

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: P592011

Luminaire Tested: **GRZ-10L-927-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592011  
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-927-30x60-X-UNV-STD-4F  
Description: iO LED GRAZER WITH 30x60 OPTIC  
1000 LUMENS PER FOOT, 4 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

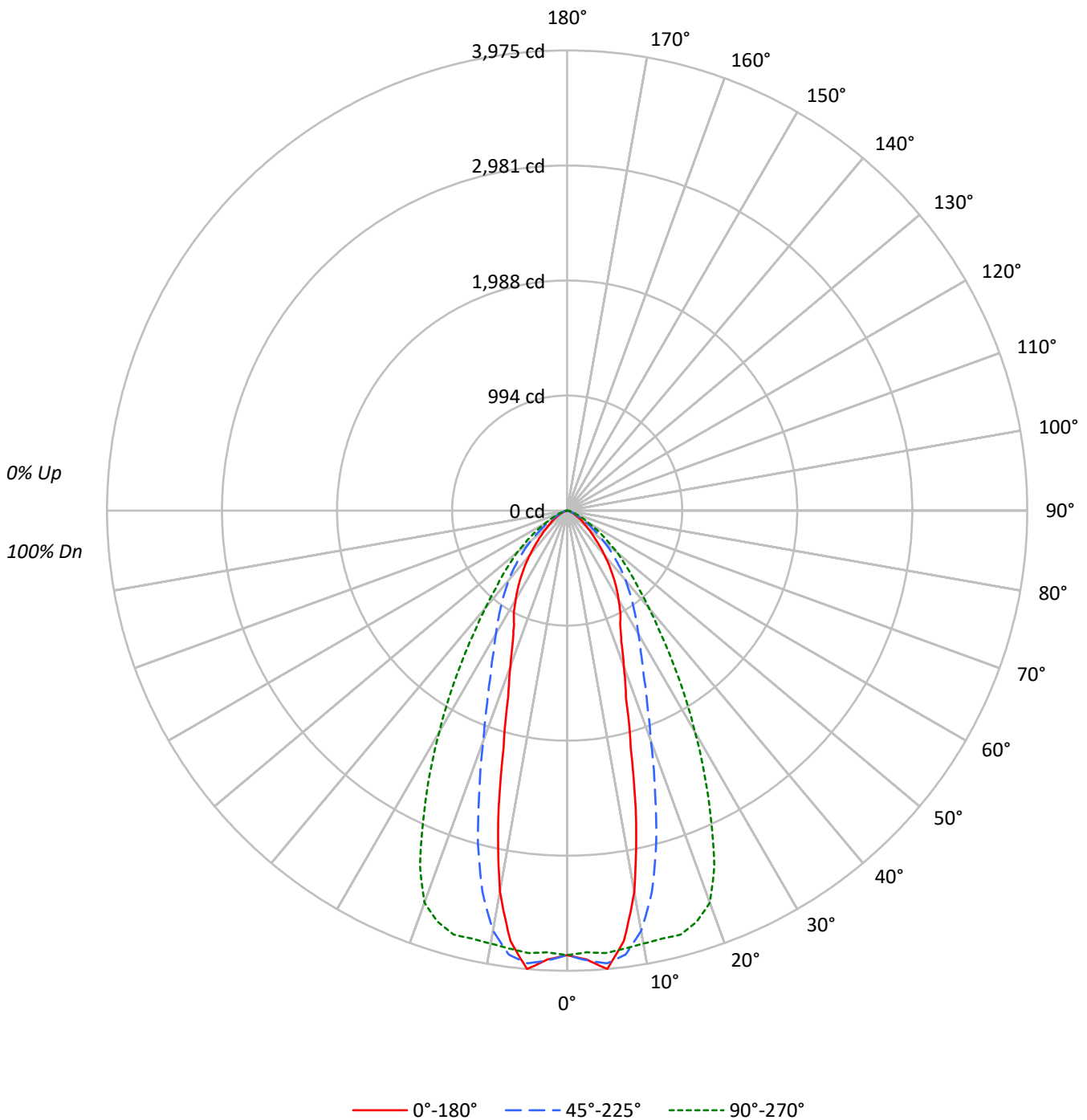
Lumens per Lamp: N/A  
Luminaire Lumens: 3524.0 lumens  
Efficiency: N/A  
Efficacy: 92.7 lumens/watt  
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 38  
Input Voltage (V): 120  
Input Current (Ain): 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: P592011  
CATALOG NUMBER: GRZ-10L-927-30x60-X-UNV-STD-4F

### Luminous Intensity Polar Plot





TEST NUMBER: P592011

CATALOG NUMBER: GRZ-10L-927-30x60-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	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°	61998	61998	61998
5°	64420	63636	62179
10°	54795	60404	62274
15°	35472	49742	63376
20°	24586	36343	61940
25°	19335	27831	52337
30°	16561	22939	41174
35°	13624	19484	31064
40°	10564	16537	23166
45°	7814	13337	17915
50°	5730	10243	14237
55°	4282	7296	10410
60°	3013	4912	7030
65°	2113	3167	4753
70°	1468	2120	3102
75°	1079	1291	2158
80°	642	967	1609
85°	648	648	648



