

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: P592120

Luminaire Tested: **GRZ-15L-940-17x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592120  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-15L-940-17x30-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 17x30 OPTIC  
1500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

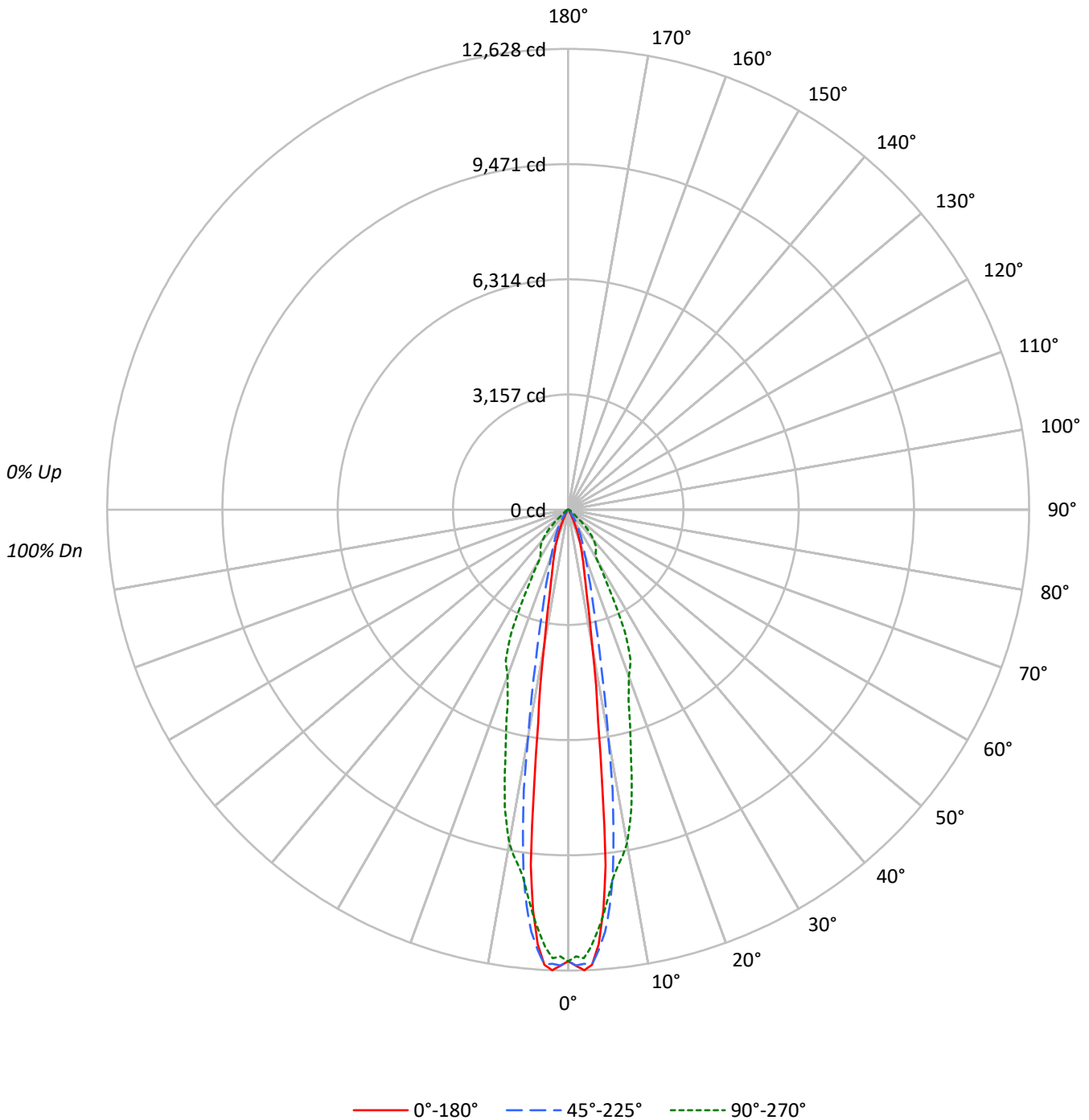
Lumens per Lamp: N/A  
Luminaire Lumens: 3002.0 lumens  
Efficiency: N/A  
Efficacy: 103.5 lumens/watt  
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

