

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: P591963

Luminaire Tested: **GRZ-05L-930-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591963
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-930-30x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 30x60 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

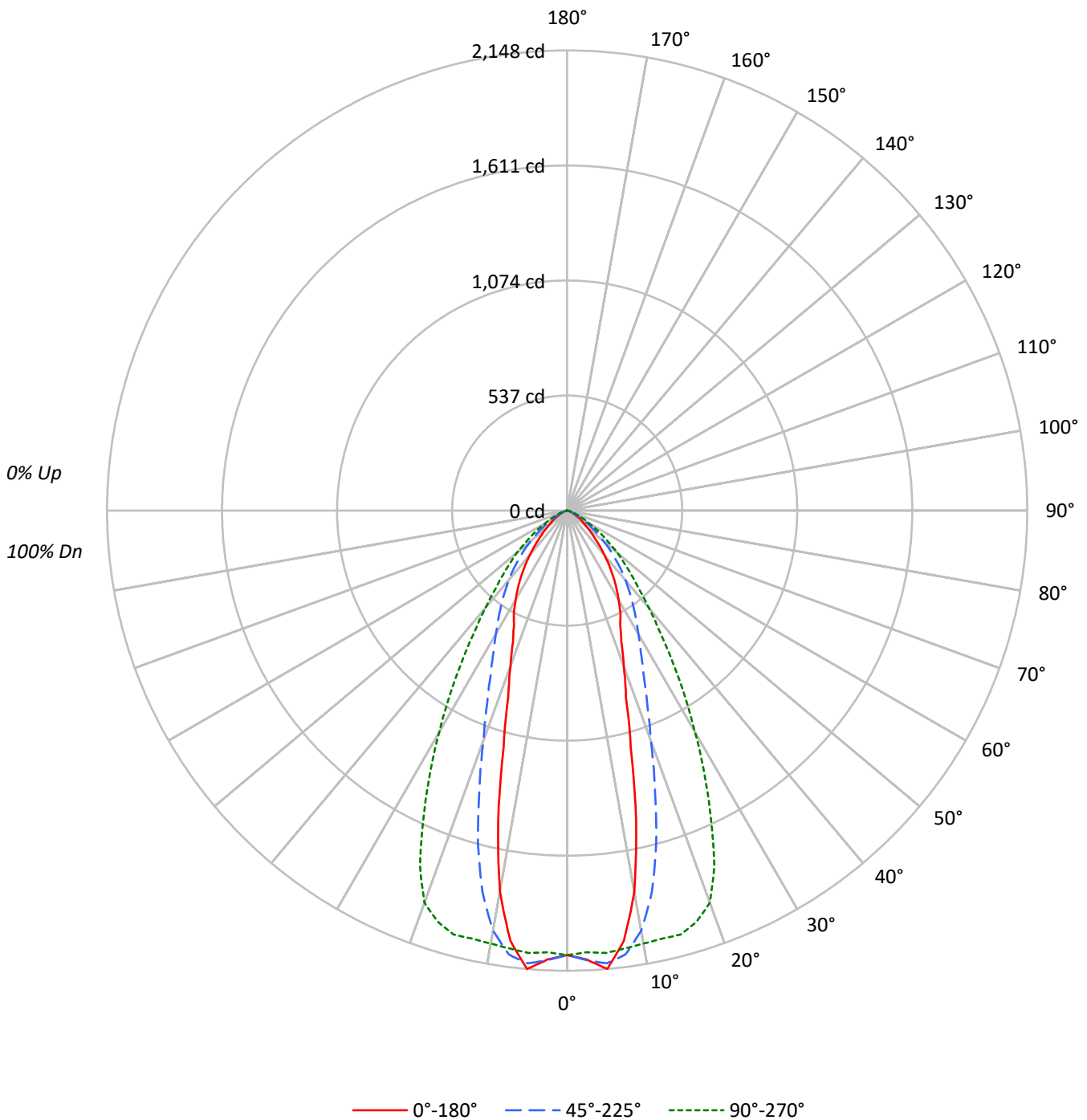
Lumens per Lamp: N/A
Luminaire Lumens: 1904.0 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

