

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: P591980

Luminaire Tested: **GRZ-05L-935-50x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591980  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-22)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-05L-935-50x60-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 50x60 OPTIC  
500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

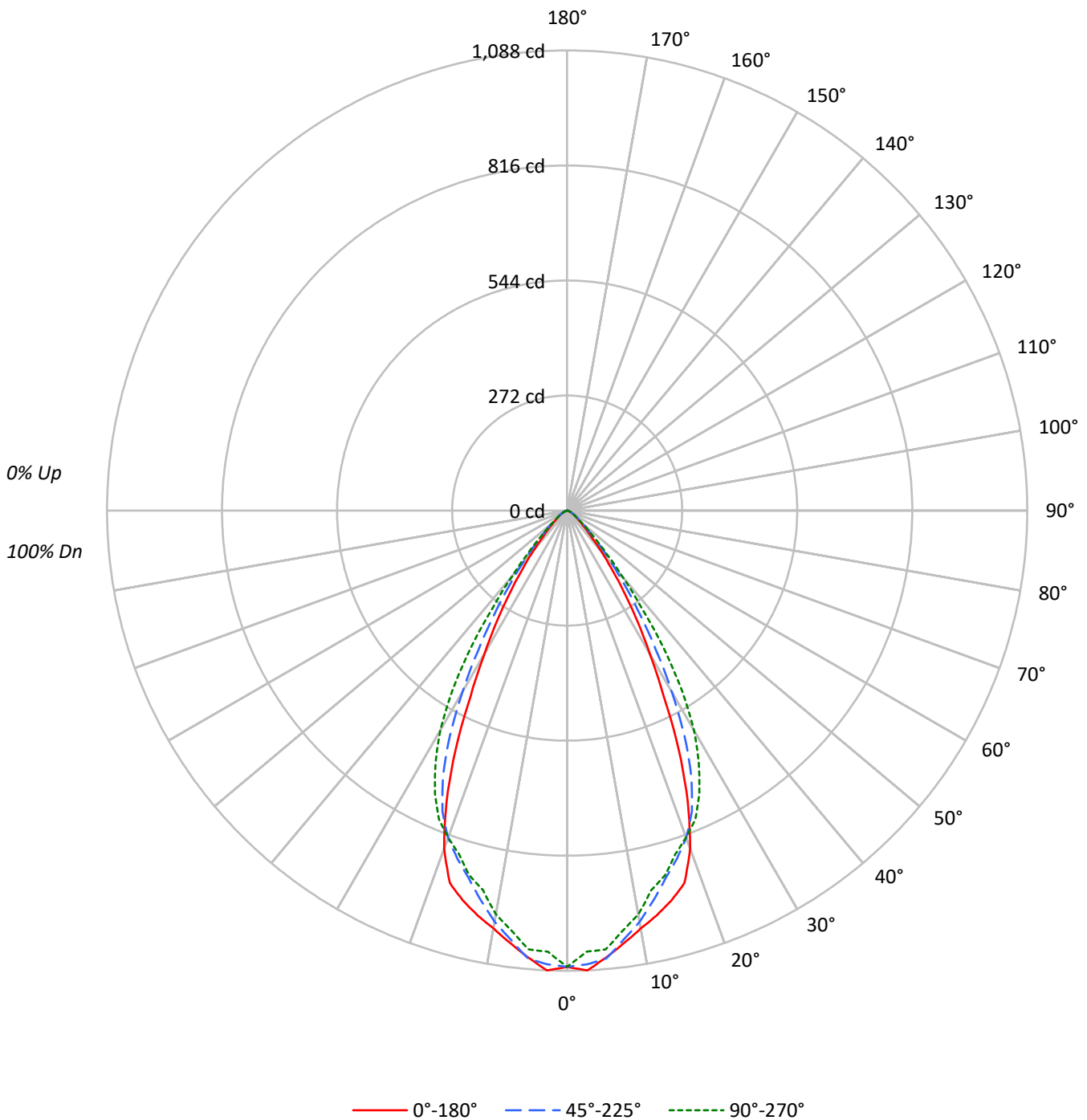
Lumens per Lamp: N/A  
Luminaire Lumens: 995.0 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 0.95 / 0.87  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.6  
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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93					93			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86					86			
3	101	95	89	85	99	93	88	85	91	87	83	88	85	82	86	83	81	79					79			
4	96	88	82	78	94	87	81	77	85	80	76	83	79	75	81	77	75	73					73			
5	91	82	76	71	89	81	75	71	79	74	70	78	73	70	76	72	69	68					68			
6	86	77	70	66	84	76	70	66	74	69	65	73	68	65	72	68	64	63					63			
7	82	72	66	61	80	71	65	61	70	65	61	69	64	60	67	63	60	59					59			
8	77	67	61	57	76	67	61	57	66	60	57	65	60	56	64	59	56	55					55			
9	74	64	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	51					51			
10	70	60	54	50	69	60	54	50	59	53	50	58	53	50	57	53	49	48					48			

