

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: P592071

Luminaire Tested: **GRZ-15L-927-10x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592071  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-15L-927-10x60-X-UNV-STD-4F  
Description: iO LED GRAZER WITH 10x60 OPTIC  
1500 LUMENS PER FOOT, 4 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

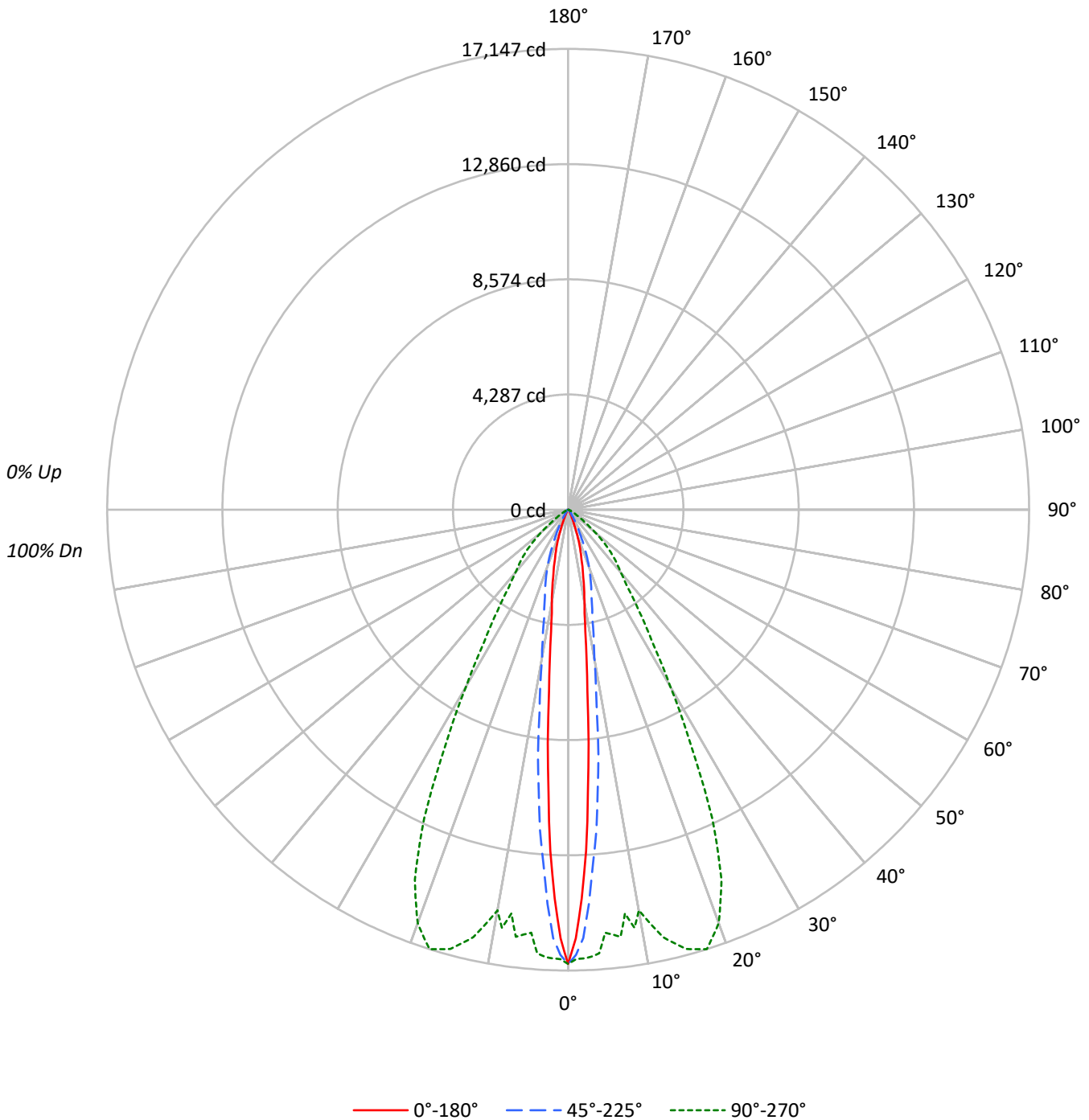
Lumens per Lamp: N/A  
Luminaire Lumens: 5244.0 lumens  
Efficiency: N/A  
Efficacy: 93.6 lumens/watt  
Spacing Criteria (0/90/45): 0.18 / 0.97 / 0.31  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 56  
Input Voltage (V): 120  
Input Current (Ain): 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	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94					94			
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88					88			
3	103	97	92	89	101	96	91	88	93	90	86	91	88	85	89	86	84	82					82			
4	98	91	86	82	97	90	85	82	88	84	81	86	83	80	84	81	79	77					77			
5	94	86	81	77	92	85	80	76	83	79	76	82	78	75	80	77	74	73					73			
6	90	82	76	72	88	81	75	72	79	75	71	78	74	71	77	73	70	69					69			
7	86	77	72	68	85	77	71	68	75	71	67	74	70	67	73	69	67	65					65			
8	82	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	63	62					62			
9	79	70	65	61	78	70	64	61	69	64	61	68	64	60	67	63	60	59					59			
10	76	67	62	58	75	67	61	58	66	61	58	65	61	58	64	60	58	56					56			

