

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: iO LED

Report Number: P592117

Luminaire Tested: **GRZ-15L-940-10x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592117  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-15L-940-10x30-X-UNV-STD-4F  
Description: iO LED GRAZER WITH 10x30 OPTIC  
1500 LUMENS PER FOOT, 4 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

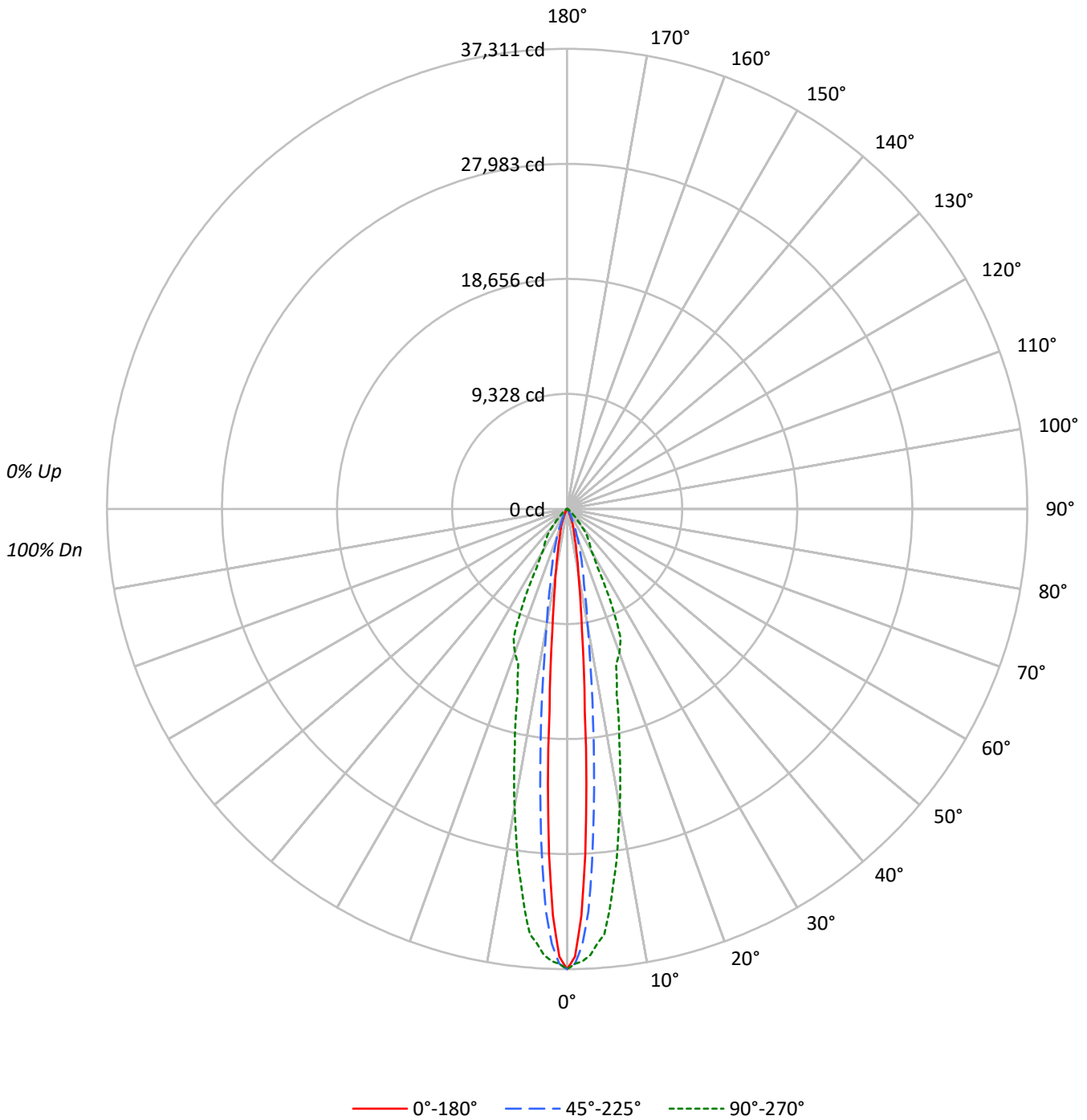
Lumens per Lamp: N/A  
Luminaire Lumens: 5914.0 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 56  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	102	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91					91			
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83					83			
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80					80			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77					77			
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74					74			
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71					71			
9	86	79	74	71	85	78	74	71	77	73	71	77	73	70	76	73	70	69					69			
10	84	76	72	69	83	76	71	68	75	71	68	74	71	68	74	70	68	67					67			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	602413	602413	602413
5°	266811	400622	561161
10°	86567	156294	402343
15°	37772	77215	259396
20°	21273	39495	212928
25°	7616	17507	150741
30°	4657	9005	72872
35°	3503	5801	58439
40°	2810	4213	38617
45°	2409	2535	19651
50°	2788	1535	9203
55°	2970	1250	4532
60°	2509	1075	2690
65°	2120	1272	2120
70°	1836	1312	1836
75°	1385	1042	1385
80°	1032	1032	1032
85°	1037	1037	1037



