

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: P591961

Luminaire Tested: **GRZ-05L-930-17x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591961  
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-4F  
Description: iO LED GRAZER WITH 17x30 OPTIC  
500 LUMENS PER FOOT, 4 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

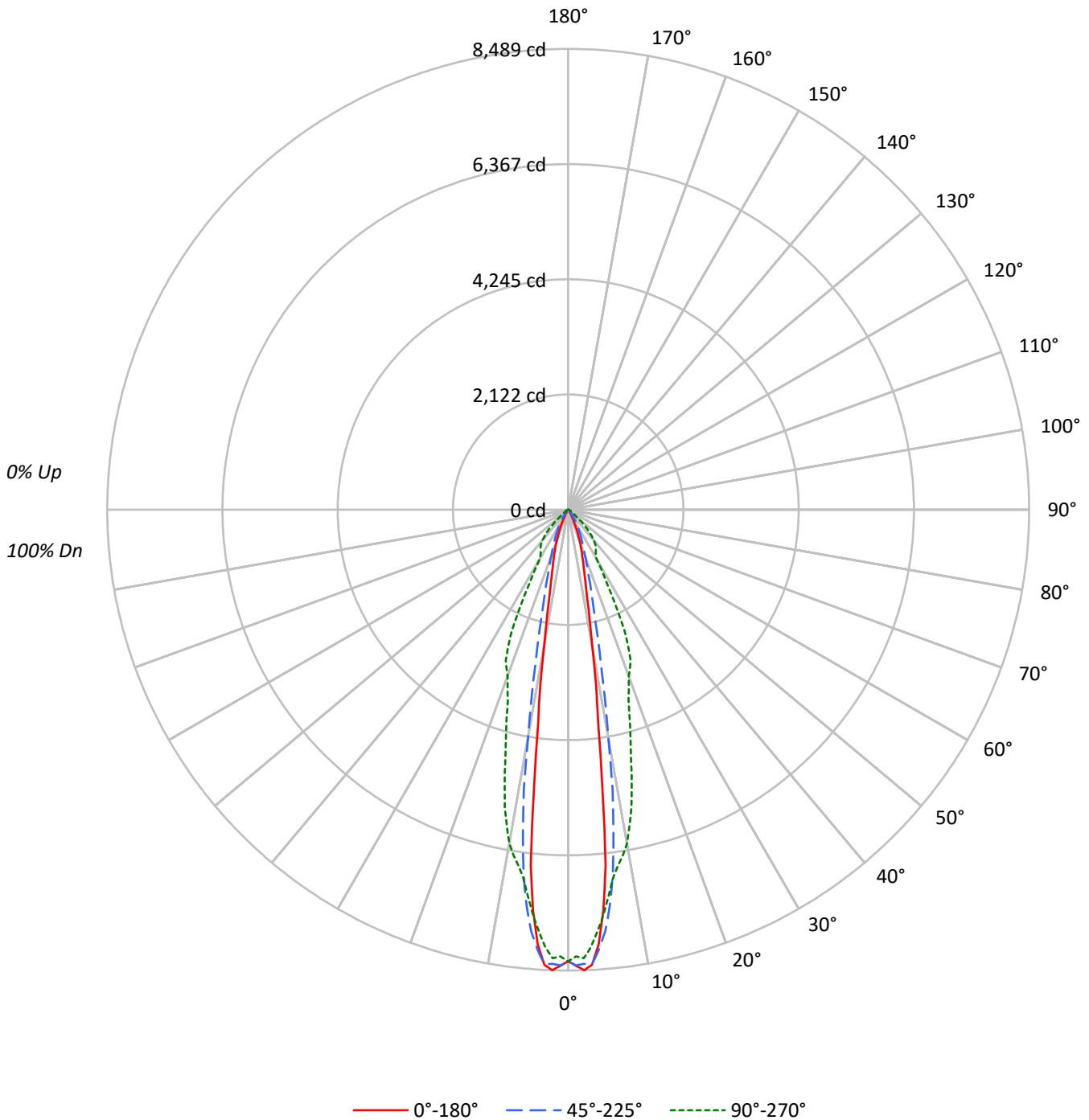
Lumens per Lamp: N/A  
Luminaire Lumens: 2018.0 lumens  
Efficiency: N/A  
Efficacy: 104.6 lumens/watt  
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P591961  
CATALOG NUMBER: GRZ-05L-930-17x30-X-UNV-STD-4F