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

	0°	45°	90°
0°	272894	272894	272894
5°	141342	194315	256035
10°	57190	91767	248099
15°	31995	56053	282855
20°	15629	38641	281306
25°	5608	20922	225696
30°	2981	9689	141529
35°	2068	4531	90428
40°	1792	2738	64042
45°	1598	2395	51122
50°	1507	2512	32513
55°	1267	2393	15755
60°	1292	1776	8070
65°	1337	1146	4008
70°	1416	944	2360
75°	1248	936	1560
80°	930	930	930
85°	926	926	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1011.0	19.3
10°-20°	1611.3	30.7
20°-30°	1356.1	25.9
30°-40°	685.2	13.1
40°-50°	347.6	6.6
50°-60°	157.2	3.0
60°-70°	52.3	1.0
70°-80°	19.9	0.4
80°-90°	3.4	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°	3978.4	75.9
0°-40°	4663.6	88.9
0°-60°	5168.4	98.6
0°-90°	5244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5244.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16902	16902	16902	16902	16902	
5°	8721	9463	11989	14638	15797	652
15°	1914	2263	3353	8022	16922	539
25°	315	430	1174	4147	12669	175
35°	105	122	230	1738	4588	69
45°	70	79	105	541	2239	54
55°	45	58	85	206	560	42
65°	35	30	30	60	105	35
75°	20	20	15	20	25	21
85°	5	5	5	0	0	4
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°	16901.8	16901.8	16901.8	16901.8	16901.8	16901.8	16901.8	16901.8	16901.8	16901.8	16901.8
1°	15952.3	16577.0	17016.7	16372.1	16871.8	16567.0	16776.9	16437.0	16671.9	16861.8	16726.9
2°	14478.0	15272.6	15247.6	15172.6	15302.6	15947.3	16532.0	16477.0	16736.9	16626.9	16706.9
3°	12708.8	13133.6	13273.6	13488.5	14048.2	14682.9	15402.5	16037.2	16681.9	16811.8	16651.9
4°	10524.9	10679.8	11154.6	11214.6	12279.0	13183.6	14398.0	15117.7	16392.0	16601.9	16547.0
5°	8720.8	8675.8	9125.6	9575.4	10904.7	11989.2	13478.5	14228.1	15867.3	16437.0	15797.3
6°	6781.7	7146.5	7581.3	8001.1	9150.6	10519.9	12119.1	13828.3	15697.4	16207.1	15897.3
7°	5642.3	5717.2	6037.1	6366.9	7611.3	9235.5	10609.9	12773.8	14822.8	15867.3	16012.2
8°	4577.8	4577.8	4992.6	5292.4	6476.9	7641.3	9820.2	11789.3	14333.0	15857.3	15172.6
9°	3898.1	3988.1	4183.0	4657.7	5352.4	6611.8	8485.9	10889.7	13958.2	15567.4	15747.4
