

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: P591956

Luminaire Tested: **GRZ-05L-930-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591956
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-17)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-05L-930-10x30-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x30 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

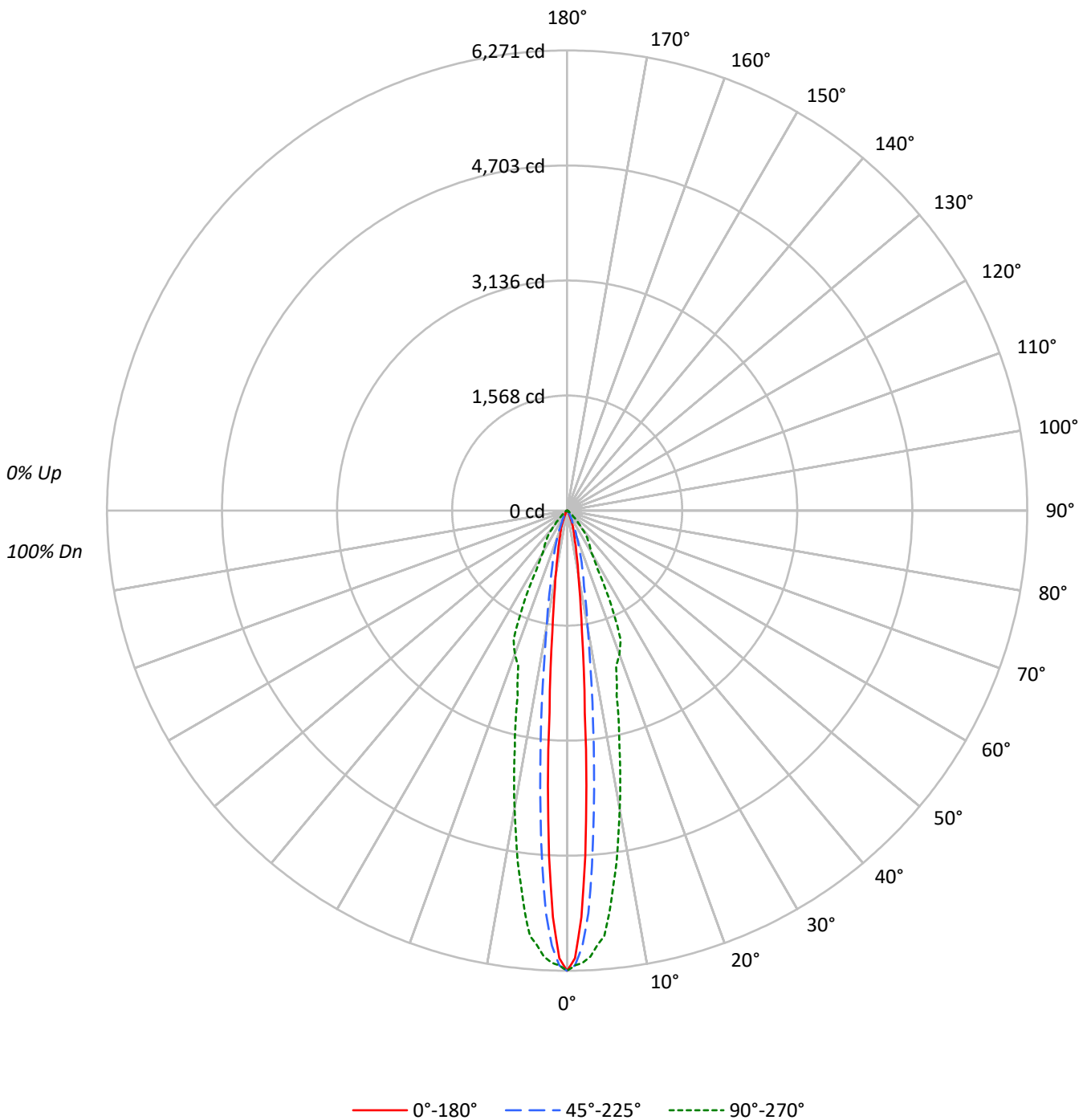
Lumens per Lamp: N/A
Luminaire Lumens: 994.0 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	102	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91					91			
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83					83			
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80					80			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77					77			
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74					74			
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71					71			
9	86	79	74	71	85	78	74	71	77	73	71	77	73	70	76	73	70	69					69			
10	84	76	72	69	83	76	71	68	75	71	68	74	71	68	74	70	68	67					67			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	202501	202501	202501
5°	89689	134671	188636
10°	29101	52539	135248
15°	12697	25956	87198
20°	7151	13275	71577
25°	2562	5886	50673
30°	1566	3028	24498
35°	1179	1951	19643
40°	944	1416	12983
45°	808	854	6603
50°	939	517	3095
55°	996	422	1526
60°	846	362	904
65°	711	428	711
70°	614	444	614
75°	462	349	462
80°	353	353	353
85°	333	333	333



