

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: P592042

Luminaire Tested: **GRZ-10L-935-30x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592042
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-2F
Description: iO LED GRAZER WITH 30x60 OPTIC
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

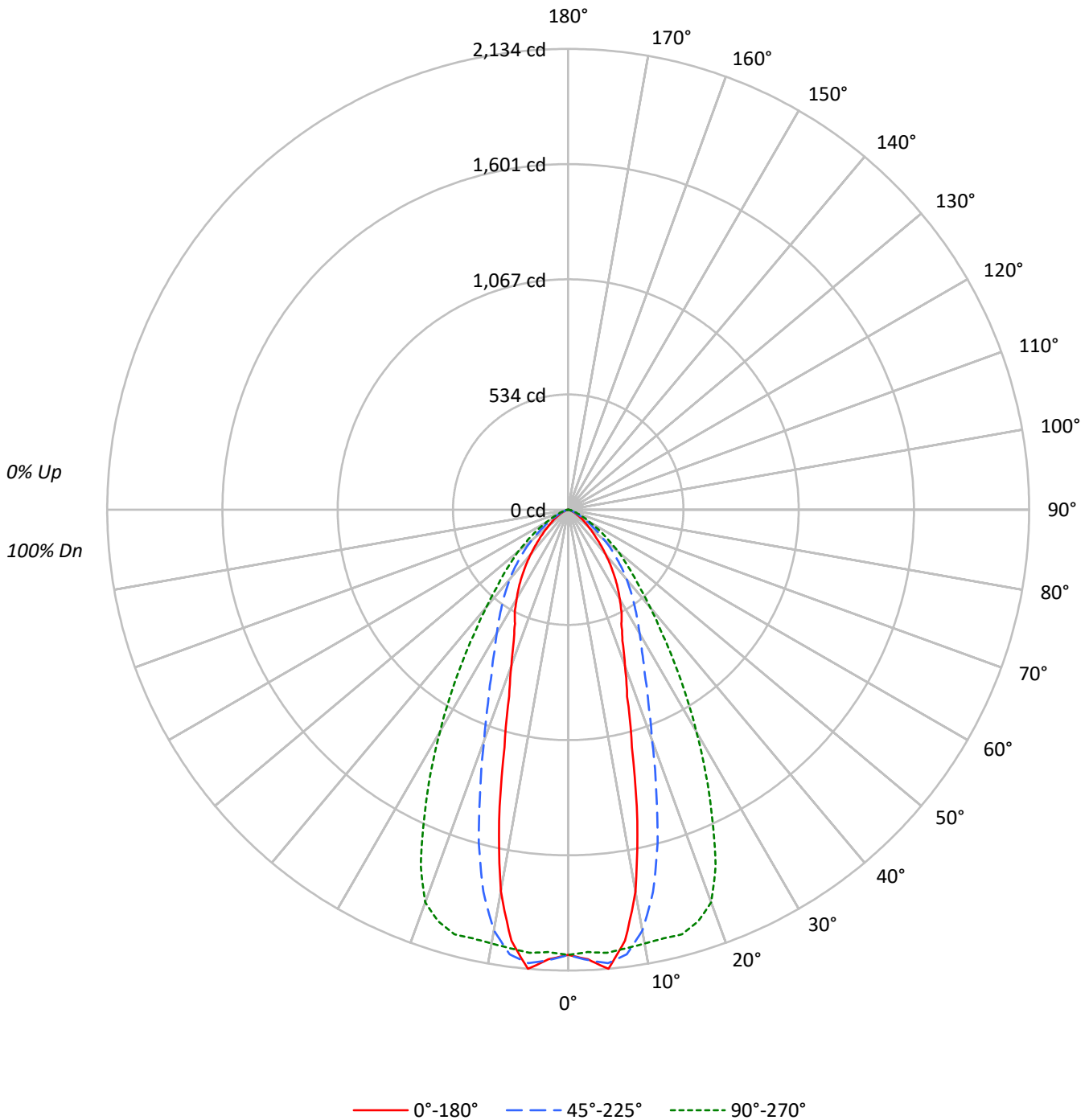
Lumens per Lamp: N/A
Luminaire Lumens: 1892.0 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	93	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°	66573	66573	66573
5°	69174	68331	66765
10°	58838	64862	66868
15°	38088	53412	68052
20°	26398	39024	66508
25°	20762	29883	56199
30°	17782	24632	44211
35°	14629	20921	33358
40°	11344	17755	24875
45°	8389	14321	19235
50°	6154	11002	15287
55°	4594	7837	11181
60°	3236	5270	7550
65°	2269	3400	5104
70°	1577	2275	3333
75°	1160	1385	2321
80°	688	1041	1729
85°	704	704	704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.9	10.3
10°-20°	444.2	23.5
20°-30°	454.0	24.0
30°-40°	363.3	19.2
40°-50°	242.8	12.8
50°-60°	128.0	6.8
60°-70°	48.4	2.6
70°-80°	14.2	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°	1093.1	57.8
0°-40°	1456.4	77.0
0°-60°	1827.2	96.6
0°-90°	1892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2062	2062	2062	2062	2062	
5°	2134	2103	2108	2076	2060	191
15°	1139	1257	1598	1939	2036	325
25°	583	629	839	1379	1577	274
35°	371	404	531	768	846	231
45°	184	213	314	415	421	144
55°	82	92	139	191	199	74
65°	30	33	44	60	67	31
75°	9	9	11	15	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°	2061.6	2061.6	2061.6	2061.6	2061.6	2061.6	2061.6	2061.6	2061.6	2061.6	2061.6
2.5°	2083.9	2082.0	2102.4	2087.6	2093.1	2087.6	2070.9	2061.6	2059.7	2041.2	2050.5
5°	2134.0	2104.3	2109.8	2100.6	2109.8	2108.0	2089.4	2078.3	2069.0	2057.9	2059.7
7.5°	2013.3	2017.1	2033.8	2041.2	2067.2	2076.4	2067.2	2059.7	2052.3	2046.7	2048.6
10°	1794.4	1807.4	1831.5	1879.7	1933.6	1978.1	1996.6	2017.1	2033.8	2035.6	2039.3
12.5°	1477.1	1495.6	1534.6	1586.6	1705.3	1812.9	1903.9	1974.4	2015.2	2037.5	2033.8