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1984.5	33.6
10°-20°	1938.0	32.8
20°-30°	1086.1	18.4
30°-40°	490.4	8.3
40°-50°	248.0	4.2
50°-60°	92.5	1.6
60°-70°	46.0	0.8
70°-80°	23.8	0.4
80°-90°	4.6	0.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	5008.7	84.7
0°-40°	5499.2	93.0
0°-60°	5839.6	98.7
0°-90°	5914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5914.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	37311	37311	37311	37311	37311	
5°	16462	18876	24718	31728	34624	1258
15°	2260	2789	4619	10101	15518	698
25°	428	478	983	3669	8462	243
35°	178	121	294	1170	2965	113
45°	106	92	111	527	861	88
55°	106	51	44	162	161	91
65°	56	43	33	49	56	56
75°	22	26	17	18	22	24
85°	6	6	6	1	6	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	37310.7	37310.7	37310.7	37310.7	37310.7	37310.7	37310.7	37310.7	37310.7	37310.7	37310.7
1°	36294.7	36300.2	36572.3	36394.6	36827.7	36888.7	36833.2	36933.2	36960.9	36805.5	36888.7
2°	32974.5	33074.4	33235.4	34168.2	34595.7	35289.7	35872.7	36372.4	36588.9	36677.8	36666.7
3°	28071.9	28005.2	28799.2	29693.1	31225.5	32680.2	34112.7	35056.5	35889.4	36155.9	36205.8
4°	22358.7	22097.7	23458.0	24213.1	26284.1	28899.1	31453.2	33490.8	34862.2	35428.5	35295.3
5°	16462.2	16923.1	17872.5	19210.6	21470.3	24718.3	28132.9	31186.6	33352.0	34307.0	34623.5
6°	12825.6	12736.7	13502.9	15135.3	17417.2	20904.0	24807.2	28638.2	31331.0	32480.3	32752.4
7°	9894.0	9838.5	10599.1	11759.5	13675.0	17261.8	21581.4	26056.4	29360.0	30659.2	30648.1
8°	7839.7	7806.4	8333.8	9249.9	11060.0	14091.5	18388.9	23213.7	27000.3	28749.2	28749.2
9°	6335.0	6407.2	6729.3	7539.9	8966.8	11504.1	15718.2	20804.1	24690.6	26400.7	26550.6
10°	5280.1	5319.0	5580.0	6246.2	7434.4	9533.1	13208.7	18000.2	22414.2	24579.5	24540.7
12.5°	3425.7	3509.0	3697.8	4125.3	4991.4	6301.7	8778.0	12620.1	17084.1	19249.4	19615.9
15°	2259.7	2276.4	2509.6	2881.6	3570.1	4619.4	6351.7	9216.6	12753.4	15207.4	15518.4
17.5°	1687.9	1704.5	1760.0	1982.1	2487.4	3381.3	4786.0	7006.9	10365.9	12842.2	13197.6
20°	1238.1	1182.6	1166.0	1293.7	1687.9	2298.6	3492.3	5463.4	8411.6	11754.0	12392.5
22.5°	721.8	710.7	682.9	788.4	1088.2	1510.2	2376.3	4080.9	7112.4	10465.9	11348.7
25°	427.5	416.4	410.9	499.7	682.9	982.7	1621.2	3087.0	5413.4	7695.3	8461.5
27.5°	310.9	299.8	272.1	310.9	449.7	677.4	1143.8	2232.0	3714.4	4947.0	5363.4
30°	249.8	238.7	188.8	205.4	310.9	483.0	838.4	1543.5	2637.3	3675.5	3908.7
32.5°	211.0	199.9	144.4	149.9	216.5	366.4	655.2	1188.2	2132.0	3181.4	3442.4
35°	177.7	166.6	116.6	122.1	166.6	294.3	538.6	977.2	1748.9	2737.2	2964.9
37.5°	149.9	138.8	99.9	105.5	144.4	244.3	488.6	843.9	1449.1	2248.6	2470.7
40°	133.3	122.1	88.8	99.9	133.3	199.9	433.1	716.2	1188.2	1737.8	1832.2
42.5°	116.6	105.5	88.8	99.9	122.1	155.5	316.5	571.9	966.1	1249.2	1327.0
45°	105.5	99.9	83.3	94.4	105.5	111.0	199.9	444.2	777.3	860.6	860.6
47.5°	111.0	99.9	77.7	83.3	83.3	83.3	122.1	349.8	605.2	583.0	566.3
50°	111.0	94.4	72.2	66.6	66.6	61.1	83.3	272.1	449.7	372.0	366.4
52.5°	111.0	94.4	66.6	61.1	55.5	50.0	61.1	205.4	316.5	238.7	238.7
55°	105.5	88.8	55.5	50.0	44.4	44.4	50.0	144.4	216.5	166.6	161.0
57.5°	94.4	77.7	50.0	44.4	44.4	38.9	38.9	94.4	166.6	127.7	111.0
60°	77.7	66.6	44.4	44.4	44.4	33.3	33.3	61.1	133.3	94.4	83.3
62.5°	66.6	55.5	44.4	44.4	44.4	33.3	27.8	44.4	111.0	77.7	66.6
65°	55.5	44.4	38.9	44.4	44.4	33.3	22.2	33.3	94.4	61.1	55.5
67.5°	44.4	38.9	33.3	38.9	38.9	27.8	16.7	22.2	77.7	50.0	44.4
70°	38.9	33.3	27.8	33.3	38.9	27.8	16.7	22.2	61.1	38.9	38.9
72.5°	27.8	27.8	27.8	33.3	33.3	22.2	11.1	16.7	50.0	33.3	33.3
75°	22.2	22.2	22.2	27.8	27.8	16.7	11.1	11.1	38.9	27.8	22.2
77.5°	16.7	16.7	16.7	22.2	22.2	11.1	5.6	11.1	27.8	16.7	16.7
80°	11.1	11.1	11.1	16.7	16.7	11.1	5.6	5.6	16.7	11.1	11.1
82.5°	5.6	5.6	5.6	11.1	11.1	5.6	5.6	5.6	5.6	5.6	5.6
85°	5.6	5.6	5.6	5.6	5.6	5.6	0.0	0.0	5.6	5.6	5.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)