

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: P591995

Luminaire Tested: **GRZ-05L-940-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591995
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-05L-940-30x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 30x60 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

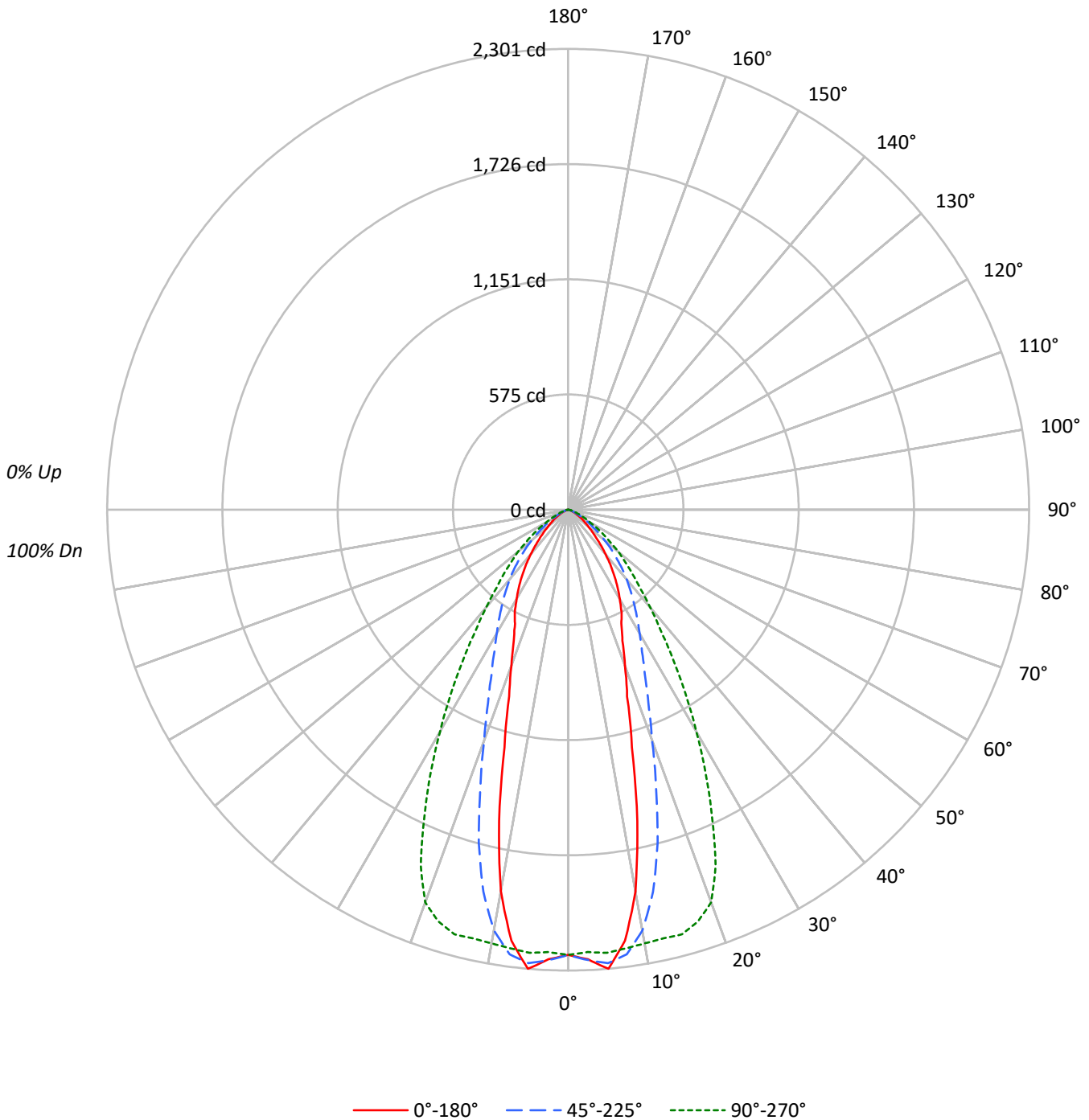
Lumens per Lamp: N/A
Luminaire Lumens: 2040.0 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92					92			
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83					83			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69					69			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64					64			
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60	59					59			
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54					54			
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51					51			
9	71	60	54	49	70	60	53	49	59	53	49	58	53	49	57	52	49	47					47			
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	54	49	46	44					44			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	35891	35891	35891
5°	37292	36838	35995
10°	31719	34967	36049
15°	20535	28796	36687
20°	14232	21039	35855
25°	11191	16110	30298
30°	9587	13280	23836
35°	7888	11278	17984
40°	6114	9573	13409
45°	4523	7720	10371
50°	3318	5930	8241
55°	2477	4225	6027
60°	1744	2842	4069
65°	1223	1834	2751
70°	850	1227	1794
75°	624	749	1248
80°	372	558	930
85°	371	371	371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.2	10.3
10°-20°	479.0	23.5
20°-30°	489.5	24.0
30°-40°	391.7	19.2
40°-50°	261.8	12.8
50°-60°	138.0	6.8
60°-70°	52.1	2.6
70°-80°	15.3	0.8
80°-90°	2.3	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°	1178.6	57.8
0°-40°	1570.3	77.0
0°-60°	1970.2	96.6
0°-90°	2040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2223	2223	2223	2223	2223	
5°	2301	2267	2273	2238	2221	206
15°	1228	1356	1723	2091	2195	350
25°	628	678	904	1487	1701	295
35°	400	435	572	828	912	249
45°	198	230	338	447	454	156
55°	88	100	150	206	214	80
65°	32	36	48	65	72	33
75°	10	10	12	16	20	11
85°	2	2	2	2	2	2
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°	2222.9	2222.9	2222.9	2222.9	2222.9	2222.9	2222.9	2222.9	2222.9	2222.9	2222.9
2.5°	2246.9	2244.9	2266.9	2250.9	2256.9	2250.9	2232.9	2222.9	2220.9	2200.8	2210.9
