

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: P592096

Luminaire Tested: **GRZ-15L-935-10x10-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592096
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-15L-935-10x10-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x10 OPTIC
1500 LUMENS PER FOOT, 2 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

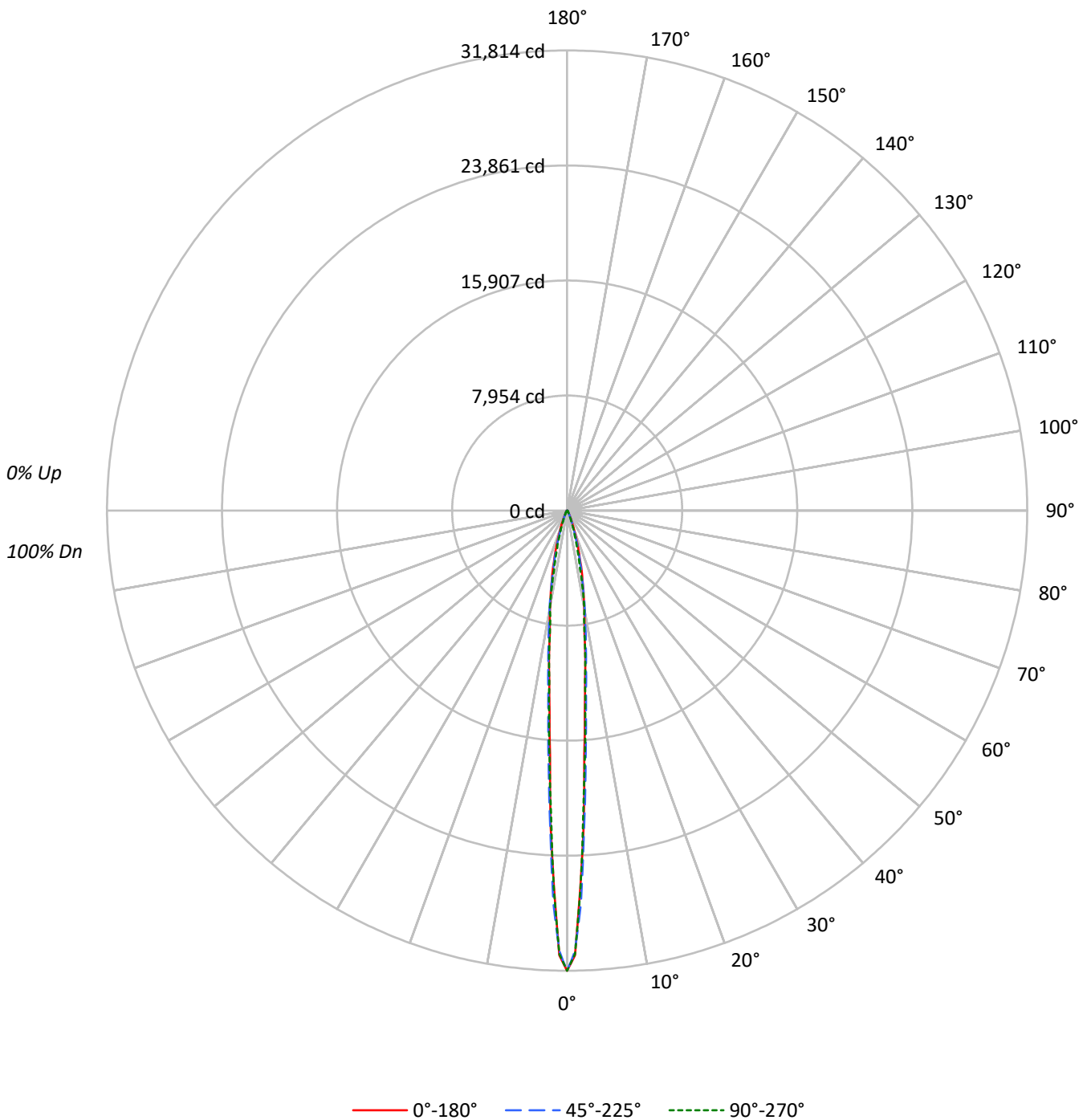
Lumens per Lamp: N/A
Luminaire Lumens: 2546.0 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 29
Input Voltage (V): 120
Input Current (A_{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°	1027340	1027340	1027340
5°	452400	482935	466426
10°	222954	229522	224915
15°	112471	103632	89307
20°	47192	39972	33948
25°	19137	16012	13482
30°	9132	8144	7211
35°	5759	5046	4005
40°	4106	3752	2816
45°	3685	3242	2352
50°	3496	3075	1819
55°	3136	2742	1565
60°	2519	2157	1531
65°	2445	2124	1597
70°	2493	2105	1445
75°	2258	2084	1385
80°	2064	1804	1302
85°	1556	1556	1037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1195.6	47.0
10°-20°	884.1	34.7
20°-30°	241.2	9.5
30°-40°	85.3	3.3
40°-50°	53.7	2.1
50°-60°	39.9	1.6
60°-70°	26.2	1.0
70°-80°	15.8	0.6
80°-90°	4.2	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°	2321.0	91.2
0°-40°	2406.3	94.5
0°-60°	2499.9	98.2
0°-90°	2546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	31814	31814	31814	31814	31814	
5°	13956	14573	14898	14346	14389	1159
15°	3364	3321	3100	2744	2671	953
25°	537	527	449	398	378	283
35°	146	143	128	117	102	95
45°	81	78	71	60	52	62
55°	56	53	49	36	28	50
65°	32	28	28	24	21	32
