

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: P591977

Luminaire Tested: **GRZ-05L-935-17x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591977
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-19)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-05L-935-17x30-X-UNV-STD-4F
Description: iO LED GRAZER WITH 17x30 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

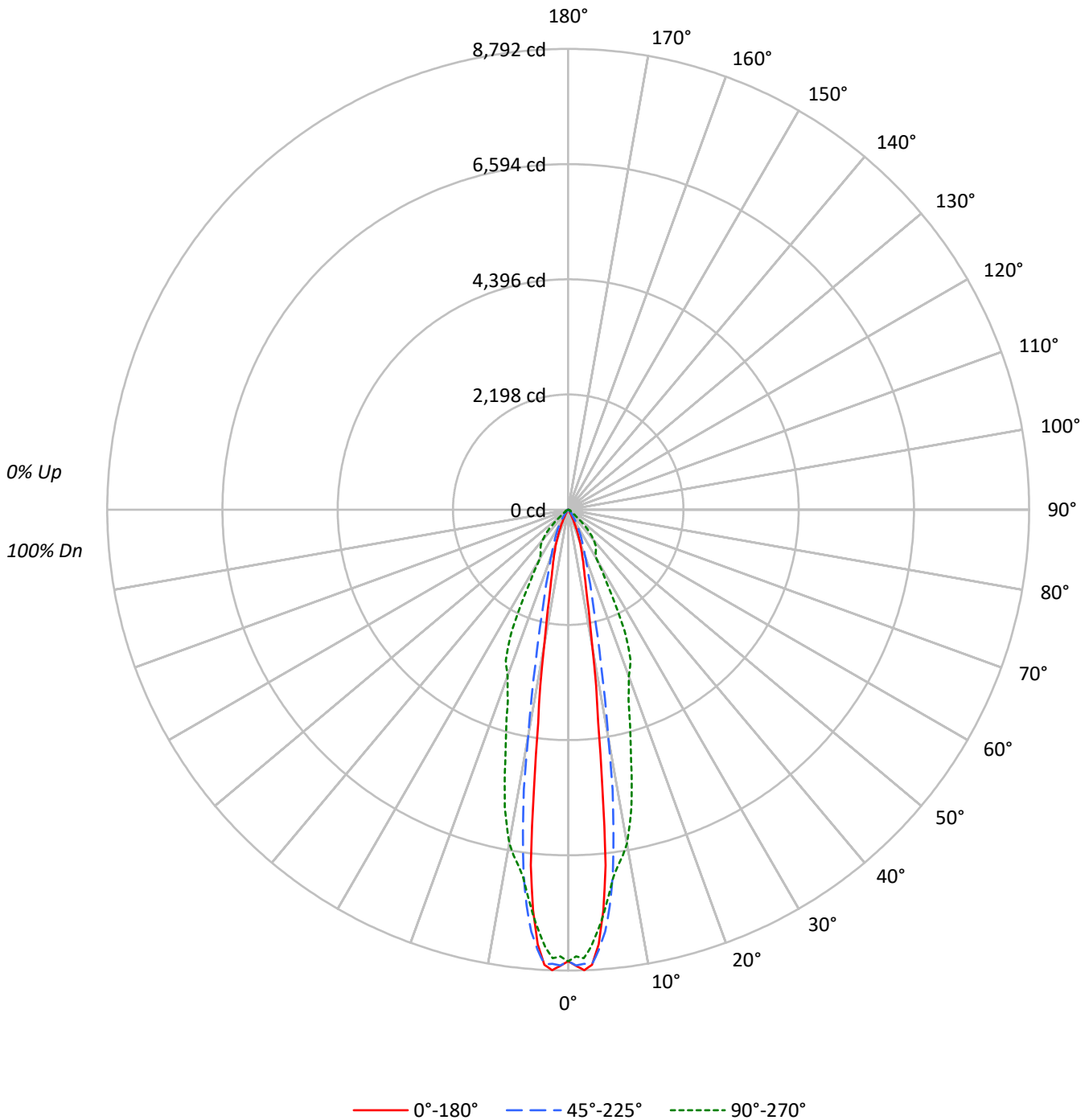
Lumens per Lamp: N/A
Luminaire Lumens: 2090.0 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92	90
3	105	100	95	92	103	98	94	91	96	93	90	93	91	88	91	89	87	86
4	101	95	90	86	99	94	89	86	92	88	85	90	86	84	88	85	83	82
5	97	90	85	82	96	89	85	81	88	84	81	86	83	80	85	82	79	78
6	94	86	81	78	92	86	81	77	84	80	77	83	79	76	82	78	76	75
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72
8	87	79	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68	67
10	82	74	69	66	81	73	69	66	73	69	66	72	68	66	71	68	65	64

