

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: P591960

Luminaire Tested: **GRZ-05L-930-17x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591960
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-19)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-05L-930-17x30-X-UNV-STD-2F
Description: iO LED GRAZER WITH 17x30 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

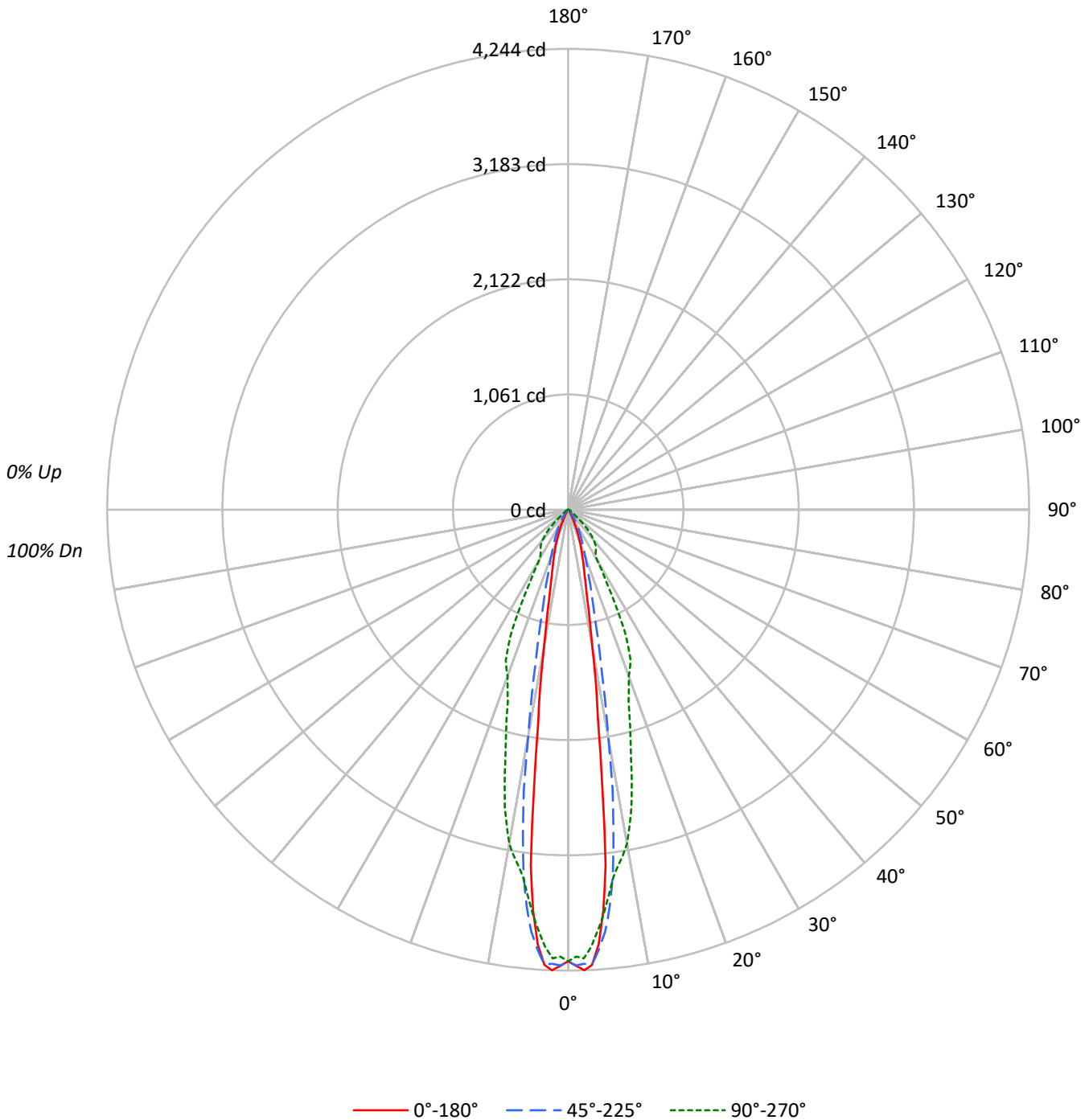
Lumens per Lamp: N/A
Luminaire Lumens: 1009.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92	90
3	105	100	95	92	103	98	94	91	96	93	90	93	91	88	91	89	87	86
4	101	95	90	86	99	94	89	86	92	88	85	90	86	84	88	85	83	82
5	97	90	85	82	96	89	85	81	88	84	81	86	83	80	85	82	79	78
6	94	86	81	78	92	86	81	77	84	80	77	83	79	76	82	78	76	75
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72
8	87	79	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68	67
10	82	74	69	66	81	73	69	66	73	69	66	72	68	66	71	68	65	64

