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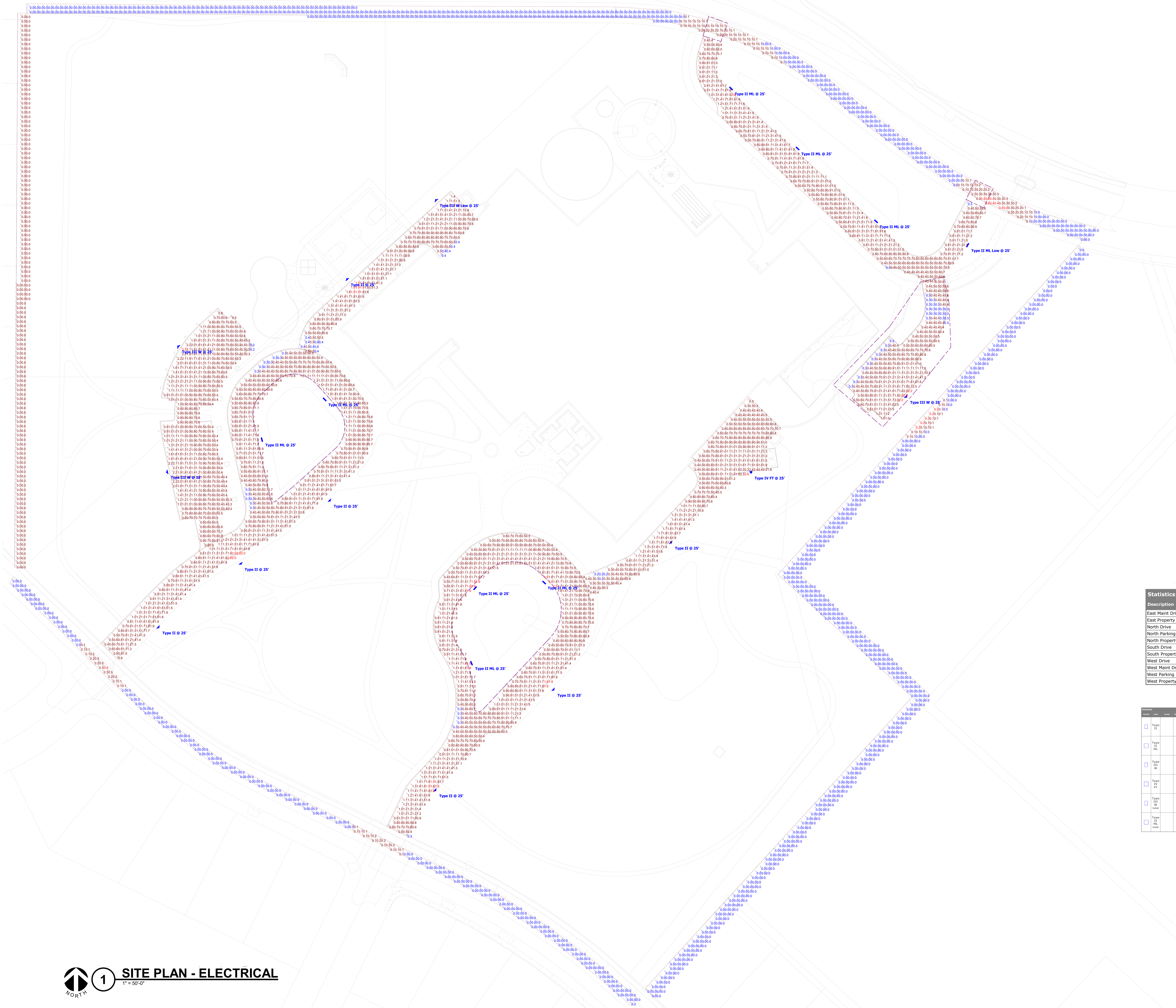


SITE PLAN - ELECTRICAL

1" = 50'-0"

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
East Maint Drive	+	0.9 fc	2.6 fc	0.2 fc	13.0:1	4.5:1
East Property Line	+	0.0 fc	0.2 fc	0.0 fc	N/A	N/A
North Drive	+	1.0 fc	2.0 fc	0.3 fc	6.7:1	3.3:1
North Parking	+	0.8 fc	2.2 fc	0.3 fc	7.3:1	2.7:1
North Property Line	+	0.0 fc	0.4 fc	0.0 fc	N/A	N/A
South Drive	+	1.0 fc	1.9 fc	0.3 fc	6.3:1	3.3:1
South Property Line	+	0.0 fc	0.4 fc	0.0 fc	N/A	N/A
West Drive	+	1.0 fc	2.0 fc	0.3 fc	6.7:1	3.3:1
West Maint Drive	+	1.0 fc	1.9 fc	0.4 fc	4.8:1	2.5:1
West Parking	+	0.9 fc	2.3 fc	0.2 fc	11.5:1	4.5:1
West Property Line	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A

Schedule

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Wattage	Plot
	Type II		7	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-II-40LED-525mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	254	64.8	Max: 9474cd
	Type II ML		8	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-II-ML-40LED-525mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	254	64.8	Max: 5816cd
	Type III W		3	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-III-W-40LED-700mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	304	86.8	Max: 11487cd
	Type IV FT		1	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-IV-FT-40LED-700mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	295	86.8	Max: 9681cd
	Type III W Low		1	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-III-W-40LED-525mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	240	64.8	Max: 9075cd
	Type II ML Low		1	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-II-ML-40LED-350mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	176	42.9	Max: 4047cd

OPN ARCHITECTS

301 N Broom St., Suite 100
Madison, WI 53703
P: 608-819-0260
www.opnarchitects.com

Owner

MADISON METRO SCHOOL DISTRICT
545 West Dayton Street
Madison, WI 53703

Project

BLACK HAWK MS & GOMPERS ES
1402 Wyoming Way
Madison, WI 53704

Construction Manager

Findorff
300 S Bedford St.
Madison, WI 53703
P. 608-257-5321

Civil Engineer & Landscape Architect

JSD Professional Services
507 W. Verona Ave., Suite 500
Verona, WI 53593
P. 608-848-5060

Structural Engineer

IMEG
2310 Crossroads Dr., Suite 3000
Madison, WI 53718
P. 608-223-9600

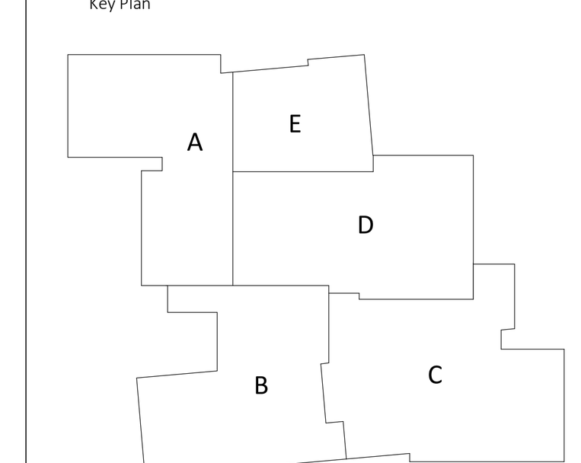
Mechanical Engineer

IMEG
2310 Crossroads Dr., Suite 3000
Madison, WI 53718
P. 608-223-9600

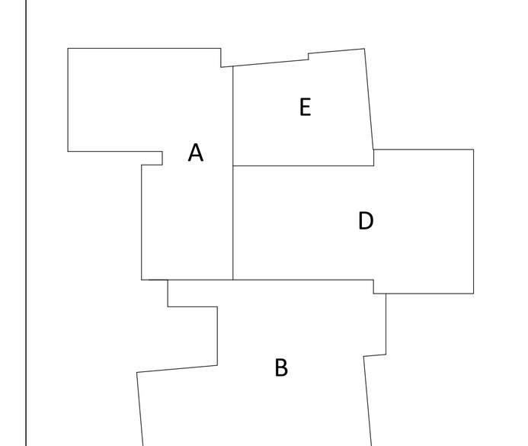
Electrical Engineer

IMEG
2310 Crossroads Dr., Suite 3000
Madison, WI 53718
P. 608-223-9600

Key Plan



UPPER LEVEL



LOWER LEVEL

Revision	Description	Date

IMEG
2310 CROSSROADS DR
SUITE 3000
MADISON, WI 53718
P: 608.223.9600 F: 608.223.9601
www.imegcorp.com

REF. SCALE IN INCHES 0 1 2 3

PROJECT #25000140.02

OPN Project No.
24654002

Sheet Issue Date
100% SCHEMATIC DESIGN **07/11/25**

Sheet Name
SITE PLAN - ELECTRICAL

Sheet Number
E050

PRELIMINARY. NOT FOR CONSTRUCTION.

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG

Type II ML Low

RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

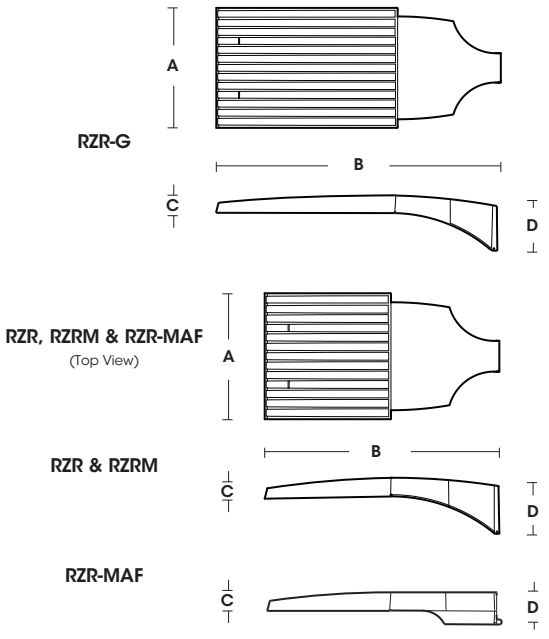
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



Fixture	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

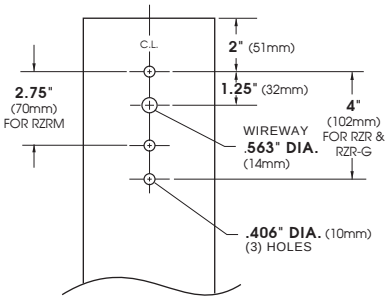
U.L. Listed for Wet Location

BABA COMPLIANT

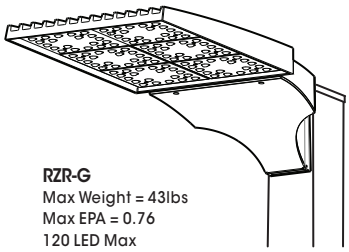
2024281

SPECIFICATIONS

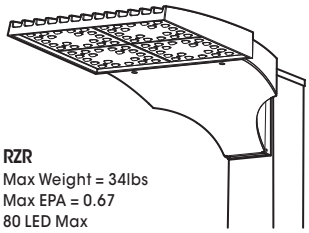
POLE DRILLING TEMPLATE



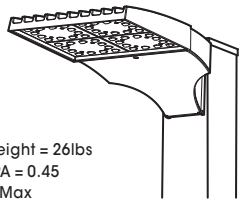
EPA & WEIGHT



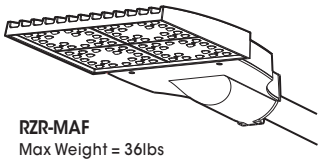
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



RZR
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

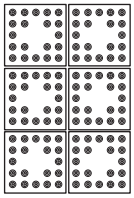


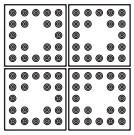
RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

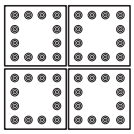


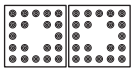
RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

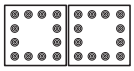
PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**

Luminaire

- ☐ RZR-G
- ☐ RZR
- ☐ RZR-MAF
- ☐ RZRM

Optics

PLED™ Distribution Type

- ☐ PLED-II
- ☐ PLED-II-FR
- ☐ PLED-II-MIL
- ☐ PLED-III
- ☐ PLED-III-W
- ☐ PLED-IV
- ☐ PLED-IV-FT
- ☐ PLED-VSQ-N
- ☐ PLED-V-SQ-M
- ☐ PLED-V-SQ-W

LED Mode

# of LEDs

RZR-G
- ☐ 120LED
- ☐ 80LED

RZR / RZR-MAF
- ☐ 80LED
- ☐ 40LED

RZRM
- ☐ 48LED
- ☐ 24LED

Drive Current
- ☐ 1400mA[1]
- ☐ 1225mA[1]
- ☐ 1050mA
- ☐ 875mA
- ☐ 700mA
- ☐ 525mA
- ☐ 350mA

Color Temp - CCT
- ☐ 27K (2700K)
- ☐ 30K (3000K)
- ☐ 40K (4000K)
- ☐ 50K (5000K)
- ☐ TRA True Amber

Consult Factory for Other LED Color, CCT, & CRI Options

NOTES:
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

Voltage

- ☐ UNV (120-277)
- ☐ 347
- ☐ 480

Mounting

Arm Mount
- ☐ 1
- ☐ 2-180
- ☐ 2-90
- ☐ 3-90
- ☐ 3-120
- ☐ 4-90

Wall Mount
- ☐ WM

WM - Wall Mount provided with mounting bracket and cover.

Finish

Standard Textured Finish
- ☐ Black 9005-T
- ☐ White 9003-T
- ☐ Grey 7004-T
- ☐ Dark Bronze 8019-T
- ☐ Green 6005-T

Premium Finishes
- ☐ Rust
- ☐ Patina Copper PC

For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)

Consult factor for custom colors

Options

- ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
- ☐ External Glare Shield 4 Sided **EGS4**
- ☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**
- ☐ Round Pole Adapter **RPA**
- ☐ Twist Lock Receptable Only **TPR**
- ☐ 7-Pin Twist Lock Receptable Only **TPR7**
- ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
- ☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**
- ☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
- ☐ Single Fuse (120V, 277V) **SF**
- ☐ Double Fuse (208V, 240V) **DF**
- ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

ELECTRICAL DATA GUIDE - AMPERAGE CHART

ELECTRICAL LOAD			CURRENT (Amps)				
# of LEDs	mA	System Watts	120V	208V	277V	347V	480V
24	350	26	0.21	0.12	0.09	0.07	0.05
24	525	39	0.32	0.19	0.14	0.11	0.08
24	700	52	0.43	0.25	0.19	0.15	0.11
24	875	67	0.55	0.32	0.24	0.19	0.14
24	1050	81	0.67	0.39	0.29	0.23	0.17
48	350	52	0.43	0.25	0.19	0.15	0.11
48	525	78	0.65	0.37	0.28	0.22	0.16
48	700	104	0.87	0.50	0.38	0.30	0.22
48	875	133	1.11	0.64	0.48	0.38	0.28
48	1050	162	1.35	0.78	0.58	0.47	0.34
40	350	43	0.36	0.21	0.15	0.12	0.09
40	525	65	0.54	0.31	0.23	0.19	0.14
40	700	87	0.72	0.42	0.31	0.25	0.18
40	875	111	0.92	0.53	0.40	0.32	0.23
40	1050	135	1.12	0.65	0.49	0.39	0.28
40	1225	159	1.32	0.76	0.57	0.46	0.33
40	1400	183	1.53	0.88	0.66	0.53	0.38
80	350	86	0.72	0.41	0.31	0.25	0.18
80	525	130	1.08	0.62	0.47	0.37	0.27
80	700	174	1.45	0.83	0.63	0.50	0.36
80	875	222	1.85	1.06	0.80	0.64	0.46
80	1050	270	2.25	1.30	0.97	0.78	0.56
80	1225	318	2.65	1.53	1.15	0.92	0.66
80	1400	366	3.05	1.76	1.32	1.06	0.76
120	350	129	1.07	0.62	0.46	0.37	0.27
120	525	195	1.62	0.94	0.70	0.56	0.41
120	700	260	2.17	1.25	0.94	0.75	0.54
120	875	332	2.77	1.60	1.20	0.96	0.69
120	1050	404	3.37	1.94	1.46	1.17	0.84
120	1225	477	3.97	2.29	1.72	1.37	0.99
120	1400	549	4.58	2.64	1.98	1.58	1.14

PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

LED LUMEN MAINTENANCE (350mA to 1050mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L96	0.96x
100,000 (6X LED Test Hrs)	L93	0.93x
150,000 (Theoretical)	L89	0.90x
200,000 (Theoretical)	L86	0.87x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.

LED LUMEN MAINTENANCE (1225mA & 1400mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L93	0.93x
100,000 (6X LED Test Hrs)	L89	0.89x
150,000 (Theoretical)	L84	0.84x
200,000 (Theoretical)	L80	0.80x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html

Photometric Toolbox

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] ITL88704-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-II-ML-40LED-350mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 42.9 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 7065
[_BUGRATING] LCS B3-U0-G3 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7065
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	165
Total Luminaire Watts	42.9
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	4047
Maximum Candela Angle	90H 67.5V
Maximum Candela (<90 Degrees Vertical)	4047
Maximum Candela Angle (<90 Degrees Vertical)	90H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	354 (5.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	451.2	N.A.	6.4
FM - Front-Medium (30-60)	1812.1	N.A.	25.6
FH - Front-High (60-80)	1231.7	N.A.	17.4
FVH - Front-Very High (80-90)	37.7	N.A.	0.5
BL - Back-Low (0-30)	451.2	N.A.	6.4
BM - Back-Medium (30-60)	1812.1	N.A.	25.6
BH - Back-High (60-80)	1231.7	N.A.	17.4
BVH - Back-Very High (80-90)	37.7	N.A.	0.5
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	7065.4	N.A.	100.0
BUG Rating	B3-U0-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**77**
0.0	934	934	934	934	934	934	934	934	934	934
2.5	941	940	940	939	938	936	935	935	936	936
5.0	952	951	952	949	947	943	941	940	940	939
7.5	958	958	959	959	958	955	950	948	944	944
10.0	960	959	963	966	971	971	967	961	955	954
12.5	971	969	971	974	982	990	989	980	971	969
15.0	993	990	991	991	999	1009	1013	1004	989	988
17.5	1017	1013	1019	1023	1026	1034	1038	1029	1010	1009
20.0	1044	1043	1046	1056	1062	1069	1069	1060	1035	1033
22.5	1079	1078	1085	1094	1100	1104	1106	1095	1066	1065
25.0	1122	1118	1128	1143	1146	1145	1154	1138	1102	1102
27.5	1160	1157	1168	1190	1200	1191	1198	1185	1146	1142
30.0	1207	1202	1215	1236	1251	1247	1243	1239	1193	1191
32.5	1246	1245	1262	1288	1307	1303	1291	1294	1249	1243
35.0	1274	1274	1295	1328	1358	1363	1341	1350	1315	1310
37.5	1299	1299	1322	1365	1396	1430	1402	1409	1386	1382
40.0	1323	1320	1344	1389	1431	1495	1466	1481	1475	1472
42.5	1341	1342	1368	1406	1455	1532	1536	1560	1599	1594
45.0	1338	1337	1370	1417	1474	1561	1609	1658	1735	1738
47.5	1319	1319	1351	1410	1473	1577	1684	1778	1894	1916
50.0	1286	1295	1326	1379	1466	1588	1788	1926	2072	2102
52.5	1217	1225	1264	1337	1439	1594	1856	2100	2288	2311
55.0	1125	1129	1175	1262	1389	1576	1901	2264	2535	2564
57.5	1027	1029	1069	1162	1309	1530	1915	2417	2807	2873
60.0	876	878	934	1050	1214	1455	1896	2546	3078	3164
62.5	633	658	732	878	1089	1349	1850	2699	3369	3456
65.0	480	485	508	626	873	1217	1733	2785	3624	3745
67.5	357	357	388	425	587	991	1542	2737	3771	3968
69.0	292	295	319	359	446	778	1374	2590	3737	3958
70.0	268	267	281	316	386	673	1269	2458	3605	3809
72.5	212	209	212	232	281	411	903	1875	2815	2922
75.0	171	169	170	180	209	276	523	1090	1610	1771
77.5	130	132	134	135	151	187	297	642	803	877
80.0	95	100	98	96	102	122	175	343	354	321
82.5	32	32	50	50	53	64	93	201	200	180
85.0	18	19	35	36	34	33	50	115	122	123
87.5	6	8	25	21	22	20	25	42	75	84
90.0	0	0	0	0	0	0	0	0	0	0

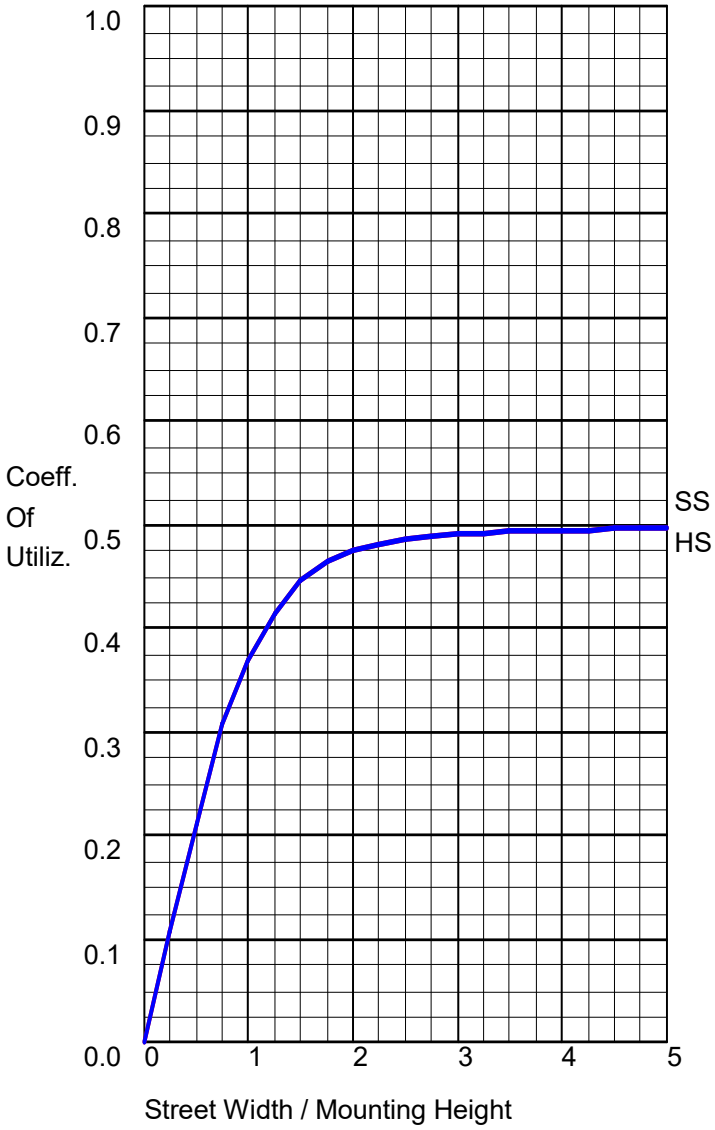
Vert. Angles	Horizontal Angles	
	85	**90**
0.0	934	934
2.5	936	935
5.0	937	935
7.5	942	941
10.0	952	949
12.5	965	964
15.0	982	980
17.5	1005	1003
20.0	1030	1029
22.5	1063	1060
25.0	1099	1099

CANDELA TABULATION - (Cont.)

