

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: P591993

Luminaire Tested: **GRZ-05L-940-17x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591993
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-940-17x30-X-UNV-STD-4F
Description: iO LED GRAZER WITH 17x30 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

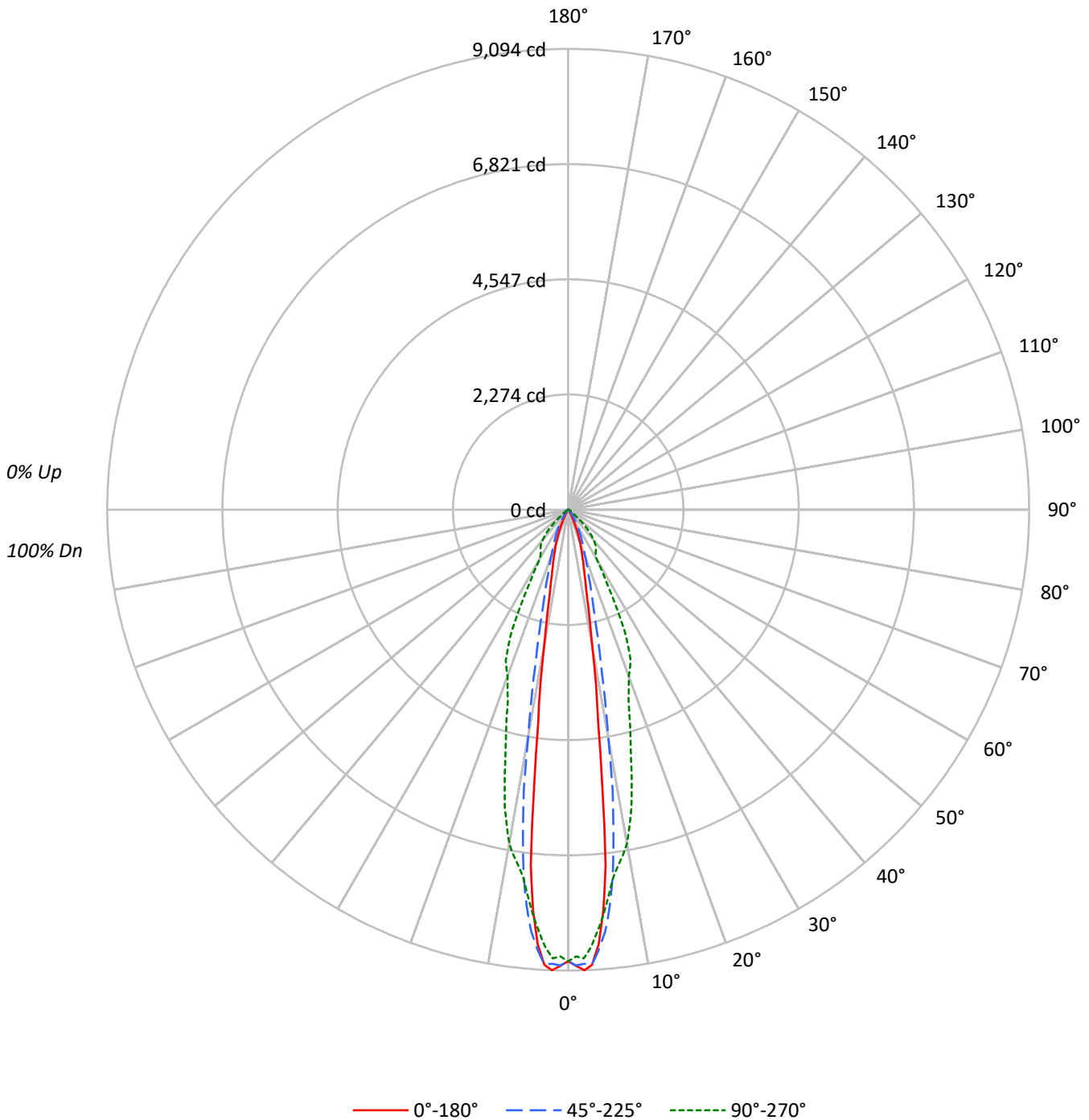
Lumens per Lamp: N/A
Luminaire Lumens: 2162.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
Input Voltage (V): 120
Input Current (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	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°	143900	143900	143900
5°	128691	135467	129890
10°	44837	74520	109679
15°	19930	30965	79453
20°	11618	16603	60086
25°	4990	10586	46795
30°	1678	6564	20663
35°	1025	3390	18810
40°	885	1939	16529
45°	959	1507	11556
50°	754	703	5076
55°	676	676	2027
60°	646	710	1873
65°	688	688	1757
70°	661	566	1322
75°	499	499	624
80°	372	372	372
85°	371	371	371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	654.6	30.3
10°-20°	692.2	32.0
20°-30°	428.6	19.8
30°-40°	216.8	10.0
40°-50°	107.3	5.0
50°-60°	32.0	1.5
60°-70°	19.7	0.9
70°-80°	9.3	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°	1775.3	82.1
0°-40°	1992.1	92.1
0°-60°	2131.3	98.6
0°-90°	2162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2162.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8912	8912	8912	8912	8912	
5°	7940	8112	8358	8126	8014	554
15°	1192	1323	1852	3242	4753	354
25°	280	349	594	1424	2627	142
35°	52	56	172	637	954	35
45°	42	38	66	175	506	31
55°	24	24	24	35	72	22
65°	18	22	18	12	46	17
75°	8	12	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°	8912.5	8912.5	8912.5	8912.5	8912.5	8912.5	8912.5	8912.5	8912.5	8912.5	8912.5
1°	9002.5	8974.5	8980.5	9016.5	9038.5	8996.5	8936.5	8890.4	8910.5	8848.4	8818.4
2°	9094.5	9072.5	9058.5	9070.5	9022.5	8968.5	8906.5	8872.4	8860.4	8828.4	8858.4
3°	8994.5	8966.5	8974.5	9002.5	8978.5	8982.5	8828.4	8724.4	8714.4	8672.4	8638.4
4°	8598.4	8618.4	8658.4	8662.4	8690.4	8698.4	8644.4	8446.3	8450.3	8372.3	8334.3
5°	7940.2	7954.2	8074.2	8124.2	8304.3	8358.3	8372.3	8132.2	8108.2	7990.2	8014.2
6°	7057.9	6799.9	7122.0	7250.0	7612.1	7858.2	7944.2	7906.2	7786.1	7650.1	7652.1
7°	5507.5	5529.5	5713.6	6067.7	6741.9	7218.0	7572.1	7650.1	7490.1	7394.0	7304.0
8°	4247.2	4339.2	4601.3	4975.4	5645.6	6415.8	7057.9	7234.0	7194.0	7098.0	7084.0