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

	0°	45°	90°
0°	34830	34830	34830
5°	34366	34460	33770
10°	32891	32354	31783
15°	31886	30074	29850
20°	29220	28289	28254
25°	22265	24781	26334
30°	14572	18468	22365
35°	9114	11822	15749
40°	5181	7014	8481
45°	2872	4019	4197
50°	1849	2331	2286
55°	1362	1582	1419
60°	1001	1124	1001
65°	810	886	741
70°	548	642	642
75°	362	487	487
80°	353	353	353
85°	371	371	371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.2	9.9
10°-20°	254.3	25.6
20°-30°	306.7	30.8
30°-40°	209.3	21.0
40°-50°	83.4	8.4
50°-60°	27.1	2.7
60°-70°	10.9	1.1
70°-80°	4.2	0.4
80°-90°	0.9	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°	659.2	66.2
0°-40°	868.5	87.3
0°-60°	979.0	98.4
0°-90°	995.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	995.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1079	1079	1079	1079	1079	
5°	1060	1059	1063	1045	1042	99
15°	954	921	900	886	893	266
25°	625	621	696	718	739	281
35°	231	291	300	428	400	148
45°	63	121	88	119	92	53
55°	24	33	28	27	25	22
65°	11	11	12	11	10	10
75°	3	4	4	4	4	4
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1078.6	1078.6	1078.6	1078.6	1078.6
2.5°	1088.3	1077.6	1073.8	1068.9	1043.8
5°	1060.2	1059.3	1063.1	1044.7	1041.8
7.5°	1031.2	1026.4	1023.5	1010.9	1002.2
10°	1003.1	992.5	986.7	969.3	969.3
12.5°	979.9	962.5	943.2	925.8	919.0
15°	953.8	920.9	899.6	886.1	892.9
17.5°	922.9	871.6	862.9	844.5	851.3
20°	850.3	815.5	823.2	805.8	822.2
22.5°	745.8	726.5	770.0	766.1	791.3
25°	624.9	621.0	695.5	717.8	739.1
27.5°	494.3	514.6	600.7	661.7	674.2
30°	390.8	422.7	495.3	594.0	599.8
32.5°	306.7	352.1	390.8	514.6	505.9
35°	231.2	291.2	299.9	427.6	399.5
37.5°	170.3	244.7	228.3	336.6	287.3
40°	122.9	200.2	166.4	248.6	201.2
42.5°	87.1	159.6	120.9	179.9	136.4
45°	62.9	120.9	88.0	119.0	91.9
47.5°	47.4	89.0	63.8	78.4	64.8
50°	36.8	62.9	46.4	53.2	45.5
52.5°	30.0	45.5	35.8	37.7	33.9
55°	24.2	32.9	28.1	27.1	25.2
57.5°	19.3	25.2	22.2	21.3	20.3
60°	15.5	18.4	17.4	16.4	15.5
62.5°	12.6	14.5	14.5	12.6	12.6
65°	10.6	10.6	11.6	10.6	9.7
67.5°	7.7	8.7	8.7	7.7	7.7
70°	5.8	6.8	6.8	6.8	6.8
72.5°	4.8	4.8	5.8	4.8	4.8
75°	2.9	3.9	3.9	3.9	3.9
77.5°	1.9	2.9	2.9	2.9	2.9
80°	1.9	1.9	1.9	1.9	1.9
82.5°	1.0	1.0	1.9	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)