27.5	1140	1138
30.0	1186	1186
32.5	1237	1234
35.0	1294	1289
37.5	1366	1369
40.0	1471	1471
42.5	1617	1622
45.0	1795	1801
47.5	1987	2018
50.0	2203	2227
52.5	2439	2461
55.0	2730	2777
57.5	3063	3121
60.0	3391	3470
62.5	3664	3745
65.0	3863	3934
67.5	4022	4047
69.0	3971	3959
70.0	3756	3739
72.5	2673	2579
75.0	1528	1470
77.5	683	685
80.0	247	255
82.5	130	110
85.0	86	63
87.5	47	25
90.0	0	0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

COEFFICIENTS OF UTILIZATION

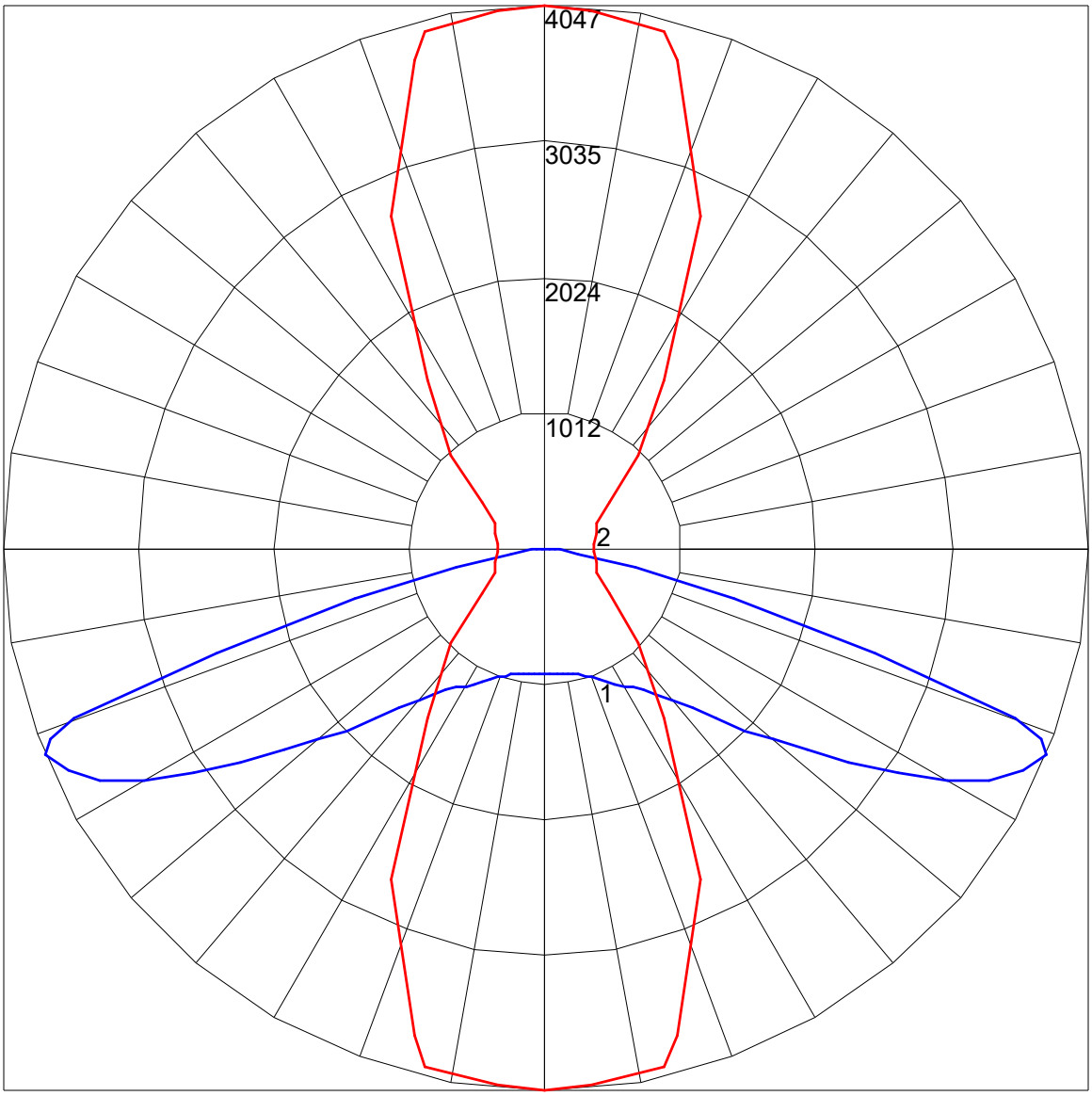


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	3532.7	50.0
Downward House Side	3532.7	50.0
Downward Total	7065.4	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	7065.4	100.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

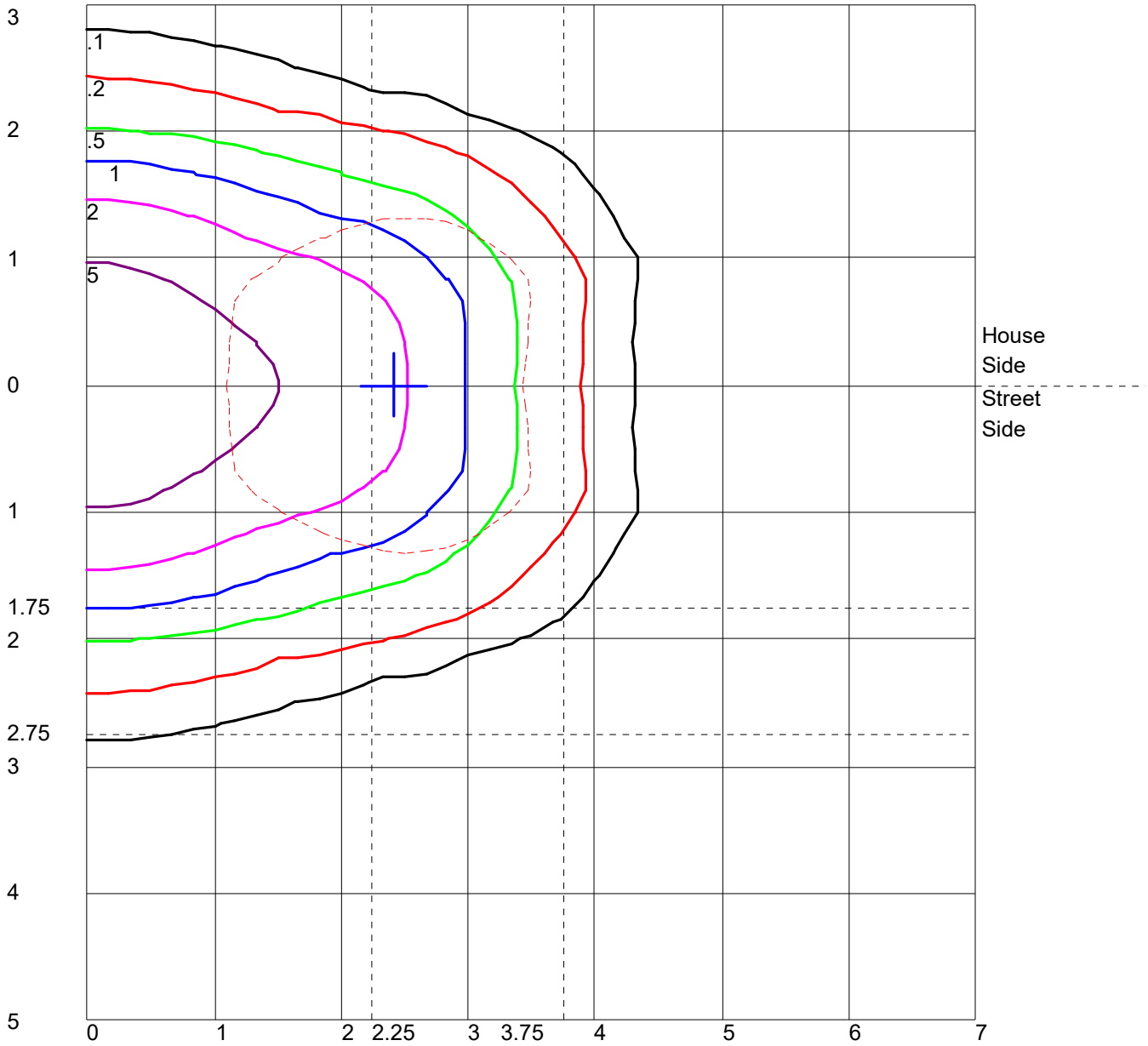
POLAR GRAPH



Maximum Candela = 4047 Located At Horizontal Angle = 90, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

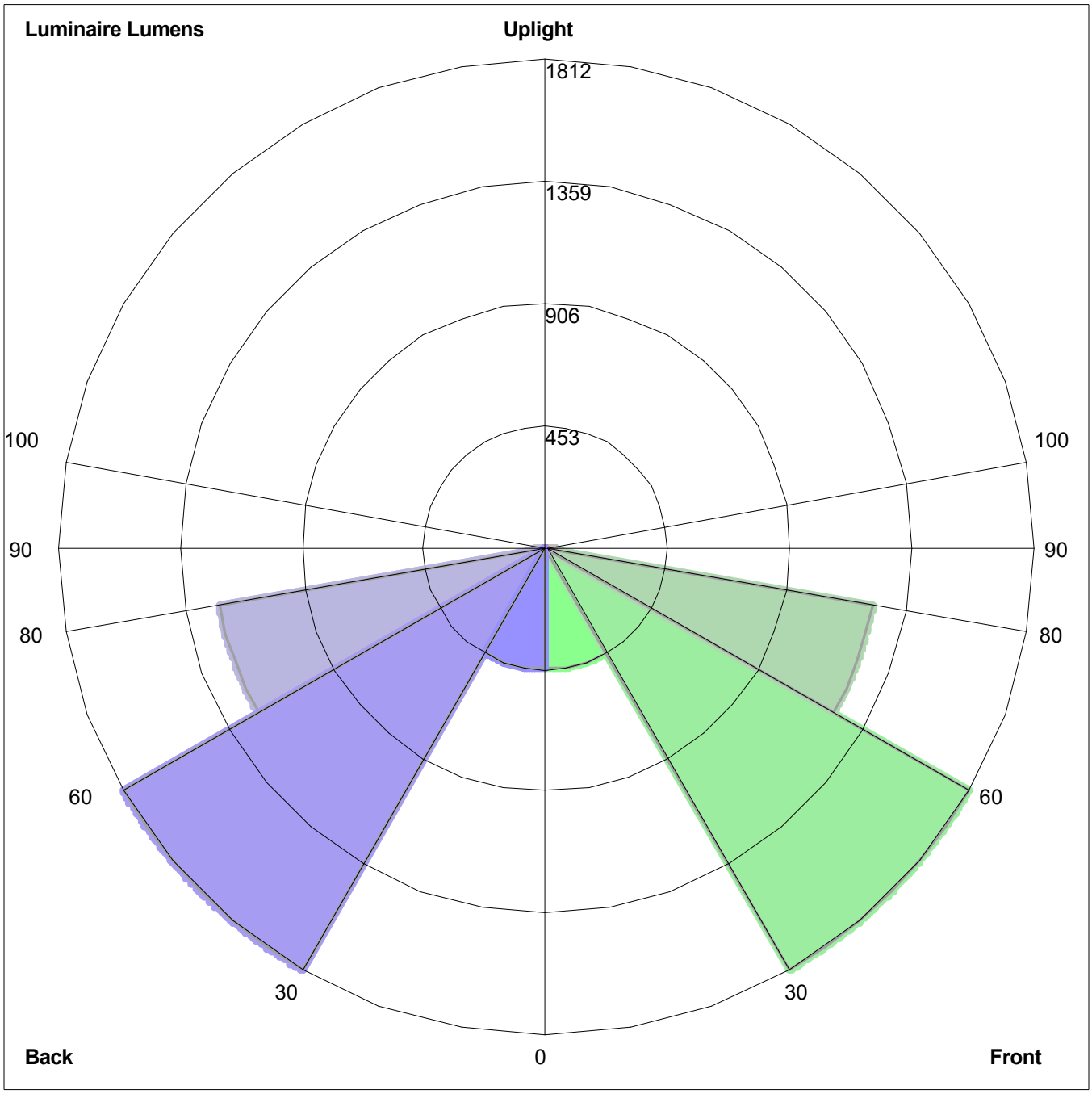
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-350MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=451.2, Medium=1812.1, High=1231.7, Very High=37.7
Back: Low=451.2, Medium=1812.1, High=1231.7, Very High=37.7
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G3

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG

Type II ML

RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

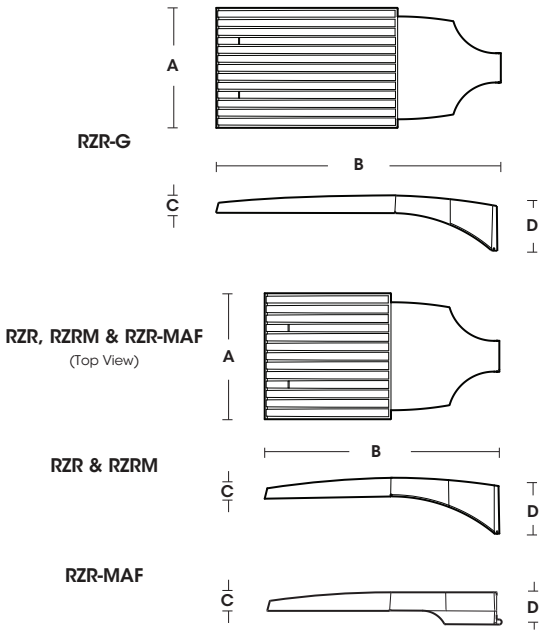
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



Fixture	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

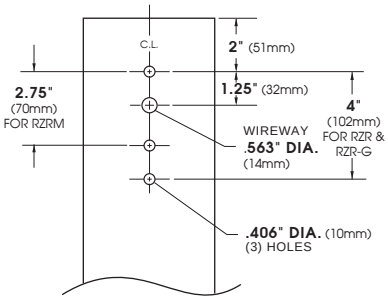
U.L. Listed for Wet Location

BABA COMPLIANT

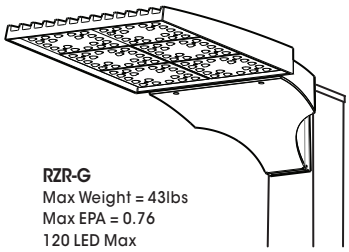
2024281

SPECIFICATIONS

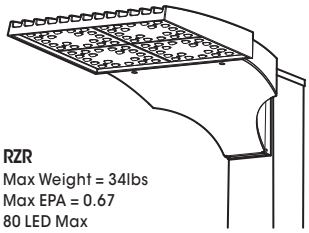
POLE DRILLING TEMPLATE



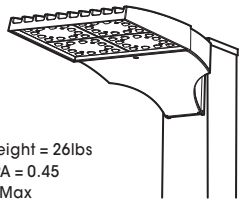
EPA & WEIGHT



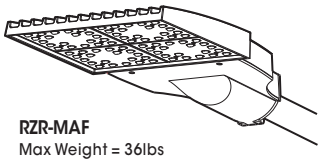
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



RZR
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

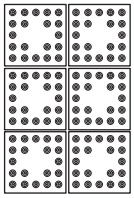


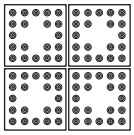
RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

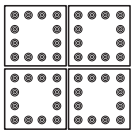


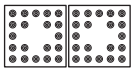
RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

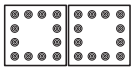
PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**

Luminaire

- ☐ RZR-G
- ☐ RZR
- ☐ RZR-MAF
- ☐ RZRM

Optics

PLED™ Distribution Type

- ☐ PLED-II
- ☐ PLED-II-FR
- ☐ PLED-II-MIL
- ☐ PLED-III
- ☐ PLED-III-W
- ☐ PLED-IV
- ☐ PLED-IV-FT
- ☐ PLED-VSQ-N
- ☐ PLED-V-SQ-M
- ☐ PLED-V-SQ-W

LED Mode

# of LEDs

RZR-G
- ☐ 120LED
- ☐ 80LED

RZR / RZR-MAF
- ☐ 80LED
- ☐ 40LED

RZRM
- ☐ 48LED
- ☐ 24LED

Drive Current
- ☐ 1400mA[1]
- ☐ 1225mA[1]
- ☐ 1050mA
- ☐ 875mA
- ☐ 700mA
- ☐ 525mA
- ☐ 350mA

Color Temp - CCT
- ☐ 27K (2700K)
- ☐ 30K (3000K)
- ☐ 40K (4000K)
- ☐ 50K (5000K)
- ☐ TRA True Amber

Consult Factory for Other LED Color, CCT, & CRI Options

NOTES:
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

Voltage

- ☐ UNV (120-277)
- ☐ 347
- ☐ 480

Mounting

Arm Mount
- ☐ 1
- ☐ 2-180
- ☐ 2-90
- ☐ 3-90
- ☐ 3-120
- ☐ 4-90

Wall Mount
- ☐ WM

WM - Wall Mount provided with mounting bracket and cover.

Finish

Standard Textured Finish
- ☐ Black **9005-T**
- ☐ White **9003-T**
- ☐ Grey **7004-T**
- ☐ Dark Bronze **8019-T**
- ☐ Green **6005-T**

Premium Finishes
- ☐ Rust
- ☐ Patina Copper **PC**

For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)

Consult factor for custom colors

Options

- ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
- ☐ External Glare Shield 4 Sided **EGS4**
- ☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**
- ☐ Round Pole Adapter **RPA**
- ☐ Twist Lock Receptable Only **TPR**
- ☐ 7-Pin Twist Lock Receptable Only **TPR7**
- ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
- ☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**
- ☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
- ☐ Single Fuse (120V, 277V) **SF**
- ☐ Double Fuse (208V, 240V) **DF**
- ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

ELECTRICAL DATA GUIDE - AMPERAGE CHART

ELECTRICAL LOAD			CURRENT (Amps)				
# of LEDs	mA	System Watts	120V	208V	277V	347V	480V
24	350	26	0.21	0.12	0.09	0.07	0.05
24	525	39	0.32	0.19	0.14	0.11	0.08
24	700	52	0.43	0.25	0.19	0.15	0.11
24	875	67	0.55	0.32	0.24	0.19	0.14
24	1050	81	0.67	0.39	0.29	0.23	0.17
48	350	52	0.43	0.25	0.19	0.15	0.11
48	525	78	0.65	0.37	0.28	0.22	0.16
48	700	104	0.87	0.50	0.38	0.30	0.22
48	875	133	1.11	0.64	0.48	0.38	0.28
48	1050	162	1.35	0.78	0.58	0.47	0.34
40	350	43	0.36	0.21	0.15	0.12	0.09
40	525	65	0.54	0.31	0.23	0.19	0.14
40	700	87	0.72	0.42	0.31	0.25	0.18
40	875	111	0.92	0.53	0.40	0.32	0.23
40	1050	135	1.12	0.65	0.49	0.39	0.28
40	1225	159	1.32	0.76	0.57	0.46	0.33
40	1400	183	1.53	0.88	0.66	0.53	0.38
80	350	86	0.72	0.41	0.31	0.25	0.18
80	525	130	1.08	0.62	0.47	0.37	0.27
80	700	174	1.45	0.83	0.63	0.50	0.36
80	875	222	1.85	1.06	0.80	0.64	0.46
80	1050	270	2.25	1.30	0.97	0.78	0.56
80	1225	318	2.65	1.53	1.15	0.92	0.66
80	1400	366	3.05	1.76	1.32	1.06	0.76
120	350	129	1.07	0.62	0.46	0.37	0.27
120	525	195	1.62	0.94	0.70	0.56	0.41
120	700	260	2.17	1.25	0.94	0.75	0.54
120	875	332	2.77	1.60	1.20	0.96	0.69
120	1050	404	3.37	1.94	1.46	1.17	0.84
120	1225	477	3.97	2.29	1.72	1.37	0.99
120	1400	549	4.58	2.64	1.98	1.58	1.14

PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

LED LUMEN MAINTENANCE (350mA to 1050mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L96	0.96x
100,000 (6X LED Test Hrs)	L93	0.93x
150,000 (Theoretical)	L89	0.90x
200,000 (Theoretical)	L86	0.87x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.

