

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: P592036

Luminaire Tested: **GRZ-10L-935-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592036
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-10L-935-10x30-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x30 OPTIC
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

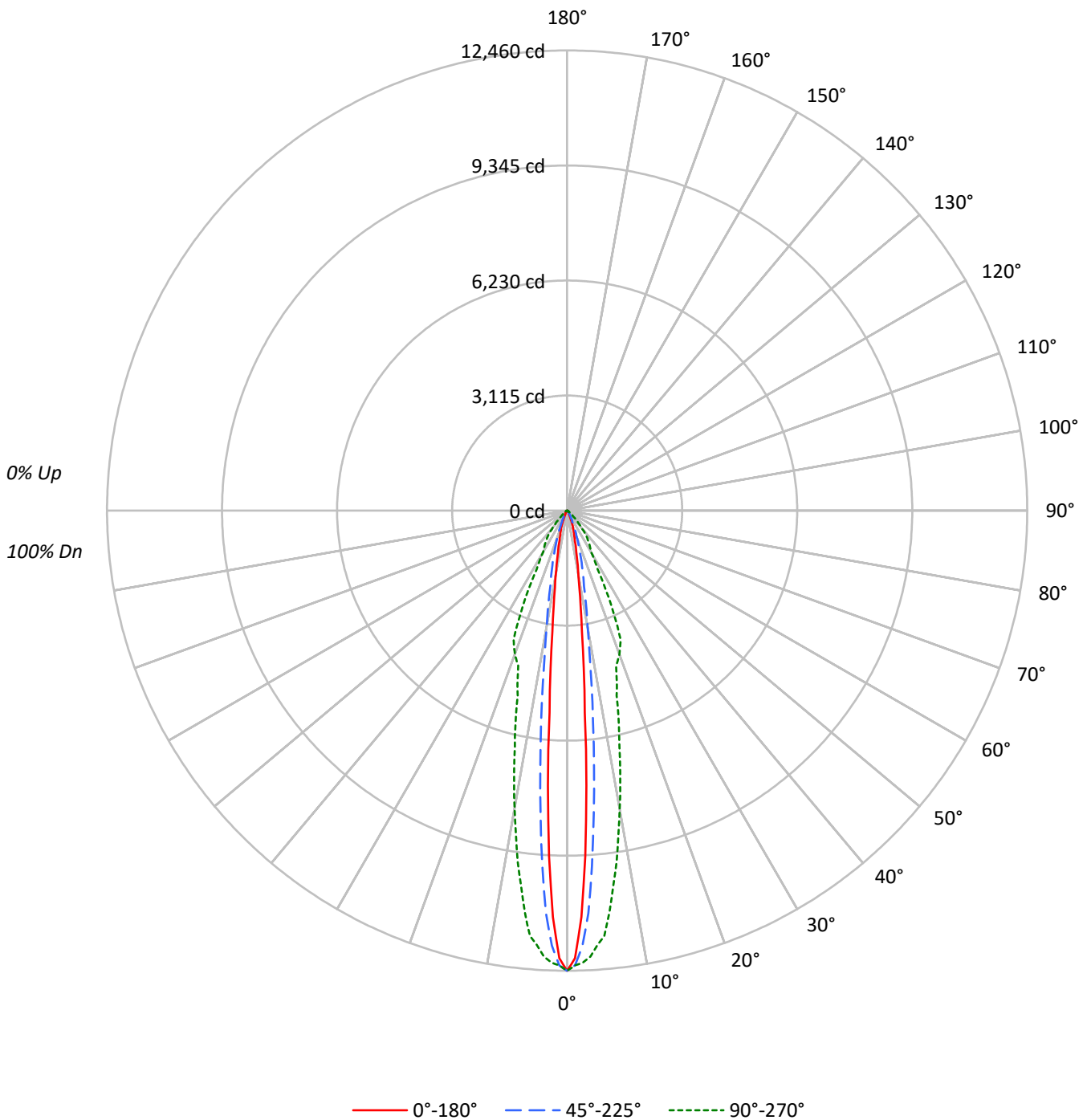
Lumens per Lamp: N/A
Luminaire Lumens: 1975.0 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	100	100	100	100	100		
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95	95	95	95	95	95		
2	110	106	102	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91	91	91	91	91	91	91		
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87	87	87	87	87	87	87		
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83	83	83	83	83	83	83		
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80	80	80	80	80	80	80		
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77	77	77	77	77	77	77		
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74	74	74	74	74	74	74		
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71	71	71	71	71	71	71		
9	86	79	74	71	85	78	74	71	77	73	71	77	73	70	76	73	70	69	69	69	69	69	69	69		
10	84	76	72	69	83	76	71	68	75	71	68	74	71	68	74	70	68	67	67	67	67	67	67	67		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	402354	402354	402354
5°	178205	267580	374802
10°	57818	104390	268726
15°	25227	51574	173252
20°	14210	26378	142216
25°	5088	11694	100683
30°	3110	6014	48671
35°	2338	3875	39031
40°	1876	2816	25794
45°	1607	1694	13125
50°	1864	1025	6149
55°	1982	833	3029
60°	1679	717	1795
65°	1414	848	1414
70°	1227	878	1227
75°	923	699	923
80°	688	688	688
85°	704	704	704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	662.7	33.6
10°-20°	647.2	32.8
20°-30°	362.7	18.4
30°-40°	163.8	8.3
40°-50°	82.8	4.2
50°-60°	30.9	1.6
60°-70°	15.3	0.8
70°-80°	8.0	0.4
80°-90°	1.6	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°	1672.7	84.7
0°-40°	1836.5	93.0
0°-60°	1950.2	98.7
0°-90°	1975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1975.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12460	12460	12460	12460	12460	
5°	5498	6304	8255	10596	11563	420
15°	755	931	1543	3373	5182	233
25°	143	159	328	1225	2826	81
35°	59	40	98	391	990	38
45°	35	31	37	176	287	29
55°	35	17	15	54	54	30
65°	18	14	11	16	18	19
75°	7	9	6	6	7	8
85°	2	2	2	0	2	2
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°	12460.0	12460.0	12460.0	12460.0	12460.0	12460.0	12460.0	12460.0	12460.0	12460.0	12460.0
1°	12120.7	12122.6	12213.4	12154.1	12298.7	12319.1	12300.6	12334.0	12343.2	12291.3	12319.1
2°	11011.9	11045.3	11099.1	11410.6	11553.3	11785.1	11979.8	12146.7	12219.0	12248.7	12245.0
