

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: P591979

Luminaire Tested: **GRZ-05L-935-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591979
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-935-30x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 30x60 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

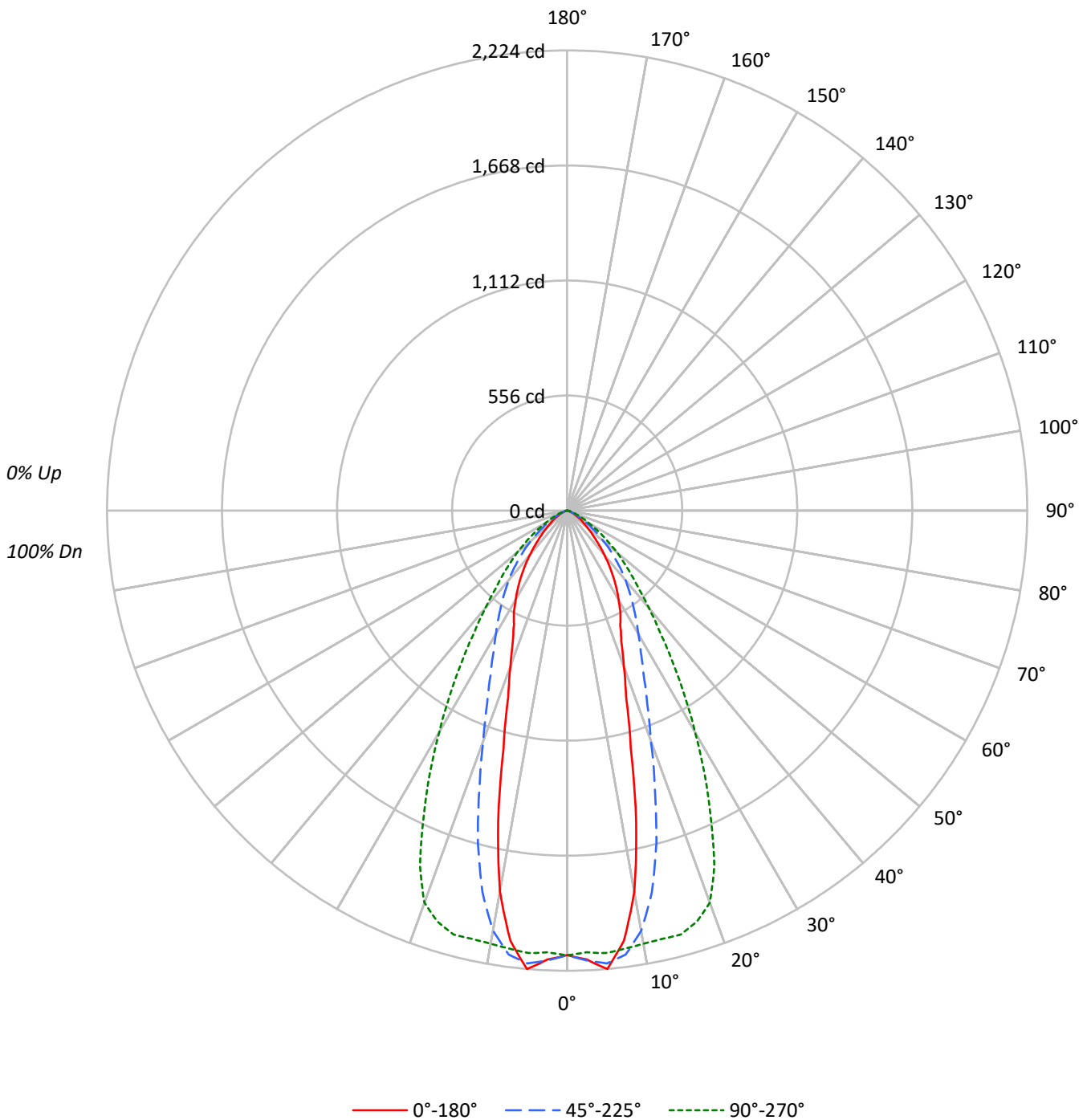
Lumens per Lamp: N/A
Luminaire Lumens: 1972.0 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

