

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: P592033

Luminaire Tested: **GRZ-10L-935-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592033
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-10L-935-10x10-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x10 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

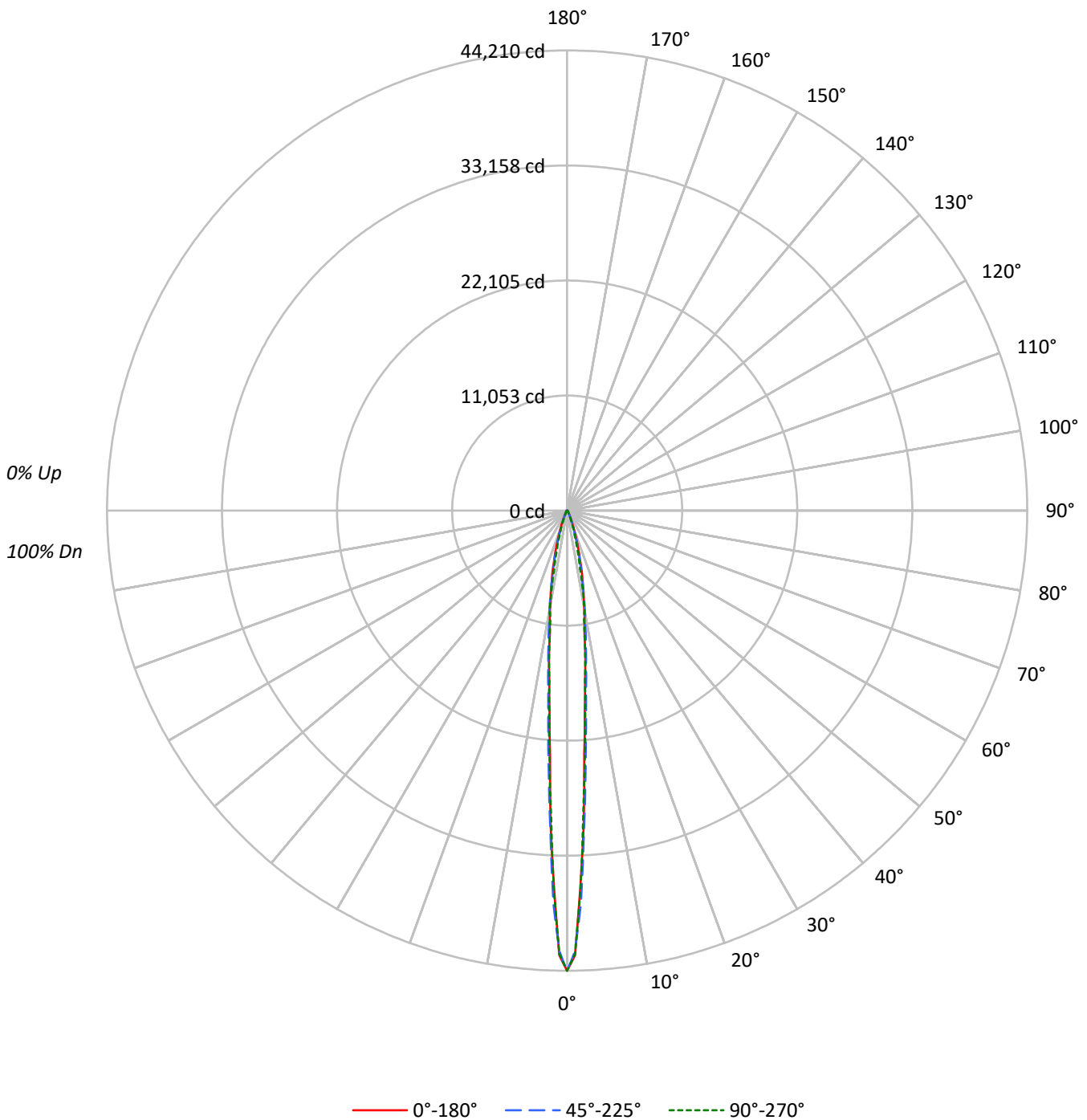
Lumens per Lamp: N/A
Luminaire Lumens: 3538.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
Input Voltage (V): 120
Input Current (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							
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10				
RCR																								
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	102	100	100	100	100
1	115	113	111	109	113	111	109	107	107	105	104	104	103	102	101	101	100	99	98	98	96	96	96	96
2	111	107	104	102	109	106	103	101	103	100	99	99	100	98	96	96	97	96	95	95	93	93	93	93
3	108	103	99	96	106	102	98	96	99	96	94	94	97	95	93	93	95	93	91	91	90	90	90	90
4	104	99	95	92	103	98	94	92	96	93	91	91	94	92	90	90	93	90	89	89	87	87	87	87
5	102	96	92	89	100	95	91	88	93	90	88	88	92	89	87	87	90	88	86	86	85	85	85	85
6	99	93	89	86	98	92	88	86	91	88	85	85	90	87	85	85	88	86	84	84	83	83	83	83
7	96	90	86	83	95	90	86	83	89	85	83	83	88	85	82	82	87	84	82	82	81	81	81	81
8	94	88	84	81	93	87	84	81	86	83	81	81	86	83	80	80	85	82	80	80	79	79	79	79
9	92	86	82	79	91	85	82	79	85	81	79	79	84	81	79	79	83	80	78	78	78	78	78	78
10	90	84	80	77	89	83	80	77	83	79	77	77	82	79	77	77	82	79	77	77	76	76	76	76

