

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: P591968

Luminaire Tested: **GRZ-05L-935-10x10-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591968  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-05L-935-10x10-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 10x10 OPTIC  
500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SCALED BASED ON PHOTOMETRIC TESTING  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

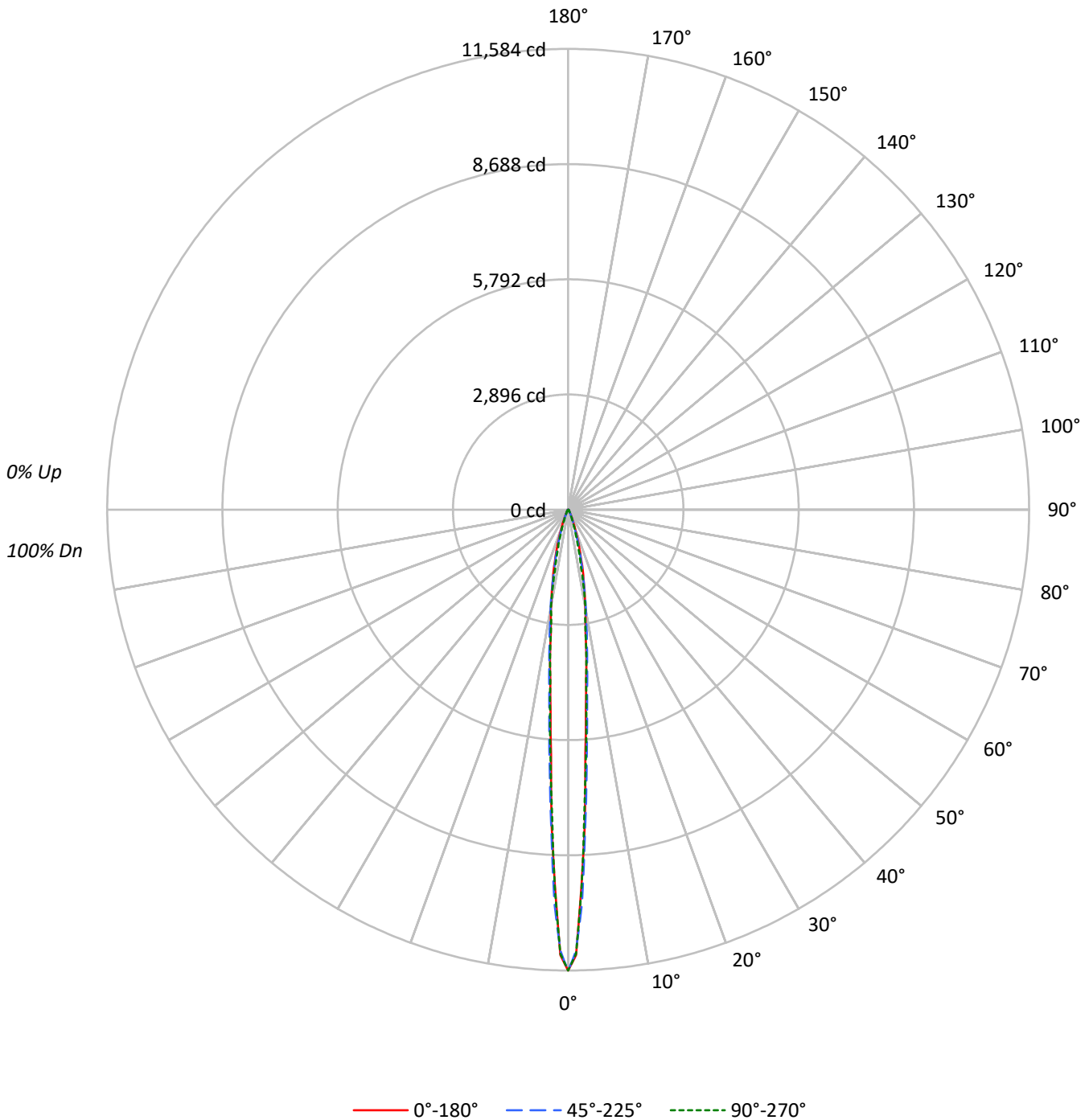
Lumens per Lamp: N/A  
Luminaire Lumens: 927.0 lumens  
Efficiency: N/A  
Efficacy: 96.6 lumens/watt  
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	95	93
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	93	90	89	87
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	90	88	86	85
6	99	93	89	86	98	92	88	86	91	88	85	90	87	85	88	86	84	83
7	96	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81
8	94	88	84	81	93	87	84	81	86	83	81	86	83	80	85	82	80	79
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	82	79	77	76