LED LUMEN MAINTENANCE (1225mA & 1400mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L93	0.93x
100,000 (6X LED Test Hrs)	L89	0.89x
150,000 (Theoretical)	L84	0.84x
200,000 (Theoretical)	L80	0.80x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html

Photometric Toolbox

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] ITL88704-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-II-ML-40LED-525mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 64.8 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 10153
[_BUGRATING] LCS B3-U0-G3 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10153
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	157
Total Luminaire Watts	64.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	5816
Maximum Candela Angle	90H 67.5V
Maximum Candela (<90 Degrees Vertical)	5816
Maximum Candela Angle (<90 Degrees Vertical)	90H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	509 (5.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	648.3	N.A.	6.4
FM - Front-Medium (30-60)	2604.1	N.A.	25.6
FH - Front-High (60-80)	1770.0	N.A.	17.4
FVH - Front-Very High (80-90)	54.2	N.A.	0.5
BL - Back-Low (0-30)	648.3	N.A.	6.4
BM - Back-Medium (30-60)	2604.1	N.A.	25.6
BH - Back-High (60-80)	1770.0	N.A.	17.4
BVH - Back-Very High (80-90)	54.2	N.A.	0.5
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	10153.2	N.A.	100.0
BUG Rating	B3-U0-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**77**
0.0	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342
2.5	1352	1351	1351	1349	1348	1345	1344	1344	1345	1345
5.0	1368	1367	1368	1364	1361	1355	1352	1351	1351	1349
7.5	1377	1377	1378	1378	1377	1372	1365	1362	1357	1357
10.0	1380	1378	1384	1388	1395	1395	1390	1381	1372	1371
12.5	1395	1392	1395	1400	1411	1423	1421	1408	1395	1392
15.0	1427	1423	1424	1424	1436	1450	1456	1443	1421	1420
17.5	1461	1456	1464	1470	1474	1486	1492	1479	1451	1450
20.0	1500	1499	1503	1517	1526	1536	1536	1523	1487	1484
22.5	1551	1549	1559	1572	1581	1586	1589	1574	1532	1530
25.0	1612	1607	1621	1642	1647	1645	1658	1635	1584	1584
27.5	1667	1663	1678	1710	1724	1711	1722	1703	1647	1641
30.0	1734	1727	1746	1776	1798	1792	1786	1780	1714	1711
32.5	1791	1789	1813	1851	1878	1872	1855	1859	1795	1786
35.0	1831	1831	1861	1908	1951	1959	1927	1940	1890	1882
37.5	1867	1867	1900	1962	2006	2055	2015	2025	1992	1986
40.0	1901	1897	1931	1996	2056	2148	2107	2128	2120	2115
42.5	1927	1928	1966	2020	2091	2201	2207	2242	2298	2291
45.0	1923	1921	1969	2036	2118	2243	2312	2383	2493	2498
47.5	1895	1895	1941	2026	2117	2266	2420	2555	2722	2753
50.0	1848	1861	1905	1982	2107	2282	2569	2768	2977	3021
52.5	1749	1760	1816	1921	2068	2291	2667	3018	3288	3321
55.0	1617	1622	1688	1813	1996	2265	2732	3253	3643	3684
57.5	1476	1479	1536	1670	1881	2199	2752	3473	4034	4129
60.0	1259	1262	1342	1509	1745	2091	2725	3659	4423	4547
62.5	910	946	1052	1262	1565	1939	2658	3878	4841	4966
65.0	690	697	730	900	1255	1749	2490	4002	5208	5382
67.5	513	513	558	611	844	1424	2216	3933	5419	5702
69.0	420	424	458	516	641	1118	1974	3722	5370	5688
70.0	385	384	404	454	555	967	1824	3532	5180	5474
72.5	305	300	305	333	404	591	1298	2694	4045	4199
75.0	246	243	244	259	300	397	752	1566	2314	2545
77.5	187	190	193	194	217	269	427	923	1154	1260
80.0	137	144	141	138	147	175	251	493	509	461
82.5	46	46	72	72	76	92	134	289	287	259
85.0	26	27	50	52	49	47	72	165	175	177
87.5	9	11	36	30	32	29	36	60	108	121
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles	
	85	**90**
0.0	1342	1342
2.5	1345	1344
5.0	1346	1344
7.5	1354	1352
10.0	1368	1364
12.5	1387	1385
15.0	1411	1408
17.5	1444	1441
20.0	1480	1479
22.5	1528	1523
25.0	1579	1579

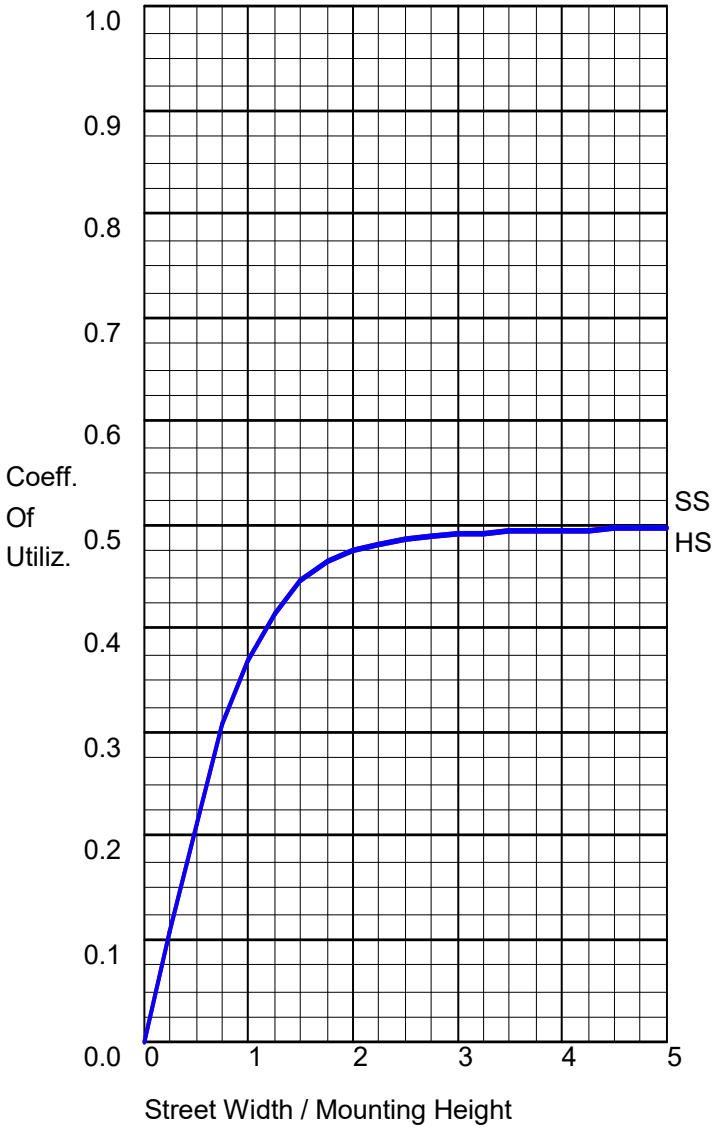
IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

CANDELA TABULATION - (Cont.)

27.5	1638	1635
30.0	1704	1704
32.5	1778	1773
35.0	1859	1852
37.5	1963	1967
40.0	2114	2114
42.5	2324	2331
45.0	2579	2588
47.5	2855	2900
50.0	3166	3200
52.5	3505	3536
55.0	3923	3991
57.5	4402	4485
60.0	4873	4986
62.5	5265	5382
65.0	5551	5653
67.5	5780	5816
69.0	5706	5689
70.0	5397	5373
72.5	3841	3706
75.0	2196	2112
77.5	981	984
80.0	355	366
82.5	187	158
85.0	124	91
87.5	68	36
90.0	0	0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

COEFFICIENTS OF UTILIZATION

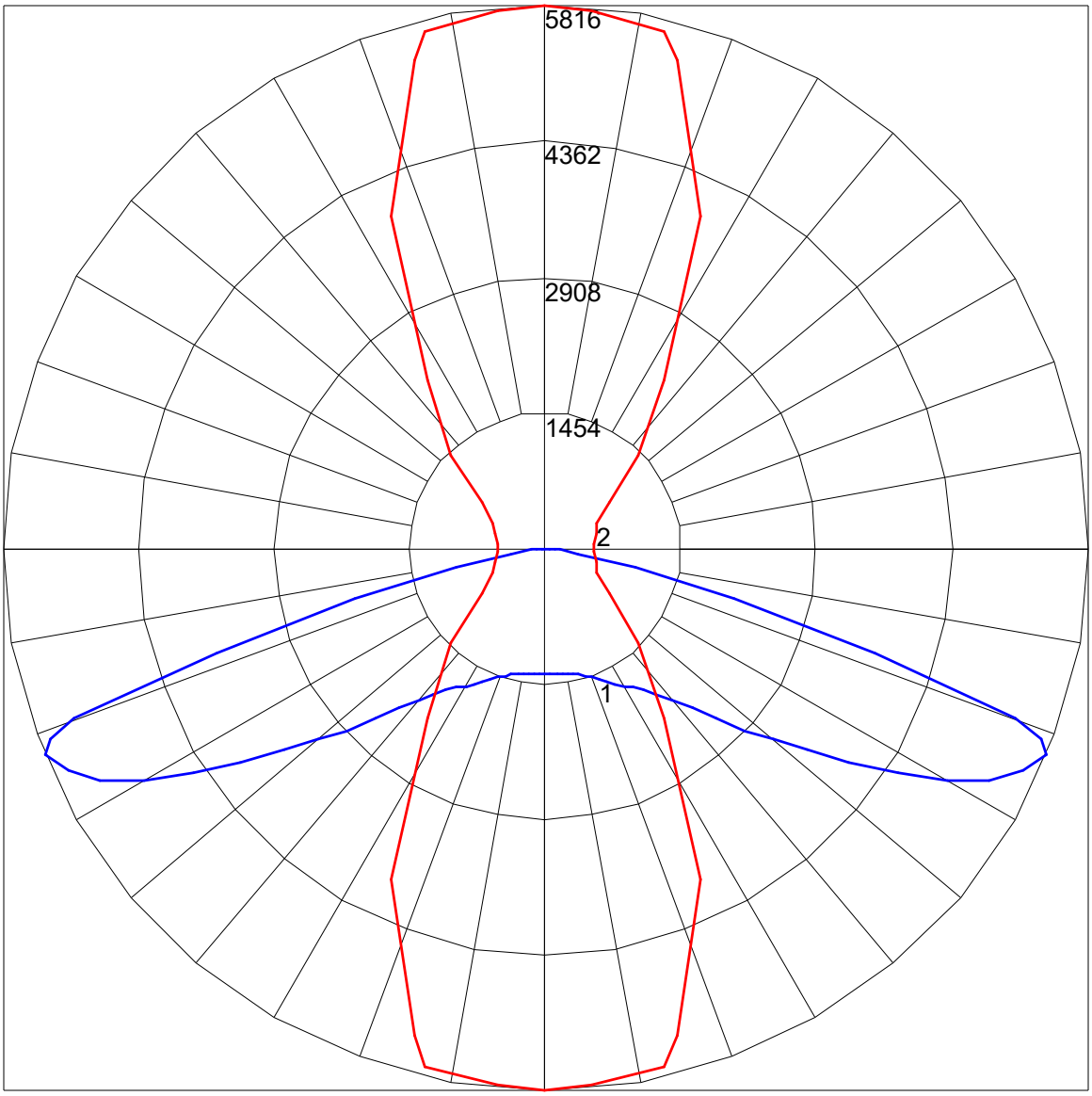


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	5076.6	50.0
Downward House Side	5076.6	50.0
Downward Total	10153.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	10153.2	100.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

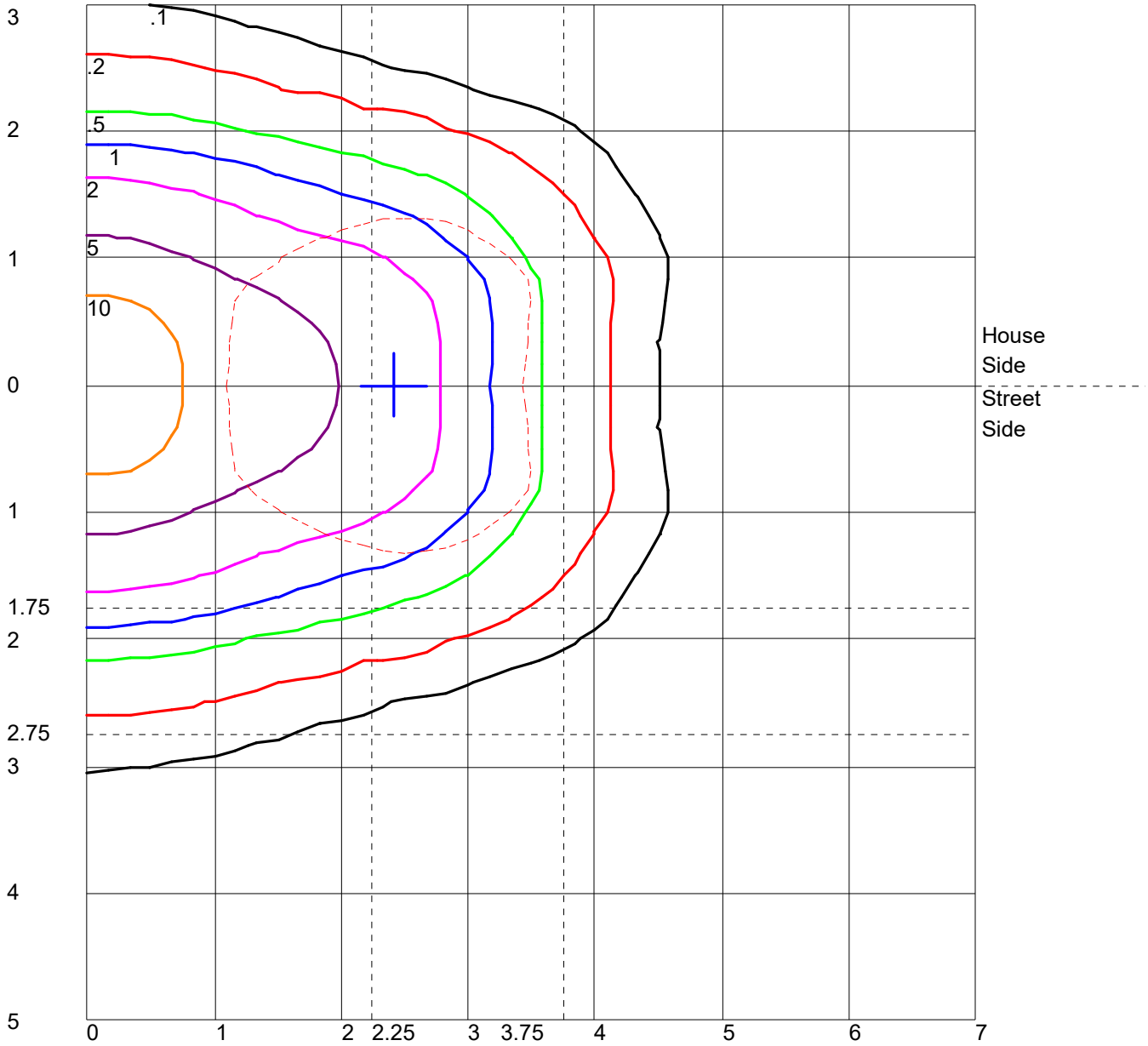
POLAR GRAPH



Maximum Candela = 5816 Located At Horizontal Angle = 90, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

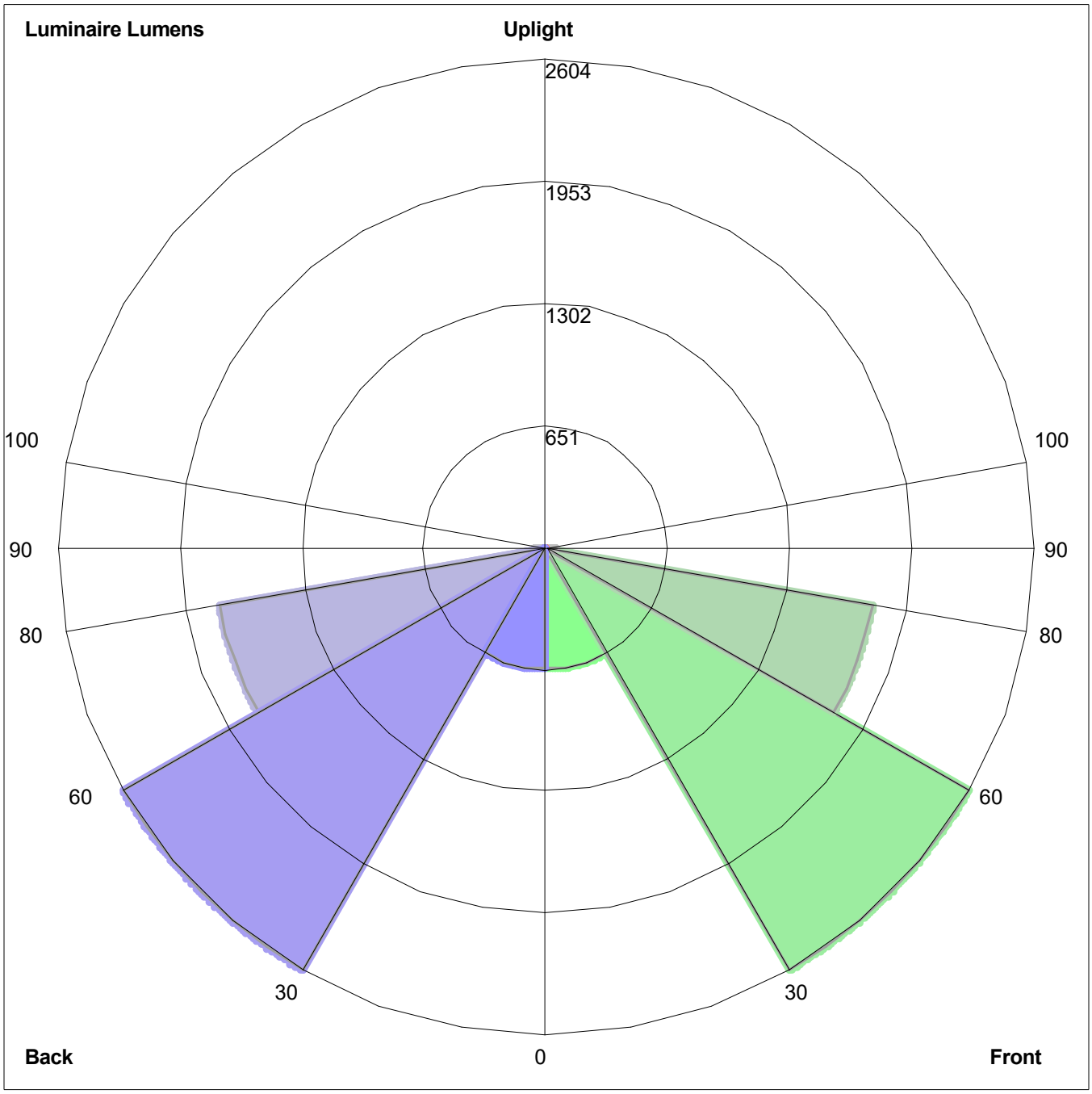
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-ML-40LED-525MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=648.3, Medium=2604.1, High= 1770.0, Very High=54.2
Back: Low=648.3, Medium=2604.1, High= 1770.0, Very High=54.2
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G3

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG

Type II

RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

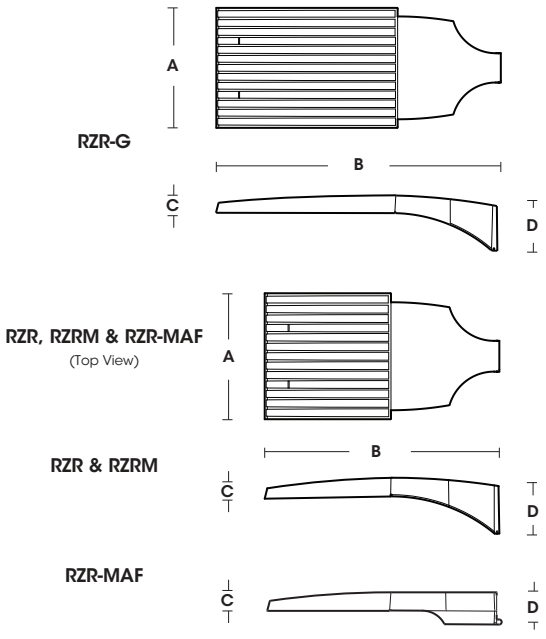
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



Fixture	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

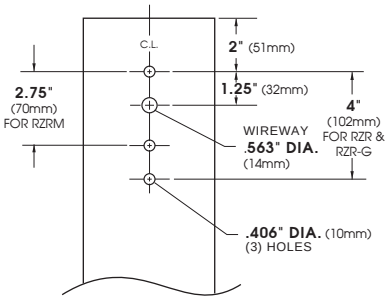
U.L. Listed for Wet Location

BABA COMPLIANT

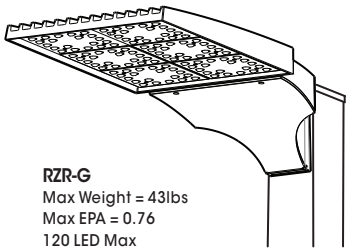
2024281

SPECIFICATIONS

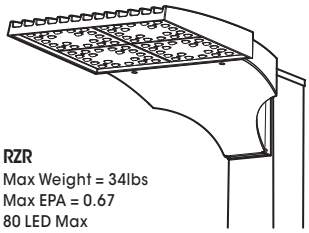
POLE DRILLING TEMPLATE



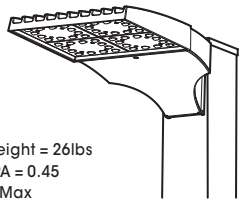
EPA & WEIGHT



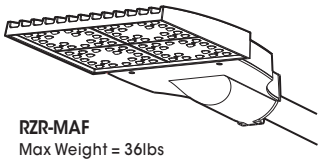
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



RZR
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

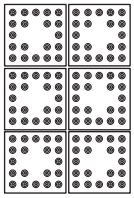


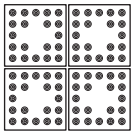
RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

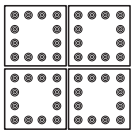


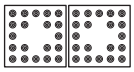
RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

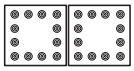
PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**

Luminaire

- ☐ RZR-G
- ☐ RZR
- ☐ RZR-MAF
- ☐ RZRM

Optics

PLED™ Distribution Type

- ☐ PLED-II
- ☐ PLED-II-FR
- ☐ PLED-II-MIL
- ☐ PLED-III
- ☐ PLED-III-W
- ☐ PLED-IV
- ☐ PLED-IV-FT
- ☐ PLED-VSQ-N
- ☐ PLED-V-SQ-M
- ☐ PLED-V-SQ-W

LED Mode

# of LEDs

RZR-G
- ☐ 120LED
- ☐ 80LED

RZR / RZR-MAF
- ☐ 80LED
- ☐ 40LED

RZRM
- ☐ 48LED
- ☐ 24LED

Drive Current
- ☐ 1400mA[1]
- ☐ 1225mA[1]
- ☐ 1050mA
- ☐ 875mA
- ☐ 700mA
- ☐ 525mA
- ☐ 350mA

Color Temp - CCT
- ☐ 27K (2700K)
- ☐ 30K (3000K)
- ☐ 40K (4000K)
- ☐ 50K (5000K)
- ☐ TRA True Amber

Consult Factory for Other LED Color, CCT, & CRI Options

NOTES:
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

Voltage

- ☐ UNV (120-277)
- ☐ 347
- ☐ 480

Mounting

Arm Mount
- ☐ 1
- ☐ 2-180
- ☐ 2-90
- ☐ 3-90
- ☐ 3-120
- ☐ 4-90

Wall Mount
- ☐ WM

WM - Wall Mount provided with mounting bracket and cover.