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	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°	33498	33498	33498
5°	34806	34383	33595
10°	29606	32636	33647
15°	19166	26875	34242
20°	13283	19636	33465
25°	10447	15038	28278
30°	8947	12394	22247
35°	7362	10527	16783
40°	5708	8934	12515
45°	4222	7206	9679
50°	3095	5536	7694
55°	2314	3944	5624
60°	1628	2654	3798
65°	1142	1712	2567
70°	793	1147	1676
75°	580	699	1167
80°	344	521	865
85°	352	352	352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.2	10.3
10°-20°	447.0	23.5
20°-30°	456.9	24.0
30°-40°	365.6	19.2
40°-50°	244.4	12.8
50°-60°	128.8	6.8
60°-70°	48.7	2.6
70°-80°	14.3	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°	1100.1	57.8
0°-40°	1465.6	77.0
0°-60°	1838.8	96.6
0°-90°	1904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1904.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2075	2075	2075	2075	2075	
5°	2148	2116	2121	2089	2073	193
15°	1147	1265	1608	1951	2048	327
25°	586	633	844	1387	1587	275
35°	374	406	534	773	852	233
45°	185	214	316	417	424	145
55°	82	93	140	192	200	75
65°	30	33	45	61	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°	2074.7	2074.7	2074.7	2074.7	2074.7	2074.7	2074.7	2074.7	2074.7	2074.7	2074.7
2.5°	2097.1	2095.2	2115.7	2100.8	2106.4	2100.8	2084.0	2074.7	2072.8	2054.1	2063.5
5°	2147.5	2117.6	2123.2	2113.9	2123.2	2121.4	2102.7	2091.5	2082.1	2070.9	2072.8
7.5°	2026.1	2029.8	2046.7	2054.1	2080.3	2089.6	2080.3	2072.8	2065.3	2059.7	2061.6
10°	1805.8	1818.8	1843.1	1891.7	1945.8	1990.6	2009.3	2029.8	2046.7	2048.5	2052.3
12.5°	1486.4	1505.1	1544.3	1596.6	1716.1	1824.4	1915.9	1986.9	2028.0	2050.4	2046.7
15°	1146.6	1152.2	1200.7	1286.6	1417.3	1607.8	1789.0	1932.7	2007.4	2059.7	2048.5
17.5°	913.2	920.6	959.8	1025.2	1150.3	1361.3	1632.1	1846.8	1983.2	2020.5	2011.2
20°	773.1	767.5	797.4	851.5	956.1	1142.8	1424.8	1712.4	1884.2	1936.5	1947.7
22.5°	661.1	666.7	685.3	728.3	819.8	974.8	1232.5	1536.9	1727.3	1785.2	1794.6
25°	586.4	592.0	610.6	640.5	715.2	844.1	1066.3	1340.8	1527.5	1583.5	1587.3
27.5°	537.8	534.1	547.1	569.6	634.9	745.1	928.1	1155.9	1329.6	1385.6	1389.3
30°	479.9	478.1	491.1	515.4	567.7	664.8	819.8	1004.7	1127.9	1182.1	1193.3
32.5°	427.6	425.8	440.7	461.2	513.5	597.6	732.0	875.8	959.8	1004.7	1015.9
35°	373.5	375.3	386.5	412.7	459.4	534.1	657.3	758.2	817.9	840.3	851.5
37.5°	321.2	323.1	338.0	364.1	410.8	478.1	577.0	655.5	690.9	707.7	705.9
40°	270.8	274.5	283.8	313.7	360.4	423.9	504.2	562.1	586.4	588.2	593.8
42.5°	226.0	226.0	240.9	265.2	310.0	369.7	440.7	481.8	500.5	498.6	494.9
45°	184.9	186.7	196.1	220.4	261.4	315.6	377.2	414.6	425.8	418.3	423.9
47.5°	151.3	153.1	160.6	183.0	218.5	270.8	319.3	354.8	364.1	358.5	358.5
50°	123.2	125.1	130.7	147.5	177.4	220.4	265.2	295.0	304.4	302.5	306.3
52.5°	100.8	100.8	106.4	119.5	143.8	179.3	214.7	240.9	248.4	246.5	244.6
55°	82.2	82.2	85.9	95.2	113.9	140.1	169.9	190.5	196.1	197.9	199.8
57.5°	65.4	65.4	67.2	74.7	87.8	108.3	130.7	145.7	151.3	153.1	155.0
60°	50.4	50.4	54.2	57.9	69.1	82.2	97.1	108.3	115.8	115.8	117.6
62.5°	39.2	39.2	41.1	44.8	52.3	61.6	71.0	80.3	84.0	87.8	89.6
65°	29.9	29.9	31.7	33.6	39.2	44.8	52.3	59.8	63.5	65.4	67.2
67.5°	22.4	22.4	22.4	26.1	29.9	33.6	37.3	42.9	44.8	48.6	50.4
70°	16.8	16.8	16.8	18.7	20.5	24.3	26.1	29.9	33.6	35.5	35.5
72.5°	13.1	13.1	13.1	13.1	14.9	16.8	18.7	20.5	24.3	26.1	26.1
75°	9.3	9.3	9.3	9.3	11.2	11.2	13.1	14.9	16.8	18.7	18.7
77.5°	7.5	7.5	5.6	7.5	7.5	7.5	9.3	9.3	11.2	13.1	13.1
80°	3.7	3.7	3.7	3.7	5.6	5.6	5.6	7.5	7.5	7.5	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)