

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: P592043

Luminaire Tested: **GRZ-10L-935-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-21)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-10L-935-30x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 30x60 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

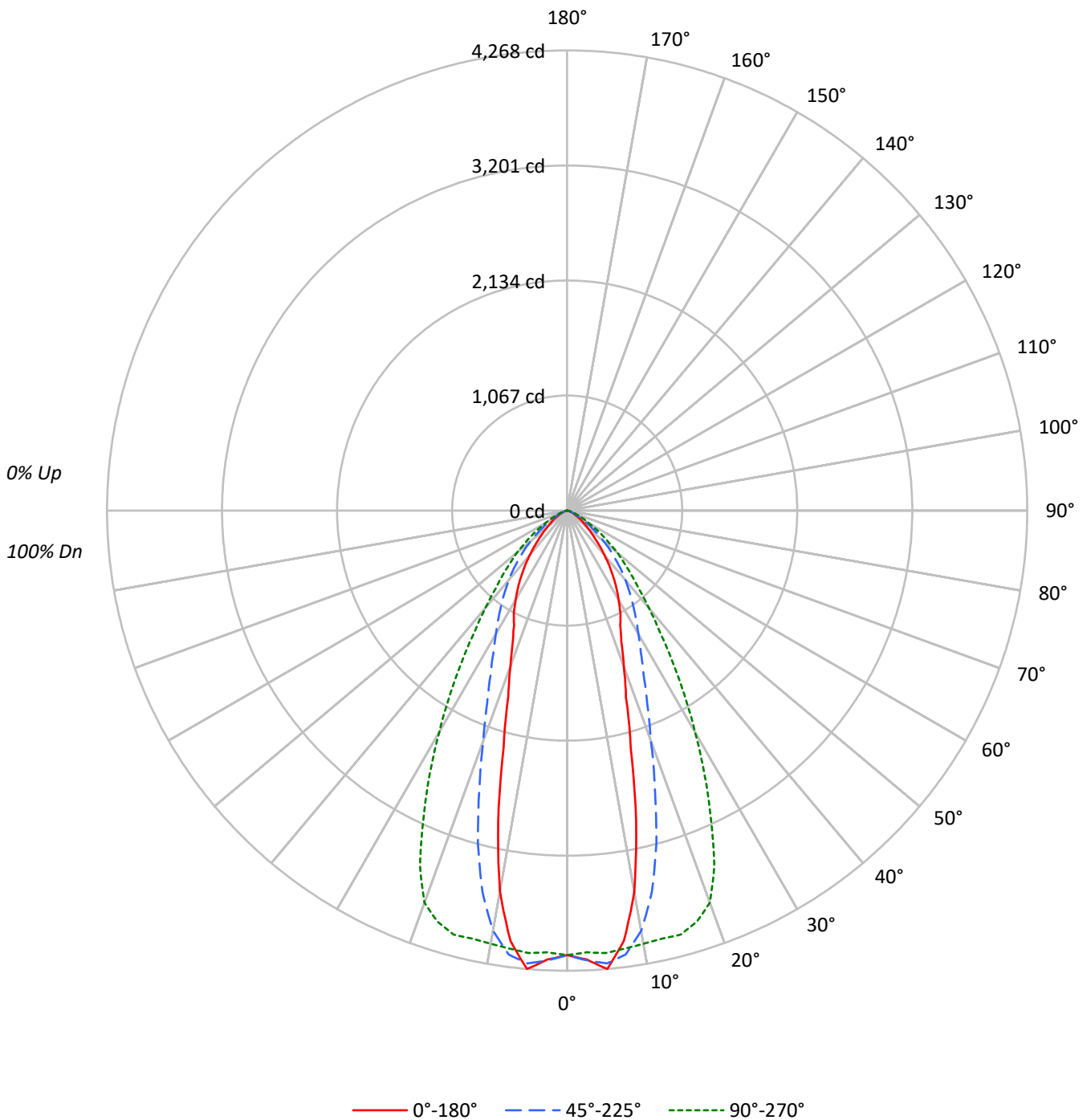
Lumens per Lamp: N/A
Luminaire Lumens: 3784.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60	59
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51
9	71	60	54	49	70	60	53	49	59	53	49	58	53	49	57	52	49	47
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	54	49	46	44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	66573	66573	66573
5°	69172	68331	66767
10°	58838	64862	66868
15°	38089	53412	68052
20°	26400	39026	66508
25°	20760	29885	56199
30°	17782	24632	44213
35°	14629	20921	33356
40°	11341	17757	24875
45°	8389	14321	19237
50°	6152	10999	15287
55°	4597	7834	11178
60°	3236	5273	7550
65°	2269	3404	5104
70°	1577	2275	3328
75°	1160	1391	2314
80°	688	1032	1729
85°	685	685	685