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	134314	134314	134314
5°	120120	126445	121239
10°	41850	69557	102373
15°	18604	28904	74163
20°	10845	15498	56082
25°	4657	9880	43679
30°	1566	6126	19285
35°	958	3165	17558
40°	826	1808	15428
45°	895	1407	10787
50°	703	658	4737
55°	631	631	1892
60°	601	665	1750
65°	642	642	1643
70°	614	529	1237
75°	462	462	586
80°	353	353	353
85°	333	333	333



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.5	30.3
10°-20°	323.0	32.0
20°-30°	200.0	19.8
30°-40°	101.2	10.0
40°-50°	50.1	5.0
50°-60°	14.9	1.5
60°-70°	9.2	0.9
70°-80°	4.3	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°	828.5	82.1
0°-40°	929.7	92.1
0°-60°	994.7	98.6
0°-90°	1009.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1009.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4159	4159	4159	4159	4159	
5°	3706	3786	3901	3792	3740	259
15°	556	617	865	1513	2218	165
25°	131	163	277	665	1226	66
35°	24	26	80	297	445	16
45°	20	17	31	81	236	14
55°	11	11	11	16	34	10
65°	8	10	8	5	22	8
75°	4	5	4	2	5	4
85°	1	1	1	0	1	1
90°	0	0	0	0	0	