15°	1139.3	1144.9	1193.2	1278.5	1408.4	1597.7	1777.7	1920.6	1994.8	2046.7	2035.6
17.5°	907.4	914.8	953.8	1018.7	1143.1	1352.7	1621.8	1835.2	1970.7	2007.8	1998.5
20°	768.2	762.7	792.3	846.2	950.1	1135.6	1415.8	1701.6	1872.3	1924.3	1935.4
22.5°	656.9	662.5	681.0	723.7	814.6	968.6	1224.7	1527.2	1716.4	1774.0	1783.2
25°	582.7	588.2	606.8	636.5	710.7	838.7	1059.6	1332.3	1517.9	1573.6	1577.3
27.5°	534.4	530.7	543.7	566.0	630.9	740.4	922.2	1148.6	1321.2	1376.9	1380.6
30°	476.9	475.0	488.0	512.2	564.1	660.6	814.6	998.3	1120.8	1174.6	1185.7
32.5°	424.9	423.1	437.9	458.3	510.3	593.8	727.4	870.3	953.8	998.3	1009.5
35°	371.1	373.0	384.1	410.1	456.5	530.7	653.2	753.4	812.8	835.0	846.2
37.5°	319.2	321.0	335.9	361.8	408.2	475.0	573.4	651.3	686.6	703.3	701.4
40°	269.1	272.8	282.1	311.7	358.1	421.2	501.0	558.5	582.7	584.5	590.1
42.5°	224.5	224.5	239.4	263.5	308.0	367.4	437.9	478.7	497.3	495.4	491.7
45°	183.7	185.6	194.8	219.0	259.8	313.6	374.8	411.9	423.1	415.7	421.2
47.5°	150.3	152.2	159.6	181.9	217.1	269.1	317.3	352.6	361.8	356.3	356.3
50°	122.5	124.3	129.9	146.6	176.3	219.0	263.5	293.2	302.5	300.6	304.3
52.5°	100.2	100.2	105.8	118.8	142.9	178.1	213.4	239.4	246.8	244.9	243.1
55°	81.6	81.6	85.4	94.6	113.2	139.2	168.9	189.3	194.8	196.7	198.6
57.5°	64.9	64.9	66.8	74.2	87.2	107.6	129.9	144.7	150.3	152.2	154.0
60°	50.1	50.1	53.8	57.5	68.7	81.6	96.5	107.6	115.0	115.0	116.9
62.5°	39.0	39.0	40.8	44.5	52.0	61.2	70.5	79.8	83.5	87.2	89.1
65°	29.7	29.7	31.5	33.4	39.0	44.5	52.0	59.4	63.1	64.9	66.8
67.5°	22.3	22.3	22.3	26.0	29.7	33.4	37.1	42.7	44.5	48.2	50.1
70°	16.7	16.7	16.7	18.6	20.4	24.1	26.0	29.7	33.4	35.3	35.3
72.5°	13.0	13.0	13.0	13.0	14.8	16.7	18.6	20.4	24.1	26.0	26.0
75°	9.3	9.3	9.3	9.3	11.1	11.1	13.0	14.8	16.7	18.6	18.6
77.5°	7.4	7.4	5.6	7.4	7.4	7.4	9.3	9.3	11.1	13.0	13.0
80°	3.7	3.7	3.7	3.7	5.6	5.6	5.6	7.4	7.4	7.4	9.3
82.5°	1.9	1.9	1.9	1.9	3.7	3.7	3.7	3.7	3.7	5.6	5.6
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)