

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: P591984

Luminaire Tested: **GRZ-05L-940-10x10-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591984  
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-940-10x10-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

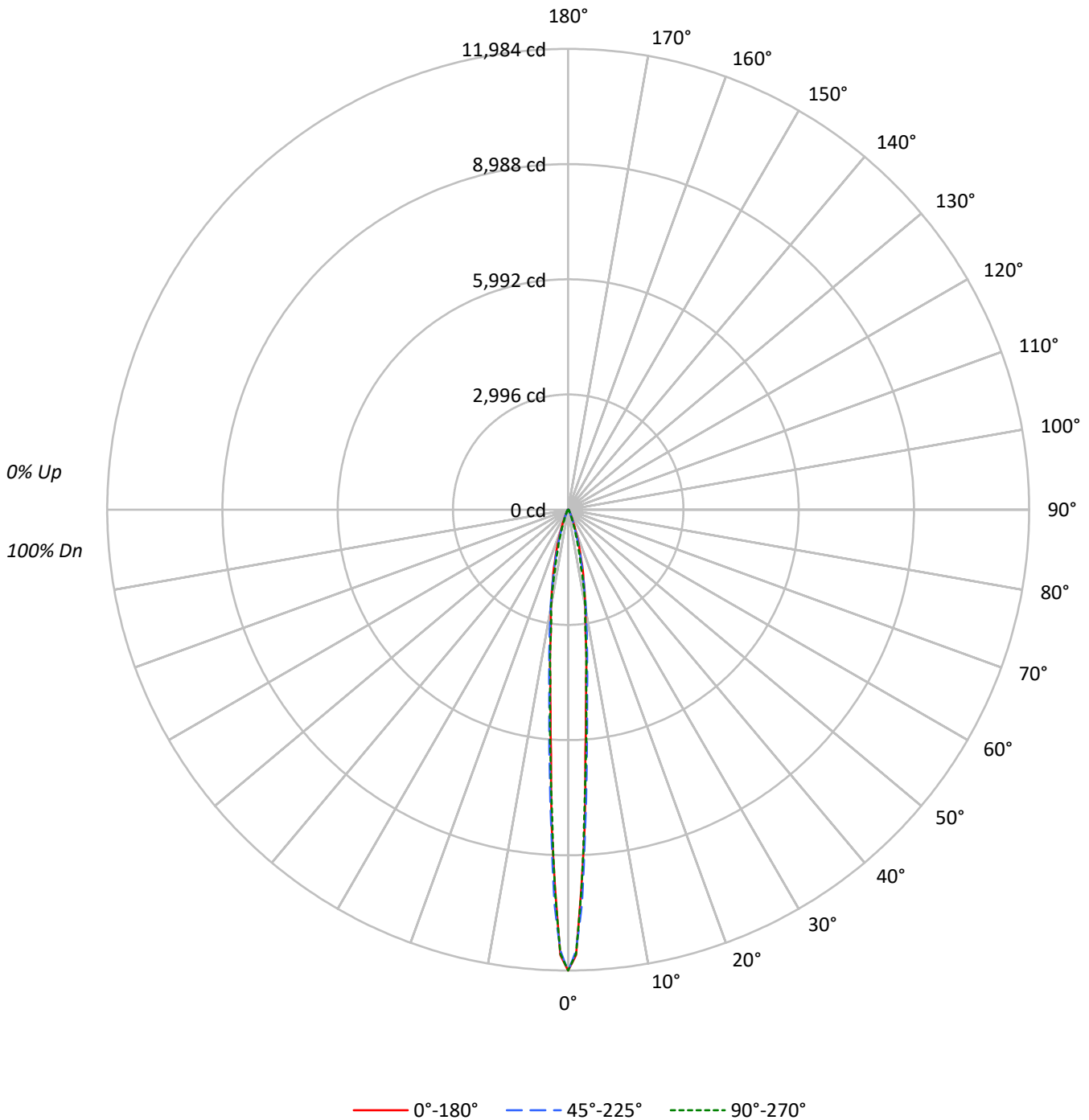
Lumens per Lamp: N/A  
Luminaire Lumens: 959.0 lumens  
Efficiency: N/A  
Efficacy: 99.9 lumens/watt  
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

