

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: P592106

Luminaire Tested: **GRZ-15L-935-30x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592106  
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-15L-935-30x60-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 30x60 OPTIC  
1500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

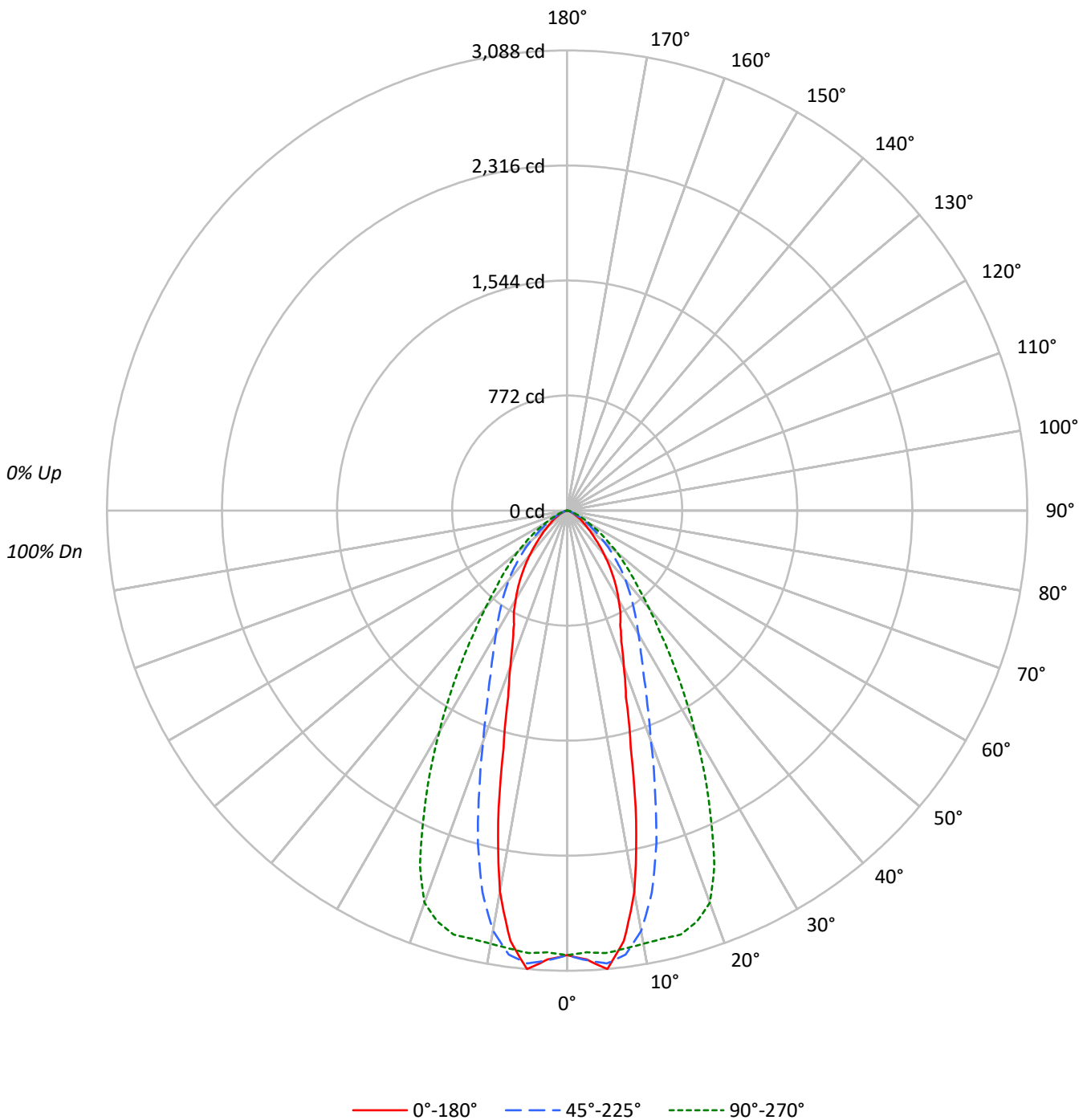
Lumens per Lamp: N/A  
Luminaire Lumens: 2738.0 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
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: P592106  
CATALOG NUMBER: GRZ-15L-935-30x60-X-UNV-STD-2F

### Luminous Intensity Polar Plot





TEST NUMBER: P592106

CATALOG NUMBER: GRZ-15L-935-30x60-X-UNV-STD-2F

**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°	96339	96339	96339
5°	100104	98885	96619
10°	85145	93864	96769
15°	55121	77295	98480
20°	38203	56474	96247
25°	30043	43248	81325
30°	25732	35647	63981
35°	21173	30275	48271
40°	16415	25697	35995
45°	12138	20724	27839
50°	8902	15920	22124
55°	6655	11339	16175
60°	4682	7634	10928
65°	3286	4921	7389
70°	2285	3295	4815
75°	1672	2009	3356
80°	1004	1506	2492
85°	1000	1000	1000