Finish

Standard Textured Finish
- ☐ Black 9005-T
- ☐ White 9003-T
- ☐ Grey 7004-T
- ☐ Dark Bronze 8019-T
- ☐ Green 6005-T

Premium Finishes
- ☐ Rust
- ☐ Patina Copper PC

For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)

Consult factor for custom colors

Options

- ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
- ☐ External Glare Shield 4 Sided **EGS4**
- ☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**
- ☐ Round Pole Adapter **RPA**
- ☐ Twist Lock Receptable Only **TPR**
- ☐ 7-Pin Twist Lock Receptable Only **TPR7**
- ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
- ☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**
- ☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
- ☐ Single Fuse (120V, 277V) **SF**
- ☐ Double Fuse (208V, 240V) **DF**
- ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

ELECTRICAL DATA GUIDE - AMPERAGE CHART

ELECTRICAL LOAD			CURRENT (Amps)				
# of LEDs	mA	System Watts	120V	208V	277V	347V	480V
24	350	26	0.21	0.12	0.09	0.07	0.05
24	525	39	0.32	0.19	0.14	0.11	0.08
24	700	52	0.43	0.25	0.19	0.15	0.11
24	875	67	0.55	0.32	0.24	0.19	0.14
24	1050	81	0.67	0.39	0.29	0.23	0.17
48	350	52	0.43	0.25	0.19	0.15	0.11
48	525	78	0.65	0.37	0.28	0.22	0.16
48	700	104	0.87	0.50	0.38	0.30	0.22
48	875	133	1.11	0.64	0.48	0.38	0.28
48	1050	162	1.35	0.78	0.58	0.47	0.34
40	350	43	0.36	0.21	0.15	0.12	0.09
40	525	65	0.54	0.31	0.23	0.19	0.14
40	700	87	0.72	0.42	0.31	0.25	0.18
40	875	111	0.92	0.53	0.40	0.32	0.23
40	1050	135	1.12	0.65	0.49	0.39	0.28
40	1225	159	1.32	0.76	0.57	0.46	0.33
40	1400	183	1.53	0.88	0.66	0.53	0.38
80	350	86	0.72	0.41	0.31	0.25	0.18
80	525	130	1.08	0.62	0.47	0.37	0.27
80	700	174	1.45	0.83	0.63	0.50	0.36
80	875	222	1.85	1.06	0.80	0.64	0.46
80	1050	270	2.25	1.30	0.97	0.78	0.56
80	1225	318	2.65	1.53	1.15	0.92	0.66
80	1400	366	3.05	1.76	1.32	1.06	0.76
120	350	129	1.07	0.62	0.46	0.37	0.27
120	525	195	1.62	0.94	0.70	0.56	0.41
120	700	260	2.17	1.25	0.94	0.75	0.54
120	875	332	2.77	1.60	1.20	0.96	0.69
120	1050	404	3.37	1.94	1.46	1.17	0.84
120	1225	477	3.97	2.29	1.72	1.37	0.99
120	1400	549	4.58	2.64	1.98	1.58	1.14

PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

LED LUMEN MAINTENANCE (350mA to 1050mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L96	0.96x
100,000 (6X LED Test Hrs)	L93	0.93x
150,000 (Theoretical)	L89	0.90x
200,000 (Theoretical)	L86	0.87x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.

LED LUMEN MAINTENANCE (1225mA & 1400mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L93	0.93x
100,000 (6X LED Test Hrs)	L89	0.89x
150,000 (Theoretical)	L84	0.84x
200,000 (Theoretical)	L80	0.80x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html

Photometric Toolbox

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] ITL88704-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-II-40LED-525mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 64.8 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 10152
[_BUGRATING] LCS B2-U0-G2 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10152
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	157
Total Luminaire Watts	64.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	9474
Maximum Candela Angle	77H 69V
Maximum Candela (<90 Degrees Vertical)	9474
Maximum Candela Angle (<90 Degrees Vertical)	77H 69V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	900 (8.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	662.1	N.A.	6.5
FM - Front-Medium (30-60)	3442.2	N.A.	33.9
FH - Front-High (60-80)	2903.2	N.A.	28.6
FVH - Front-Very High (80-90)	80.3	N.A.	0.8
BL - Back-Low (0-30)	634.5	N.A.	6.2
BM - Back-Medium (30-60)	1765.7	N.A.	17.4
BH - Back-High (60-80)	636.2	N.A.	6.3
BVH - Back-Very High (80-90)	28.0	N.A.	0.3
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	10152.2	N.A.	100.0
BUG Rating	B2-U0-G2		

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**77**
0.0	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342
2.5	1367	1362	1362	1361	1355	1355	1352	1346	1349	1349
5.0	1387	1385	1384	1382	1377	1372	1364	1357	1355	1354
7.5	1384	1385	1387	1390	1388	1387	1375	1364	1358	1358
10.0	1369	1372	1377	1387	1398	1405	1392	1380	1368	1368
12.5	1387	1381	1382	1390	1408	1428	1426	1405	1388	1387
15.0	1434	1428	1423	1417	1427	1453	1463	1441	1414	1411
17.5	1487	1479	1484	1482	1473	1487	1497	1479	1443	1443
20.0	1548	1546	1542	1552	1543	1545	1542	1522	1477	1473
22.5	1631	1627	1631	1634	1618	1599	1599	1575	1519	1517
25.0	1740	1730	1733	1747	1713	1670	1677	1644	1571	1571
27.5	1852	1842	1841	1859	1836	1759	1747	1717	1640	1632
30.0	1997	1984	1979	1982	1957	1881	1824	1808	1716	1711
32.5	2135	2131	2137	2138	2111	2010	1913	1901	1811	1795
35.0	2258	2260	2272	2281	2265	2177	2022	2002	1911	1898
37.5	2397	2391	2404	2434	2408	2380	2183	2117	2030	2018
40.0	2538	2529	2543	2575	2568	2600	2374	2286	2187	2176
42.5	2676	2676	2699	2712	2722	2776	2607	2490	2444	2411
45.0	2765	2765	2811	2851	2877	2957	2875	2775	2750	2714
47.5	2819	2824	2868	2946	3006	3123	3196	3153	3137	3127
50.0	2865	2870	2919	3003	3124	3296	3613	3646	3593	3574
52.5	2817	2834	2906	3045	3213	3472	3949	4229	4160	4075
55.0	2704	2719	2814	3000	3269	3623	4249	4827	4824	4710
57.5	2558	2566	2663	2883	3229	3718	4509	5429	5614	5540
60.0	2243	2252	2400	2703	3107	3692	4699	6041	6487	6396
62.5	1642	1711	1911	2305	2865	3535	4791	6729	7485	7330
65.0	1253	1266	1322	1644	2325	3263	4634	7260	8468	8352
67.5	918	920	1003	1106	1558	2690	4202	7392	9238	9290
69.0	743	749	813	925	1171	2104	3765	7100	9349	9474
70.0	680	675	710	815	1009	1816	3490	6793	9142	9243
72.5	532	522	525	583	721	1086	2485	5203	7360	7337
75.0	424	418	418	450	526	708	1413	2996	4210	4481
77.5	323	326	328	331	368	463	773	1737	2064	2193
80.0	236	247	236	230	239	286	435	900	858	734
82.5	72	66	105	103	108	129	210	507	453	385
85.0	42	43	60	70	66	56	96	266	251	246
87.5	14	17	45	42	45	37	43	78	144	167
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	85	**90**	**95**	**105**	**115**	**125**	**135**	**145**	**155**	**165**
0.0	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342
2.5	1346	1344	1345	1341	1341	1336	1334	1338	1336	1339
5.0	1346	1344	1346	1345	1345	1341	1339	1346	1345	1351
7.5	1352	1352	1354	1355	1361	1357	1357	1364	1367	1369
10.0	1364	1364	1372	1375	1384	1385	1385	1390	1388	1390
12.5	1380	1385	1394	1401	1413	1417	1415	1417	1408	1408
15.0	1405	1408	1418	1428	1444	1450	1447	1444	1433	1424
17.5	1438	1441	1448	1460	1477	1487	1484	1476	1459	1444
20.0	1473	1479	1487	1497	1525	1530	1526	1510	1482	1464
22.5	1517	1523	1539	1543	1572	1579	1574	1543	1510	1489
25.0	1569	1579	1589	1597	1628	1638	1619	1582	1539	1509

CANDELA TABULATION - (Cont.)

27.5	1632	1635	1644	1653	1688	1697	1664	1614	1562	1516
30.0	1707	1704	1701	1713	1755	1750	1703	1638	1571	1512
32.5	1782	1773	1773	1779	1816	1795	1733	1645	1563	1490
35.0	1871	1852	1848	1868	1878	1829	1742	1637	1536	1450
37.5	1984	1967	1943	1954	1933	1847	1732	1604	1489	1395
40.0	2157	2114	2069	2051	1972	1839	1697	1545	1418	1319
42.5	2397	2331	2250	2151	1992	1806	1627	1459	1326	1234
45.0	2696	2588	2463	2235	1989	1747	1529	1358	1223	1127
47.5	3038	2900	2673	2305	1959	1642	1411	1229	1106	1015
50.0	3447	3200	2884	2365	1891	1526	1269	1088	961	892
52.5	3863	3536	3147	2418	1805	1385	1109	923	799	726
55.0	4397	3991	3447	2462	1681	1214	905	721	627	563
57.5	5019	4485	3784	2453	1517	994	681	530	456	408
60.0	5698	4986	4047	2358	1276	750	490	381	315	287
62.5	6307	5382	4222	2197	1029	525	339	264	218	191
65.0	6837	5653	4266	1947	744	346	234	182	154	138
67.5	7398	5816	4162	1599	476	227	157	129	115	111
69.0	7468	5689	3946	1390	342	181	129	111	103	102
70.0	7148	5373	3647	1219	272	155	116	102	95	98
72.5	5303	3706	2380	729	185	112	95	85	82	82
75.0	3021	2112	1372	418	137	92	83	73	69	72
77.5	1305	984	658	244	108	79	73	65	57	57
80.0	405	366	305	160	86	68	65	55	47	45
82.5	200	158	172	122	70	56	53	45	40	39
85.0	118	91	128	101	65	47	37	32	33	39
87.5	56	36	80	72	46	30	19	19	19	30
90.0	0	0	0	0	0	0	0	0	0	0

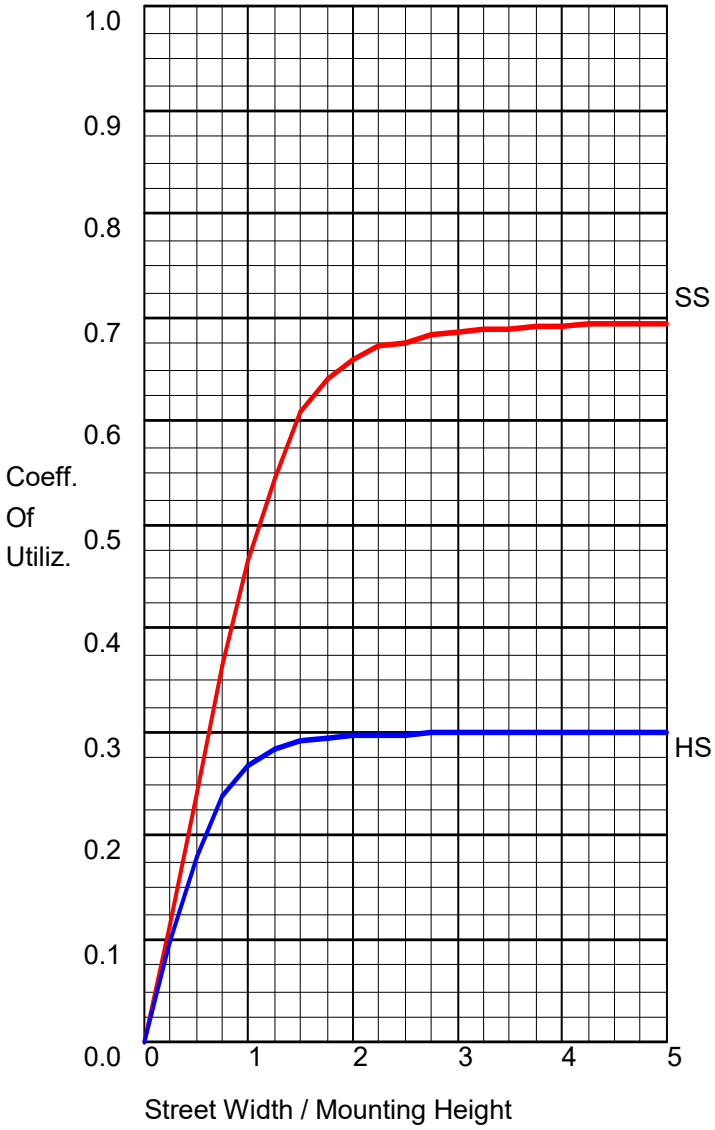
Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	1342	1342
2.5	1336	1338
5.0	1348	1349
7.5	1368	1369
10.0	1387	1388
12.5	1401	1404
15.0	1415	1421
17.5	1431	1434
20.0	1450	1453
22.5	1470	1471
25.0	1484	1484
27.5	1483	1484
30.0	1471	1473
32.5	1444	1447
35.0	1401	1404
37.5	1344	1336
40.0	1265	1263
42.5	1180	1177
45.0	1078	1082
47.5	969	971
50.0	851	832
52.5	690	681
55.0	525	529
57.5	389	392
60.0	270	273

CANDELA TABULATION - (Cont.)

62.5	180	174
65.0	126	126
67.5	106	106
69.0	98	96
70.0	92	92
72.5	79	78
75.0	68	66
77.5	55	52
80.0	40	36
82.5	24	20
85.0	13	9
87.5	7	1
90.0	0	0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

COEFFICIENTS OF UTILIZATION

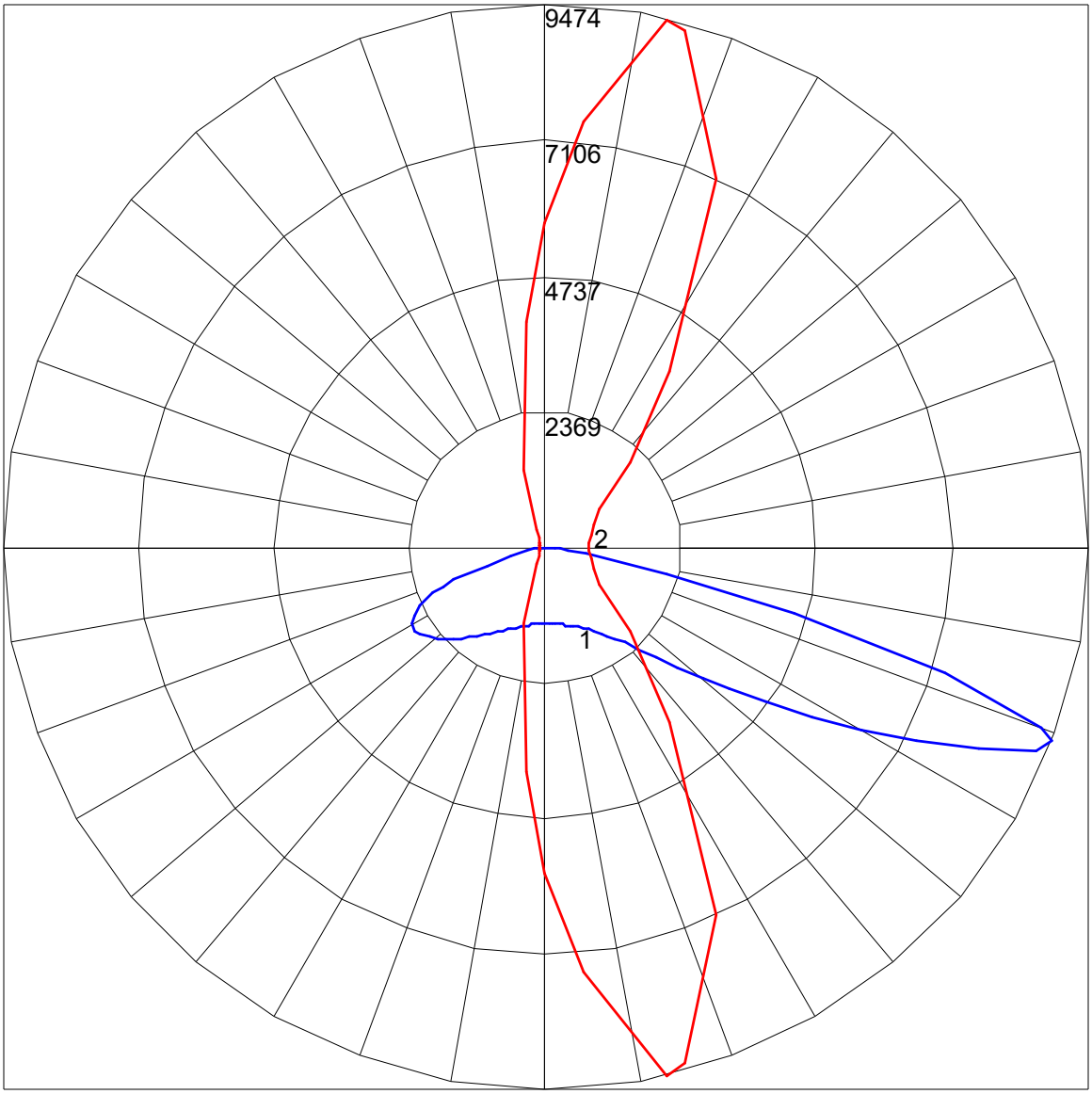


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	7087.9	69.8
Downward House Side	3064.4	30.2
Downward Total	10152.3	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	10152.3	100.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

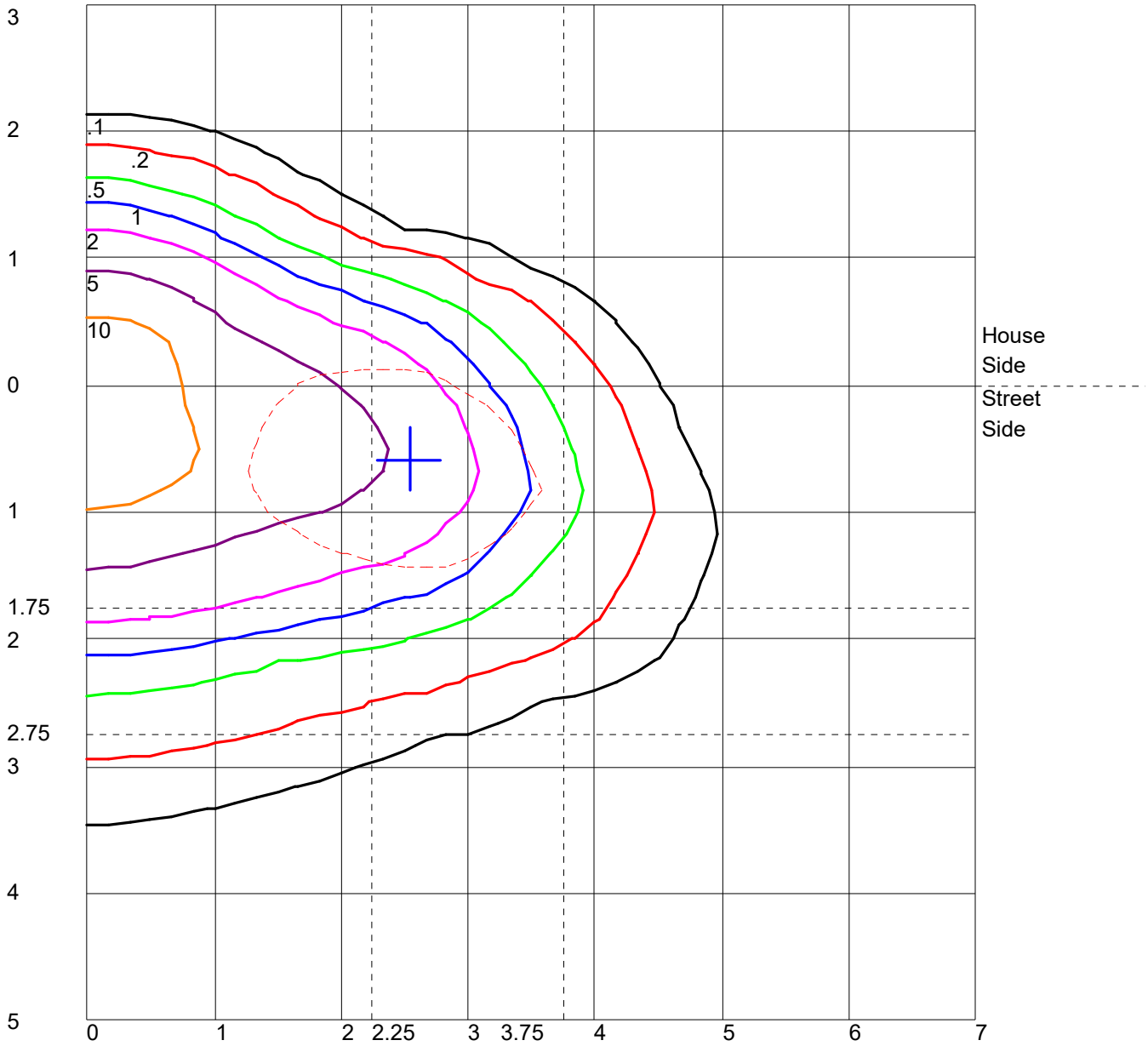
POLAR GRAPH



Maximum Candela = 9474 Located At Horizontal Angle = 77, Vertical Angle = 69
1 - Vertical Plane Through Horizontal Angles (77 - 257) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (69) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

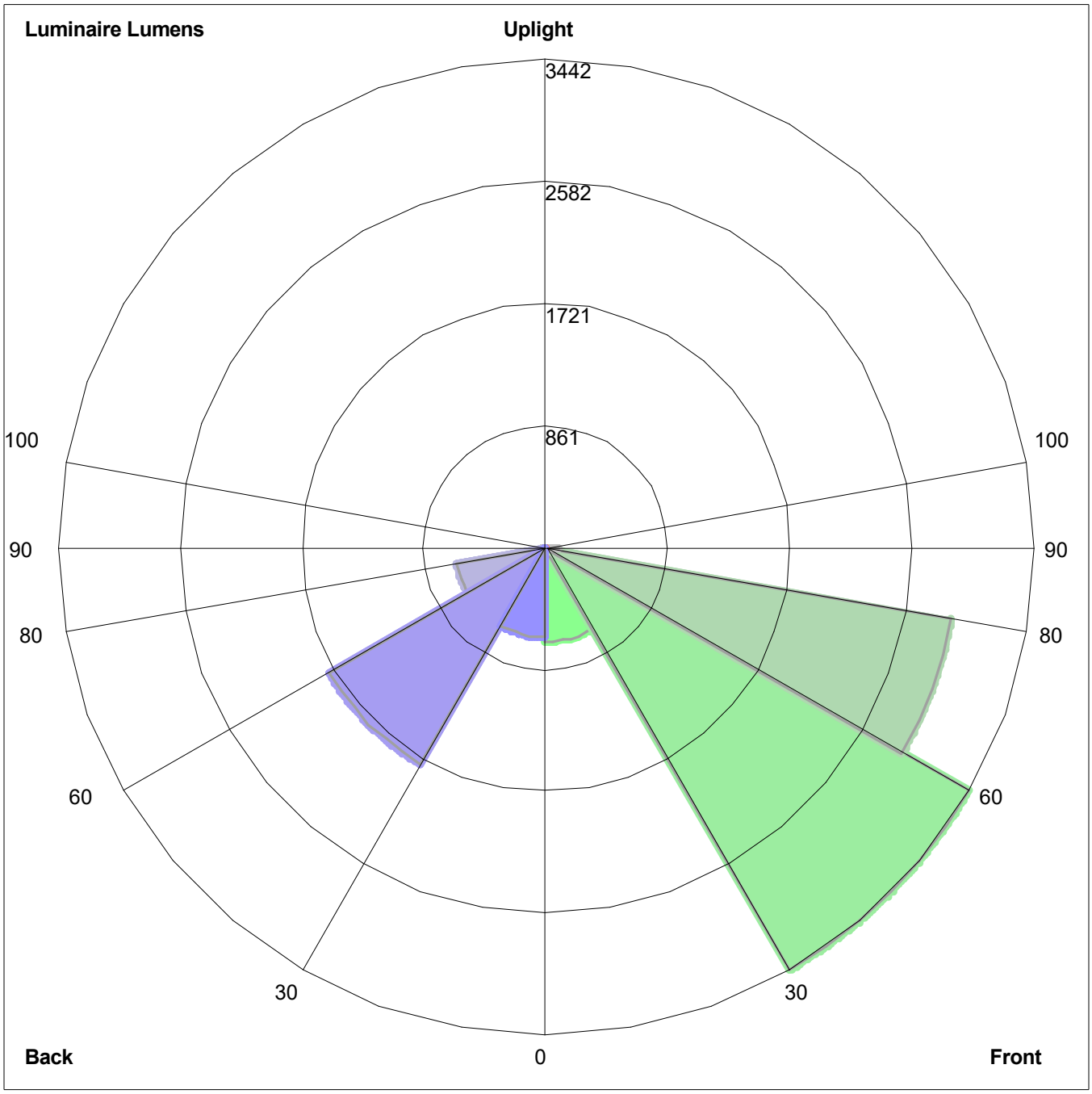
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-II-40LED-525MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=662.1, Medium=3442.2, High=2903.2, Very High=80.3
Back: Low=634.5, Medium=1765.7, High=636.2, Very High=28.0
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G2