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				
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92					90				
3	105	100	95	92	103	98	94	91	96	93	90	93	91	88	91	89	87					86				
4	101	95	90	86	99	94	89	86	92	88	85	90	86	84	88	85	83					82				
5	97	90	85	82	96	89	85	81	88	84	81	86	83	80	85	82	79					78				
6	94	86	81	78	92	86	81	77	84	80	77	83	79	76	82	78	76					75				
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73					72				
8	87	79	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70					69				
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68					67				
10	82	74	69	66	81	73	69	66	73	69	66	72	68	66	71	68	65					64				

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

	0°	45°	90°
0°	399616	399616	399616
5°	357382	376199	360714
10°	124513	206943	304585
15°	55348	85994	220647
20°	32264	46106	166858
25°	13856	29395	129953
30°	4661	18230	57381
35°	2846	9418	52233
40°	2458	5387	45901
45°	2662	4188	32095
50°	2095	1954	14096
55°	1875	1875	5630
60°	1795	1976	5205
65°	1910	1910	4883
70°	1832	1577	3673
75°	1385	1385	1734
80°	1041	1041	1041
85°	1037	1037	1037



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	908.9	30.3
10°-20°	961.1	32.0
20°-30°	595.1	19.8
30°-40°	301.1	10.0
40°-50°	149.0	5.0
50°-60°	44.4	1.5
60°-70°	27.3	0.9
70°-80°	12.9	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°	2465.0	82.1
0°-40°	2766.1	92.1
0°-60°	2959.5	98.6
0°-90°	3002.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3002.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12375	12375	12375	12375	12375	
5°	11025	11263	11606	11284	11128	769
15°	1656	1837	2572	4501	6600	492
25°	389	485	825	1977	3647	197
35°	72	78	239	884	1325	48
45°	58	52	92	242	703	42
55°	33	33	33	49	100	30
65°	25	30	25	16	64	24
75°	11	16	11	6	14	13
85°	3	3	3	0	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°	12375.2	12375.2	12375.2	12375.2	12375.2	12375.2	12375.2	12375.2	12375.2	12375.2	12375.2
1°	12500.2	12461.3	12469.7	12519.7	12550.2	12491.9	12408.5	12344.6	12372.4	12286.3	12244.6
2°	12628.0	12597.4	12578.0	12594.7	12528.0	12453.0	12366.9	12319.6	12303.0	12258.5	12300.2
3°	12489.1	12450.2	12461.3	12500.2	12466.9	12472.4	12258.5	12114.1	12100.2	12041.9	11994.6
4°	11939.1	11966.9	12022.4	12028.0	12066.9	12078.0	12003.0	11728.0	11733.5	11625.2	11572.4
5°	11025.2	11044.6	11211.3	11280.7	11530.7	11605.7	11625.2	11291.9	11258.5	11094.6	11128.0
6°	9800.2	9441.8	9889.1	10066.8	10569.6	10911.3	11030.7	10978.0	10811.3	10622.4	10625.2
7°	7647.3	7677.9	7933.5	8425.1	9361.3	10022.4	10514.1	10622.4	10400.2	10266.8	10141.8