5°	2300.9	2268.9	2274.9	2264.9	2274.9	2272.9	2252.9	2240.9	2230.9	2218.9	2220.9
7.5°	2170.8	2174.8	2192.8	2200.8	2228.9	2238.9	2228.9	2220.9	2212.9	2206.9	2208.9
10°	1934.7	1948.8	1974.8	2026.8	2084.8	2132.8	2152.8	2174.8	2192.8	2194.8	2198.8
12.5°	1592.6	1612.6	1654.6	1710.7	1838.7	1954.8	2052.8	2128.8	2172.8	2196.8	2192.8
15°	1228.5	1234.5	1286.5	1378.5	1518.6	1722.7	1916.7	2070.8	2150.8	2206.9	2194.8
17.5°	978.4	986.4	1028.4	1098.4	1232.5	1458.6	1748.7	1978.8	2124.8	2164.8	2154.8
20°	828.3	822.3	854.3	912.4	1024.4	1224.5	1526.6	1834.7	2018.8	2074.8	2086.8
22.5°	708.3	714.3	734.3	780.3	878.3	1044.4	1320.5	1646.6	1850.7	1912.7	1922.7
25°	628.2	634.2	654.3	686.3	766.3	904.3	1142.4	1436.6	1636.6	1696.7	1700.7
27.5°	576.2	572.2	586.2	610.2	680.3	798.3	994.4	1238.5	1424.5	1484.6	1488.6
30°	514.2	512.2	526.2	552.2	608.2	712.3	878.3	1076.4	1208.5	1266.5	1278.5
32.5°	458.2	456.2	472.2	494.2	550.2	640.2	784.3	938.4	1028.4	1076.4	1088.4
35°	400.2	402.2	414.2	442.2	492.2	572.2	704.3	812.3	876.3	900.3	912.4
37.5°	344.1	346.1	362.1	390.2	440.2	512.2	618.2	702.3	740.3	758.3	756.3
40°	290.1	294.1	304.1	336.1	386.1	454.2	540.2	602.2	628.2	630.2	636.2
42.5°	242.1	242.1	258.1	284.1	332.1	396.2	472.2	516.2	536.2	534.2	530.2
45°	198.1	200.1	210.1	236.1	280.1	338.1	404.2	444.2	456.2	448.2	454.2
47.5°	162.1	164.1	172.1	196.1	234.1	290.1	342.1	380.1	390.2	384.1	384.1
50°	132.1	134.1	140.1	158.1	190.1	236.1	284.1	316.1	326.1	324.1	328.1
52.5°	108.0	108.0	114.0	128.0	154.1	192.1	230.1	258.1	266.1	264.1	262.1
55°	88.0	88.0	92.0	102.0	122.0	150.1	182.1	204.1	210.1	212.1	214.1
57.5°	70.0	70.0	72.0	80.0	94.0	116.0	140.1	156.1	162.1	164.1	166.1
60°	54.0	54.0	58.0	62.0	74.0	88.0	104.0	116.0	124.0	124.0	126.0
62.5°	42.0	42.0	44.0	48.0	56.0	66.0	76.0	86.0	90.0	94.0	96.0
65°	32.0	32.0	34.0	36.0	42.0	48.0	56.0	64.0	68.0	70.0	72.0
67.5°	24.0	24.0	24.0	28.0	32.0	36.0	40.0	46.0	48.0	52.0	54.0
70°	18.0	18.0	18.0	20.0	22.0	26.0	28.0	32.0	36.0	38.0	38.0
72.5°	14.0	14.0	14.0	14.0	16.0	18.0	20.0	22.0	26.0	28.0	28.0
75°	10.0	10.0	10.0	10.0	12.0	12.0	14.0	16.0	18.0	20.0	20.0
77.5°	8.0	8.0	6.0	8.0	8.0	8.0	10.0	10.0	12.0	14.0	14.0
80°	4.0	4.0	4.0	4.0	6.0	6.0	6.0	8.0	8.0	8.0	10.0
82.5°	2.0	2.0	2.0	2.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0
85°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)