TEST NUMBER: P592011

CATALOG NUMBER: GRZ-10L-927-30x60-X-UNV-STD-4F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	363.1	10.3
10°-20°	827.4	23.5
20°-30°	845.6	24.0
30°-40°	676.6	19.2
40°-50°	452.3	12.8
50°-60°	238.5	6.8
60°-70°	90.1	2.6
70°-80°	26.5	0.8
80°-90°	4.0	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°	2036.0	57.8
0°-40°	2712.6	77.0
0°-60°	3403.4	96.6
0°-90°	3524.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3524.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3840	3840	3840	3840	3840	
5°	3975	3917	3926	3867	3836	357
15°	2122	2342	2976	3612	3792	605
25°	1085	1172	1562	2568	2938	510
35°	691	752	988	1431	1576	431
45°	342	397	584	772	785	269
55°	152	172	259	355	370	138
65°	55	61	83	112	124	57
75°	17	17	21	28	35	20
85°	4	4	4	4	4	3
90°	0	0	0	0	0	



TEST NUMBER: P592011

CATALOG NUMBER: GRZ-10L-927-30x60-X-UNV-STD-4F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3839.9	3839.9	3839.9	3839.9	3839.9	3839.9	3839.9	3839.9	3839.9	3839.9	3839.9
2.5°	3881.4	3877.9	3915.9	3888.3	3898.6	3888.3	3857.2	3839.9	3836.4	3801.9	3819.1
5°	3974.7	3919.4	3929.7	3912.5	3929.7	3926.3	3891.7	3871.0	3853.7	3833.0	3836.4
7.5°	3750.0	3756.9	3788.0	3801.9	3850.2	3867.5	3850.2	3836.4	3822.6	3812.2	3815.7
10°	3342.2	3366.4	3411.3	3501.2	3601.4	3684.3	3718.9	3756.9	3788.0	3791.5	3798.4
12.5°	2751.2	2785.7	2858.3	2955.1	3176.3	3376.7	3546.1	3677.4	3753.5	3794.9	3788.0
15°	2122.1	2132.5	2222.4	2381.3	2623.3	2975.8	3311.1	3577.2	3715.5	3812.2	3791.5
17.5°	1690.1	1703.9	1776.5	1897.5	2129.0	2519.6	3020.7	3418.2	3670.5	3739.6	3722.4
20°	1430.9	1420.5	1475.8	1576.0	1769.6	2115.2	2637.1	3169.4	3487.3	3584.1	3604.9
22.5°	1223.5	1233.9	1268.4	1347.9	1517.3	1804.2	2281.1	2844.5	3197.0	3304.2	3321.4
25°	1085.3	1095.6	1130.2	1185.5	1323.7	1562.2	1973.5	2481.6	2827.2	2930.9	2937.8
27.5°	995.4	988.5	1012.7	1054.2	1175.1	1379.0	1717.7	2139.4	2460.8	2564.5	2571.4
30°	888.3	884.8	909.0	953.9	1050.7	1230.4	1517.3	1859.5	2087.6	2187.8	2208.5
32.5°	791.5	788.0	815.7	853.7	950.5	1106.0	1354.8	1621.0	1776.5	1859.5	1880.2
35°	691.2	694.7	715.4	763.8	850.2	988.5	1216.6	1403.2	1513.8	1555.3	1576.0
37.5°	594.5	597.9	625.6	674.0	760.4	884.8	1068.0	1213.1	1278.8	1309.9	1306.5
40°	501.2	508.1	525.3	580.6	667.1	784.6	933.2	1040.3	1085.3	1088.7	1099.1
42.5°	418.2	418.2	445.9	490.8	573.7	684.3	815.7	891.7	926.3	922.8	915.9
45°	342.2	345.6	362.9	407.8	483.9	584.1	698.2	767.3	788.0	774.2	784.6
47.5°	280.0	283.4	297.2	338.7	404.4	501.2	591.0	656.7	674.0	663.6	663.6
50°	228.1	231.6	241.9	273.0	328.3	407.8	490.8	546.1	563.4	559.9	566.8
52.5°	186.6	186.6	197.0	221.2	266.1	331.8	397.5	445.9	459.7	456.2	452.8
55°	152.1	152.1	159.0	176.3	210.8	259.2	314.5	352.5	362.9	366.4	369.8
57.5°	121.0	121.0	124.4	138.2	162.4	200.5	241.9	269.6	280.0	283.4	286.9
60°	93.3	93.3	100.2	107.1	127.9	152.1	179.7	200.5	214.3	214.3	217.7
62.5°	72.6	72.6	76.0	82.9	96.8	114.1	131.3	148.6	155.5	162.4	165.9
65°	55.3	55.3	58.8	62.2	72.6	82.9	96.8	110.6	117.5	121.0	124.4
67.5°	41.5	41.5	41.5	48.4	55.3	62.2	69.1	79.5	82.9	89.9	93.3
70°	31.1	31.1	31.1	34.6	38.0	44.9	48.4	55.3	62.2	65.7	65.7
72.5°	24.2	24.2	24.2	24.2	27.6	31.1	34.6	38.0	44.9	48.4	48.4
75°	17.3	17.3	17.3	17.3	20.7	20.7	24.2	27.6	31.1	34.6	34.6
77.5°	13.8	13.8	10.4	13.8	13.8	13.8	17.3	17.3	20.7	24.2	24.2
80°	6.9	6.9	6.9	6.9	10.4	10.4	10.4	13.8	13.8	13.8	17.3
82.5°	3.5	3.5	3.5	3.5	6.9	6.9	6.9	6.9	6.9	10.4	10.4
85°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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)