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG

Type III W Low

RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

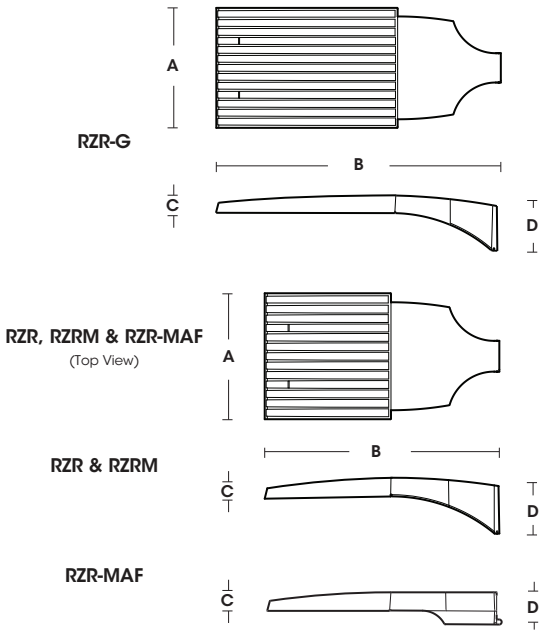
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



Fixture	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

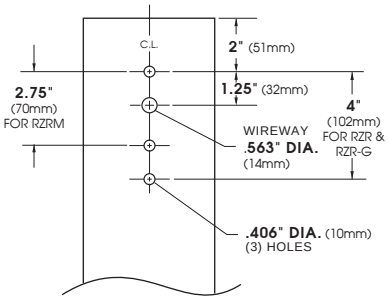
U.L. Listed for Wet Location

BABA COMPLIANT

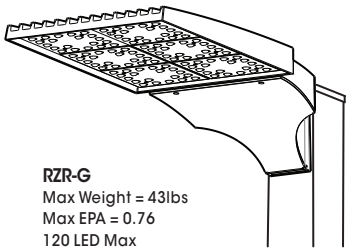
2024281

SPECIFICATIONS

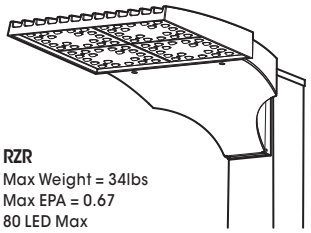
POLE DRILLING TEMPLATE



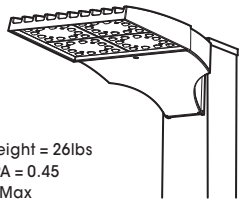
EPA & WEIGHT



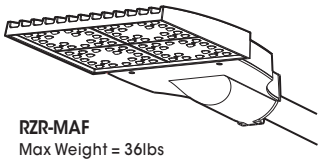
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



RZR
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

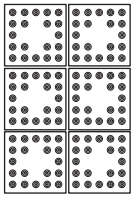


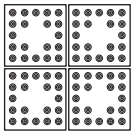
RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

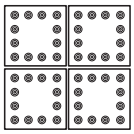


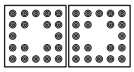
RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

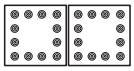
PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**
	PLED™ Distribution Type	# of LEDs / Drive Current / Color Temp - CCT		Arm Mount	Standard Textured Finish	
☐ RZR-G	☐ PLED-II	**RZR-G**	☐ UNV (120-277)	☐ 1	☐ Black **9005-T**	☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
	☐ PLED-II-FR	☐ 120LED	☐ 347	☐ 2-180	☐ White **9003-T**	☐ External Glare Shield 4 Sided **EGS4**
	☐ PLED-II-MIL	☐ 80LED	☐ 480	☐ 2-90	☐ Grey **7004-T**	☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**
☐ RZR	☐ PLED-III	Drive Current: ☐ 1400mA[1] ☐ 1225mA[1] ☐ 1050mA ☐ 875mA ☐ 700mA ☐ 525mA ☐ 350mA		☐ 3-90	☐ Dark Bronze **8019-T**	☐ Round Pole Adapter **RPA**
☐ RZR-MAF	☐ PLED-III-W	Color Temp - CCT: ☐ 27K (2700K) ☐ 30K (3000K) ☐ 40K (4000K) ☐ 50K (5000K)		☐ 3-120	☐ Green **6005-T**	☐ Twist Lock Receptable Only **TPR**
	☐ PLED-IV	**RZR / RZR-MAF**		☐ 4-90		☐ 7-Pin Twist Lock Receptable Only **TPR7**
	☐ PLED-IV-FT	☐ 80LED			Premium Finishes	☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
☐ RZRM	☐ PLED-VSQ-N	☐ 40LED		Wall Mount	☐ Rust	☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**
	☐ PLED-V-SQ-M	**RZRM**		☐ WM	☐ Patina Copper **PC**	☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
	☐ PLED-V-SQ-W	☐ 48LED			For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)	☐ Single Fuse (120V, 277V) **SF**
		☐ 24LED				☐ Double Fuse (208V, 240V) **DF**
		☐ TRA True Amber				☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

Consult Factory for Other LED Color, CCT, & CRI Options

NOTES:
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

WM - Wall Mount provided with mounting bracket and cover.

Consult factor for custom colors

ELECTRICAL DATA GUIDE - AMPERAGE CHART

ELECTRICAL LOAD			CURRENT (Amps)				
# of LEDs	mA	System Watts	120V	208V	277V	347V	480V
24	350	26	0.21	0.12	0.09	0.07	0.05
24	525	39	0.32	0.19	0.14	0.11	0.08
24	700	52	0.43	0.25	0.19	0.15	0.11
24	875	67	0.55	0.32	0.24	0.19	0.14
24	1050	81	0.67	0.39	0.29	0.23	0.17
48	350	52	0.43	0.25	0.19	0.15	0.11
48	525	78	0.65	0.37	0.28	0.22	0.16
48	700	104	0.87	0.50	0.38	0.30	0.22
48	875	133	1.11	0.64	0.48	0.38	0.28
48	1050	162	1.35	0.78	0.58	0.47	0.34
40	350	43	0.36	0.21	0.15	0.12	0.09
40	525	65	0.54	0.31	0.23	0.19	0.14
40	700	87	0.72	0.42	0.31	0.25	0.18
40	875	111	0.92	0.53	0.40	0.32	0.23
40	1050	135	1.12	0.65	0.49	0.39	0.28
40	1225	159	1.32	0.76	0.57	0.46	0.33
40	1400	183	1.53	0.88	0.66	0.53	0.38
80	350	86	0.72	0.41	0.31	0.25	0.18
80	525	130	1.08	0.62	0.47	0.37	0.27
80	700	174	1.45	0.83	0.63	0.50	0.36
80	875	222	1.85	1.06	0.80	0.64	0.46
80	1050	270	2.25	1.30	0.97	0.78	0.56
80	1225	318	2.65	1.53	1.15	0.92	0.66
80	1400	366	3.05	1.76	1.32	1.06	0.76
120	350	129	1.07	0.62	0.46	0.37	0.27
120	525	195	1.62	0.94	0.70	0.56	0.41
120	700	260	2.17	1.25	0.94	0.75	0.54
120	875	332	2.77	1.60	1.20	0.96	0.69
120	1050	404	3.37	1.94	1.46	1.17	0.84
120	1225	477	3.97	2.29	1.72	1.37	0.99
120	1400	549	4.58	2.64	1.98	1.58	1.14

PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

LED LUMEN MAINTENANCE (350mA to 1050mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L96	0.96x
100,000 (6X LED Test Hrs)	L93	0.93x
150,000 (Theoretical)	L89	0.90x
200,000 (Theoretical)	L86	0.87x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.

LED LUMEN MAINTENANCE (1225mA & 1400mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L93	0.93x
100,000 (6X LED Test Hrs)	L89	0.89x
150,000 (Theoretical)	L84	0.84x
200,000 (Theoretical)	L80	0.80x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html

Photometric Toolbox

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] ITL88707-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-III-W-40LED-525mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 64.8 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 9592
[_BUGRATING] LCS B2-U0-G3 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9592
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	64.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	9075
Maximum Candela Angle	68H 75V
Maximum Candela (<90 Degrees Vertical)	9075
Maximum Candela Angle (<90 Degrees Vertical)	68H 75V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	3735 (38.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	601.8	N.A.	6.3
FM - Front-Medium (30-60)	2726.9	N.A.	28.4
FH - Front-High (60-80)	3904.9	N.A.	40.7
FVH - Front-Very High (80-90)	246.6	N.A.	2.6
BL - Back-Low (0-30)	613.2	N.A.	6.4
BM - Back-Medium (30-60)	1122.3	N.A.	11.7
BH - Back-High (60-80)	349.3	N.A.	3.6
BVH - Back-Very High (80-90)	27.0	N.A.	0.3
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	9592.0	N.A.	100.0
BUG Rating	B2-U0-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**68**	**75**
0.0	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283
2.5	1293	1293	1292	1293	1292	1290	1290	1290	1290	1292
5.0	1296	1298	1296	1299	1300	1300	1300	1302	1300	1303
7.5	1288	1292	1292	1299	1306	1311	1315	1318	1318	1319
10.0	1273	1277	1283	1295	1309	1322	1332	1341	1341	1341
12.5	1262	1266	1276	1295	1316	1335	1352	1364	1365	1364
15.0	1265	1269	1277	1300	1329	1352	1375	1391	1394	1395
17.5	1273	1280	1293	1318	1351	1378	1405	1427	1431	1434
20.0	1290	1296	1315	1346	1384	1414	1447	1473	1479	1482
22.5	1315	1323	1342	1380	1424	1463	1502	1530	1535	1532
25.0	1351	1358	1380	1423	1471	1515	1569	1598	1597	1578
27.5	1403	1408	1430	1473	1522	1572	1647	1668	1653	1621
30.0	1476	1489	1499	1542	1582	1631	1723	1720	1697	1673
32.5	1565	1575	1588	1628	1663	1701	1776	1753	1737	1727
35.0	1647	1663	1676	1716	1760	1792	1822	1773	1766	1776
37.5	1753	1763	1772	1813	1865	1891	1882	1816	1805	1828
40.0	1871	1884	1893	1933	1980	2003	1966	1888	1875	1907
42.5	2007	2020	2033	2081	2121	2141	2082	1999	1979	2013
45.0	2140	2153	2176	2227	2276	2302	2223	2134	2115	2151
47.5	2272	2289	2316	2372	2439	2476	2388	2306	2291	2319
50.0	2414	2433	2464	2538	2605	2667	2585	2522	2515	2536
52.5	2552	2574	2610	2697	2789	2877	2822	2775	2775	2753
55.0	2686	2722	2763	2857	2976	3108	3114	3075	3081	3008
57.5	2817	2855	2924	3034	3166	3353	3457	3470	3456	3324
60.0	2887	2926	3028	3200	3391	3618	3866	3942	3919	3680
62.5	2926	2962	3104	3334	3617	3932	4284	4499	4460	4139
65.0	2901	2933	3117	3436	3820	4325	4708	5088	5041	4646
67.5	2686	2732	2907	3315	3942	4712	5323	5744	5722	5360
70.0	2312	2354	2429	2750	3618	5011	6112	6814	6843	6665
72.5	1658	1707	1724	1957	2589	4695	6780	8326	8355	7988
75.0	868	933	980	1285	1670	3141	6454	8974	9075	8445
77.5	466	483	502	703	1102	1898	4673	7188	7254	6346
80.0	328	300	326	398	647	1242	2473	3735	3700	2815
82.5	135	129	187	224	303	651	1371	1835	1699	947
85.0	52	49	80	106	149	286	697	842	734	374
87.5	26	26	47	45	50	109	282	335	290	157
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	85	**90**	**95**	**105**	**115**	**125**	**135**	**145**	**155**	**165**
0.0	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283
2.5	1290	1288	1286	1286	1283	1283	1275	1279	1276	1272
5.0	1298	1293	1292	1290	1285	1282	1272	1273	1272	1269
7.5	1311	1306	1302	1295	1288	1283	1273	1279	1279	1277
10.0	1329	1321	1315	1303	1295	1292	1288	1296	1300	1303
12.5	1351	1339	1331	1316	1309	1311	1315	1328	1338	1345
15.0	1378	1365	1354	1338	1335	1346	1358	1381	1395	1403
17.5	1418	1403	1385	1367	1371	1395	1420	1448	1461	1469
20.0	1459	1438	1418	1400	1413	1451	1484	1515	1523	1523
22.5	1494	1471	1456	1444	1463	1503	1538	1562	1563	1558
25.0	1539	1523	1512	1503	1517	1548	1566	1581	1575	1565
27.5	1597	1589	1579	1561	1562	1575	1571	1569	1553	1539

CANDELA TABULATION - (Cont.)

30.0	1664	1660	1647	1609	1586	1575	1542	1517	1492	1476
32.5	1740	1732	1706	1641	1585	1536	1476	1437	1401	1380
35.0	1811	1792	1753	1647	1551	1464	1388	1338	1295	1270
37.5	1874	1848	1786	1621	1482	1365	1282	1227	1186	1164
40.0	1950	1901	1806	1568	1385	1249	1160	1111	1076	1075
42.5	2026	1950	1815	1492	1267	1115	1029	983	951	976
45.0	2115	1997	1809	1404	1125	967	887	838	812	813
47.5	2214	2043	1805	1306	977	822	739	688	662	641
50.0	2319	2102	1819	1194	816	674	605	542	507	487
52.5	2443	2197	1859	1052	658	545	474	410	379	351
55.0	2607	2328	1913	871	522	431	358	299	270	257
57.5	2808	2485	1964	683	415	328	266	224	204	200
60.0	3044	2660	2010	512	325	244	201	170	151	155
62.5	3327	2873	2043	389	250	193	155	141	126	128
65.0	3710	3164	2061	299	198	155	129	121	112	114
67.5	4399	3663	2091	236	161	135	118	115	103	102
70.0	5275	4208	2041	181	134	124	119	109	95	92
72.5	5964	4473	1801	138	112	112	121	105	86	80
75.0	5728	4022	1292	111	98	106	115	98	78	70
77.5	3620	2337	661	92	88	101	108	92	69	59
80.0	1016	759	277	80	73	95	102	82	60	46
82.5	315	241	128	57	62	85	92	72	50	36
85.0	135	96	82	39	50	68	68	53	36	23
87.5	33	32	32	24	30	42	42	32	20	10
90.0	0	0	0	0	0	0	0	0	0	0

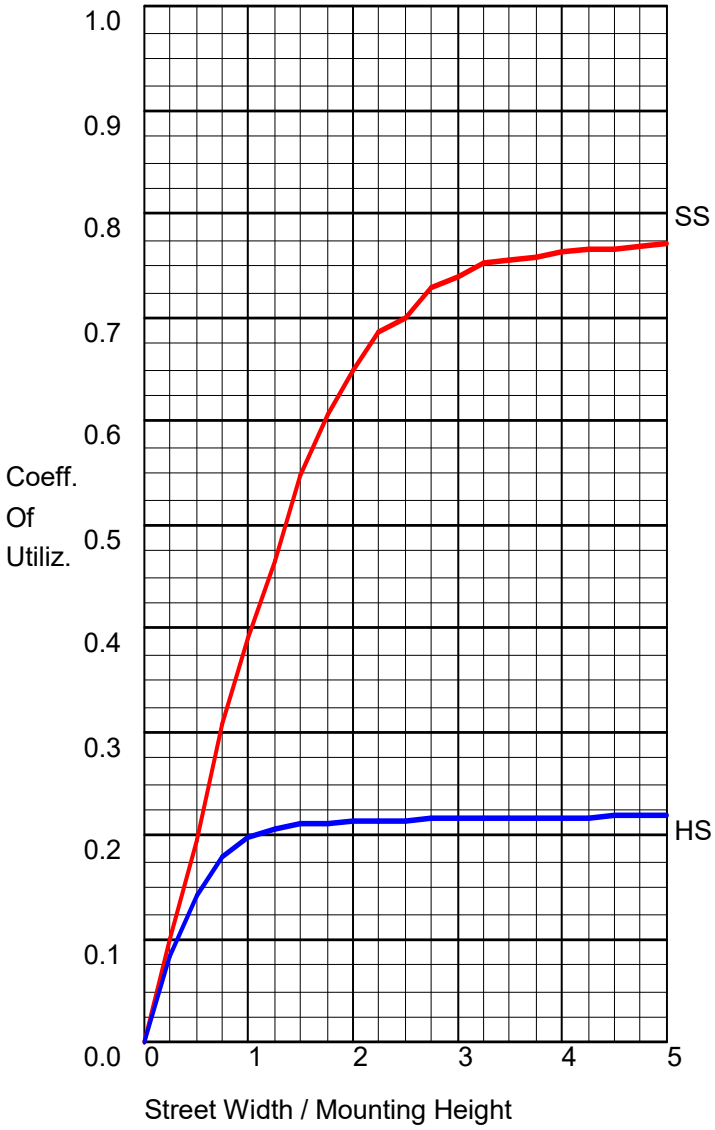
Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	1283	1283
2.5	1273	1267
5.0	1269	1263
7.5	1282	1276
10.0	1308	1303
12.5	1351	1346
15.0	1410	1408
17.5	1474	1471
20.0	1526	1523
22.5	1558	1556
25.0	1563	1562
27.5	1538	1536
30.0	1471	1470
32.5	1375	1371
35.0	1263	1260
37.5	1164	1170
40.0	1108	1112
42.5	979	987
45.0	798	808
47.5	635	639
50.0	474	489
52.5	358	366
55.0	274	285
57.5	213	211
60.0	168	168
62.5	137	137
65.0	115	115

CANDELA TABULATION - (Cont.)

67.5	102	102
70.0	91	91
72.5	79	78
75.0	69	66
77.5	56	53
80.0	40	39
82.5	24	22
85.0	10	9
87.5	1	0
90.0	0	0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

COEFFICIENTS OF UTILIZATION

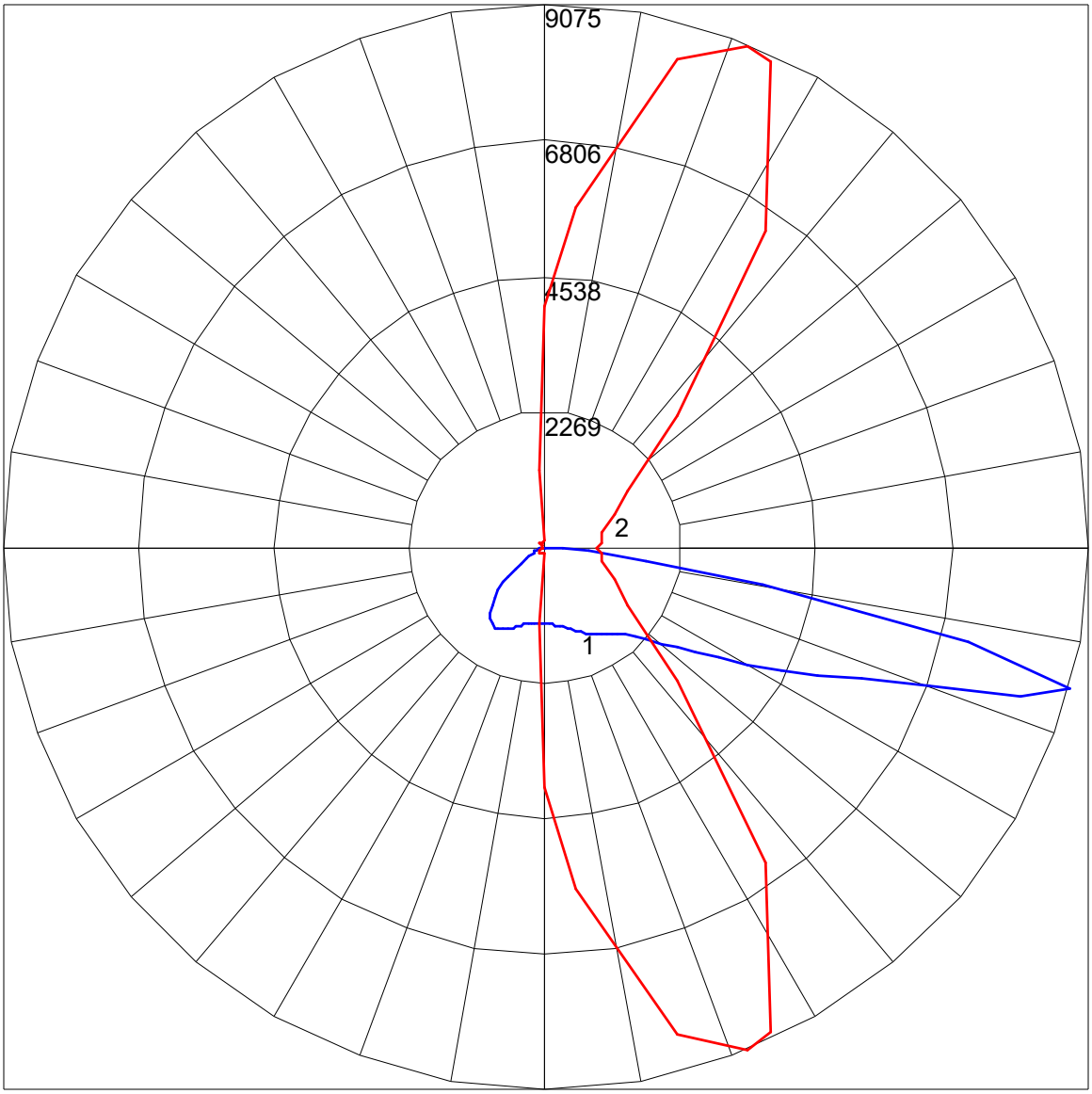


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	7480.1	78.0
Downward House Side	2111.8	22.0
Downward Total	9591.9	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	9591.9	100.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