10°	3488.3	3608.2	3713.2	3893.1	4637.8	5597.3	7531.3	10015.1	13638.4	15582.4	15132.7
12.5°	2588.7	2653.7	2778.7	2988.6	3553.3	4138.0	5667.3	8291.0	12089.1	15852.3	16287.1
15°	1914.1	1934.1	2109.0	2313.9	2788.6	3353.4	4377.9	6881.7	11444.4	16327.1	16921.8
17.5°	1414.3	1439.3	1554.2	1744.2	2069.0	2783.6	3768.2	5682.2	10694.8	16292.1	17146.7
20°	909.6	939.5	1054.5	1204.4	1594.2	2248.9	3168.5	4687.7	9595.3	15122.7	16372.1
22.5°	539.7	569.7	609.7	754.6	1119.5	1684.2	2608.7	4033.0	7641.3	13563.4	14902.8
25°	314.8	309.8	354.8	454.8	684.7	1174.4	2129.0	3448.3	6242.0	11699.3	12668.9
27.5°	204.9	209.9	229.9	279.9	424.8	789.6	1679.2	2963.6	4902.6	8910.7	9895.2
30°	159.9	159.9	169.9	194.9	274.9	519.7	1264.4	2468.8	4043.0	6801.7	7591.3
32.5°	124.9	129.9	134.9	149.9	194.9	339.8	909.6	1974.0	3293.4	5132.5	5777.2
35°	104.9	109.9	114.9	124.9	154.9	229.9	619.7	1449.3	2603.7	3893.1	4587.8
37.5°	95.0	95.0	100.0	104.9	129.9	164.9	404.8	989.5	1989.0	3203.4	3613.2
40°	85.0	85.0	90.0	95.0	114.9	129.9	249.9	649.7	1549.2	2643.7	3038.5
42.5°	75.0	80.0	85.0	85.0	100.0	114.9	174.9	484.8	1259.4	2363.9	2638.7
45°	70.0	70.0	75.0	80.0	95.0	104.9	134.9	374.8	1039.5	1989.0	2238.9
47.5°	65.0	65.0	70.0	75.0	90.0	100.0	109.9	289.9	869.6	1609.2	1784.1
50°	60.0	60.0	65.0	75.0	85.0	100.0	90.0	219.9	694.7	1204.4	1294.4
52.5°	50.0	55.0	60.0	65.0	75.0	95.0	75.0	169.9	574.7	844.6	849.6
55°	45.0	45.0	50.0	60.0	65.0	85.0	60.0	124.9	449.8	579.7	559.7
57.5°	45.0	40.0	45.0	50.0	55.0	75.0	45.0	95.0	334.8	389.8	359.8
60°	40.0	40.0	40.0	40.0	45.0	55.0	35.0	75.0	244.9	259.9	249.9
62.5°	35.0	35.0	35.0	35.0	35.0	45.0	30.0	55.0	164.9	164.9	154.9
65°	35.0	35.0	30.0	30.0	30.0	30.0	25.0	45.0	104.9	104.9	104.9
67.5°	35.0	30.0	30.0	25.0	25.0	25.0	20.0	35.0	65.0	75.0	70.0
70°	30.0	30.0	25.0	25.0	20.0	20.0	20.0	30.0	45.0	50.0	50.0
72.5°	25.0	25.0	25.0	20.0	20.0	15.0	15.0	25.0	35.0	35.0	35.0
75°	20.0	20.0	20.0	20.0	15.0	15.0	10.0	20.0	20.0	25.0	25.0
77.5°	15.0	15.0	15.0	15.0	15.0	10.0	10.0	15.0	15.0	15.0	15.0
80°	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
85°	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0
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)