

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: P591965

Luminaire Tested: **GRZ-05L-930-50x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591965  
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-930-50x60-X-UNV-STD-4F  
Description: iO LED GRAZER WITH 50x60 OPTIC  
500 LUMENS PER FOOT, 4 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

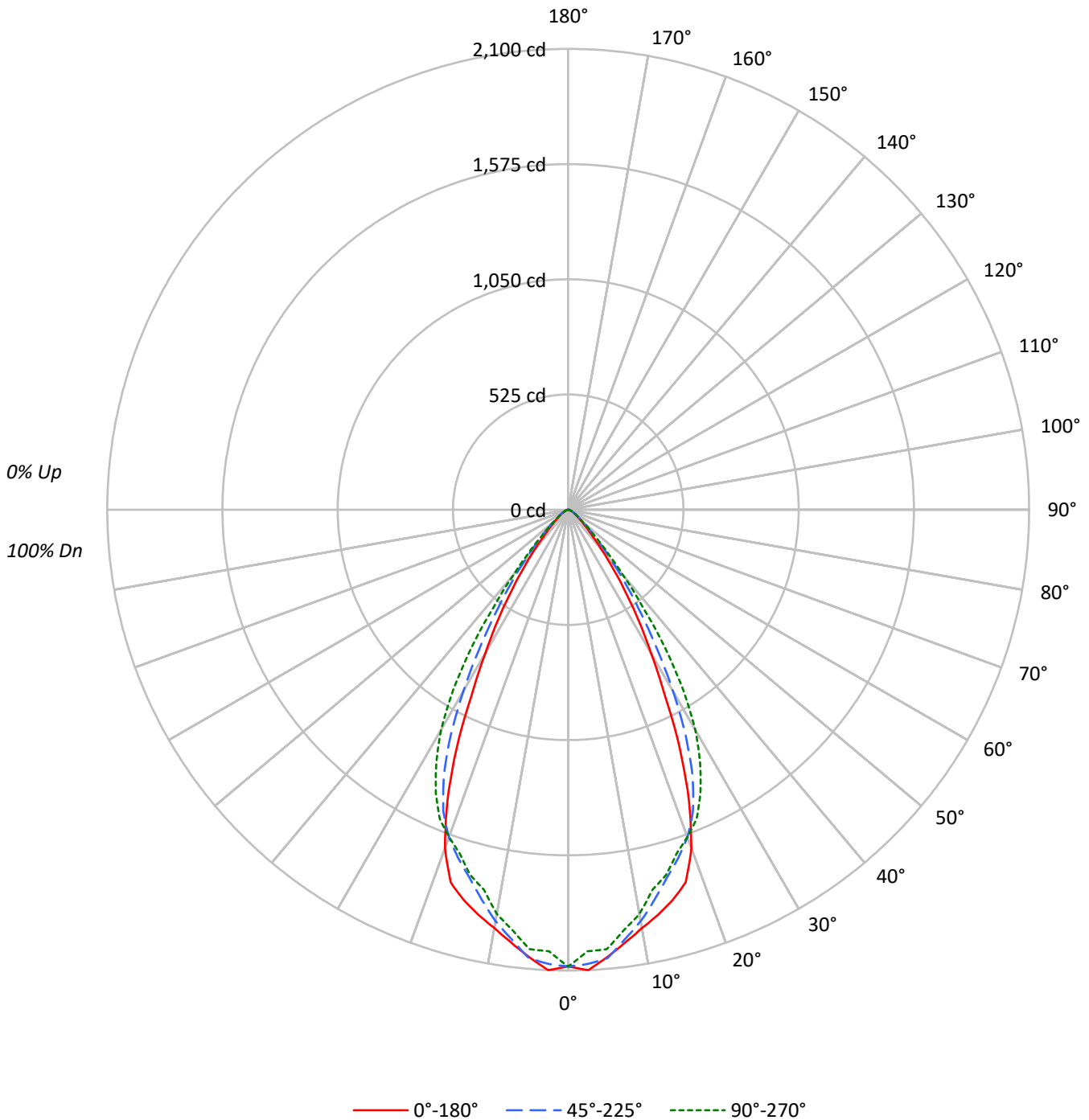
Lumens per Lamp: N/A  
Luminaire Lumens: 1920.0 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 0.95 / 0.87  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

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°	33604	33604	33604
5°	33157	33248	32584
10°	31736	31216	30665
15°	30765	29018	28799
20°	28192	27294	27263
25°	21483	23909	25406
30°	14059	17818	21576
35°	8793	11406	15195
40°	4997	6768	8184
45°	2770	3879	4048
50°	1781	2251	2203
55°	1315	1523	1365
60°	966	1085	966
65°	783	856	714
70°	529	618	618
75°	349	468	468
80°	344	344	344
85°	352	352	352



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.5	9.9
10°-20°	490.7	25.6
20°-30°	591.8	30.8
30°-40°	404.0	21.0
40°-50°	161.0	8.4
50°-60°	52.2	2.7
60°-70°	21.1	1.1
70°-80°	8.1	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°	1272.0	66.2
0°-40°	1675.9	87.3
0°-60°	1889.2	98.4
0°-90°	1920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1920.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2081	2081	2081	2081	2081	
5°	2046	2044	2051	2016	2010	192
15°	1840	1777	1736	1710	1723	514
25°	1206	1198	1342	1385	1426	543
35°	446	562	579	825	771	286
45°	121	233	170	230	177	102
55°	47	64	54	52	48	43
65°	20	20	22	20	19	20
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°	2081.3	2081.3	2081.3	2081.3	2081.3
2.5°	2100.0	2079.4	2072.0	2062.6	2014.1
5°	2045.8	2044.0	2051.4	2016.0	2010.4
7.5°	1989.8	1980.5	1974.9	1950.6	1933.8
10°	1935.7	1915.2	1904.0	1870.4	1870.4
12.5°	1890.9	1857.3	1820.0	1786.4	1773.3
15°	1840.5	1777.1	1736.0	1709.9	1722.9
17.5°	1780.8	1681.9	1665.1	1629.6	1642.7
20°	1640.8	1573.6	1588.5	1554.9	1586.7
22.5°	1439.2	1401.9	1485.9	1478.4	1526.9
25°	1205.9	1198.4	1342.1	1385.1	1426.1
27.5°	953.9	993.1	1159.2	1276.8	1301.1
30°	754.1	815.7	955.7	1146.1	1157.3
32.5°	591.7	679.5	754.1	993.1	976.3
35°	446.1	561.9	578.7	825.1	770.9
37.5°	328.5	472.3	440.5	649.6	554.4
40°	237.1	386.4	321.1	479.7	388.3
42.5°	168.0	308.0	233.3	347.2	263.2
45°	121.3	233.3	169.9	229.6	177.3
47.5°	91.5	171.7	123.2	151.2	125.1
50°	70.9	121.3	89.6	102.7	87.7
52.5°	57.9	87.7	69.1	72.8	65.3
55°	46.7	63.5	54.1	52.3	48.5
57.5°	37.3	48.5	42.9	41.1	39.2
60°	29.9	35.5	33.6	31.7	29.9
62.5°	24.3	28.0	28.0	24.3	24.3
65°	20.5	20.5	22.4	20.5	18.7
67.5°	14.9	16.8	16.8	14.9	14.9
70°	11.2	13.1	13.1	13.1	13.1
72.5°	9.3	9.3	11.2	9.3	9.3
75°	5.6	7.5	7.5	7.5	7.5
77.5°	3.7	5.6	5.6	5.6	5.6
80°	3.7	3.7	3.7	3.7	3.7
82.5°	1.9	1.9	3.7	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)