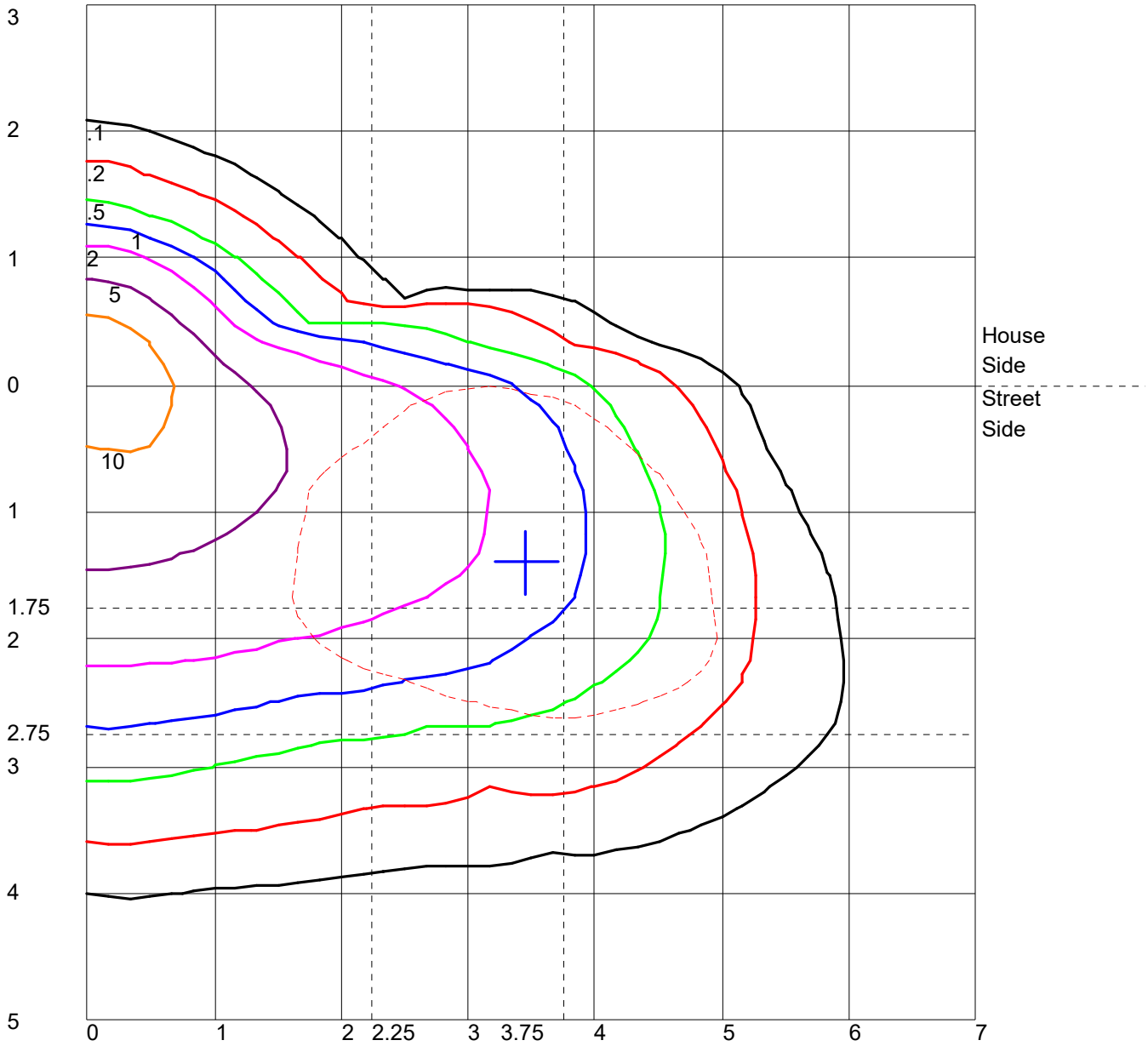
POLAR GRAPH



Maximum Candela = 9075 Located At Horizontal Angle = 68, Vertical Angle = 75
1 - Vertical Plane Through Horizontal Angles (68 - 248) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (75) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

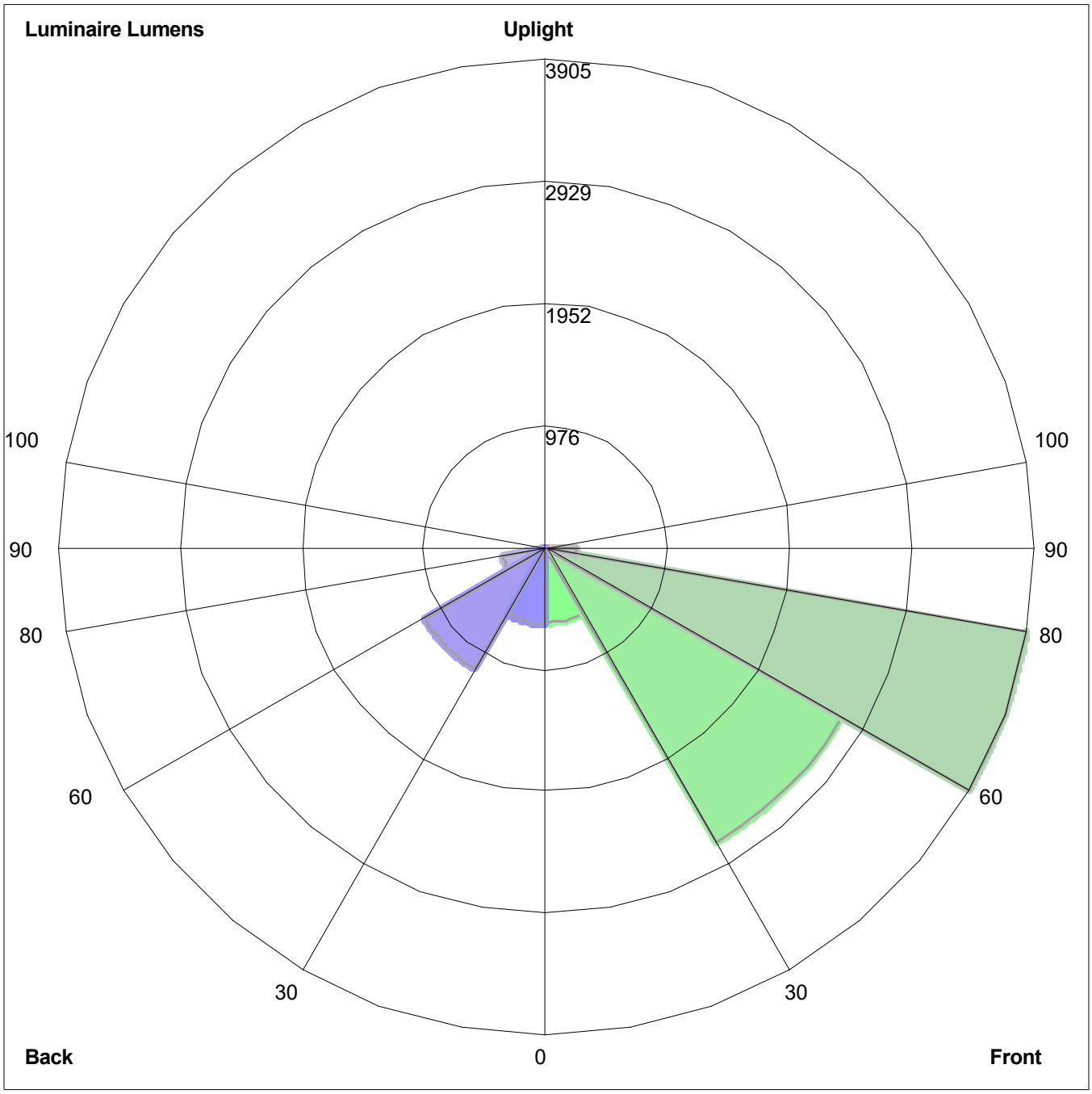
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-525MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=601.8, Medium=2726.9, High=3904.9, Very High=246.6
Back: Low=613.2, Medium=1122.3, High=349.3, Very High=27.0
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG

Type III W

RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

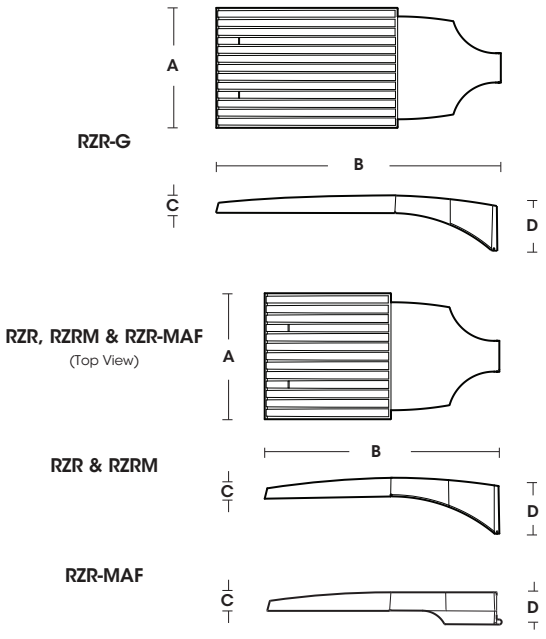
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



Fixture	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

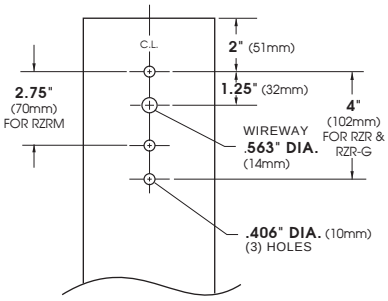
U.L. Listed for Wet Location

BABA COMPLIANT

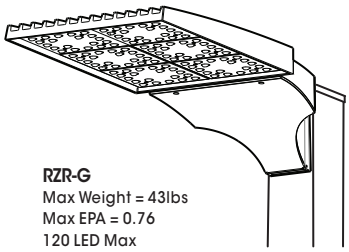
2024281

SPECIFICATIONS

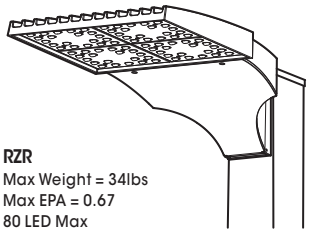
POLE DRILLING TEMPLATE



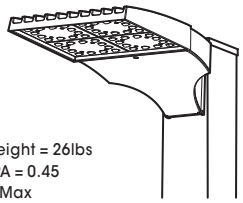
EPA & WEIGHT



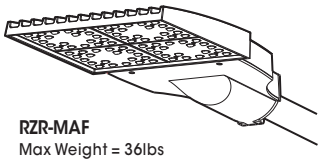
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



RZR
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

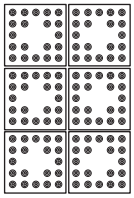


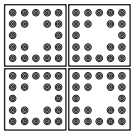
RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

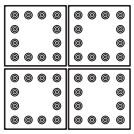


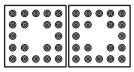
RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

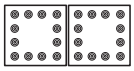
PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**

Luminaire

- ☐ RZR-G
- ☐ RZR
- ☐ RZR-MAF
- ☐ RZRM

Optics

PLED™ Distribution Type

- ☐ PLED-II
- ☐ PLED-II-FR
- ☐ PLED-II-MIL
- ☐ PLED-III
- ☐ PLED-III-W
- ☐ PLED-IV
- ☐ PLED-IV-FT
- ☐ PLED-VSQ-N
- ☐ PLED-V-SQ-M
- ☐ PLED-V-SQ-W

LED

# of LEDs

RZR-G
- ☐ 120LED
- ☐ 80LED

RZR / RZR-MAF
- ☐ 80LED
- ☐ 40LED

RZRM
- ☐ 48LED
- ☐ 24LED

Drive Current
- ☐ 1400mA[1]
- ☐ 1225mA[1]
- ☐ 1050mA
- ☐ 875mA
- ☐ 700mA
- ☐ 525mA
- ☐ 350mA

Color Temp - CCT
- ☐ 27K (2700K)
- ☐ 30K (3000K)
- ☐ 40K (4000K)
- ☐ 50K (5000K)
- ☐ TRA True Amber

Consult Factory for Other LED Color, CCT, & CRI Options

NOTES:
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

Voltage

- ☐ UNV (120-277)
- ☐ 347
- ☐ 480

Mounting

Arm Mount
- ☐ 1
- ☐ 2-180
- ☐ 2-90
- ☐ 3-90
- ☐ 3-120
- ☐ 4-90

Wall Mount
- ☐ WM

WM - Wall Mount provided with mounting bracket and cover.

Finish

Standard Textured Finish
- ☐ Black 9005-T
- ☐ White 9003-T
- ☐ Grey 7004-T
- ☐ Dark Bronze 8019-T
- ☐ Green 6005-T

Premium Finishes
- ☐ Rust
- ☐ Patina Copper PC

For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)

Consult factor for custom colors

Options

- ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
- ☐ External Glare Shield 4 Sided **EGS4**
- ☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**
- ☐ Round Pole Adapter **RPA**
- ☐ Twist Lock Receptable Only **TPR**
- ☐ 7-Pin Twist Lock Receptable Only **TPR7**
- ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
- ☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**
- ☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
- ☐ Single Fuse (120V, 277V) **SF**
- ☐ Double Fuse (208V, 240V) **DF**
- ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

ELECTRICAL DATA GUIDE - AMPERAGE CHART

ELECTRICAL LOAD			CURRENT (Amps)				
# of LEDs	mA	System Watts	120V	208V	277V	347V	480V
24	350	26	0.21	0.12	0.09	0.07	0.05
24	525	39	0.32	0.19	0.14	0.11	0.08
24	700	52	0.43	0.25	0.19	0.15	0.11
24	875	67	0.55	0.32	0.24	0.19	0.14
24	1050	81	0.67	0.39	0.29	0.23	0.17
48	350	52	0.43	0.25	0.19	0.15	0.11
48	525	78	0.65	0.37	0.28	0.22	0.16
48	700	104	0.87	0.50	0.38	0.30	0.22
48	875	133	1.11	0.64	0.48	0.38	0.28
48	1050	162	1.35	0.78	0.58	0.47	0.34
40	350	43	0.36	0.21	0.15	0.12	0.09
40	525	65	0.54	0.31	0.23	0.19	0.14
40	700	87	0.72	0.42	0.31	0.25	0.18
40	875	111	0.92	0.53	0.40	0.32	0.23
40	1050	135	1.12	0.65	0.49	0.39	0.28
40	1225	159	1.32	0.76	0.57	0.46	0.33
40	1400	183	1.53	0.88	0.66	0.53	0.38
80	350	86	0.72	0.41	0.31	0.25	0.18
80	525	130	1.08	0.62	0.47	0.37	0.27
80	700	174	1.45	0.83	0.63	0.50	0.36
80	875	222	1.85	1.06	0.80	0.64	0.46
80	1050	270	2.25	1.30	0.97	0.78	0.56
80	1225	318	2.65	1.53	1.15	0.92	0.66
80	1400	366	3.05	1.76	1.32	1.06	0.76
120	350	129	1.07	0.62	0.46	0.37	0.27
120	525	195	1.62	0.94	0.70	0.56	0.41
120	700	260	2.17	1.25	0.94	0.75	0.54
120	875	332	2.77	1.60	1.20	0.96	0.69
120	1050	404	3.37	1.94	1.46	1.17	0.84
120	1225	477	3.97	2.29	1.72	1.37	0.99
120	1400	549	4.58	2.64	1.98	1.58	1.14

PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

LED LUMEN MAINTENANCE (350mA to 1050mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L96	0.96x
100,000 (6X LED Test Hrs)	L93	0.93x
150,000 (Theoretical)	L89	0.90x
200,000 (Theoretical)	L86	0.87x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.

LED LUMEN MAINTENANCE (1225mA & 1400mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L93	0.93x
100,000 (6X LED Test Hrs)	L89	0.89x
150,000 (Theoretical)	L84	0.84x
200,000 (Theoretical)	L80	0.80x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html

Photometric Toolbox

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] ITL88707-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-III-W-40LED-700mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 86.8 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 12142
[_BUGRATING] LCS B2-U0-G3 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12142
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	86.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	11487
Maximum Candela Angle	68H 75V
Maximum Candela (<90 Degrees Vertical)	11487
Maximum Candela Angle (<90 Degrees Vertical)	68H 75V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	4728 (38.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	761.7	N.A.	6.3
FM - Front-Medium (30-60)	3451.8	N.A.	28.4
FH - Front-High (60-80)	4942.8	N.A.	40.7
FVH - Front-Very High (80-90)	312.1	N.A.	2.6
BL - Back-Low (0-30)	776.2	N.A.	6.4
BM - Back-Medium (30-60)	1420.6	N.A.	11.7
BH - Back-High (60-80)	442.1	N.A.	3.6
BVH - Back-Very High (80-90)	34.2	N.A.	0.3
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	12141.5	N.A.	100.0
BUG Rating	B2-U0-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**68**	**75**
0.0	1624	1624	1624	1624	1624	1624	1624	1624	1624	1624
2.5	1637	1637	1635	1637	1635	1633	1633	1633	1633	1635
5.0	1641	1643	1641	1644	1646	1646	1646	1648	1646	1650
7.5	1630	1635	1635	1644	1653	1659	1664	1668	1668	1670
10.0	1612	1617	1624	1639	1657	1673	1686	1697	1697	1697
12.5	1597	1603	1615	1639	1666	1690	1712	1726	1728	1726
15.0	1601	1606	1617	1646	1683	1712	1741	1761	1764	1766
17.5	1612	1621	1637	1668	1710	1744	1779	1806	1812	1815
20.0	1633	1641	1664	1704	1752	1790	1832	1864	1872	1875
22.5	1664	1675	1699	1746	1803	1852	1901	1937	1943	1939
25.0	1710	1719	1746	1801	1863	1917	1986	2023	2021	1997
27.5	1775	1783	1810	1864	1926	1990	2085	2112	2092	2052
30.0	1868	1884	1897	1952	2003	2065	2181	2177	2148	2117
32.5	1981	1994	2010	2061	2105	2154	2248	2219	2199	2186
35.0	2085	2105	2121	2172	2228	2268	2306	2245	2236	2248
37.5	2219	2232	2243	2296	2361	2394	2383	2299	2285	2314
40.0	2368	2385	2396	2447	2507	2536	2488	2390	2374	2414
42.5	2541	2558	2574	2634	2685	2710	2636	2530	2505	2548
45.0	2708	2725	2754	2819	2881	2914	2814	2701	2678	2723
47.5	2876	2898	2932	3003	3087	3134	3023	2919	2899	2936
50.0	3056	3080	3120	3212	3298	3376	3272	3192	3183	3211
52.5	3231	3258	3303	3414	3531	3642	3573	3512	3512	3485
55.0	3400	3445	3498	3616	3767	3934	3942	3893	3900	3807
57.5	3565	3614	3702	3840	4007	4244	4377	4393	4375	4207
60.0	3654	3703	3833	4051	4293	4580	4893	4990	4960	4658
62.5	3703	3749	3929	4220	4578	4977	5422	5695	5646	5239
65.0	3673	3713	3945	4349	4835	5475	5959	6441	6381	5881
67.5	3400	3458	3680	4196	4990	5965	6738	7271	7243	6785
70.0	2927	2980	3074	3482	4580	6343	7736	8626	8662	8437
72.5	2099	2161	2183	2477	3278	5943	8582	10539	10576	10112
75.0	1099	1181	1241	1626	2114	3976	8169	11360	11487	10690
77.5	589	611	635	889	1395	2403	5915	9099	9182	8033
80.0	415	380	413	504	819	1572	3130	4728	4684	3563
82.5	171	164	236	284	384	824	1735	2323	2150	1199
85.0	65	62	102	135	189	362	882	1066	930	473
87.5	33	33	60	56	64	138	357	424	367	198
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	85	**90**	**95**	**105**	**115**	**125**	**135**	**145**	**155**	**165**
0.0	1624	1624	1624	1624	1624	1624	1624	1624	1624	1624
2.5	1633	1630	1628	1628	1624	1624	1613	1619	1615	1610
5.0	1643	1637	1635	1633	1626	1623	1610	1612	1610	1606
7.5	1659	1653	1648	1639	1630	1624	1612	1619	1619	1617
10.0	1683	1672	1664	1650	1639	1635	1630	1641	1646	1650
12.5	1710	1695	1684	1666	1657	1659	1664	1681	1693	1703
15.0	1744	1728	1713	1693	1690	1704	1719	1748	1766	1775
17.5	1795	1775	1754	1730	1735	1766	1797	1834	1850	1859
20.0	1846	1821	1795	1772	1788	1837	1879	1917	1928	1928
22.5	1892	1863	1843	1828	1852	1903	1946	1977	1979	1972
25.0	1948	1928	1914	1903	1921	1959	1983	2001	1994	1981
27.5	2021	2012	1999	1975	1977	1994	1988	1986	1966	1948

CANDELA TABULATION - (Cont.)