8°	5897.3	6025.1	6389.0	6908.4	7839.0	8908.5	9800.2	10044.6	9989.1	9855.7	9836.3
9°	4883.4	4786.2	5077.9	5491.8	6383.4	7758.5	8858.5	9377.9	9539.0	9580.7	9589.0
10°	3797.3	3911.2	4050.1	4480.6	5236.2	6311.2	7755.7	8561.3	8983.5	9219.6	9289.0
11°	3075.1	3116.7	3294.5	3700.1	4269.5	5258.4	6719.6	7627.9	8277.9	8755.7	8816.8
12°	2530.6	2566.7	2686.2	2986.2	3502.8	4289.0	5544.5	6680.7	7658.5	8216.8	8341.8
13°	2150.0	2191.7	2288.9	2522.3	2922.3	3608.4	4477.9	5708.4	6833.4	7625.1	7736.2
14°	1847.3	1894.5	1958.4	2163.9	2488.9	2975.0	3716.7	4891.7	6097.3	6986.2	7133.5
15°	1655.6	1661.1	1730.6	1872.3	2158.4	2572.3	3211.2	4194.5	5422.3	6422.3	6600.1
17.5°	1244.5	1236.1	1244.5	1355.6	1522.2	1825.0	2263.9	3116.7	4425.1	5294.5	5489.0
20°	938.9	941.7	922.2	986.1	1125.0	1341.7	1705.6	2536.2	3875.1	4744.5	4855.6
22.5°	652.8	647.2	655.6	716.7	850.0	1050.0	1336.1	2069.5	3530.6	4377.9	4469.5
25°	388.9	397.2	430.6	502.8	633.3	825.0	1091.7	1672.2	2891.7	3455.6	3647.3
27.5°	225.0	227.8	255.6	333.3	458.3	641.7	897.2	1302.8	2002.8	2302.8	2352.8
30°	125.0	125.0	144.4	194.4	311.1	488.9	733.3	1080.6	1452.8	1536.1	1538.9
32.5°	83.3	83.3	88.9	113.9	191.7	355.6	597.2	930.6	1261.1	1380.6	1400.0
35°	72.2	69.4	72.2	80.6	119.4	238.9	458.3	791.7	1161.1	1302.8	1325.0
37.5°	63.9	63.9	66.7	75.0	91.7	155.6	325.0	627.8	1027.8	1205.6	1230.6
40°	58.3	58.3	61.1	75.0	91.7	127.8	205.6	455.6	847.2	1061.1	1088.9
42.5°	55.6	55.6	55.6	66.7	86.1	116.7	119.4	291.7	652.8	872.2	913.9
45°	58.3	55.6	50.0	52.8	66.7	91.7	69.4	172.2	452.8	672.2	702.8
47.5°	55.6	55.6	52.8	50.0	50.0	61.1	44.4	94.4	283.3	466.7	483.3
50°	41.7	41.7	36.1	44.4	47.2	38.9	33.3	61.1	175.0	263.9	280.6
52.5°	36.1	36.1	33.3	33.3	38.9	36.1	25.0	50.0	111.1	147.2	152.8
55°	33.3	30.6	30.6	33.3	36.1	33.3	22.2	38.9	77.8	97.2	100.0
57.5°	30.6	30.6	30.6	30.6	36.1	33.3	22.2	27.8	61.1	77.8	86.1
60°	27.8	27.8	30.6	30.6	33.3	30.6	19.4	19.4	50.0	69.4	80.6
62.5°	25.0	27.8	27.8	30.6	33.3	27.8	16.7	13.9	38.9	63.9	75.0
65°	25.0	25.0	27.8	30.6	30.6	25.0	13.9	11.1	30.6	52.8	63.9
67.5°	22.2	22.2	25.0	27.8	30.6	22.2	8.3	8.3	25.0	44.4	52.8
70°	19.4	19.4	22.2	25.0	25.0	16.7	8.3	8.3	16.7	36.1	38.9
72.5°	16.7	16.7	19.4	22.2	22.2	13.9	5.6	5.6	11.1	27.8	25.0
75°	11.1	13.9	13.9	16.7	16.7	11.1	5.6	5.6	8.3	16.7	13.9
77.5°	8.3	8.3	11.1	13.9	13.9	8.3	2.8	2.8	5.6	11.1	8.3
80°	5.6	5.6	8.3	8.3	8.3	5.6	2.8	2.8	2.8	5.6	5.6
82.5°	2.8	2.8	5.6	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	0.0	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



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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)