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							
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10				
RCR																								
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	102	100	100	100	100
1	115	113	111	109	113	111	109	107	107	105	104	104	103	102	101	101	100	99	98	98	96	96	96	96
2	111	107	104	102	109	106	103	101	103	100	99	99	100	98	96	96	97	96	95	95	93	93	93	93
3	108	103	99	96	106	102	98	96	99	96	94	94	97	95	93	93	95	93	91	91	90	90	90	90
4	104	99	95	92	103	98	94	92	96	93	91	91	94	92	90	90	93	90	89	89	87	87	87	87
5	102	96	92	89	100	95	91	88	93	90	88	88	92	89	87	87	90	88	86	86	85	85	85	85
6	99	93	89	86	98	92	88	86	91	88	85	85	90	87	85	85	88	86	84	84	83	83	83	83
7	96	90	86	83	95	90	86	83	89	85	83	83	88	85	82	82	87	84	82	82	81	81	81	81
8	94	88	84	81	93	87	84	81	86	83	81	81	86	83	80	80	85	82	80	80	79	79	79	79
9	92	86	82	79	91	85	82	79	85	81	79	79	84	81	79	79	83	80	78	78	78	78	78	78
10	90	84	80	77	89	83	80	77	83	79	77	77	82	79	77	77	82	79	77	77	76	76	76	76

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

	0°	45°	90°
0°	386967	386967	386967
5°	170406	181907	175689
10°	83981	86454	84719
15°	42364	39034	33638
20°	17777	15055	12787
25°	7208	6032	5077
30°	3438	3069	2715
35°	2168	1900	1510
40°	1547	1412	1062
45°	1388	1219	886
50°	1316	1160	683
55°	1182	1030	591
60°	949	814	575
65°	925	802	604
70°	944	793	548
75°	848	786	524
80°	781	688	483
85°	593	593	371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	450.4	47.0
10°-20°	333.0	34.7
20°-30°	90.9	9.5
30°-40°	32.1	3.3
40°-50°	20.2	2.1
50°-60°	15.0	1.6
60°-70°	9.9	1.0
70°-80°	6.0	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°	874.3	91.2
0°-40°	906.4	94.5
0°-60°	941.6	98.2
0°-90°	959.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	959.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11984	11984	11984	11984	11984	
5°	5257	5489	5612	5404	5420	437
15°	1267	1251	1168	1034	1006	359
25°	202	199	169	150	142	107
35°	55	54	48	44	38	36
45°	30	29	27	22	19	24
55°	21	20	18	14	10	19
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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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	11983.5	11983.5	11983.5	11983.5	11983.5
1°	11582.6	11350.9	11485.6	11480.4	11547.5
2°	9799.2	10524.5	10242.0	10211.1	9889.3
3°	8198.1	8518.8	8339.6	8445.0	7940.8
4°	6383.2	6783.6	6844.9	6707.1	6529.5
5°	5257.0	5489.2	5611.8	5403.7	5420.0
6°	4427.9	4721.9	4703.6	4709.3	4476.1
7°	3879.2	4032.2	4054.2	3921.1	3857.7
8°	3251.4	3515.0	3494.5	3394.4	3252.4
9°	2898.1	3060.1	3034.4	2855.7	2803.8
10°	2561.2	2650.2	2636.6	2440.1	2583.7
12.5°	1844.2	1852.6	1762.5	1655.6	1570.1
15°	1267.2	1251.0	1167.6	1033.5	1006.2
17.5°	832.2	834.3	721.7	620.5	604.8
20°	517.3	520.4	438.1	382.1	372.1
22.5°	325.5	311.3	260.5	236.9	230.6
25°	202.3	198.6	169.3	149.9	142.5
27.5°	136.8	134.2	110.1	101.1	100.6
30°	92.2	95.9	82.3	74.9	72.8
32.5°	69.7	69.7	63.9	58.7	52.9
35°	55.0	54.0	48.2	44.0	38.3
37.5°	41.9	44.0	38.8	35.6	29.9
40°	36.7	36.7	33.5	29.3	25.2
42.5°	32.5	33.5	29.3	25.2	21.0
45°	30.4	29.3	26.7	22.5	19.4
47.5°	27.8	27.3	24.6	19.9	16.8
50°	26.2	25.2	23.1	17.8	13.6
52.5°	24.6	23.1	21.0	15.7	11.5
55°	21.0	19.9	18.3	13.6	10.5
57.5°	18.3	16.2	15.2	11.5	9.4
60°	14.7	13.1	12.6	10.5	8.9
62.5°	13.1	12.1	11.5	10.0	8.4
65°	12.1	10.5	10.5	8.9	7.9
67.5°	11.0	9.4	9.4	7.9	6.8
70°	10.0	8.4	8.4	6.8	5.8
72.5°	8.4	6.8	7.3	5.8	5.2
75°	6.8	5.8	6.3	5.2	4.2
77.5°	5.8	4.7	4.7	4.2	3.1
80°	4.2	3.7	3.7	3.1	2.6
82.5°	2.6	2.1	2.6	2.1	1.6
85°	1.6	1.0	1.6	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)