30.0	2106	2101	2085	2037	2008	1994	1952	1921	1888	1868
32.5	2203	2192	2159	2077	2006	1945	1868	1819	1774	1746
35.0	2292	2268	2219	2085	1963	1854	1757	1693	1639	1608
37.5	2372	2339	2261	2052	1875	1728	1623	1553	1501	1473
40.0	2468	2407	2286	1985	1754	1581	1468	1406	1362	1361
42.5	2565	2468	2297	1888	1604	1412	1302	1244	1204	1235
45.0	2678	2528	2290	1777	1424	1224	1122	1060	1028	1030
47.5	2803	2587	2285	1653	1237	1040	935	871	839	811
50.0	2936	2661	2303	1512	1033	853	766	686	642	617
52.5	3092	2781	2354	1332	833	689	600	518	480	444
55.0	3300	2947	2421	1102	660	546	453	378	342	326
57.5	3554	3145	2487	864	526	415	337	284	258	253
60.0	3853	3367	2545	648	411	309	255	215	191	196
62.5	4211	3636	2587	493	317	244	196	178	160	162
65.0	4697	4005	2608	378	251	196	164	153	142	144
67.5	5568	4637	2647	298	204	171	149	146	131	129
70.0	6678	5326	2583	229	169	156	151	138	120	116
72.5	7549	5663	2279	175	142	142	153	133	109	102
75.0	7251	5091	1635	140	124	135	146	124	98	89
77.5	4582	2958	837	116	111	127	136	116	87	75
80.0	1286	960	351	102	93	120	129	104	76	58
82.5	398	306	162	73	78	107	116	91	64	45
85.0	171	122	104	49	64	85	85	67	45	29
87.5	42	40	40	31	38	53	53	40	25	13
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	1624	1624
2.5	1612	1604
5.0	1606	1599
7.5	1623	1615
10.0	1655	1650
12.5	1710	1704
15.0	1784	1783
17.5	1866	1863
20.0	1932	1928
22.5	1972	1970
25.0	1979	1977
27.5	1946	1945
30.0	1863	1861
32.5	1741	1735
35.0	1599	1595
37.5	1473	1481
40.0	1402	1408
42.5	1239	1250
45.0	1010	1022
47.5	804	809
50.0	600	618
52.5	453	464
55.0	347	360
57.5	269	267
60.0	213	213
62.5	173	173
65.0	146	146

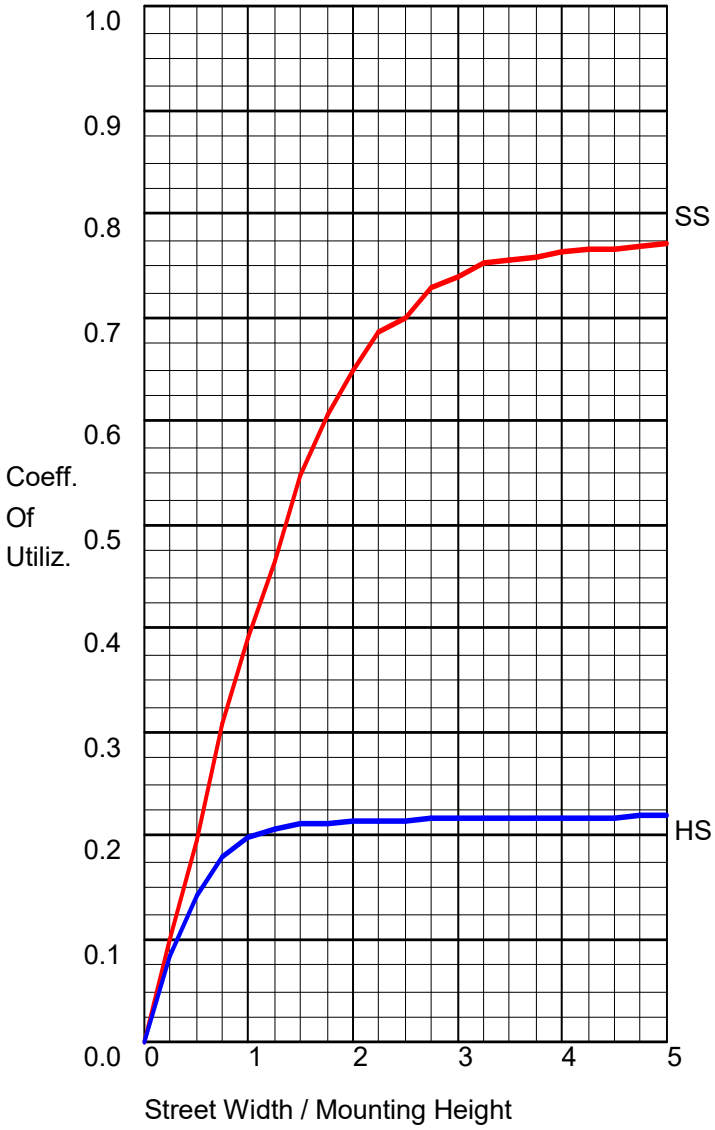
IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

CANDELA TABULATION - (Cont.)

67.5	129	129
70.0	115	115
72.5	100	98
75.0	87	84
77.5	71	67
80.0	51	49
82.5	31	27
85.0	13	11
87.5	2	0
90.0	0	0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

COEFFICIENTS OF UTILIZATION

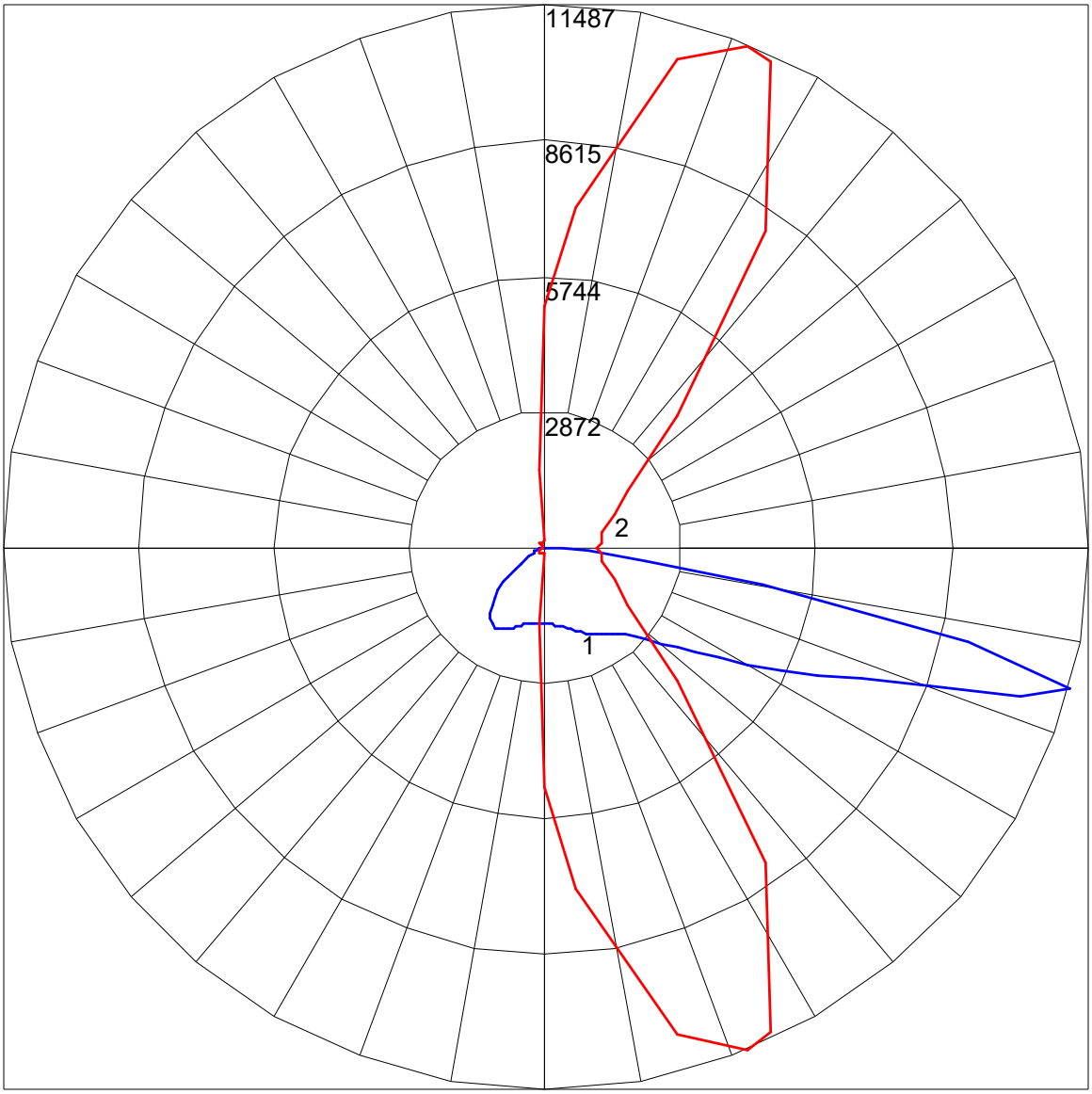


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	9468.5	78.0
Downward House Side	2673.0	22.0
Downward Total	12141.5	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	12141.5	100.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

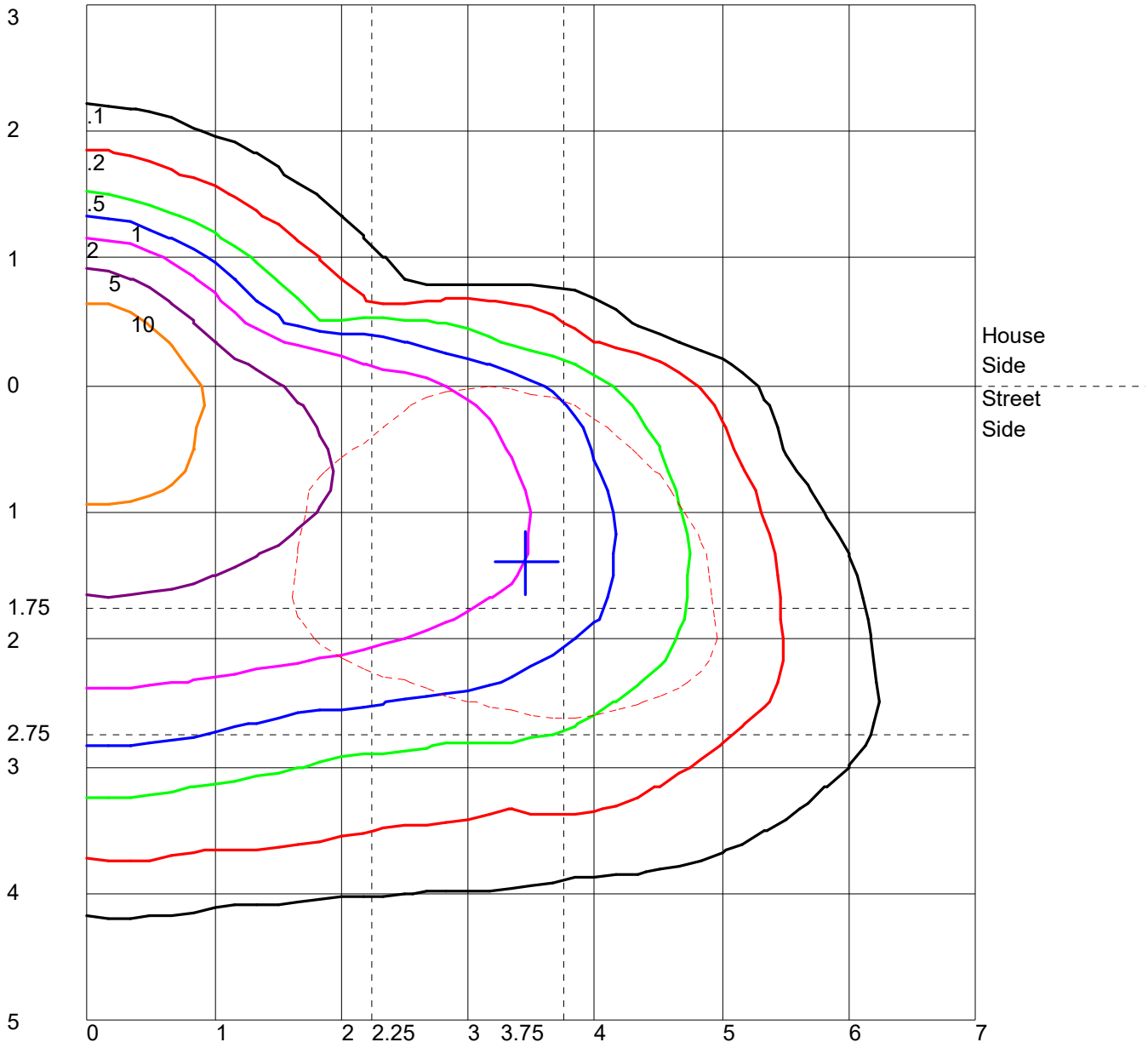
POLAR GRAPH



Maximum Candela = 11487 Located At Horizontal Angle = 68, Vertical Angle = 75
1 - Vertical Plane Through Horizontal Angles (68 - 248) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (75) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

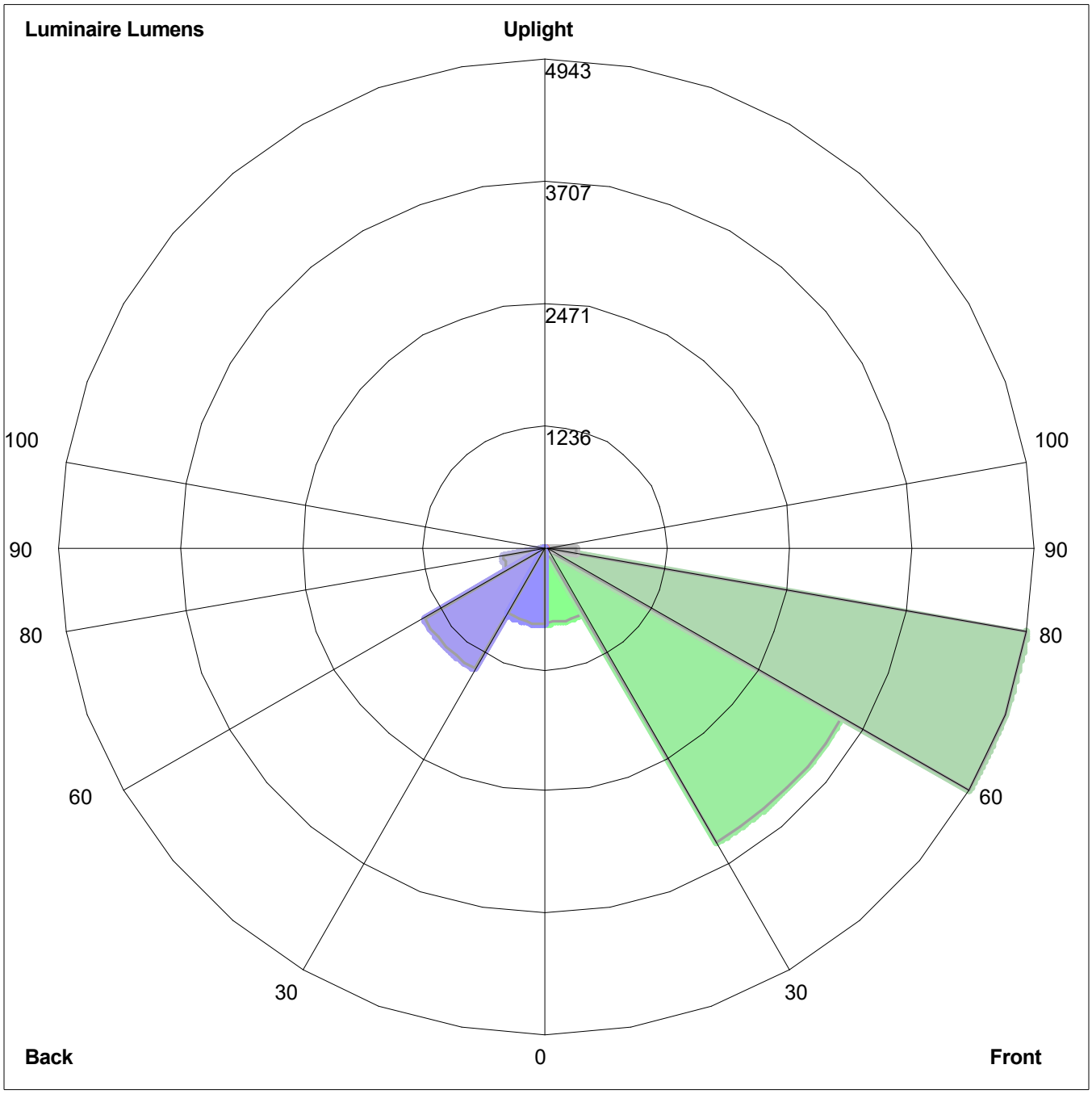
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-W-40LED-700MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=761.7, Medium=3451.8, High=4942.8, Very High=312.1
Back: Low=776.2, Medium=1420.6, High=442.1, Very High=34.2
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG

Type IV FT

RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

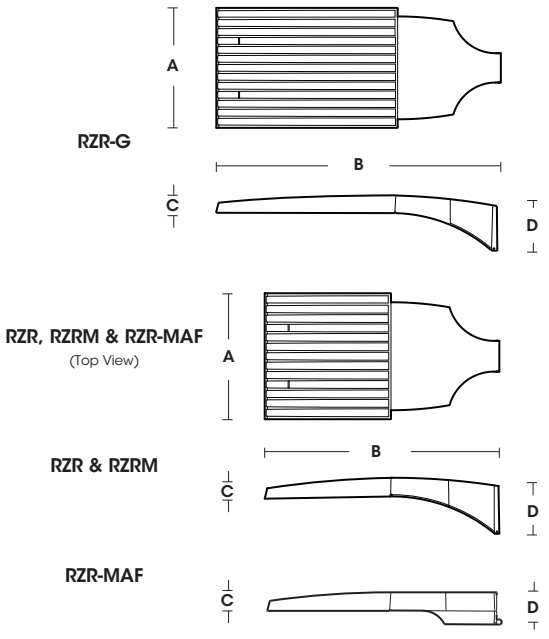
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



Fixture	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

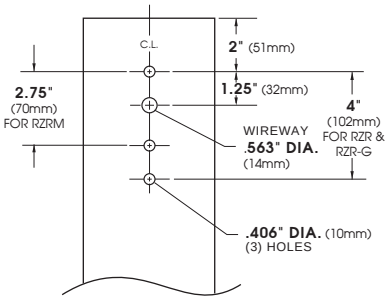
U.L. Listed for Wet Location

BABA COMPLIANT

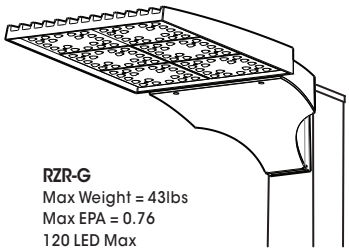
2024281

SPECIFICATIONS

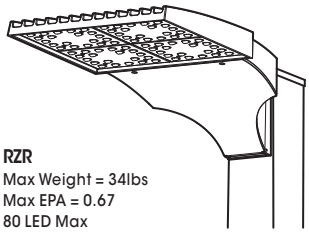
POLE DRILLING TEMPLATE



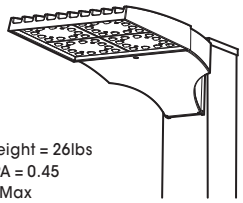
EPA & WEIGHT



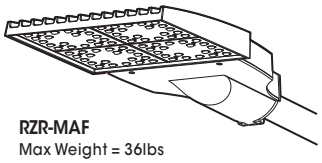
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



RZR
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

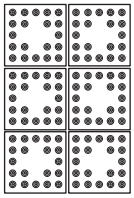


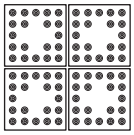
RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

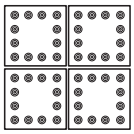


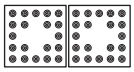
RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

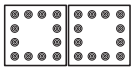
PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options

Luminaire

- ☐ RZR-G
- ☐ RZR
- ☐ RZR-MAF
- ☐ RZRM

Optics

PLED™ Distribution Type

- ☐ PLED-II
- ☐ PLED-II-FR
- ☐ PLED-II-MIL
- ☐ PLED-III
- ☐ PLED-III-W
- ☐ PLED-IV
- ☐ PLED-IV-FT
- ☐ PLED-VSQ-N
- ☐ PLED-V-SQ-M
- ☐ PLED-V-SQ-W

LED

# of LEDs	Drive Current	Color Temp - CCT
RZR-G		
☐ 120LED	☐ 1400mA[1]	☐ 27K (2700K)
☐ 80LED	☐ 1225mA[1]	☐ 30K (3000K)
	☐ 1050mA	☐ 40K (4000K)
	☐ 875mA	☐ 50K (5000K)
RZR / RZR-MAF	☐ 700mA	☐ TRA True Amber
☐ 80LED	☐ 525mA	Consult Factory for Other LED Color, CCT, & CRI Options
☐ 40LED	☐ 350mA	
RZRM		
☐ 48LED		
☐ 24LED		

NOTES:
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

Voltage

- ☐ UNV (120-277)
- ☐ 347
- ☐ 480

Mounting

Arm Mount

- ☐ 1
- ☐ 2-180
- ☐ 2-90
- ☐ 3-90
- ☐ 3-120
- ☐ 4-90

Wall Mount

- ☐ WM

WM - Wall Mount provided with mounting bracket and cover.

Finish

Standard Textured Finish

- ☐ Black **9005-T**
- ☐ White **9003-T**
- ☐ Grey **7004-T**
- ☐ Dark Bronze **8019-T**
- ☐ Green **6005-T**

Premium Finishes

- ☐ Rust
- ☐ Patina Copper **PC**

For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)

Consult factor for custom colors

Options

- ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
- ☐ External Glare Shield 4 Sided **EGS4**
- ☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**
- ☐ Round Pole Adapter **RPA**
- ☐ Twist Lock Receptable Only **TPR**
- ☐ 7-Pin Twist Lock Receptable Only **TPR7**
- ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
- ☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**
- ☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
- ☐ Single Fuse (120V, 277V) **SF**
- ☐ Double Fuse (208V, 240V) **DF**
- ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

ELECTRICAL DATA GUIDE - AMPERAGE CHART

ELECTRICAL LOAD			CURRENT (Amps)				
# of LEDs	mA	System Watts	120V	208V	277V	347V	480V
24	350	26	0.21	0.12	0.09	0.07	0.05
24	525	39	0.32	0.19	0.14	0.11	0.08
24	700	52	0.43	0.25	0.19	0.15	0.11
24	875	67	0.55	0.32	0.24	0.19	0.14
24	1050	81	0.67	0.39	0.29	0.23	0.17
48	350	52	0.43	0.25	0.19	0.15	0.11
48	525	78	0.65	0.37	0.28	0.22	0.16
48	700	104	0.87	0.50	0.38	0.30	0.22
48	875	133	1.11	0.64	0.48	0.38	0.28
48	1050	162	1.35	0.78	0.58	0.47	0.34
40	350	43	0.36	0.21	0.15	0.12	0.09
40	525	65	0.54	0.31	0.23	0.19	0.14
40	700	87	0.72	0.42	0.31	0.25	0.18
40	875	111	0.92	0.53	0.40	0.32	0.23
40	1050	135	1.12	0.65	0.49	0.39	0.28
40	1225	159	1.32	0.76	0.57	0.46	0.33
40	1400	183	1.53	0.88	0.66	0.53	0.38
80	350	86	0.72	0.41	0.31	0.25	0.18
80	525	130	1.08	0.62	0.47	0.37	0.27
80	700	174	1.45	0.83	0.63	0.50	0.36
80	875	222	1.85	1.06	0.80	0.64	0.46
80	1050	270	2.25	1.30	0.97	0.78	0.56
80	1225	318	2.65	1.53	1.15	0.92	0.66
80	1400	366	3.05	1.76	1.32	1.06	0.76
120	350	129	1.07	0.62	0.46	0.37	0.27
120	525	195	1.62	0.94	0.70	0.56	0.41
120	700	260	2.17	1.25	0.94	0.75	0.54
120	875	332	2.77	1.60	1.20	0.96	0.69
120	1050	404	3.37	1.94	1.46	1.17	0.84
120	1225	477	3.97	2.29	1.72	1.37	0.99
120	1400	549	4.58	2.64	1.98	1.58	1.14

PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

LED LUMEN MAINTENANCE (350mA to 1050mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L96	0.96x
100,000 (6X LED Test Hrs)	L93	0.93x
150,000 (Theoretical)	L89	0.90x
200,000 (Theoretical)	L86	0.87x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.

