

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: P592037

Luminaire Tested: **GRZ-10L-935-10x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592037
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-4F
Description: iO LED GRAZER WITH 10x30 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

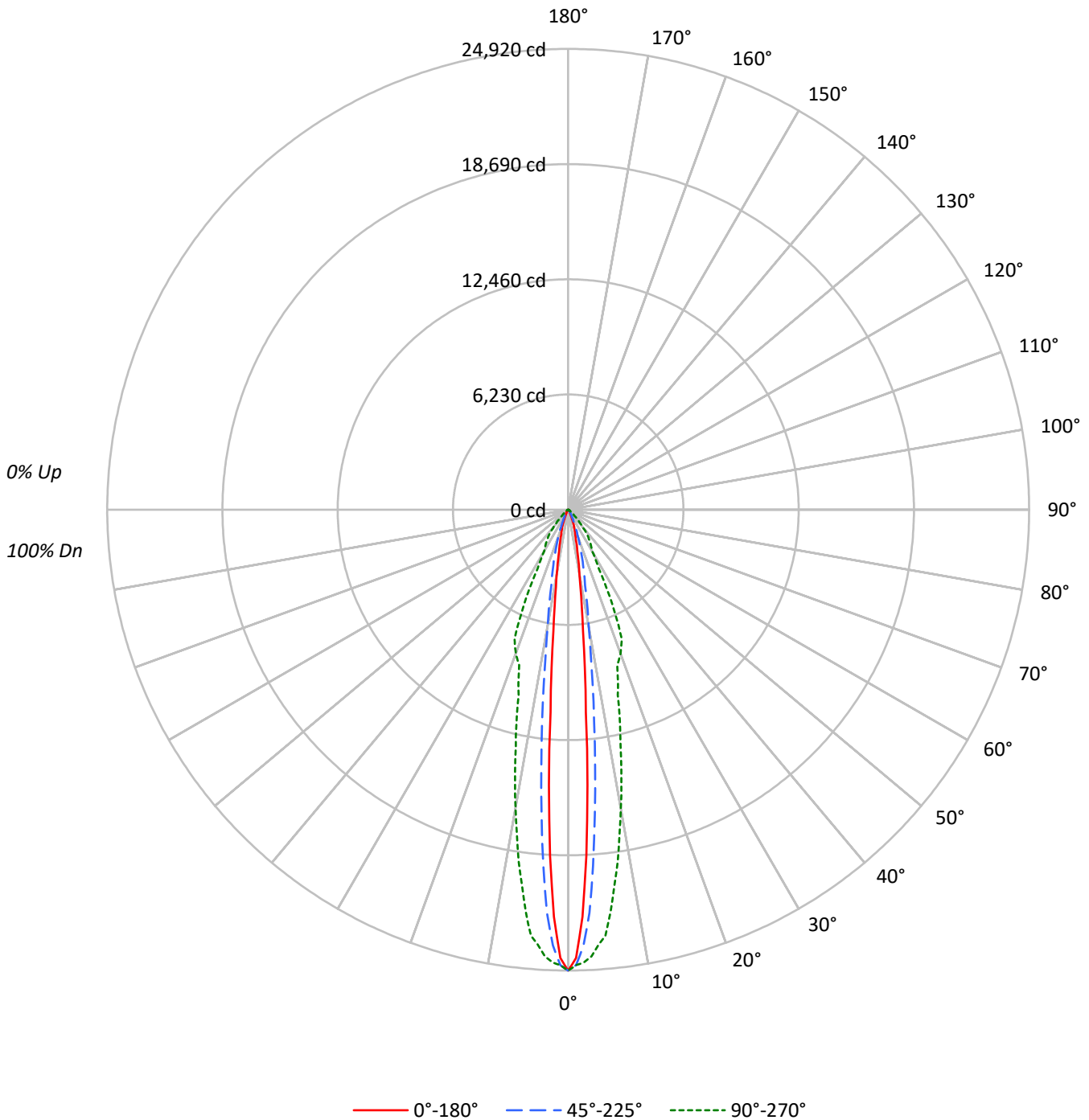
Lumens per Lamp: N/A
Luminaire Lumens: 3950.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

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



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	402356	402356	402356
5°	178205	267578	374802
10°	57818	104390	268727
15°	25229	51572	173252
20°	14210	26380	142216
25°	5086	11694	100681
30°	3112	6014	48673
35°	2340	3873	39033
40°	1876	2814	25794
45°	1610	1694	13125
50°	1864	1025	6149
55°	1985	836	3026
60°	1676	720	1795
65°	1417	852	1417
70°	1227	873	1227
75°	923	692	923
80°	688	688	688
85°	685	685	685