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	139106	139106	139106
5°	124406	130957	125564
10°	43343	72038	106028
15°	19266	29934	76807
20°	11232	16050	58084
25°	4823	10233	45236
30°	1622	6346	19975
35°	991	3278	18183
40°	856	1876	15978
45°	927	1457	11173
50°	728	681	4906
55°	653	653	1959
60°	623	688	1812
65°	665	665	1700
70°	637	548	1279
75°	480	480	605
80°	363	363	363
85°	352	352	352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	632.8	30.3
10°-20°	669.1	32.0
20°-30°	414.3	19.8
30°-40°	209.6	10.0
40°-50°	103.7	5.0
50°-60°	30.9	1.5
60°-70°	19.0	0.9
70°-80°	9.0	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°	1716.2	82.1
0°-40°	1925.8	92.1
0°-60°	2060.4	98.6
0°-90°	2090.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2090.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8616	8616	8616	8616	8616	
5°	7676	7842	8080	7856	7747	536
15°	1153	1279	1791	3134	4595	343
25°	271	337	574	1376	2539	137
35°	50	55	166	616	922	34
45°	41	36	64	169	489	30
55°	23	23	23	34	70	21
65°	17	21	17	11	44	17
75°	8	11	8	4	10	9
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°	8615.6	8615.6	8615.6	8615.6	8615.6	8615.6	8615.6	8615.6	8615.6	8615.6	8615.6
1°	8702.7	8675.6	8681.4	8716.2	8737.5	8696.9	8638.9	8594.4	8613.7	8553.8	8524.8
2°	8791.6	8770.4	8756.8	8768.4	8722.0	8669.8	8609.8	8577.0	8565.4	8534.4	8563.4
3°	8694.9	8667.9	8675.6	8702.7	8679.5	8683.3	8534.4	8433.9	8424.2	8383.6	8350.7
4°	8312.0	8331.4	8370.0	8373.9	8401.0	8408.7	8356.5	8165.0	8168.9	8093.5	8056.7
5°	7675.8	7689.3	7805.3	7853.7	8027.7	8080.0	8093.5	7861.4	7838.2	7724.1	7747.3
6°	6822.9	6573.4	6884.8	7008.6	7358.6	7596.5	7679.6	7642.9	7526.8	7395.3	7397.3
7°	5324.1	5345.4	5523.3	5865.6	6517.3	6977.6	7319.9	7395.3	7240.6	7147.8	7060.8
8°	4105.7	4194.7	4448.0	4809.7	5457.5	6202.1	6822.9	6993.1	6954.4	6861.6	6848.0
9°	3399.8	3332.2	3535.2	3823.4	4444.2	5401.5	6167.3	6528.9	6641.1	6670.1	6675.9
10°	2643.7	2723.0	2819.7	3119.4	3645.5	4393.9	5399.5	5960.4	6254.3	6418.7	6467.1
11°	2140.9	2169.9	2293.6	2576.0	2972.4	3660.9	4678.2	5310.6	5763.1	6095.7	6138.3
12°	1761.8	1786.9	1870.1	2079.0	2438.7	2986.0	3860.1	4651.1	5331.8	5720.6	5807.6