9°	3517.0	3446.9	3657.0	3955.1	4597.3	5587.5	6379.8	6753.9	6869.9	6899.9	6905.9
10°	2734.8	2816.8	2916.8	3226.9	3771.0	4545.3	5585.5	6165.7	6469.8	6639.8	6689.8
11°	2214.6	2244.6	2372.7	2664.7	3074.8	3787.0	4839.3	5493.5	5961.6	6305.7	6349.7
12°	1822.5	1848.5	1934.5	2150.6	2522.7	3088.9	3993.1	4811.3	5515.5	5917.6	6007.7
13°	1548.4	1578.4	1648.5	1816.5	2104.6	2598.7	3224.9	4111.1	4921.4	5491.5	5571.5
14°	1330.4	1364.4	1410.4	1558.4	1792.5	2142.6	2676.7	3523.0	4391.2	5031.4	5137.4
15°	1192.3	1196.3	1246.3	1348.4	1554.4	1852.5	2312.6	3020.8	3905.1	4625.3	4753.3
17.5°	896.2	890.2	896.2	976.3	1096.3	1314.4	1630.4	2244.6	3186.9	3813.1	3953.1
20°	676.2	678.2	664.2	710.2	810.2	966.3	1228.3	1826.5	2790.8	3416.9	3497.0
22.5°	470.1	466.1	472.1	516.1	612.2	756.2	962.3	1490.4	2542.7	3152.9	3218.9
25°	280.1	286.1	310.1	362.1	456.1	594.2	786.2	1204.3	2082.6	2488.7	2626.7
27.5°	162.0	164.0	184.1	240.1	330.1	462.1	646.2	938.3	1442.4	1658.5	1694.5
30°	90.0	90.0	104.0	140.0	224.1	352.1	528.1	778.2	1046.3	1106.3	1108.3
32.5°	60.0	60.0	64.0	82.0	138.0	256.1	430.1	670.2	908.3	994.3	1008.3
35°	52.0	50.0	52.0	58.0	86.0	172.0	330.1	570.2	836.2	938.3	954.3
37.5°	46.0	46.0	48.0	54.0	66.0	112.0	234.1	452.1	740.2	868.2	886.2
40°	42.0	42.0	44.0	54.0	66.0	92.0	148.0	328.1	610.2	764.2	784.2
42.5°	40.0	40.0	40.0	48.0	62.0	84.0	86.0	210.1	470.1	628.2	658.2
45°	42.0	40.0	36.0	38.0	48.0	66.0	50.0	124.0	326.1	484.1	506.1
47.5°	40.0	40.0	38.0	36.0	36.0	44.0	32.0	68.0	204.1	336.1	348.1
50°	30.0	30.0	26.0	32.0	34.0	28.0	24.0	44.0	126.0	190.1	202.1
52.5°	26.0	26.0	24.0	24.0	28.0	26.0	18.0	36.0	80.0	106.0	110.0
55°	24.0	22.0	22.0	24.0	26.0	24.0	16.0	28.0	56.0	70.0	72.0
57.5°	22.0	22.0	22.0	22.0	26.0	24.0	16.0	20.0	44.0	56.0	62.0
60°	20.0	20.0	22.0	22.0	24.0	22.0	14.0	14.0	36.0	50.0	58.0
62.5°	18.0	20.0	20.0	22.0	24.0	20.0	12.0	10.0	28.0	46.0	54.0
65°	18.0	18.0	20.0	22.0	22.0	18.0	10.0	8.0	22.0	38.0	46.0
67.5°	16.0	16.0	18.0	20.0	22.0	16.0	6.0	6.0	18.0	32.0	38.0
70°	14.0	14.0	16.0	18.0	18.0	12.0	6.0	6.0	12.0	26.0	28.0
72.5°	12.0	12.0	14.0	16.0	16.0	10.0	4.0	4.0	8.0	20.0	18.0
75°	8.0	10.0	10.0	12.0	12.0	8.0	4.0	4.0	6.0	12.0	10.0
77.5°	6.0	6.0	8.0	10.0	10.0	6.0	2.0	2.0	4.0	8.0	6.0
80°	4.0	4.0	6.0	6.0	6.0	4.0	2.0	2.0	2.0	4.0	4.0
82.5°	2.0	2.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0
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)