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.5	33.6
10°-20°	325.7	32.8
20°-30°	182.6	18.4
30°-40°	82.4	8.3
40°-50°	41.7	4.2
50°-60°	15.6	1.6
60°-70°	7.7	0.8
70°-80°	4.0	0.4
80°-90°	0.8	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°	841.8	84.7
0°-40°	924.3	93.0
0°-60°	981.5	98.7
0°-90°	994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6271	6271	6271	6271	6271	
5°	2767	3173	4155	5333	5819	211
15°	380	469	776	1698	2608	117
25°	72	80	165	617	1422	41
35°	30	20	50	197	498	19
45°	18	15	19	89	145	15
55°	18	9	8	27	27	15
65°	9	7	6	8	9	9
75°	4	4	3	3	4	4
85°	1	1	1	0	1	1
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°	6271.0	6271.0	6271.0	6271.0	6271.0	6271.0	6271.0	6271.0	6271.0	6271.0	6271.0
1°	6100.3	6101.2	6146.9	6117.0	6189.8	6200.1	6190.8	6207.6	6212.2	6186.1	6200.1
2°	5542.2	5559.0	5586.1	5742.8	5814.7	5931.3	6029.3	6113.3	6149.7	6164.6	6162.8
3°	4718.2	4707.0	4840.4	4990.7	5248.3	5492.7	5733.5	5892.2	6032.1	6076.9	6085.3
4°	3757.9	3714.1	3942.7	4069.6	4417.7	4857.2	5286.5	5629.0	5859.5	5954.7	5932.3
5°	2766.9	2844.4	3003.9	3228.8	3608.6	4154.6	4728.5	5241.7	5605.7	5766.2	5819.4
6°	2155.7	2140.7	2269.5	2543.9	2927.4	3513.5	4169.5	4813.4	5266.0	5459.2	5504.9
7°	1662.9	1653.6	1781.5	1976.5	2298.4	2901.3	3627.3	4379.5	4934.7	5153.1	5151.2
8°	1317.7	1312.1	1400.7	1554.7	1858.9	2368.4	3090.7	3901.7	4538.1	4832.0	4832.0
9°	1064.8	1076.9	1131.0	1267.3	1507.1	1933.6	2641.9	3496.7	4149.9	4437.3	4462.5
10°	887.5	894.0	937.9	1049.8	1249.5	1602.3	2220.1	3025.4	3767.3	4131.2	4124.7
12.5°	575.8	589.8	621.5	693.4	838.9	1059.2	1475.4	2121.1	2871.4	3235.4	3297.0
15°	379.8	382.6	421.8	484.3	600.0	776.4	1067.6	1549.1	2143.5	2556.0	2608.3
17.5°	283.7	286.5	295.8	333.1	418.1	568.3	804.4	1177.7	1742.3	2158.5	2218.2
20°	208.1	198.8	196.0	217.4	283.7	386.3	587.0	918.3	1413.8	1975.6	2082.9
22.5°	121.3	119.4	114.8	132.5	182.9	253.8	399.4	685.9	1195.4	1759.1	1907.4
25°	71.9	70.0	69.1	84.0	114.8	165.2	272.5	518.9	909.9	1293.4	1422.2
27.5°	52.3	50.4	45.7	52.3	75.6	113.8	192.2	375.1	624.3	831.5	901.5
30°	42.0	40.1	31.7	34.5	52.3	81.2	140.9	259.4	443.3	617.8	657.0
32.5°	35.5	33.6	24.3	25.2	36.4	61.6	110.1	199.7	358.3	534.7	578.6
35°	29.9	28.0	19.6	20.5	28.0	49.5	90.5	164.2	294.0	460.1	498.3
37.5°	25.2	23.3	16.8	17.7	24.3	41.1	82.1	141.8	243.6	377.9	415.3
40°	22.4	20.5	14.9	16.8	22.4	33.6	72.8	120.4	199.7	292.1	308.0
42.5°	19.6	17.7	14.9	16.8	20.5	26.1	53.2	96.1	162.4	210.0	223.0
45°	17.7	16.8	14.0	15.9	17.7	18.7	33.6	74.7	130.6	144.6	144.6
47.5°	18.7	16.8	13.1	14.0	14.0	14.0	20.5	58.8	101.7	98.0	95.2
50°	18.7	15.9	12.1	11.2	11.2	10.3	14.0	45.7	75.6	62.5	61.6
52.5°	18.7	15.9	11.2	10.3	9.3	8.4	10.3	34.5	53.2	40.1	40.1
55°	17.7	14.9	9.3	8.4	7.5	7.5	8.4	24.3	36.4	28.0	27.1
57.5°	15.9	13.1	8.4	7.5	7.5	6.5	6.5	15.9	28.0	21.5	18.7
60°	13.1	11.2	7.5	7.5	7.5	5.6	5.6	10.3	22.4	15.9	14.0
62.5°	11.2	9.3	7.5	7.5	7.5	5.6	4.7	7.5	18.7	13.1	11.2
65°	9.3	7.5	6.5	7.5	7.5	5.6	3.7	5.6	15.9	10.3	9.3
67.5°	7.5	6.5	5.6	6.5	6.5	4.7	2.8	3.7	13.1	8.4	7.5
70°	6.5	5.6	4.7	5.6	6.5	4.7	2.8	3.7	10.3	6.5	6.5
72.5°	4.7	4.7	4.7	5.6	5.6	3.7	1.9	2.8	8.4	5.6	5.6
75°	3.7	3.7	3.7	4.7	4.7	2.8	1.9	1.9	6.5	4.7	3.7
77.5°	2.8	2.8	2.8	3.7	3.7	1.9	0.9	1.9	4.7	2.8	2.8
80°	1.9	1.9	1.9	2.8	2.8	1.9	0.9	0.9	2.8	1.9	1.9
82.5°	0.9	0.9	0.9	1.9	1.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.9	0.9	0.9
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)