

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: P592097

Luminaire Tested: **GRZ-15L-935-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592097  
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-15L-935-10x10-X-UNV-STD-4F  
Description: iO LED GRAZER WITH 10x10 OPTIC  
1500 LUMENS PER FOOT, 4 FOOT FIXTURE  
SCALED BASED ON PHOTOMETRIC TESTING  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

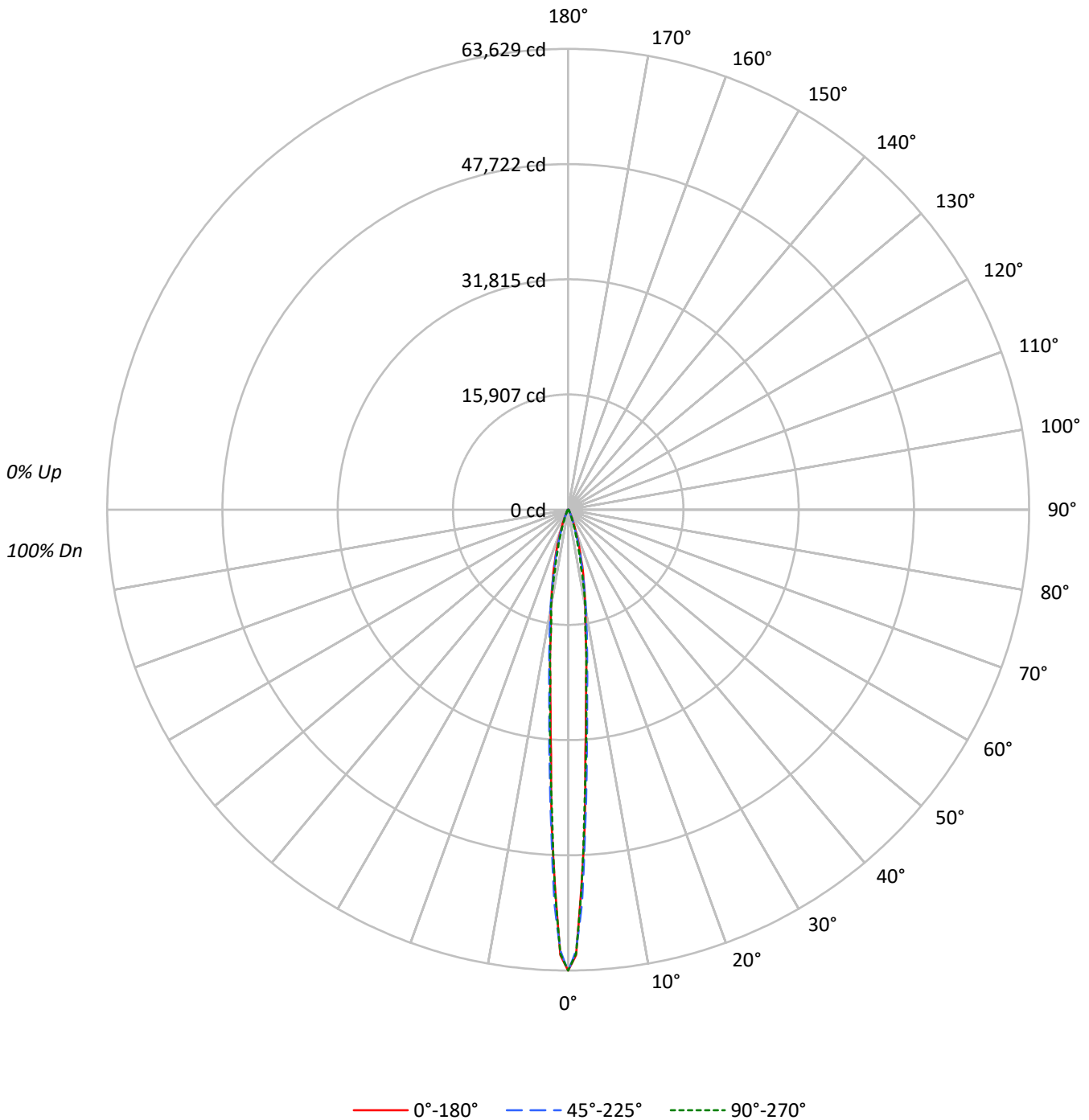
Lumens per Lamp: N/A  
Luminaire Lumens: 5092.0 lumens  
Efficiency: N/A  
Efficacy: 90.9 lumens/watt  
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 56  
Input Voltage (V): 120  
Input Current (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	100	100	100	100	100		
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	96	96	96	96	96	96		
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	95	93	93	93	93	93	93	93		
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90	90	90	90	90	90	90		
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	93	90	89	87	87	87	87	87	87	87		
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	90	88	86	85	85	85	85	85	85	85		
6	99	93	89	86	98	92	88	86	91	88	85	90	87	85	88	86	84	83	83	83	83	83	83	83		
7	96	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81	81	81	81	81	81	81		
8	94	88	84	81	93	87	84	81	86	83	81	86	83	80	85	82	80	79	79	79	79	79	79	79		
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78	78	78	78	78	78	78		
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	82	79	77	76	76	76	76	76	76	76		

