

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: P592116

Luminaire Tested: **GRZ-15L-940-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592116  
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-2F  
Description: iO LED GRAZER WITH 10x30 OPTIC  
1500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

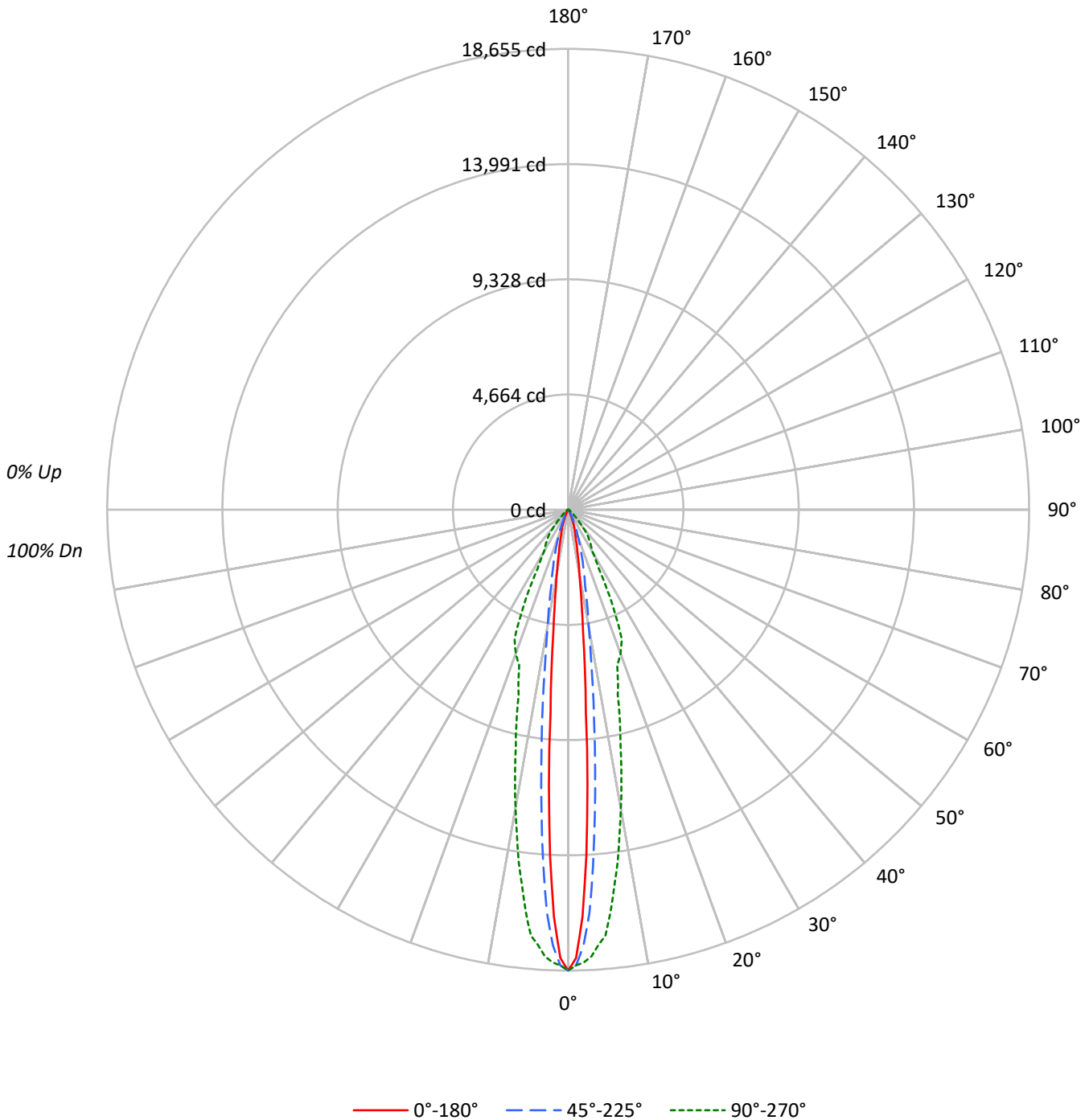
Lumens per Lamp: N/A  
Luminaire Lumens: 2957.0 lumens  
Efficiency: N/A  
Efficacy: 102.0 lumens/watt  
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
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°	602414	602414	602414
5°	266811	400624	561159
10°	86568	156296	402341
15°	37773	77215	259396
20°	21275	39495	212927
25°	7618	17509	150743
30°	4657	9005	72874
35°	3501	5799	58437
40°	2807	4211	38617
45°	2407	2535	19651
50°	2788	1532	9203
55°	2967	1250	4532
60°	2512	1079	2687
65°	2124	1276	2124
70°	1832	1312	1832
75°	1385	1036	1385
80°	1041	1041	1041
85°	1037	1037	1037