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CATALOG NUMBER: GRZ-10L-935-10x30-X-UNV-STD-4F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1325.5	33.6
10°-20°	1294.4	32.8
20°-30°	725.4	18.4
30°-40°	327.6	8.3
40°-50°	165.7	4.2
50°-60°	61.8	1.6
60°-70°	30.7	0.8
70°-80°	15.9	0.4
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°	3345.3	84.7
0°-40°	3672.9	93.0
0°-60°	3900.4	98.7
0°-90°	3950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	24920	24920	24920	24920	24920	
5°	10995	12607	16510	21191	23125	840
15°	1509	1862	3085	6746	10365	466
25°	286	319	656	2450	5652	162
35°	119	81	196	782	1980	76
45°	70	61	74	352	575	59
55°	70	34	30	108	108	61
65°	37	29	22	32	37	37
75°	15	18	11	12	15	16
85°	4	4	4	1	4	3
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°	24920.1	24920.1	24920.1	24920.1	24920.1	24920.1	24920.1	24920.1	24920.1	24920.1	24920.1
1°	24241.4	24245.2	24426.9	24308.2	24597.4	24638.2	24601.2	24667.9	24686.4	24582.6	24638.2
2°	22023.9	22090.6	22198.1	22821.2	23106.7	23570.2	23959.6	24293.4	24438.0	24497.3	24489.9
3°	18749.4	18704.9	19235.2	19832.2	20855.7	21827.3	22784.1	23414.5	23970.7	24148.7	24182.1
4°	14933.5	14759.2	15667.8	16172.1	17555.3	19301.9	21007.8	22368.7	23284.7	23662.9	23573.9
5°	10995.2	11303.0	11937.2	12830.9	14340.2	16509.5	18790.2	20829.8	22276.0	22913.9	23125.2
6°	8566.3	8506.9	9018.7	10108.9	11633.1	13961.9	16568.9	19127.6	20926.2	21693.8	21875.5
7°	6608.3	6571.2	7079.2	7854.3	9133.7	11529.2	14414.3	17403.3	19609.7	20477.5	20470.1
8°	5236.2	5213.9	5566.2	6178.1	7387.0	9411.8	12282.0	15504.6	18033.7	19201.8	19201.8
9°	4231.2	4279.4	4494.5	5035.9	5989.0	7683.7	10498.3	13895.2	16491.0	17633.2	17733.3
10°	3526.6	3552.6	3726.9	4171.9	4965.5	6367.2	8822.2	12022.5	14970.6	16416.8	16390.9
12.5°	2288.0	2343.7	2469.8	2755.3	3333.8	4209.0	5862.9	8429.1	11410.6	12856.8	13101.6
15°	1509.3	1520.4	1676.2	1924.6	2384.5	3085.3	4242.3	6155.9	8518.1	10157.2	10364.8
17.5°	1127.3	1138.5	1175.5	1323.9	1661.3	2258.4	3196.6	4679.9	6923.5	8577.4	8814.7
20°	827.0	789.9	778.8	864.0	1127.3	1535.3	2332.5	3649.0	5618.1	7850.6	8277.0
22.5°	482.1	474.7	456.1	526.6	726.8	1008.7	1587.2	2725.6	4750.4	6990.2	7579.9
25°	285.5	278.1	274.4	333.8	456.1	656.4	1082.8	2061.8	3615.6	5139.8	5651.5
27.5°	207.7	200.3	181.7	207.7	300.4	452.4	763.9	1490.8	2480.9	3304.1	3582.3
30°	166.9	159.5	126.1	137.2	207.7	322.6	560.0	1030.9	1761.5	2454.9	2610.7
32.5°	140.9	133.5	96.4	100.1	144.6	244.8	437.6	793.6	1424.0	2124.9	2299.2
35°	118.7	111.3	77.9	81.6	111.3	196.5	359.7	652.7	1168.1	1828.2	1980.3
37.5°	100.1	92.7	66.8	70.5	96.4	163.2	326.3	563.7	967.9	1501.9	1650.2
40°	89.0	81.6	59.3	66.8	89.0	133.5	289.3	478.4	793.6	1160.7	1223.8
42.5°	77.9	70.5	59.3	66.8	81.6	103.8	211.4	382.0	645.3	834.4	886.3
45°	70.5	66.8	55.6	63.0	70.5	74.2	133.5	296.7	519.2	574.8	574.8
47.5°	74.2	66.8	51.9	55.6	55.6	55.6	81.6	233.6	404.2	389.4	378.3
50°	74.2	63.0	48.2	44.5	44.5	40.8	55.6	181.7	300.4	248.5	244.8
52.5°	74.2	63.0	44.5	40.8	37.1	33.4	40.8	137.2	211.4	159.5	159.5
55°	70.5	59.3	37.1	33.4	29.7	29.7	33.4	96.4	144.6	111.3	107.5
57.5°	63.0	51.9	33.4	29.7	29.7	26.0	26.0	63.0	111.3	85.3	74.2
60°	51.9	44.5	29.7	29.7	29.7	22.3	22.3	40.8	89.0	63.0	55.6
62.5°	44.5	37.1	29.7	29.7	29.7	22.3	18.5	29.7	74.2	51.9	44.5
65°	37.1	29.7	26.0	29.7	29.7	22.3	14.8	22.3	63.0	40.8	37.1
67.5°	29.7	26.0	22.3	26.0	26.0	18.5	11.1	14.8	51.9	33.4	29.7
70°	26.0	22.3	18.5	22.3	26.0	18.5	11.1	14.8	40.8	26.0	26.0
72.5°	18.5	18.5	18.5	22.3	22.3	14.8	7.4	11.1	33.4	22.3	22.3
75°	14.8	14.8	14.8	18.5	18.5	11.1	7.4	7.4	26.0	18.5	14.8
77.5°	11.1	11.1	11.1	14.8	14.8	7.4	3.7	7.4	18.5	11.1	11.1
80°	7.4	7.4	7.4	11.1	11.1	7.4	3.7	3.7	11.1	7.4	7.4
82.5°	3.7	3.7	3.7	7.4	7.4	3.7	3.7	3.7	3.7	3.7	3.7
85°	3.7	3.7	3.7	3.7	3.7	3.7	0.0	0.0	3.7	3.7	3.7
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)