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	713812	713812	713812
5°	314335	335551	324081
10°	154912	159477	156275
15°	78146	72005	62051
20°	32788	27773	23586
25°	13295	11125	9369
30°	6344	5660	5010
35°	4001	3506	2781
40°	2852	2607	1956
45°	2560	2251	1633
50°	2429	2138	1263
55°	2176	1906	1089
60°	1747	1498	1062
65°	1700	1479	1108
70°	1733	1459	1006
75°	1566	1447	967
80°	1441	1255	902
85°	1074	1074	722



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1661.5	47.0
10°-20°	1228.6	34.7
20°-30°	335.2	9.5
30°-40°	118.5	3.3
40°-50°	74.7	2.1
50°-60°	55.4	1.6
60°-70°	36.4	1.0
70°-80°	22.0	0.6
80°-90°	5.7	0.2
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°	3225.3	91.2
0°-40°	3343.8	94.5
0°-60°	3473.9	98.2
0°-90°	3538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	44210	44210	44210	44210	44210	
5°	19394	20251	20703	19936	19996	1611
15°	4675	4615	4308	3813	3712	1325
25°	746	733	624	553	526	393
35°	203	199	178	162	141	131
45°	112	108	99	83	72	87
55°	77	74	68	50	39	69
65°	44	39	39	33	29	44
75°	25	21	23	19	16	27
85°	6	4	6	4	4	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	44210.3	44210.3	44210.3	44210.3	44210.3
1°	42731.2	41876.6	42373.5	42354.2	42601.6
2°	36151.6	38827.5	37785.4	37671.3	36484.2
3°	30245.0	31428.2	30767.0	31155.6	29295.6
4°	23549.4	25026.6	25252.8	24744.3	24088.9
5°	19394.4	20251.0	20703.4	19935.8	19995.7
6°	16335.7	17420.4	17352.7	17374.0	16513.6
7°	14311.4	14876.0	14957.2	14466.1	14232.1
8°	11995.1	12967.6	12892.2	12523.0	11999.0
9°	10692.0	11289.4	11194.7	10535.4	10344.0
10°	9448.8	9777.5	9727.2	9002.1	9531.9
12.5°	6803.8	6834.7	6502.2	6107.8	5792.6
15°	4675.1	4615.1	4307.7	3812.8	3712.2
17.5°	3070.3	3078.1	2662.4	2289.2	2231.2
20°	1908.3	1919.9	1616.4	1409.5	1372.7
22.5°	1200.7	1148.5	960.9	873.9	850.7
25°	746.3	732.8	624.5	553.0	525.9
27.5°	504.6	495.0	406.0	373.2	371.2
30°	340.3	353.8	303.6	276.5	268.7
32.5°	257.1	257.1	235.9	216.5	195.3
35°	203.0	199.1	177.9	162.4	141.1
37.5°	154.7	162.4	143.1	131.5	110.2
40°	135.3	135.3	123.7	108.3	92.8
42.5°	119.9	123.7	108.3	92.8	77.3
45°	112.1	108.3	98.6	83.1	71.5
47.5°	102.5	100.5	90.9	73.5	61.9
50°	96.7	92.8	85.1	65.7	50.3
52.5°	90.9	85.1	77.3	58.0	42.5
55°	77.3	73.5	67.7	50.3	38.7
57.5°	67.7	59.9	56.1	42.5	34.8
60°	54.1	48.3	46.4	38.7	32.9
62.5°	48.3	44.5	42.5	36.7	30.9
65°	44.5	38.7	38.7	32.9	29.0
67.5°	40.6	34.8	34.8	29.0	25.1
70°	36.7	30.9	30.9	25.1	21.3
72.5°	30.9	25.1	27.1	21.3	19.3
75°	25.1	21.3	23.2	19.3	15.5
77.5°	21.3	17.4	17.4	15.5	11.6
80°	15.5	13.5	13.5	11.6	9.7
82.5°	9.7	7.7	9.7	7.7	5.8
85°	5.8	3.9	5.8	3.9	3.9
87.5°	1.9	1.9	1.9	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)