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.9	10.3
10°-20°	888.4	23.5
20°-30°	908.0	24.0
30°-40°	726.5	19.2
40°-50°	485.7	12.8
50°-60°	256.0	6.8
60°-70°	96.7	2.6
70°-80°	28.4	0.8
80°-90°	4.3	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°	2186.3	57.8
0°-40°	2912.8	77.0
0°-60°	3654.5	96.6
0°-90°	3784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4123	4123	4123	4123	4123	
5°	4268	4206	4216	4152	4120	383
15°	2279	2514	3195	3878	4071	650
25°	1165	1258	1678	2757	3155	547
35°	742	807	1061	1536	1692	462
45°	367	426	627	829	842	289
55°	163	185	278	381	397	148
65°	59	66	89	121	134	61
75°	19	19	22	31	37	21
85°	4	4	4	4	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°	4123.2	4123.2	4123.2	4123.2	4123.2	4123.2	4123.2	4123.2	4123.2	4123.2	4123.2
2.5°	4167.7	4164.0	4204.8	4175.1	4186.3	4175.1	4141.7	4123.2	4119.5	4082.4	4100.9
5°	4267.9	4208.5	4219.7	4201.1	4219.7	4216.0	4178.9	4156.6	4138.0	4115.8	4119.5
7.5°	4026.7	4034.1	4067.5	4082.4	4134.3	4152.9	4134.3	4119.5	4104.6	4093.5	4097.2
10°	3588.8	3614.7	3663.0	3759.5	3867.1	3956.2	3993.3	4034.1	4067.5	4071.2	4078.6
12.5°	2954.1	2991.3	3069.2	3173.1	3410.6	3625.9	3807.7	3948.8	4030.4	4074.9	4067.5
15°	2278.7	2289.8	2386.3	2557.0	2816.8	3195.4	3555.4	3841.1	3989.6	4093.5	4071.2
17.5°	1814.8	1829.6	1907.6	2037.5	2286.1	2705.5	3243.6	3670.4	3941.3	4015.6	3997.0
20°	1536.5	1525.3	1584.7	1692.3	1900.2	2271.3	2831.7	3403.2	3744.6	3848.6	3870.8
22.5°	1313.8	1324.9	1362.0	1447.4	1629.2	1937.3	2449.4	3054.3	3432.9	3547.9	3566.5
25°	1165.3	1176.5	1213.6	1273.0	1421.4	1677.5	2119.1	2664.7	3035.8	3147.1	3154.6
27.5°	1068.8	1061.4	1087.4	1131.9	1261.8	1480.8	1844.5	2297.3	2642.4	2753.7	2761.2
30°	953.8	950.1	976.1	1024.3	1128.2	1321.2	1629.2	1996.6	2241.6	2349.2	2371.5
32.5°	849.9	846.2	875.9	916.7	1020.6	1187.6	1454.8	1740.6	1907.6	1996.6	2018.9
35°	742.2	746.0	768.2	820.2	913.0	1061.4	1306.4	1506.8	1625.5	1670.1	1692.3
37.5°	638.3	642.0	671.7	723.7	816.5	950.1	1146.8	1302.6	1373.2	1406.6	1402.8
40°	538.1	545.6	564.1	623.5	716.3	842.5	1002.0	1117.1	1165.3	1169.0	1180.2
42.5°	449.1	449.1	478.7	527.0	616.1	734.8	875.9	957.5	994.6	990.9	983.5
45°	367.4	371.1	389.7	437.9	519.6	627.2	749.7	823.9	846.2	831.3	842.5
47.5°	300.6	304.3	319.2	363.7	434.2	538.1	634.6	705.1	723.7	712.6	712.6
50°	244.9	248.7	259.8	293.2	352.6	437.9	527.0	586.4	604.9	601.2	608.6
52.5°	200.4	200.4	211.5	237.5	285.8	356.3	426.8	478.7	493.6	489.9	486.2
55°	163.3	163.3	170.7	189.3	226.4	278.3	337.7	378.5	389.7	393.4	397.1
57.5°	129.9	129.9	133.6	148.4	174.4	215.3	259.8	289.5	300.6	304.3	308.0
60°	100.2	100.2	107.6	115.0	137.3	163.3	193.0	215.3	230.1	230.1	233.8
62.5°	77.9	77.9	81.6	89.1	103.9	122.5	141.0	159.6	167.0	174.4	178.1
65°	59.4	59.4	63.1	66.8	77.9	89.1	103.9	118.8	126.2	129.9	133.6
67.5°	44.5	44.5	44.5	52.0	59.4	66.8	74.2	85.4	89.1	96.5	100.2
70°	33.4	33.4	33.4	37.1	40.8	48.2	52.0	59.4	66.8	70.5	70.5
72.5°	26.0	26.0	26.0	26.0	29.7	33.4	37.1	40.8	48.2	52.0	52.0
75°	18.6	18.6	18.6	18.6	22.3	22.3	26.0	29.7	33.4	37.1	37.1
77.5°	14.8	14.8	11.1	14.8	14.8	14.8	18.6	18.6	22.3	26.0	26.0
80°	7.4	7.4	7.4	7.4	11.1	11.1	11.1	14.8	14.8	14.8	18.6
82.5°	3.7	3.7	3.7	3.7	7.4	7.4	7.4	7.4	7.4	11.1	11.1
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
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)