

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: P592053

Luminaire Tested: **GRZ-10L-940-10x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592053
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-17)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-10L-940-10x30-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x30 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

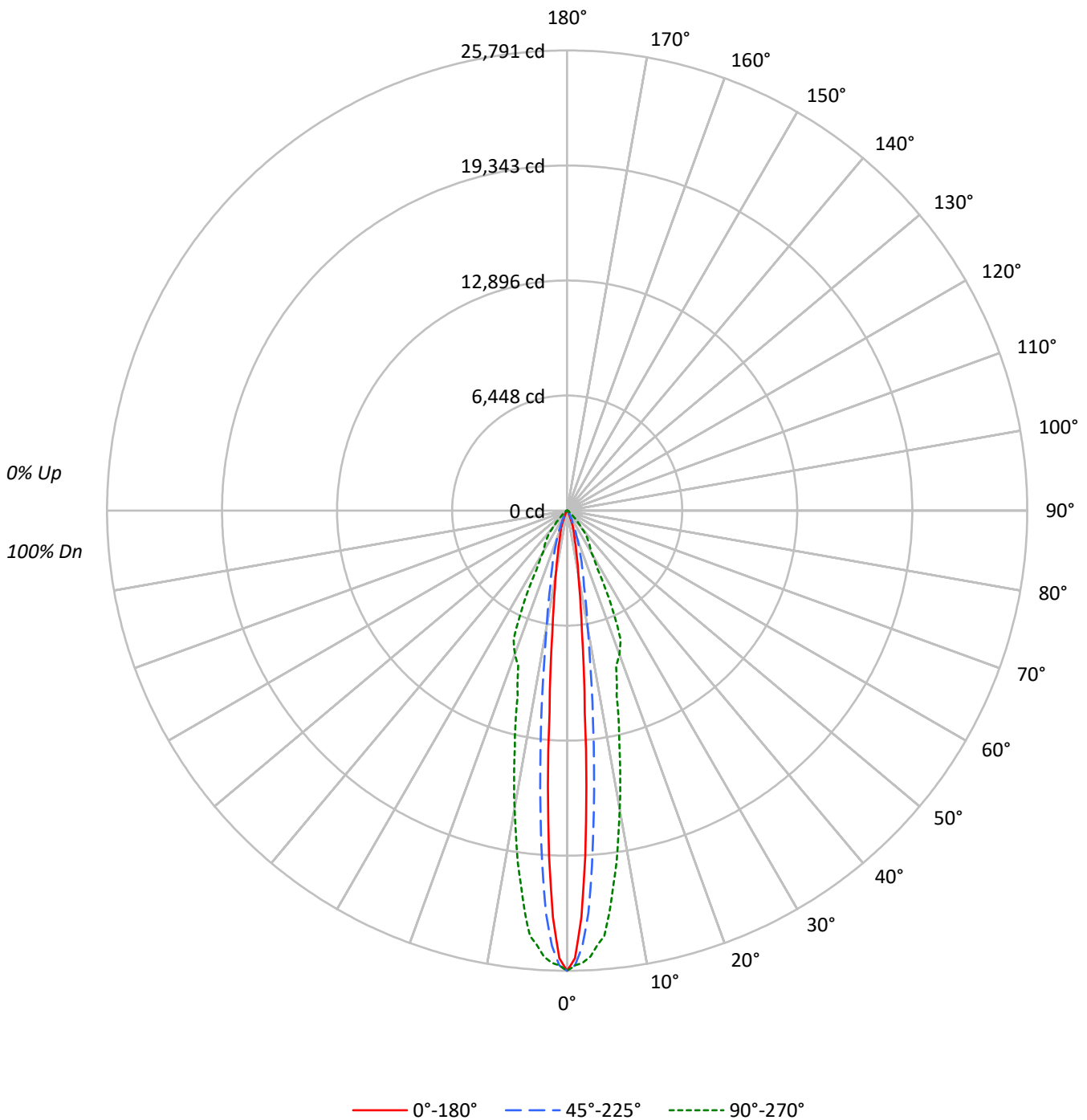
Lumens per Lamp: N/A
Luminaire Lumens: 4088.0 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
Input Voltage (V): 120
Input Current (A_{in}): 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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	102	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91					91			
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83					83			
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80					80			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77					77			
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74					74			
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71					71			
9	86	79	74	71	85	78	74	71	77	73	71	77	73	70	76	73	70	69					69			
10	84	76	72	69	83	76	71	68	75	71	68	74	71	68	74	70	68	67					67			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	416413	416413	416413
5°	184432	276926	387898
10°	59838	108038	278115
15°	26109	53374	179304
20°	14706	27301	147185
25°	5264	12102	104200
30°	3220	6225	50373
35°	2420	4009	40395
40°	1941	2913	26694
45°	1665	1754	13584
50°	1929	1060	6363
55°	2052	864	3133
60°	1734	743	1860
65°	1467	879	1467
70°	1270	906	1270
75°	961	717	961
80°	716	716	716
85°	704	704	704