TEST NUMBER: P592106

CATALOG NUMBER: GRZ-15L-935-30x60-X-UNV-STD-2F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.1	10.3
10°-20°	642.9	23.5
20°-30°	657.0	24.0
30°-40°	525.7	19.2
40°-50°	351.4	12.8
50°-60°	185.3	6.8
60°-70°	70.0	2.6
70°-80°	20.6	0.8
80°-90°	3.1	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°	1581.9	57.8
0°-40°	2107.6	77.0
0°-60°	2644.3	96.6
0°-90°	2738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2738.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2983	2983	2983	2983	2983	
5°	3088	3043	3051	3004	2981	277
15°	1649	1819	2312	2806	2946	470
25°	843	910	1214	1995	2282	396
35°	537	584	768	1112	1224	335
45°	266	308	454	600	610	209
55°	118	134	201	276	287	107
65°	43	48	64	87	97	44
75°	13	13	16	22	27	15
85°	3	3	3	3	3	2
90°	0	0	0	0	0	



TEST NUMBER: P592106

CATALOG NUMBER: GRZ-15L-935-30x60-X-UNV-STD-2F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2983.4	2983.4	2983.4	2983.4	2983.4	2983.4	2983.4	2983.4	2983.4	2983.4	2983.4
2.5°	3015.6	3013.0	3042.5	3021.0	3029.1	3021.0	2996.9	2983.4	2980.7	2953.9	2967.3
5°	3088.2	3045.2	3053.2	3039.8	3053.2	3050.6	3023.7	3007.6	2994.2	2978.1	2980.7
7.5°	2913.6	2919.0	2943.1	2953.9	2991.5	3004.9	2991.5	2980.7	2970.0	2961.9	2964.6
10°	2596.7	2615.5	2650.4	2720.3	2798.1	2862.6	2889.4	2919.0	2943.1	2945.8	2951.2
12.5°	2137.5	2164.4	2220.8	2296.0	2467.8	2623.6	2755.2	2857.2	2916.3	2948.5	2943.1
15°	1648.8	1656.9	1726.7	1850.2	2038.2	2312.1	2572.6	2779.3	2886.8	2961.9	2945.8
17.5°	1313.1	1323.9	1380.3	1474.3	1654.2	1957.6	2347.0	2655.8	2851.8	2905.5	2892.1
20°	1111.7	1103.7	1146.6	1224.5	1374.9	1643.4	2048.9	2462.5	2709.5	2784.7	2800.8
22.5°	950.6	958.7	985.5	1047.3	1178.9	1401.8	1772.3	2210.0	2483.9	2567.2	2580.6
25°	843.2	851.3	878.1	921.1	1028.5	1213.8	1533.3	1928.1	2196.6	2277.2	2282.5
27.5°	773.4	768.0	786.8	819.0	913.0	1071.5	1334.6	1662.2	1912.0	1992.5	1997.9
30°	690.1	687.4	706.2	741.2	816.3	956.0	1178.9	1444.7	1622.0	1699.8	1715.9
32.5°	614.9	612.3	633.7	663.3	738.5	859.3	1052.7	1259.4	1380.3	1444.7	1460.8
35°	537.1	539.8	555.9	593.5	660.6	768.0	945.2	1090.3	1176.2	1208.4	1224.5
37.5°	461.9	464.6	486.0	523.6	590.8	687.4	829.8	942.6	993.6	1017.7	1015.1
40°	389.4	394.7	408.2	451.1	518.3	609.6	725.0	808.3	843.2	845.9	853.9
42.5°	324.9	324.9	346.4	381.3	445.8	531.7	633.7	692.8	719.7	717.0	711.6
45°	265.8	268.5	282.0	316.9	375.9	453.8	542.4	596.1	612.3	601.5	609.6
47.5°	217.5	220.2	230.9	263.2	314.2	389.4	459.2	510.2	523.6	515.6	515.6
50°	177.2	179.9	188.0	212.1	255.1	316.9	381.3	424.3	437.7	435.0	440.4
52.5°	145.0	145.0	153.1	171.9	206.8	257.8	308.8	346.4	357.2	354.5	351.8
55°	118.2	118.2	123.5	137.0	163.8	201.4	244.4	273.9	282.0	284.6	287.3
57.5°	94.0	94.0	96.7	107.4	126.2	155.8	188.0	209.5	217.5	220.2	222.9
60°	72.5	72.5	77.9	83.2	99.4	118.2	139.6	155.8	166.5	166.5	169.2
62.5°	56.4	56.4	59.1	64.4	75.2	88.6	102.0	115.5	120.8	126.2	128.9
65°	43.0	43.0	45.7	48.3	56.4	64.4	75.2	85.9	91.3	94.0	96.7
67.5°	32.2	32.2	32.2	37.6	43.0	48.3	53.7	61.8	64.4	69.8	72.5
70°	24.2	24.2	24.2	26.9	29.5	34.9	37.6	43.0	48.3	51.0	51.0
72.5°	18.8	18.8	18.8	18.8	21.5	24.2	26.9	29.5	34.9	37.6	37.6
75°	13.4	13.4	13.4	13.4	16.1	16.1	18.8	21.5	24.2	26.9	26.9
77.5°	10.7	10.7	8.1	10.7	10.7	10.7	13.4	13.4	16.1	18.8	18.8
80°	5.4	5.4	5.4	5.4	8.1	8.1	8.1	10.7	10.7	10.7	13.4
82.5°	2.7	2.7	2.7	2.7	5.4	5.4	5.4	5.4	5.4	8.1	8.1
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)