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	992.3	33.6
10°-20°	969.0	32.8
20°-30°	543.1	18.4
30°-40°	245.2	8.3
40°-50°	124.0	4.2
50°-60°	46.2	1.6
60°-70°	23.0	0.8
70°-80°	11.9	0.4
80°-90°	2.3	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°	2504.4	84.7
0°-40°	2749.6	93.0
0°-60°	2919.8	98.7
0°-90°	2957.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2957.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	18655	18655	18655	18655	18655	
5°	8231	9438	12359	15864	17312	629
15°	1130	1394	2310	5050	7759	349
25°	214	239	491	1834	4231	121
35°	89	60	147	585	1482	57
45°	53	46	56	264	430	44
55°	53	26	22	81	80	45
65°	28	22	17	24	28	28
75°	11	13	8	9	11	12
85°	3	3	3	1	3	2
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°	18655.4	18655.4	18655.4	18655.4	18655.4	18655.4	18655.4	18655.4	18655.4	18655.4	18655.4
1°	18147.3	18150.1	18286.1	18197.3	18413.8	18444.4	18416.6	18466.6	18480.5	18402.7	18444.4
2°	16487.2	16537.2	16617.7	17084.1	17297.8	17644.9	17936.3	18186.2	18294.5	18338.9	18333.3
3°	14035.9	14002.6	14399.6	14846.6	15612.8	16340.1	17056.3	17528.3	17944.7	18077.9	18102.9
4°	11179.3	11048.9	11729.0	12106.5	13142.0	14449.6	15726.6	16745.4	17431.1	17714.3	17647.6
5°	8231.1	8461.5	8936.2	9605.3	10735.2	12359.2	14066.5	15593.3	16676.0	17153.5	17311.7
6°	6412.8	6368.4	6751.5	7567.6	8708.6	10452.0	12403.6	14319.1	15665.5	16240.2	16376.2
7°	4947.0	4919.2	5299.6	5879.8	6837.5	8630.9	10790.7	13028.2	14680.0	15329.6	15324.0
8°	3919.8	3903.2	4166.9	4625.0	5530.0	7045.7	9194.4	11606.9	13500.1	14374.6	14374.6
9°	3167.5	3203.6	3364.6	3769.9	4483.4	5752.1	7859.1	10402.0	12345.3	13200.3	13275.3
10°	2640.1	2659.5	2790.0	3123.1	3717.2	4766.6	6604.3	9000.1	11207.1	12289.8	12270.3
12.5°	1712.9	1754.5	1848.9	2062.6	2495.7	3150.9	4389.0	6310.1	8542.0	9624.7	9807.9
15°	1129.9	1138.2	1254.8	1440.8	1785.0	2309.7	3175.9	4608.3	6376.7	7603.7	7759.2
17.5°	843.9	852.3	880.0	991.1	1243.7	1690.6	2393.0	3503.4	5183.0	6421.1	6598.8
20°	619.1	591.3	583.0	646.8	843.9	1149.3	1746.2	2731.7	4205.8	5877.0	6196.2
22.5°	360.9	355.3	341.5	394.2	544.1	755.1	1188.2	2040.4	3556.2	5232.9	5674.3
25°	213.8	208.2	205.4	249.8	341.5	491.4	810.6	1543.5	2706.7	3847.7	4230.8
27.5°	155.5	149.9	136.0	155.5	224.9	338.7	571.9	1116.0	1857.2	2473.5	2681.7
30°	124.9	119.4	94.4	102.7	155.5	241.5	419.2	771.8	1318.6	1837.8	1954.4
32.5°	105.5	99.9	72.2	75.0	108.3	183.2	327.6	594.1	1066.0	1590.7	1721.2
35°	88.8	83.3	58.3	61.1	83.3	147.1	269.3	488.6	874.5	1368.6	1482.4
37.5°	75.0	69.4	50.0	52.7	72.2	122.1	244.3	422.0	724.6	1124.3	1235.4
40°	66.6	61.1	44.4	50.0	66.6	99.9	216.5	358.1	594.1	868.9	916.1
42.5°	58.3	52.7	44.4	50.0	61.1	77.7	158.2	285.9	483.0	624.6	663.5
45°	52.7	50.0	41.6	47.2	52.7	55.5	99.9	222.1	388.7	430.3	430.3
47.5°	55.5	50.0	38.9	41.6	41.6	41.6	61.1	174.9	302.6	291.5	283.2
50°	55.5	47.2	36.1	33.3	33.3	30.5	41.6	136.0	224.9	186.0	183.2
52.5°	55.5	47.2	33.3	30.5	27.8	25.0	30.5	102.7	158.2	119.4	119.4
55°	52.7	44.4	27.8	25.0	22.2	22.2	25.0	72.2	108.3	83.3	80.5
57.5°	47.2	38.9	25.0	22.2	22.2	19.4	19.4	47.2	83.3	63.9	55.5
60°	38.9	33.3	22.2	22.2	22.2	16.7	16.7	30.5	66.6	47.2	41.6
62.5°	33.3	27.8	22.2	22.2	22.2	16.7	13.9	22.2	55.5	38.9	33.3
65°	27.8	22.2	19.4	22.2	22.2	16.7	11.1	16.7	47.2	30.5	27.8
67.5°	22.2	19.4	16.7	19.4	19.4	13.9	8.3	11.1	38.9	25.0	22.2
70°	19.4	16.7	13.9	16.7	19.4	13.9	8.3	11.1	30.5	19.4	19.4
72.5°	13.9	13.9	13.9	16.7	16.7	11.1	5.6	8.3	25.0	16.7	16.7
75°	11.1	11.1	11.1	13.9	13.9	8.3	5.6	5.6	19.4	13.9	11.1
77.5°	8.3	8.3	8.3	11.1	11.1	5.6	2.8	5.6	13.9	8.3	8.3
80°	5.6	5.6	5.6	8.3	8.3	5.6	2.8	2.8	8.3	5.6	5.6
82.5°	2.8	2.8	2.8	5.6	5.6	2.8	2.8	2.8	2.8	2.8	2.8
85°	2.8	2.8	2.8	2.8	2.8	2.8	0.0	0.0	2.8	2.8	2.8
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)