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°	34694	34694	34694
5°	36049	35610	34794
10°	30663	33801	34849
15°	19850	27834	35465
20°	13758	20338	34660
25°	10819	15574	29288
30°	9268	12836	23042
35°	7624	10902	17383
40°	5910	9253	12962
45°	4373	7464	10024
50°	3205	5732	7968
55°	2396	4084	5824
60°	1686	2748	3933
65°	1181	1773	2659
70°	821	1185	1733
75°	605	724	1204
80°	363	539	902
85°	352	352	352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.2	10.3
10°-20°	463.0	23.5
20°-30°	473.2	24.0
30°-40°	378.6	19.2
40°-50°	253.1	12.8
50°-60°	133.4	6.8
60°-70°	50.4	2.6
70°-80°	14.8	0.8
80°-90°	2.2	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°	1139.4	57.8
0°-40°	1518.0	77.0
0°-60°	1904.5	96.6
0°-90°	1972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2149	2149	2149	2149	2149	
5°	2224	2192	2197	2164	2147	200
15°	1188	1310	1665	2021	2122	339
25°	607	656	874	1437	1644	285
35°	387	421	553	801	882	241
45°	192	222	327	432	439	151
55°	85	96	145	199	207	77
65°	31	34	46	63	70	32
75°	10	10	12	16	19	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°	2148.8	2148.8	2148.8	2148.8	2148.8	2148.8	2148.8	2148.8	2148.8	2148.8	2148.8
2.5°	2172.0	2170.0	2191.3	2175.8	2181.6	2175.8	2158.4	2148.8	2146.8	2127.5	2137.2
5°	2224.2	2193.2	2199.0	2189.4	2199.0	2197.1	2177.8	2166.2	2156.5	2144.9	2146.8
7.5°	2098.5	2102.3	2119.8	2127.5	2154.6	2164.2	2154.6	2146.8	2139.1	2133.3	2135.2
10°	1870.3	1883.8	1908.9	1959.2	2015.3	2061.7	2081.1	2102.3	2119.8	2121.7	2125.6
12.5°	1539.5	1558.9	1599.5	1653.6	1777.4	1889.6	1984.4	2057.9	2100.4	2123.6	2119.8
15°	1187.5	1193.3	1243.6	1332.6	1468.0	1665.2	1852.8	2001.8	2079.1	2133.3	2121.7
17.5°	945.8	953.5	994.1	1061.8	1191.4	1409.9	1690.4	1912.8	2054.0	2092.7	2083.0
20°	800.7	794.9	825.9	881.9	990.2	1183.7	1475.7	1773.6	1951.5	2005.6	2017.2
22.5°	684.7	690.5	709.8	754.3	849.1	1009.6	1276.5	1591.7	1789.0	1849.0	1858.7
25°	607.3	613.1	632.4	663.4	740.8	874.2	1104.4	1388.7	1582.1	1640.1	1644.0
27.5°	557.0	553.1	566.7	589.9	657.6	771.7	961.2	1197.2	1377.1	1435.1	1439.0
30°	497.1	495.1	508.7	533.8	588.0	688.5	849.1	1040.5	1168.2	1224.3	1235.9
32.5°	442.9	441.0	456.4	477.7	531.9	618.9	758.2	907.1	994.1	1040.5	1052.1
35°	386.8	388.7	400.4	427.4	475.8	553.1	680.8	785.2	847.1	870.3	881.9
37.5°	332.7	334.6	350.1	377.1	425.5	495.1	597.6	678.9	715.6	733.0	731.1
40°	280.4	284.3	294.0	324.9	373.3	439.0	522.2	582.2	607.3	609.2	615.0
42.5°	234.0	234.0	249.5	274.6	321.1	382.9	456.4	499.0	518.3	516.4	512.5
45°	191.5	193.4	203.1	228.2	270.8	326.9	390.7	429.4	441.0	433.2	439.0
47.5°	156.7	158.6	166.3	189.5	226.3	280.4	330.7	367.5	377.1	371.3	371.3
50°	127.6	129.6	135.4	152.8	183.7	228.2	274.6	305.6	315.3	313.3	317.2
52.5°	104.4	104.4	110.2	123.8	148.9	185.7	222.4	249.5	257.2	255.3	253.4
55°	85.1	85.1	89.0	98.6	118.0	145.1	176.0	197.3	203.1	205.0	206.9
57.5°	67.7	67.7	69.6	77.4	90.9	112.2	135.4	150.9	156.7	158.6	160.5
60°	52.2	52.2	56.1	60.0	71.6	85.1	100.6	112.2	119.9	119.9	121.8
62.5°	40.6	40.6	42.5	46.4	54.2	63.8	73.5	83.2	87.0	90.9	92.8
65°	30.9	30.9	32.9	34.8	40.6	46.4	54.2	61.9	65.8	67.7	69.6
67.5°	23.2	23.2	23.2	27.1	30.9	34.8	38.7	44.5	46.4	50.3	52.2
70°	17.4	17.4	17.4	19.3	21.3	25.1	27.1	30.9	34.8	36.7	36.7
72.5°	13.5	13.5	13.5	13.5	15.5	17.4	19.3	21.3	25.1	27.1	27.1
75°	9.7	9.7	9.7	9.7	11.6	11.6	13.5	15.5	17.4	19.3	19.3
77.5°	7.7	7.7	5.8	7.7	7.7	7.7	9.7	9.7	11.6	13.5	13.5
80°	3.9	3.9	3.9	3.9	5.8	5.8	5.8	7.7	7.7	7.7	9.7
82.5°	1.9	1.9	1.9	1.9	3.9	3.9	3.9	3.9	3.9	5.8	5.8
85°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)