### Luminous Intensity Polar Plot





TEST NUMBER: P591961

CATALOG NUMBER: GRZ-05L-930-17x30-X-UNV-STD-4F

**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°	120119	126445	121239
10°	41850	69555	102375
15°	18603	28903	74161
20°	10844	15496	56082
25°	4657	9880	43679
30°	1566	6126	19287
35°	956	3165	17556
40°	826	1811	15428
45°	895	1407	10787
50°	703	656	4737
55°	631	631	1892
60°	604	662	1750
65°	642	642	1639
70°	618	529	1232
75°	468	468	580
80°	344	344	344
85°	352	352	352



TEST NUMBER: P591961

CATALOG NUMBER: GRZ-05L-930-17x30-X-UNV-STD-4F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	611.0	30.3
10°-20°	646.1	32.0
20°-30°	400.0	19.8
30°-40°	202.4	10.0
40°-50°	100.1	5.0
50°-60°	29.8	1.5
60°-70°	18.4	0.9
70°-80°	8.7	0.4
80°-90°	1.5	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°	1657.0	82.1
0°-40°	1859.4	92.1
0°-60°	1989.4	98.6
0°-90°	2018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2018.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8319	8319	8319	8319	8319	
5°	7411	7571	7802	7585	7480	517
15°	1113	1235	1729	3026	4437	331
25°	261	326	555	1329	2452	132
35°	48	53	161	594	891	32
45°	39	35	62	163	472	28
55°	22	22	22	33	67	20
65°	17	20	17	11	43	16
75°	8	11	8	4	9	9
85°	2	2	2	0	2	2
90°	0	0	0	0	0	