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

	0°	45°	90°
0°	374054	374054	374054
5°	164720	175835	169826
10°	81178	83568	81893
15°	40949	37733	32515
20°	17182	14553	12361
25°	6966	5829	4910
30°	3326	2964	2625
35°	2097	1837	1459
40°	1496	1366	1024
45°	1343	1178	854
50°	1271	1120	663
55°	1143	996	569
60°	917	788	555
65°	894	772	581
70°	906	765	529
75°	823	761	512
80°	762	651	465
85°	556	556	371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	435.3	47.0
10°-20°	321.9	34.7
20°-30°	87.8	9.5
30°-40°	31.1	3.3
40°-50°	19.6	2.1
50°-60°	14.5	1.6
60°-70°	9.5	1.0
70°-80°	5.8	0.6
80°-90°	1.5	0.2
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°	845.1	91.2
0°-40°	876.1	94.5
0°-60°	910.2	98.2
0°-90°	927.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	927.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11584	11584	11584	11584	11584	
5°	5082	5306	5424	5223	5239	422
15°	1225	1209	1129	999	973	347
25°	196	192	164	145	138	103
35°	53	52	47	43	37	34
45°	29	28	26	22	19	23
55°	20	19	18	13	10	18
65°	12	10	10	9	8	12
75°	7	6	6	5	4	7
85°	2	1	2	1	1	2
90°	0	0	0	0	0	



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CATALOG NUMBER: GRZ-05L-935-10x10-X-UNV-STD-2F

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	11583.6	11583.6	11583.6	11583.6	11583.6
1°	11196.1	10972.2	11102.4	11097.3	11162.2
2°	9472.2	10173.3	9900.2	9870.4	9559.3
3°	7924.6	8234.6	8061.3	8163.2	7675.8
4°	6170.2	6557.3	6616.5	6483.3	6311.6
5°	5081.6	5306.0	5424.5	5223.4	5239.1
6°	4280.2	4564.4	4546.6	4552.2	4326.8
7°	3749.8	3897.7	3919.0	3790.3	3729.0
8°	3142.9	3397.7	3377.9	3281.2	3143.9
9°	2801.4	2958.0	2933.1	2760.4	2710.2
10°	2475.7	2561.8	2548.6	2358.7	2497.5
12.5°	1782.7	1790.8	1703.7	1600.3	1517.7
15°	1224.9	1209.2	1128.7	999.0	972.6
17.5°	804.5	806.5	697.6	599.8	584.6
20°	500.0	503.0	423.5	369.3	359.7
22.5°	314.6	300.9	251.8	229.0	222.9
25°	195.5	192.0	163.6	144.9	137.8
27.5°	132.2	129.7	106.4	97.8	97.3
30°	89.2	92.7	79.5	72.4	70.4
32.5°	67.4	67.4	61.8	56.7	51.2
35°	53.2	52.2	46.6	42.6	37.0
37.5°	40.5	42.6	37.5	34.4	28.9
40°	35.5	35.5	32.4	28.4	24.3
42.5°	31.4	32.4	28.4	24.3	20.3
45°	29.4	28.4	25.8	21.8	18.7
47.5°	26.8	26.3	23.8	19.3	16.2
50°	25.3	24.3	22.3	17.2	13.2
52.5°	23.8	22.3	20.3	15.2	11.1
55°	20.3	19.3	17.7	13.2	10.1
57.5°	17.7	15.7	14.7	11.1	9.1
60°	14.2	12.7	12.2	10.1	8.6
62.5°	12.7	11.7	11.1	9.6	8.1
65°	11.7	10.1	10.1	8.6	7.6
67.5°	10.6	9.1	9.1	7.6	6.6
70°	9.6	8.1	8.1	6.6	5.6
72.5°	8.1	6.6	7.1	5.6	5.1
75°	6.6	5.6	6.1	5.1	4.1
77.5°	5.6	4.6	4.6	4.1	3.0
80°	4.1	3.5	3.5	3.0	2.5
82.5°	2.5	2.0	2.5	2.0	1.5
85°	1.5	1.0	1.5	1.0	1.0
87.5°	0.5	0.5	0.5	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)