13°	1496.9	1525.9	1593.6	1756.0	2034.5	2512.2	3117.5	3974.2	4757.5	5308.6	5386.0
14°	1286.1	1318.9	1363.4	1506.5	1732.8	2071.2	2587.6	3405.6	4245.0	4863.8	4966.3
15°	1152.6	1156.5	1204.8	1303.5	1502.7	1790.8	2235.6	2920.2	3775.0	4471.2	4595.0
17.5°	866.4	860.6	866.4	943.8	1059.8	1270.6	1576.2	2169.9	3080.7	3686.1	3821.4
20°	653.7	655.6	642.1	686.5	783.2	934.1	1187.4	1765.7	2697.8	3303.1	3380.5
22.5°	454.5	450.6	456.4	499.0	591.8	731.0	930.2	1440.8	2458.0	3047.9	3111.7
25°	270.7	276.6	299.8	350.0	440.9	574.4	760.0	1164.2	2013.2	2405.8	2539.2
27.5°	156.6	158.6	177.9	232.1	319.1	446.7	624.7	907.0	1394.4	1603.2	1638.0
30°	87.0	87.0	100.6	135.4	216.6	340.4	510.6	752.3	1011.4	1069.5	1071.4
32.5°	58.0	58.0	61.9	79.3	133.4	247.5	415.8	647.9	878.0	961.2	974.7
35°	50.3	48.3	50.3	56.1	83.2	166.3	319.1	551.2	808.4	907.0	922.5
37.5°	44.5	44.5	46.4	52.2	63.8	108.3	226.3	437.1	715.6	839.3	856.7
40°	40.6	40.6	42.5	52.2	63.8	89.0	143.1	317.2	589.8	738.8	758.1
42.5°	38.7	38.7	38.7	46.4	60.0	81.2	83.2	203.1	454.5	607.3	636.3
45°	40.6	38.7	34.8	36.7	46.4	63.8	48.3	119.9	315.2	468.0	489.3
47.5°	38.7	38.7	36.7	34.8	34.8	42.5	30.9	65.8	197.3	324.9	336.5
50°	29.0	29.0	25.1	30.9	32.9	27.1	23.2	42.5	121.8	183.7	195.3
52.5°	25.1	25.1	23.2	23.2	27.1	25.1	17.4	34.8	77.4	102.5	106.4
55°	23.2	21.3	21.3	23.2	25.1	23.2	15.5	27.1	54.1	67.7	69.6
57.5°	21.3	21.3	21.3	21.3	25.1	23.2	15.5	19.3	42.5	54.1	60.0
60°	19.3	19.3	21.3	21.3	23.2	21.3	13.5	13.5	34.8	48.3	56.1
62.5°	17.4	19.3	19.3	21.3	23.2	19.3	11.6	9.7	27.1	44.5	52.2
65°	17.4	17.4	19.3	21.3	21.3	17.4	9.7	7.7	21.3	36.7	44.5
67.5°	15.5	15.5	17.4	19.3	21.3	15.5	5.8	5.8	17.4	30.9	36.7
70°	13.5	13.5	15.5	17.4	17.4	11.6	5.8	5.8	11.6	25.1	27.1
72.5°	11.6	11.6	13.5	15.5	15.5	9.7	3.9	3.9	7.7	19.3	17.4
75°	7.7	9.7	9.7	11.6	11.6	7.7	3.9	3.9	5.8	11.6	9.7
77.5°	5.8	5.8	7.7	9.7	9.7	5.8	1.9	1.9	3.9	7.7	5.8
80°	3.9	3.9	5.8	5.8	5.8	3.9	1.9	1.9	1.9	3.9	3.9
82.5°	1.9	1.9	3.9	3.9	3.9	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	0.0	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



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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)