

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: P591981

Luminaire Tested: **GRZ-05L-935-50x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591981  
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-4F  
Description: iO LED GRAZER WITH 50x60 OPTIC  
500 LUMENS PER FOOT, 4 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

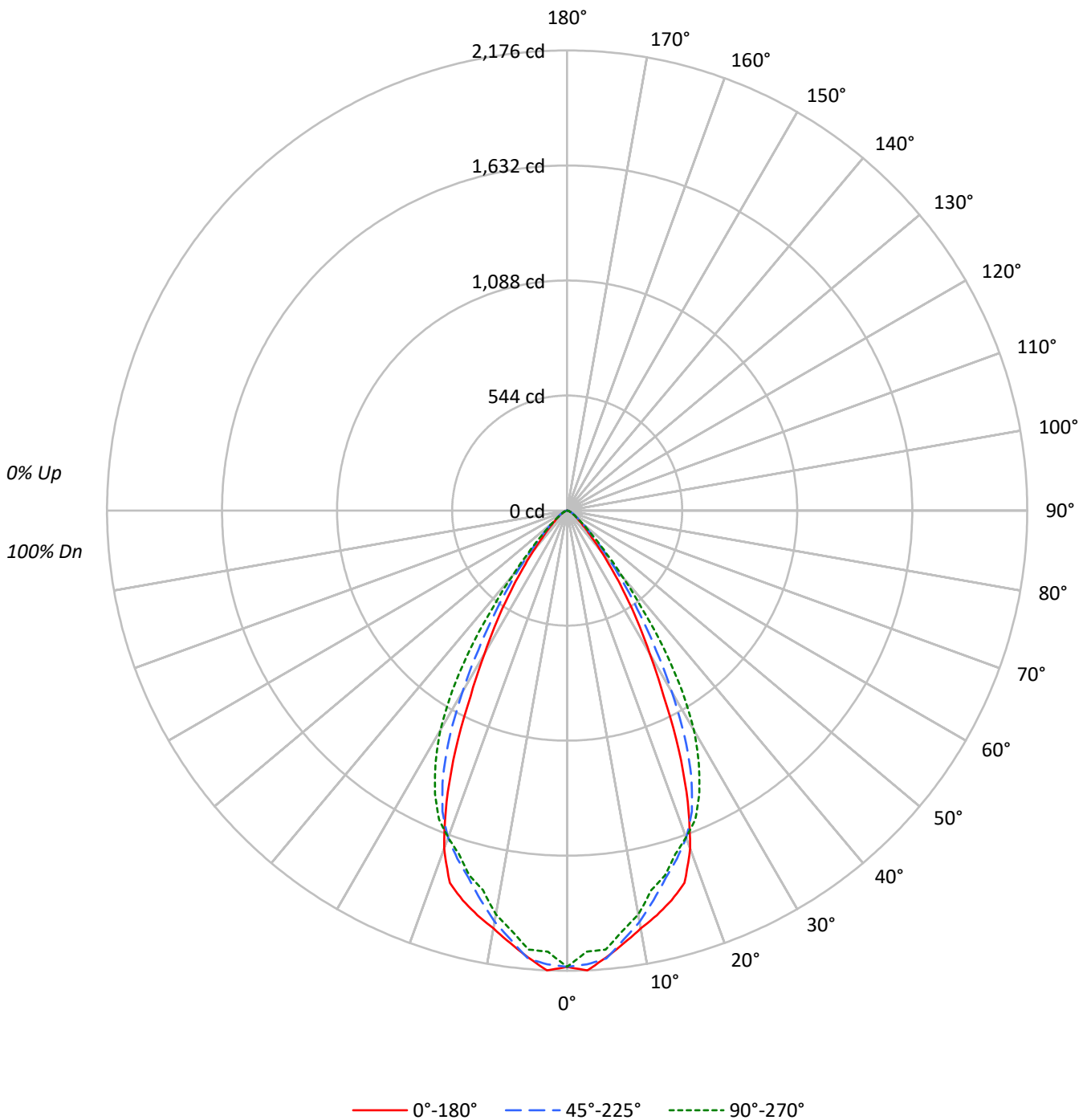
Lumens per Lamp: N/A  
Luminaire Lumens: 1990.0 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 0.95 / 0.87  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.3  
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	33772
10°	32893	32354	31783
15°	31886	30076	29849
20°	29220	28289	28256
25°	22265	24782	26332
30°	14572	18468	22363
35°	9114	11822	15749
40°	5179	7014	8481
45°	2872	4021	4197
50°	1846	2334	2283
55°	1362	1579	1416
60°	1001	1124	1001
65°	814	886	737
70°	548	637	637
75°	362	480	480
80°	363	363	363
85°	352	352	352