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CATALOG NUMBER: GRZ-05L-930-17x30-X-UNV-STD-2F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4159.4	4159.4	4159.4	4159.4	4159.4	4159.4	4159.4	4159.4	4159.4	4159.4	4159.4
1°	4201.4	4188.4	4191.2	4208.0	4218.2	4198.6	4170.6	4149.2	4158.5	4129.5	4115.5
2°	4244.4	4234.1	4227.6	4233.2	4210.8	4185.6	4156.6	4140.7	4135.1	4120.2	4134.2
3°	4197.7	4184.6	4188.4	4201.4	4190.2	4192.1	4120.2	4071.7	4067.0	4047.4	4031.5
4°	4012.8	4022.2	4040.8	4042.7	4055.8	4059.5	4034.3	3941.9	3943.7	3907.3	3889.6
5°	3705.7	3712.2	3768.2	3791.6	3875.6	3900.8	3907.3	3795.3	3784.1	3729.0	3740.2
6°	3293.9	3173.5	3323.8	3383.6	3552.5	3667.4	3707.5	3689.8	3633.8	3570.3	3571.2
7°	2570.3	2580.6	2666.5	2831.8	3146.4	3368.6	3533.9	3570.3	3495.6	3450.8	3408.8
8°	1982.1	2025.1	2147.4	2322.0	2634.8	2994.2	3293.9	3376.1	3357.4	3312.6	3306.1
9°	1641.4	1608.7	1706.7	1845.8	2145.5	2607.7	2977.4	3152.0	3206.2	3220.2	3223.0
10°	1276.3	1314.6	1361.3	1506.0	1759.9	2121.3	2606.8	2877.5	3019.4	3098.8	3122.1
11°	1033.6	1047.6	1107.3	1243.6	1435.0	1767.4	2258.5	2563.8	2782.3	2942.9	2963.4
12°	850.6	862.7	902.8	1003.7	1177.3	1441.6	1863.6	2245.4	2574.1	2761.7	2803.8
13°	722.6	736.7	769.3	847.8	982.2	1212.8	1505.0	1918.7	2296.8	2562.9	2600.2
14°	620.9	636.8	658.2	727.3	836.6	999.9	1249.2	1644.2	2049.4	2348.1	2397.6
15°	556.5	558.3	581.7	629.3	725.4	864.6	1079.3	1409.8	1822.5	2158.6	2218.4
17.5°	418.3	415.5	418.3	455.6	511.6	613.4	760.9	1047.6	1487.3	1779.5	1844.9
20°	315.6	316.5	310.0	331.4	378.1	451.0	573.3	852.4	1302.4	1594.7	1632.0
22.5°	219.4	217.5	220.3	240.9	285.7	352.9	449.1	695.6	1186.7	1471.4	1502.2
25°	130.7	133.5	144.7	169.0	212.9	277.3	366.9	562.1	971.9	1161.5	1225.9
27.5°	75.6	76.6	85.9	112.0	154.1	215.7	301.6	437.9	673.2	774.0	790.8
30°	42.0	42.0	48.5	65.4	104.6	164.3	246.5	363.2	488.3	516.3	517.2
32.5°	28.0	28.0	29.9	38.3	64.4	119.5	200.7	312.8	423.9	464.0	470.6
35°	24.3	23.3	24.3	27.1	40.1	80.3	154.1	266.1	390.3	437.9	445.4
37.5°	21.5	21.5	22.4	25.2	30.8	52.3	109.2	211.0	345.5	405.2	413.6
40°	19.6	19.6	20.5	25.2	30.8	42.9	69.1	153.1	284.8	356.7	366.0
42.5°	18.7	18.7	18.7	22.4	28.9	39.2	40.1	98.0	219.4	293.2	307.2
45°	19.6	18.7	16.8	17.7	22.4	30.8	23.3	57.9	152.2	225.9	236.2
47.5°	18.7	18.7	17.7	16.8	16.8	20.5	14.9	31.7	95.2	156.9	162.5
50°	14.0	14.0	12.1	14.9	15.9	13.1	11.2	20.5	58.8	88.7	94.3
52.5°	12.1	12.1	11.2	11.2	13.1	12.1	8.4	16.8	37.3	49.5	51.4
55°	11.2	10.3	10.3	11.2	12.1	11.2	7.5	13.1	26.1	32.7	33.6
57.5°	10.3	10.3	10.3	10.3	12.1	11.2	7.5	9.3	20.5	26.1	28.9
60°	9.3	9.3	10.3	10.3	11.2	10.3	6.5	6.5	16.8	23.3	27.1
62.5°	8.4	9.3	9.3	10.3	11.2	9.3	5.6	4.7	13.1	21.5	25.2
65°	8.4	8.4	9.3	10.3	10.3	8.4	4.7	3.7	10.3	17.7	21.5
67.5°	7.5	7.5	8.4	9.3	10.3	7.5	2.8	2.8	8.4	14.9	17.7
70°	6.5	6.5	7.5	8.4	8.4	5.6	2.8	2.8	5.6	12.1	13.1
72.5°	5.6	5.6	6.5	7.5	7.5	4.7	1.9	1.9	3.7	9.3	8.4
75°	3.7	4.7	4.7	5.6	5.6	3.7	1.9	1.9	2.8	5.6	4.7
77.5°	2.8	2.8	3.7	4.7	4.7	2.8	0.9	0.9	1.9	3.7	2.8
80°	1.9	1.9	2.8	2.8	2.8	1.9	0.9	0.9	0.9	1.9	1.9
82.5°	0.9	0.9	1.9	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	0.0	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



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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)