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CATALOG NUMBER: GRZ-10L-940-10x30-X-UNV-STD-4F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1371.8	33.6
10°-20°	1339.7	32.8
20°-30°	750.8	18.4
30°-40°	339.0	8.3
40°-50°	171.4	4.2
50°-60°	63.9	1.6
60°-70°	31.8	0.8
70°-80°	16.5	0.4
80°-90°	3.2	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°	3462.2	84.7
0°-40°	3801.2	93.0
0°-60°	4036.6	98.7
0°-90°	4088.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4088.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	25791	25791	25791	25791	25791	
5°	11379	13048	17086	21932	23933	870
15°	1562	1928	3193	6982	10727	483
25°	296	330	679	2536	5849	168
35°	123	83	203	809	2049	78
45°	73	63	77	365	595	61
55°	73	35	31	112	111	63
65°	38	30	23	34	38	38
75°	15	18	12	12	15	17
85°	4	4	4	1	4	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	25790.7	25790.7	25790.7	25790.7	25790.7	25790.7	25790.7	25790.7	25790.7	25790.7	25790.7
1°	25088.4	25092.2	25280.3	25157.4	25456.8	25499.0	25460.6	25529.7	25548.9	25441.4	25499.0
2°	22793.3	22862.4	22973.7	23618.4	23914.0	24393.7	24796.7	25142.1	25291.8	25353.2	25345.5
3°	19404.4	19358.4	19907.2	20525.1	21584.4	22589.9	23580.1	24232.5	24808.2	24992.4	25027.0
4°	15455.2	15274.8	16215.1	16737.1	18168.6	19976.3	21741.7	23150.2	24098.2	24489.6	24397.5
5°	11379.4	11697.9	12354.2	13279.1	14841.2	17086.3	19446.6	21557.5	23054.3	23714.4	23933.2
6°	8865.6	8804.1	9333.8	10462.1	12039.5	14449.7	17147.7	19795.9	21657.3	22451.7	22639.8
7°	6839.1	6800.8	7326.6	8128.7	9452.8	11932.0	14917.9	18011.3	20294.8	21192.9	21185.2
8°	5419.1	5396.1	5760.7	6393.9	7645.1	9740.6	12711.1	16046.3	18663.7	19872.7	19872.7
9°	4379.0	4428.9	4651.5	5211.9	6198.2	7952.1	10865.1	14380.6	17067.1	18249.2	18352.8
10°	3649.8	3676.7	3857.1	4317.6	5139.0	6589.7	9130.4	12442.5	15493.6	16990.4	16963.5
12.5°	2368.0	2425.6	2556.0	2851.6	3450.3	4356.0	6067.7	8723.6	11809.2	13306.0	13559.3
15°	1562.0	1573.5	1734.7	1991.9	2467.8	3193.1	4390.6	6370.9	8815.7	10512.0	10726.9
17.5°	1166.7	1178.2	1216.6	1370.1	1719.4	2337.3	3308.3	4843.4	7165.4	8877.1	9122.7
20°	855.9	817.5	806.0	894.2	1166.7	1588.9	2414.0	3776.5	5814.4	8124.8	8566.2
22.5°	498.9	491.3	472.1	545.0	752.2	1043.9	1642.6	2820.9	4916.4	7234.4	7844.7
25°	295.5	287.8	284.0	345.4	472.1	679.3	1120.7	2133.9	3742.0	5319.3	5849.0
27.5°	214.9	207.2	188.1	214.9	310.9	468.2	790.6	1542.8	2567.6	3419.6	3707.4
30°	172.7	165.0	130.5	142.0	214.9	333.9	579.5	1066.9	1823.0	2540.7	2701.9
32.5°	145.8	138.2	99.8	103.6	149.7	253.3	452.9	821.3	1473.8	2199.1	2379.5
35°	122.8	115.1	80.6	84.4	115.1	203.4	372.3	675.5	1208.9	1892.1	2049.4
37.5°	103.6	95.9	69.1	72.9	99.8	168.9	337.7	583.4	1001.7	1554.4	1707.9
40°	92.1	84.4	61.4	69.1	92.1	138.2	299.4	495.1	821.3	1201.3	1266.5
42.5°	80.6	72.9	61.4	69.1	84.4	107.5	218.8	395.3	667.8	863.5	917.3
45°	72.9	69.1	57.6	65.2	72.9	76.8	138.2	307.0	537.3	594.9	594.9
47.5°	76.8	69.1	53.7	57.6	57.6	57.6	84.4	241.8	418.3	403.0	391.5
50°	76.8	65.2	49.9	46.1	46.1	42.2	57.6	188.1	310.9	257.1	253.3
52.5°	76.8	65.2	46.1	42.2	38.4	34.5	42.2	142.0	218.8	165.0	165.0
55°	72.9	61.4	38.4	34.5	30.7	30.7	34.5	99.8	149.7	115.1	111.3
57.5°	65.2	53.7	34.5	30.7	30.7	26.9	26.9	65.2	115.1	88.3	76.8
60°	53.7	46.1	30.7	30.7	30.7	23.0	23.0	42.2	92.1	65.2	57.6
62.5°	46.1	38.4	30.7	30.7	30.7	23.0	19.2	30.7	76.8	53.7	46.1
65°	38.4	30.7	26.9	30.7	30.7	23.0	15.4	23.0	65.2	42.2	38.4
67.5°	30.7	26.9	23.0	26.9	26.9	19.2	11.5	15.4	53.7	34.5	30.7
70°	26.9	23.0	19.2	23.0	26.9	19.2	11.5	15.4	42.2	26.9	26.9
72.5°	19.2	19.2	19.2	23.0	23.0	15.4	7.7	11.5	34.5	23.0	23.0
75°	15.4	15.4	15.4	19.2	19.2	11.5	7.7	7.7	26.9	19.2	15.4
77.5°	11.5	11.5	11.5	15.4	15.4	7.7	3.8	7.7	19.2	11.5	11.5
80°	7.7	7.7	7.7	11.5	11.5	7.7	3.8	3.8	11.5	7.7	7.7
82.5°	3.8	3.8	3.8	7.7	7.7	3.8	3.8	3.8	3.8	3.8	3.8
85°	3.8	3.8	3.8	3.8	3.8	3.8	0.0	0.0	3.8	3.8	3.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)