75°	18	15	17	14	11	20
85°	4	3	4	3	3	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	31814.4	31814.4	31814.4	31814.4	31814.4
1°	30750.0	30135.1	30492.6	30478.7	30656.8
2°	26015.3	27940.9	27191.0	27108.9	26254.6
3°	21764.7	22616.2	22140.4	22420.1	21081.6
4°	16946.5	18009.5	18172.3	17806.4	17334.7
5°	13956.5	14572.9	14898.5	14346.1	14389.2
6°	11755.4	12536.0	12487.3	12502.6	11883.4
7°	10298.7	10705.0	10763.4	10410.0	10241.7
8°	8631.9	9331.7	9277.5	9011.7	8634.7
9°	7694.1	8124.0	8055.9	7581.4	7443.7
10°	6799.5	7036.0	6999.8	6478.1	6859.3
12.5°	4896.1	4918.4	4679.1	4395.2	4168.5
15°	3364.3	3321.1	3099.9	2743.7	2671.4
17.5°	2209.4	2215.0	1915.9	1647.3	1605.6
20°	1373.3	1381.6	1163.2	1014.3	987.9
22.5°	864.0	826.5	691.5	628.9	612.2
25°	537.1	527.3	449.4	397.9	378.4
27.5°	363.1	356.2	292.2	268.5	267.1
30°	244.9	254.6	218.4	199.0	193.4
32.5°	185.0	185.0	169.7	155.8	140.5
35°	146.1	143.3	128.0	116.9	101.6
37.5°	111.3	116.9	103.0	94.6	79.3
40°	97.4	97.4	89.0	77.9	66.8
42.5°	86.3	89.0	77.9	66.8	55.7
45°	80.7	77.9	71.0	59.8	51.5
47.5°	73.7	72.3	65.4	52.9	44.5
50°	69.6	66.8	61.2	47.3	36.2
52.5°	65.4	61.2	55.7	41.7	30.6
55°	55.7	52.9	48.7	36.2	27.8
57.5°	48.7	43.1	40.3	30.6	25.0
60°	39.0	34.8	33.4	27.8	23.7
62.5°	34.8	32.0	30.6	26.4	22.3
65°	32.0	27.8	27.8	23.7	20.9
67.5°	29.2	25.0	25.0	20.9	18.1
70°	26.4	22.3	22.3	18.1	15.3
72.5°	22.3	18.1	19.5	15.3	13.9
75°	18.1	15.3	16.7	13.9	11.1
77.5°	15.3	12.5	12.5	11.1	8.3
80°	11.1	9.7	9.7	8.3	7.0
82.5°	7.0	5.6	7.0	5.6	4.2
85°	4.2	2.8	4.2	2.8	2.8
87.5°	1.4	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)