LED LUMEN MAINTENANCE (1225mA & 1400mA)		
LED Life / Operating Hours	Lumen Depreciation	Lumen Depreciation Scale Factor
60,000	L93	0.93x
100,000 (6X LED Test Hrs)	L89	0.89x
150,000 (Theoretical)	L84	0.84x
200,000 (Theoretical)	L80	0.80x

TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html

Photometric Toolbox

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] ITL89292-GONIOPHOTOMETRY
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-IV-FT-40LED-700mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 86.8 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 11822
[_BUGRATING] LCS B2-U0-G3 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11822
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	86.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	9681
Maximum Candela Angle	31.5H 74V
Maximum Candela (<90 Degrees Vertical)	9681
Maximum Candela Angle (<90 Degrees Vertical)	31.5H 74V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	3296 (27.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	805.6	N.A.	6.8
FM - Front-Medium (30-60)	3310.2	N.A.	28.0
FH - Front-High (60-80)	5006.4	N.A.	42.3
FVH - Front-Very High (80-90)	370.9	N.A.	3.1
BL - Back-Low (0-30)	792.9	N.A.	6.7
BM - Back-Medium (30-60)	1056.8	N.A.	8.9
BH - Back-High (60-80)	435.6	N.A.	3.7
BVH - Back-Very High (80-90)	43.9	N.A.	0.4
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	11822.3	N.A.	100.0
BUG Rating	B2-U0-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	**5.0**	**15.0**	**25.0**	**31.5**	**35.0**	**45.0**	**55.0**	**65.0**	**75.0**
0.0	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023
2.5	2006	2006	2005	1999	2003	2012	2005	2010	2015	2023
5.0	1974	1972	1972	1968	1975	1985	1981	1994	2006	2019
7.5	1939	1934	1934	1932	1939	1948	1950	1970	1992	2015
10.0	1901	1897	1897	1890	1899	1910	1915	1945	1977	2015
12.5	1864	1861	1854	1850	1857	1872	1886	1925	1972	2023
15.0	1821	1814	1806	1806	1814	1832	1857	1910	1974	2039
17.5	1768	1763	1754	1759	1775	1795	1839	1904	1986	2068
20.0	1726	1715	1699	1715	1743	1768	1830	1915	2012	2106
22.5	1713	1697	1659	1679	1715	1748	1834	1937	2048	2148
25.0	1728	1708	1644	1655	1699	1737	1843	1972	2095	2192
27.5	1770	1743	1663	1657	1701	1743	1864	2012	2146	2236
30.0	1817	1790	1710	1690	1728	1764	1892	2059	2203	2279
32.5	1879	1850	1781	1768	1784	1806	1926	2119	2268	2330
35.0	1934	1901	1846	1848	1854	1868	1975	2196	2356	2396
37.5	1925	1895	1864	1928	1939	1950	2054	2305	2476	2485
40.0	1923	1894	1886	2030	2061	2070	2170	2454	2632	2587
42.5	1970	1945	1974	2183	2245	2256	2348	2650	2796	2685
45.0	2048	2039	2117	2383	2503	2517	2610	2870	2961	2801
47.5	2172	2176	2296	2623	2818	2869	2943	3078	3123	2952
50.0	2367	2377	2539	2945	3225	3318	3298	3294	3332	3154
52.5	2643	2656	2845	3336	3614	3738	3660	3556	3600	3436
55.0	2996	3016	3212	3745	4031	4164	4051	3867	3938	3789
57.5	3460	3483	3689	4251	4551	4628	4482	4262	4362	4202
60.0	3947	3982	4204	4782	5111	5193	4957	4749	4891	4584
62.5	4431	4480	4735	5382	5739	5843	5561	5308	5302	4771
65.0	4995	5060	5359	6061	6461	6572	6254	5844	5519	4622
67.5	5723	5801	6135	6867	7251	7414	6987	6139	5328	4056
70.0	6568	6658	7043	7896	8322	8437	7496	5914	4471	3103
72.5	7241	7294	7880	9008	9450	9268	7212	4844	3196	2097
74.0	7247	7236	7927	9324	9681	9157	6343	3762	2408	1595
75.0	6927	6876	7571	9119	9364	8540	5430	3020	1954	1313
77.5	5066	4828	4882	6114	6290	5459	2885	1721	1075	715
80.0	2798	2896	2990	3296	3085	2634	1510	829	524	317
82.5	1864	1850	2097	2243	1988	1564	749	362	266	144
85.0	1017	1017	1250	1368	1166	835	313	167	149	100
87.5	422	427	535	551	418	258	85	56	56	40
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	85.0	**90.0**	**95.0**	**105.0**	**115.0**	**125.0**	**135.0**	**145.0**	**155.0**	**165.0**
0.0	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023
2.5	2026	2026	2026	2026	2032	2025	2026	2034	2032	2028
5.0	2026	2028	2032	2034	2039	2032	2032	2034	2026	2023
7.5	2032	2037	2039	2046	2048	2035	2026	2021	2010	1997
10.0	2039	2048	2057	2059	2057	2034	2015	2001	1981	1966
12.5	2059	2070	2077	2075	2065	2034	2001	1977	1950	1932
15.0	2086	2097	2105	2095	2070	2025	1983	1948	1914	1890
17.5	2121	2132	2134	2110	2070	2010	1957	1910	1868	1835
20.0	2159	2166	2165	2123	2059	1983	1917	1859	1804	1768
22.5	2196	2196	2183	2119	2034	1939	1855	1784	1726	1683
25.0	2228	2217	2190	2097	1981	1868	1772	1688	1626	1579

CANDELA TABULATION - (Cont.)

27.5	2252	2228	2186	2054	1904	1768	1663	1570	1508	1464
30.0	2270	2228	2168	1988	1799	1641	1532	1437	1381	1344
32.5	2292	2226	2136	1897	1668	1497	1386	1301	1251	1221
35.0	2314	2216	2088	1779	1515	1335	1228	1157	1121	1100
37.5	2332	2190	2012	1635	1341	1162	1066	1011	991	979
40.0	2341	2143	1912	1466	1155	993	906	873	868	866
42.5	2350	2092	1803	1275	966	833	764	746	757	773
45.0	2390	2074	1715	1086	791	678	646	640	671	709
47.5	2488	2119	1672	906	635	560	549	566	606	660
50.0	2668	2236	1690	749	508	453	466	511	566	624
52.5	2905	2428	1777	653	407	382	407	467	529	588
55.0	3218	2665	1894	595	338	331	367	429	489	542
57.5	3516	2892	2019	571	289	287	338	397	449	500
60.0	3734	3018	2035	538	262	269	309	360	407	453
62.5	3765	3005	1974	500	260	260	296	324	371	413
65.0	3505	2792	1824	469	293	249	267	302	342	375
67.5	2930	2345	1572	429	307	282	286	311	346	369
70.0	2165	1752	1228	395	313	338	331	340	369	378
72.5	1468	1204	891	346	282	333	366	382	344	317
74.0	1148	953	724	309	255	302	364	397	302	293
75.0	970	817	629	286	231	271	329	342	280	275
77.5	571	495	400	218	171	215	258	246	246	227
80.0	255	289	236	147	124	167	209	209	215	169
82.5	113	129	120	100	95	122	147	171	162	113
85.0	64	62	65	76	75	82	93	115	96	62
87.5	22	20	27	40	35	40	45	47	40	25
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**	
	175.0	**180.0**
0.0	2023	2023
2.5	2030	2032
5.0	2023	2023
7.5	1995	1995
10.0	1961	1961
12.5	1926	1925
15.0	1879	1881
17.5	1824	1824
20.0	1754	1755
22.5	1666	1668
25.0	1561	1563
27.5	1444	1448
30.0	1326	1332
32.5	1206	1213
35.0	1086	1093
37.5	973	977
40.0	869	869
42.5	788	793
45.0	737	744
47.5	700	708
50.0	664	673
52.5	631	638
55.0	582	586
57.5	531	537
60.0	484	487

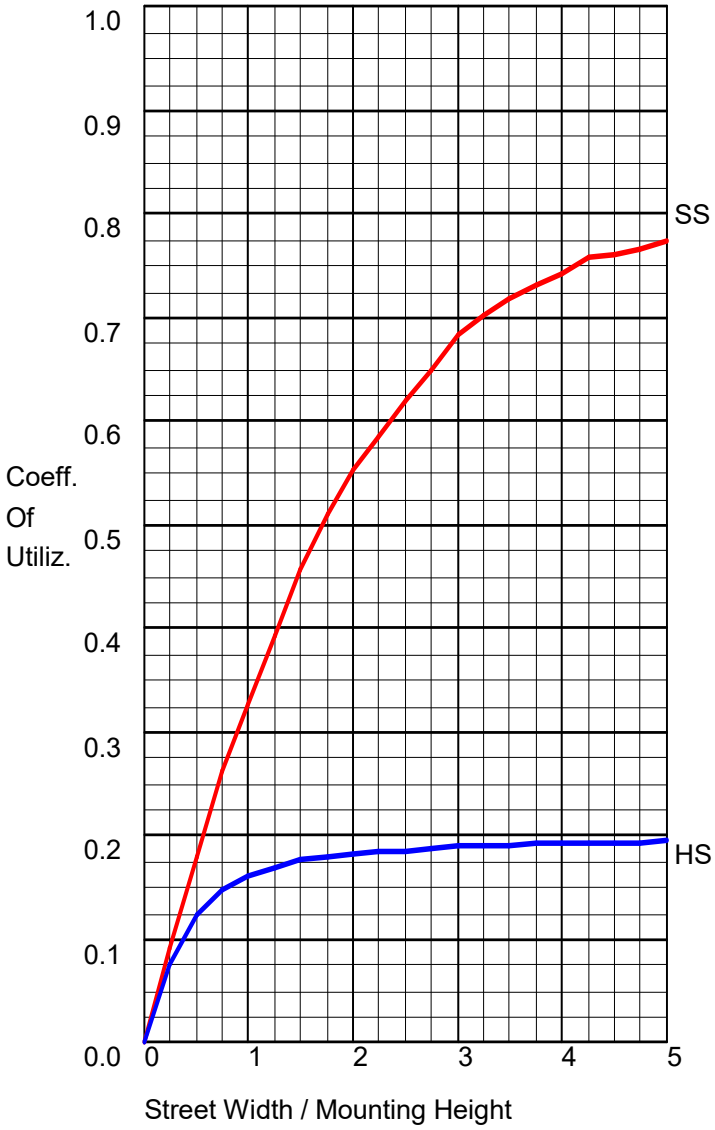
IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

CANDELA TABULATION - (Cont.)

62.5	433	435
65.0	384	384
67.5	367	367
70.0	369	369
72.5	326	333
74.0	302	302
75.0	280	280
77.5	231	233
80.0	153	140
82.5	73	64
85.0	20	9
87.5	5	0
90.0	0	0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

COEFFICIENTS OF UTILIZATION

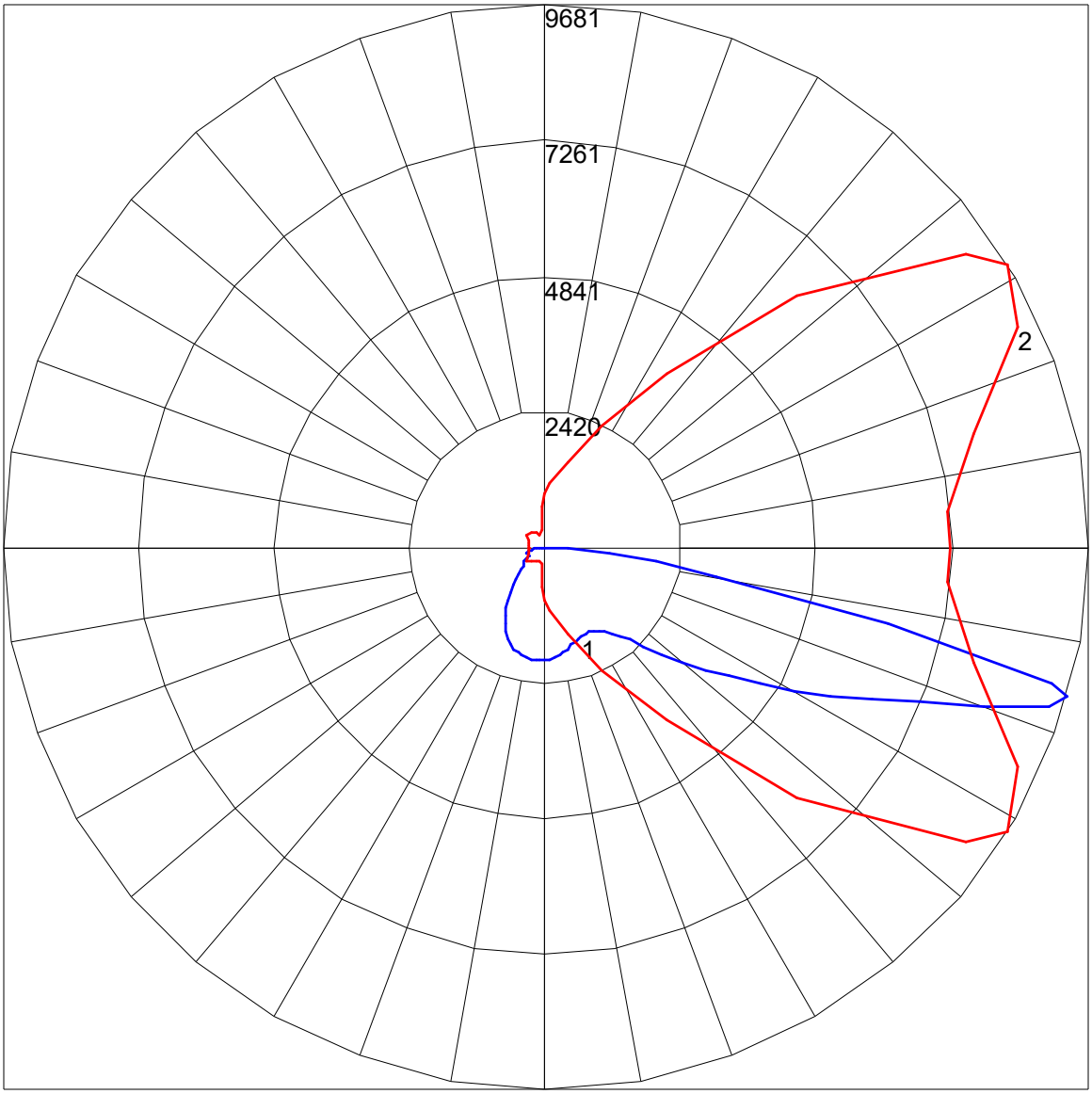


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	9493.1	80.3
Downward House Side	2329.1	19.7
Downward Total	11822.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	11822.2	100.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

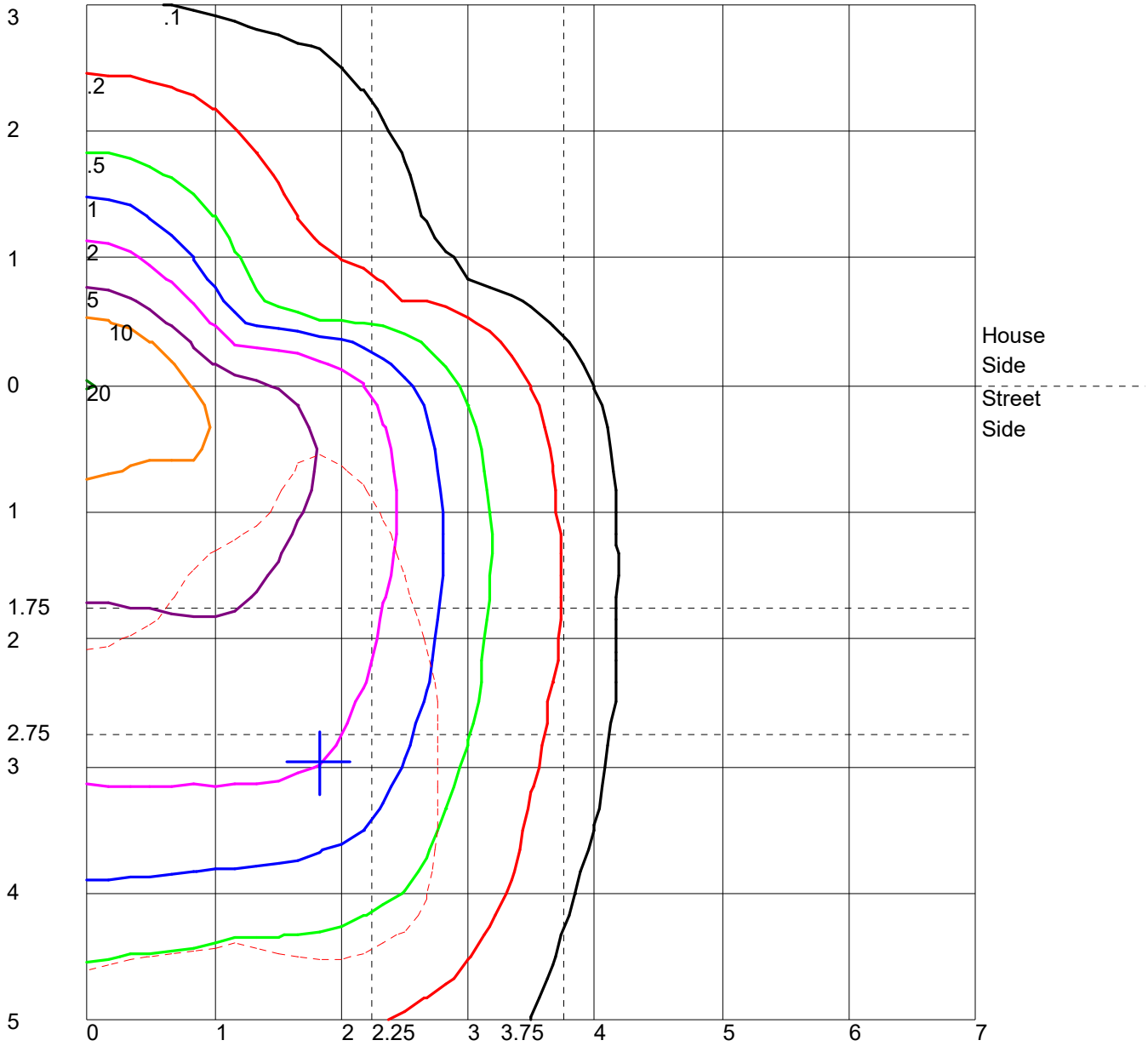
POLAR GRAPH



Maximum Candela = 9681 Located At Horizontal Angle = 31.5, Vertical Angle = 74
1 - Vertical Plane Through Horizontal Angles (31.5 - 211.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (74) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

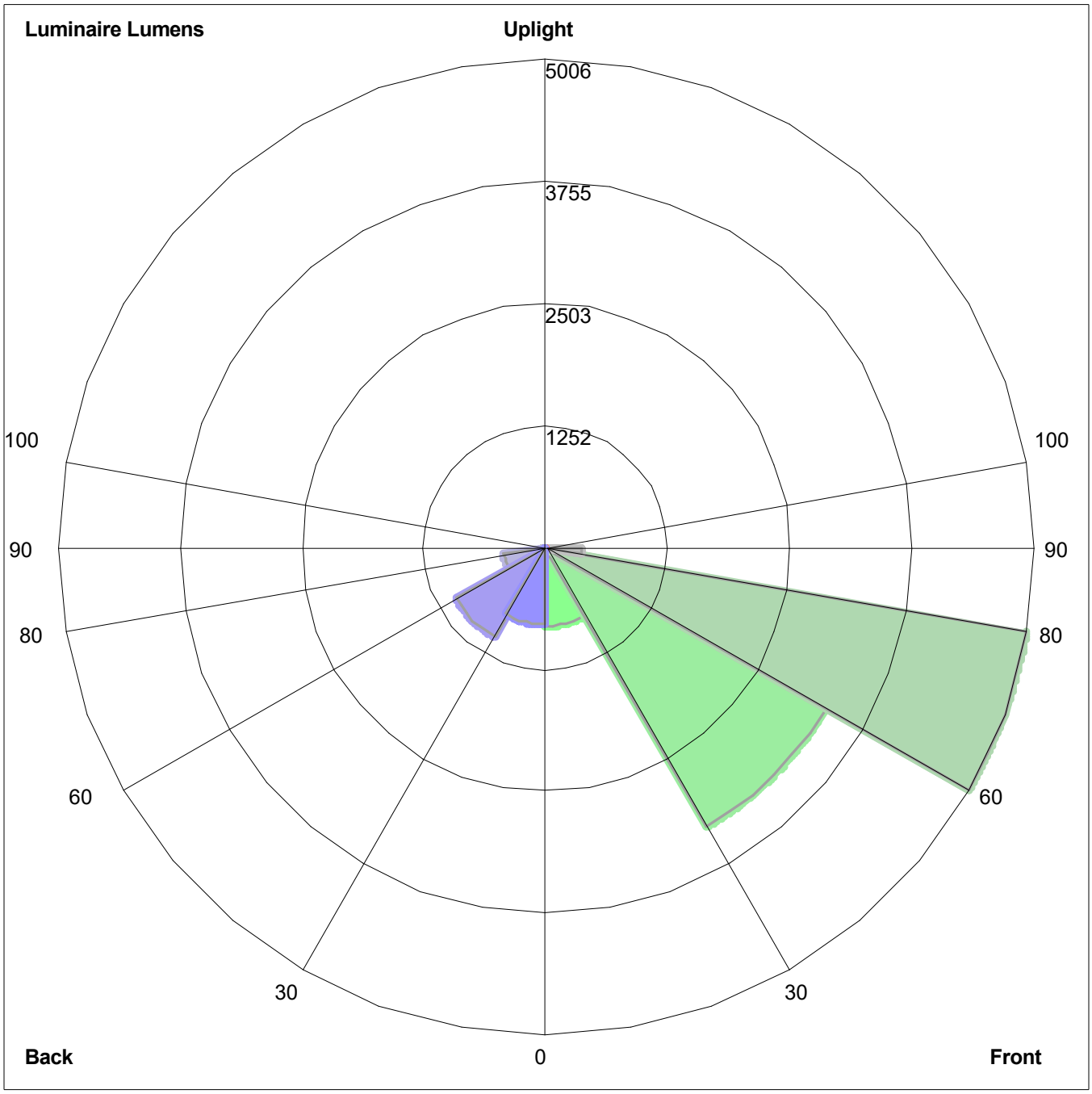
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-700MA-40K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=805.6, Medium=3310.2, High=5006.4, Very High=370.9
Back: Low=792.9, Medium=1056.8, High=435.6, Very High=43.9
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3