3°	9374.7	9352.4	9617.6	9916.1	10427.9	10913.7	11392.0	11707.2	11985.4	12074.4	12091.1
4°	7466.8	7379.6	7833.9	8086.0	8777.7	9651.0	10503.9	11184.4	11642.3	11831.5	11787.0
5°	5497.6	5651.5	5968.6	6415.4	7170.1	8254.8	9395.1	10414.9	11138.0	11456.9	11562.6
6°	4283.1	4253.5	4509.3	5054.5	5816.5	6981.0	8284.4	9563.8	10463.1	10846.9	10937.8
7°	3304.1	3285.6	3539.6	3927.1	4566.8	5764.6	7207.2	8701.6	9804.9	10238.7	10235.0
8°	2618.1	2607.0	2783.1	3089.1	3693.5	4705.9	6141.0	7752.3	9016.8	9600.9	9600.9
9°	2115.6	2139.7	2247.3	2518.0	2994.5	3841.8	5249.2	6947.6	8245.5	8816.6	8866.7
10°	1763.3	1776.3	1863.4	2085.9	2482.7	3183.6	4411.1	6011.2	7485.3	8208.4	8195.4
12.5°	1144.0	1171.8	1234.9	1377.6	1666.9	2104.5	2931.4	4214.5	5705.3	6428.4	6550.8
15°	754.6	760.2	838.1	962.3	1192.2	1542.7	2121.2	3077.9	4259.0	5078.6	5182.4
17.5°	563.7	569.2	587.8	661.9	830.7	1129.2	1598.3	2340.0	3461.7	4288.7	4407.4
20°	413.5	394.9	389.4	432.0	563.7	767.6	1166.3	1824.5	2809.1	3925.3	4138.5
22.5°	241.0	237.3	228.1	263.3	363.4	504.3	793.6	1362.8	2375.2	3495.1	3789.9
25°	142.8	139.1	137.2	166.9	228.1	328.2	541.4	1030.9	1807.8	2569.9	2825.8
27.5°	103.8	100.1	90.9	103.8	150.2	226.2	382.0	745.4	1240.4	1652.1	1791.1
30°	83.4	79.7	63.0	68.6	103.8	161.3	280.0	515.5	880.7	1227.5	1305.3
32.5°	70.5	66.8	48.2	50.1	72.3	122.4	218.8	396.8	712.0	1062.4	1149.6
35°	59.3	55.6	38.9	40.8	55.6	98.3	179.9	326.3	584.1	914.1	990.1
37.5°	50.1	46.4	33.4	35.2	48.2	81.6	163.2	281.8	483.9	750.9	825.1
40°	44.5	40.8	29.7	33.4	44.5	66.8	144.6	239.2	396.8	580.4	611.9
42.5°	38.9	35.2	29.7	33.4	40.8	51.9	105.7	191.0	322.6	417.2	443.1
45°	35.2	33.4	27.8	31.5	35.2	37.1	66.8	148.3	259.6	287.4	287.4
47.5°	37.1	33.4	26.0	27.8	27.8	27.8	40.8	116.8	202.1	194.7	189.1
50°	37.1	31.5	24.1	22.3	22.3	20.4	27.8	90.9	150.2	124.2	122.4
52.5°	37.1	31.5	22.3	20.4	18.5	16.7	20.4	68.6	105.7	79.7	79.7
55°	35.2	29.7	18.5	16.7	14.8	14.8	16.7	48.2	72.3	55.6	53.8
57.5°	31.5	26.0	16.7	14.8	14.8	13.0	13.0	31.5	55.6	42.6	37.1
60°	26.0	22.3	14.8	14.8	14.8	11.1	11.1	20.4	44.5	31.5	27.8
62.5°	22.3	18.5	14.8	14.8	14.8	11.1	9.3	14.8	37.1	26.0	22.3
65°	18.5	14.8	13.0	14.8	14.8	11.1	7.4	11.1	31.5	20.4	18.5
67.5°	14.8	13.0	11.1	13.0	13.0	9.3	5.6	7.4	26.0	16.7	14.8
70°	13.0	11.1	9.3	11.1	13.0	9.3	5.6	7.4	20.4	13.0	13.0
72.5°	9.3	9.3	9.3	11.1	11.1	7.4	3.7	5.6	16.7	11.1	11.1
75°	7.4	7.4	7.4	9.3	9.3	5.6	3.7	3.7	13.0	9.3	7.4
77.5°	5.6	5.6	5.6	7.4	7.4	3.7	1.9	3.7	9.3	5.6	5.6
80°	3.7	3.7	3.7	5.6	5.6	3.7	1.9	1.9	5.6	3.7	3.7
82.5°	1.9	1.9	1.9	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	1.9	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
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)