TEST NUMBER: P591961

CATALOG NUMBER: GRZ-05L-930-17x30-X-UNV-STD-4F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	8318.8	8318.8	8318.8	8318.8	8318.8	8318.8	8318.8	8318.8	8318.8	8318.8	8318.8
1°	8402.9	8376.7	8382.3	8415.9	8436.5	8397.3	8341.2	8298.3	8317.0	8259.1	8231.1
2°	8488.8	8468.2	8455.2	8466.4	8421.5	8371.1	8313.2	8281.5	8270.3	8240.4	8268.4
3°	8395.4	8369.3	8376.7	8402.9	8380.5	8384.2	8240.4	8143.3	8134.0	8094.8	8063.0
4°	8025.7	8044.3	8081.7	8085.4	8111.6	8119.0	8068.6	7883.8	7887.5	7814.7	7779.2
5°	7411.3	7424.4	7536.4	7583.1	7751.2	7801.6	7814.7	7590.6	7568.2	7458.0	7480.4
6°	6587.9	6347.0	6647.6	6767.1	7105.1	7334.8	7415.1	7379.6	7267.5	7140.6	7142.4
7°	5140.7	5161.2	5333.0	5663.5	6292.8	6737.2	7067.7	7140.6	6991.2	6901.6	6817.5
8°	3964.3	4050.2	4294.8	4644.0	5269.5	5988.4	6587.9	6752.2	6714.8	6625.2	6612.1
9°	3282.7	3217.4	3413.4	3691.7	4291.1	5215.4	5954.8	6304.0	6412.3	6440.3	6445.9
10°	2552.6	2629.2	2722.5	3012.0	3519.9	4242.5	5213.5	5755.0	6038.9	6197.6	6244.3
11°	2067.1	2095.1	2214.6	2487.2	2870.0	3534.8	4517.0	5127.6	5564.6	5885.7	5926.8
12°	1701.1	1725.4	1805.7	2007.4	2354.7	2883.1	3727.1	4490.9	5148.2	5523.5	5607.5
13°	1445.3	1473.3	1538.7	1695.5	1964.4	2425.6	3010.1	3837.3	4593.6	5125.8	5200.4
14°	1241.8	1273.5	1316.4	1454.6	1673.1	1999.9	2498.5	3288.3	4098.7	4696.3	4795.2
15°	1112.9	1116.6	1163.3	1258.6	1450.9	1729.1	2158.6	2819.6	3645.0	4317.2	4436.7
17.5°	836.6	831.0	836.6	911.2	1023.3	1226.8	1521.9	2095.1	2974.6	3559.1	3689.8
20°	631.1	633.0	619.9	662.9	756.3	901.9	1146.5	1704.8	2604.9	3189.4	3264.0
22.5°	438.8	435.1	440.7	481.8	571.4	705.8	898.2	1391.1	2373.3	2942.9	3004.5
25°	261.4	267.0	289.4	338.0	425.7	554.6	733.9	1124.1	1943.9	2322.9	2451.8
27.5°	151.3	153.1	171.8	224.1	308.1	431.3	603.1	875.8	1346.3	1548.0	1581.6
30°	84.0	84.0	97.1	130.7	209.1	328.6	493.0	726.4	976.6	1032.6	1034.5
32.5°	56.0	56.0	59.8	76.6	128.8	239.0	401.5	625.5	847.8	928.1	941.1
35°	48.5	46.7	48.5	54.2	80.3	160.6	308.1	532.2	780.5	875.8	890.7
37.5°	42.9	42.9	44.8	50.4	61.6	104.6	218.5	422.0	690.9	810.4	827.2
40°	39.2	39.2	41.1	50.4	61.6	85.9	138.2	306.2	569.5	713.3	732.0
42.5°	37.3	37.3	37.3	44.8	57.9	78.4	80.3	196.1	438.8	586.3	614.3
45°	39.2	37.3	33.6	35.5	44.8	61.6	46.7	115.8	304.4	451.9	472.4
47.5°	37.3	37.3	35.5	33.6	33.6	41.1	29.9	63.5	190.5	313.7	324.9
50°	28.0	28.0	24.3	29.9	31.7	26.1	22.4	41.1	117.6	177.4	188.6
52.5°	24.3	24.3	22.4	22.4	26.1	24.3	16.8	33.6	74.7	99.0	102.7
55°	22.4	20.5	20.5	22.4	24.3	22.4	14.9	26.1	52.3	65.4	67.2
57.5°	20.5	20.5	20.5	20.5	24.3	22.4	14.9	18.7	41.1	52.3	57.9
60°	18.7	18.7	20.5	20.5	22.4	20.5	13.1	13.1	33.6	46.7	54.2
62.5°	16.8	18.7	18.7	20.5	22.4	18.7	11.2	9.3	26.1	42.9	50.4
65°	16.8	16.8	18.7	20.5	20.5	16.8	9.3	7.5	20.5	35.5	42.9
67.5°	14.9	14.9	16.8	18.7	20.5	14.9	5.6	5.6	16.8	29.9	35.5
70°	13.1	13.1	14.9	16.8	16.8	11.2	5.6	5.6	11.2	24.3	26.1
72.5°	11.2	11.2	13.1	14.9	14.9	9.3	3.7	3.7	7.5	18.7	16.8
75°	7.5	9.3	9.3	11.2	11.2	7.5	3.7	3.7	5.6	11.2	9.3
77.5°	5.6	5.6	7.5	9.3	9.3	5.6	1.9	1.9	3.7	7.5	5.6
80°	3.7	3.7	5.6	5.6	5.6	3.7	1.9	1.9	1.9	3.7	3.7
82.5°	1.9	1.9	3.7	3.7	3.7	1.9	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	0.0	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



TEST NUMBER: P591961  
CATALOG NUMBER: GRZ-05L-930-17x30-X-UNV-STD-4F

**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)