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

	0°	45°	90°
0°	1027340	1027340	1027340
5°	452402	482935	466428
10°	222954	229524	224915
15°	112470	103632	89305
20°	47190	39971	33947
25°	19135	16012	13484
30°	9132	8145	7211
35°	5759	5046	4003
40°	4106	3754	2816
45°	3685	3240	2352
50°	3494	3075	1816
55°	3133	2742	1568
60°	2516	2157	1527
65°	2445	2128	1593
70°	2497	2101	1445
75°	2258	2084	1391
80°	2073	1813	1292
85°	1538	1538	1037



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2391.3	47.0
10°-20°	1768.2	34.7
20°-30°	482.5	9.5
30°-40°	170.5	3.3
40°-50°	107.5	2.1
50°-60°	79.7	1.6
60°-70°	52.4	1.0
70°-80°	31.6	0.6
80°-90°	8.3	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°	4642.0	91.2
0°-40°	4812.5	94.5
0°-60°	4999.7	98.2
0°-90°	5092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5092.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	63629	63629	63629	63629	63629	
5°	27913	29146	29797	28692	28778	2318
15°	6728	6642	6200	5487	5343	1907
25°	1074	1055	899	796	757	566
35°	292	287	256	234	203	189
45°	161	156	142	120	103	125
55°	111	106	97	72	56	100
65°	64	56	56	47	42	64
75°	36	31	33	28	22	39
85°	8	6	8	6	6	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	63628.8	63628.8	63628.8	63628.8	63628.8
1°	61500.0	60270.1	60985.3	60957.4	61313.6
2°	52030.6	55881.8	54381.9	54217.8	52509.2
3°	43529.5	45232.5	44280.8	44840.1	42163.2
4°	33893.1	36019.0	36344.6	35612.8	34669.4
5°	27913.1	29145.8	29797.0	28692.2	28778.5
6°	23510.9	25072.0	24974.6	25005.2	23766.9
7°	20597.4	21410.0	21526.8	20820.0	20483.3
8°	17263.8	18663.4	18554.9	18023.4	17269.3
9°	15388.2	16248.1	16111.7	15162.8	14887.3
10°	13599.0	14072.0	13999.7	12956.2	13718.6
12.5°	9792.3	9836.8	9358.2	8790.5	8336.9
15°	6728.5	6642.3	6199.8	5487.4	5342.7
17.5°	4418.9	4430.0	3831.8	3294.7	3211.2
20°	2746.5	2763.2	2326.3	2028.6	1975.7
22.5°	1728.0	1652.9	1383.0	1257.8	1224.4
25°	1074.1	1054.6	898.8	795.8	756.9
27.5°	726.3	712.4	584.4	537.1	534.3
30°	489.8	509.2	436.9	397.9	386.8
32.5°	370.1	370.1	339.5	311.7	281.1
35°	292.2	286.6	256.0	233.7	203.1
37.5°	222.6	233.7	205.9	189.2	158.6
40°	194.8	194.8	178.1	155.8	133.6
42.5°	172.5	178.1	155.8	133.6	111.3
45°	161.4	155.8	141.9	119.7	103.0
47.5°	147.5	144.7	130.8	105.7	89.0
50°	139.1	133.6	122.4	94.6	72.3
52.5°	130.8	122.4	111.3	83.5	61.2
55°	111.3	105.7	97.4	72.3	55.7
57.5°	97.4	86.3	80.7	61.2	50.1
60°	77.9	69.6	66.8	55.7	47.3
62.5°	69.6	64.0	61.2	52.9	44.5
65°	64.0	55.7	55.7	47.3	41.7
67.5°	58.4	50.1	50.1	41.7	36.2
70°	52.9	44.5	44.5	36.2	30.6
72.5°	44.5	36.2	39.0	30.6	27.8
75°	36.2	30.6	33.4	27.8	22.3
77.5°	30.6	25.0	25.0	22.3	16.7
80°	22.3	19.5	19.5	16.7	13.9
82.5°	13.9	11.1	13.9	11.1	8.3
85°	8.3	5.6	8.3	5.6	5.6
87.5°	2.8	2.8	2.8	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)