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	196.4	9.9
10°-20°	508.6	25.6
20°-30°	613.3	30.8
30°-40°	418.7	21.0
40°-50°	166.9	8.4
50°-60°	54.1	2.7
60°-70°	21.9	1.1
70°-80°	8.4	0.4
80°-90°	1.7	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°	1318.3	66.2
0°-40°	1737.0	87.3
0°-60°	1958.1	98.4
0°-90°	1990.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1990.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2157	2157	2157	2157	2157	
5°	2120	2118	2126	2090	2084	199
15°	1908	1842	1799	1772	1786	532
25°	1250	1242	1391	1436	1478	562
35°	462	582	600	855	799	296
45°	126	242	176	238	184	106
55°	48	66	56	54	50	44
65°	21	21	23	21	19	21
75°	6	8	8	8	8	7
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2157.2	2157.2	2157.2	2157.2	2157.2
2.5°	2176.5	2155.3	2147.5	2137.8	2087.5
5°	2120.4	2118.5	2126.2	2089.5	2083.7
7.5°	2062.4	2052.7	2046.9	2021.8	2004.4
10°	2006.3	1985.0	1973.4	1938.6	1938.6
12.5°	1959.9	1925.0	1886.3	1851.5	1838.0
15°	1907.6	1841.8	1799.3	1772.2	1785.7
17.5°	1845.7	1743.2	1725.8	1689.0	1702.5
20°	1700.6	1631.0	1646.4	1611.6	1644.5
22.5°	1491.7	1453.0	1540.0	1532.3	1582.6
25°	1249.8	1242.1	1391.1	1435.6	1478.1
27.5°	988.6	1029.3	1201.5	1323.3	1348.5
30°	781.6	845.5	990.6	1187.9	1199.5
32.5°	613.3	704.2	781.6	1029.3	1011.9
35°	462.4	582.3	599.8	855.1	799.0
37.5°	340.5	489.5	456.6	673.3	574.6
40°	245.7	400.5	332.8	497.2	402.4
42.5°	174.1	319.2	241.8	359.9	272.8
45°	125.8	241.8	176.1	238.0	183.8
47.5°	94.8	178.0	127.7	156.7	129.6
50°	73.5	125.8	92.9	106.4	90.9
52.5°	60.0	90.9	71.6	75.5	67.7
55°	48.4	65.8	56.1	54.2	50.3
57.5°	38.7	50.3	44.5	42.6	40.6
60°	31.0	36.8	34.8	32.9	31.0
62.5°	25.2	29.0	29.0	25.2	25.2
65°	21.3	21.3	23.2	21.3	19.3
67.5°	15.5	17.4	17.4	15.5	15.5
70°	11.6	13.5	13.5	13.5	13.5
72.5°	9.7	9.7	11.6	9.7	9.7
75°	5.8	7.7	7.7	7.7	7.7
77.5°	3.9	5.8	5.8	5.8	5.8
80°	3.9	3.9	3.9	3.9	3.9
82.5°	1.9	1.9	3.9	1.9	1.9
85°	1.9	1.9	1.9	1.9	1.9
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)