

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: P591988

Luminaire Tested: **GRZ-05L-940-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591988
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-05L-940-10x30-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x30 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

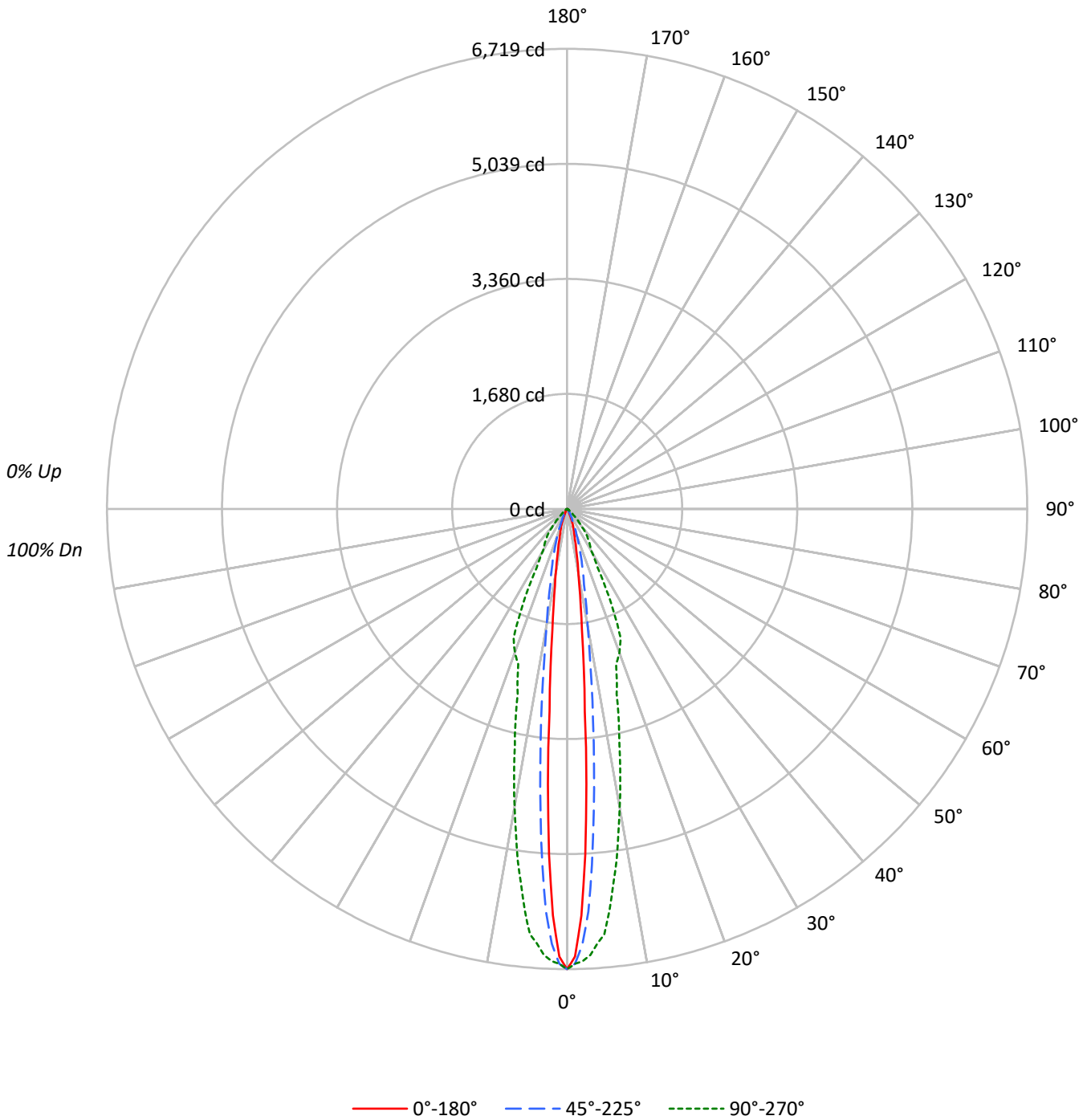
Lumens per Lamp: N/A
Luminaire Lumens: 1065.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
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	106	102	100	108	104	101	99	101	99	96		98	96	94		95	94	92	91
3	106	100	96	93	104	99	95	92	97	93	91		94	92	90		92	90	88	87
4	102	96	91	88	100	95	91	87	93	89	86		91	88	85		89	86	84	83
5	98	92	87	83	97	91	86	83	89	85	82		87	84	82		86	83	81	80
6	95	88	83	80	94	87	83	79	86	82	79		84	81	78		83	80	78	77
7	92	84	80	76	91	84	79	76	83	79	76		82	78	75		81	77	75	74
8	89	81	77	73	88	81	76	73	80	76	73		79	75	73		78	75	72	71
9	86	79	74	71	85	78	74	71	77	73	71		77	73	70		76	73	70	69
10	84	76	72	69	83	76	71	68	75	71	68		74	71	68		74	70	68	67

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	216968	216968	216968
5°	96094	144289	202108
10°	31180	56290	144908
15°	13603	27811	93426
20°	7663	14223	76690
25°	2744	6306	54293
30°	1678	3244	26246
35°	1261	2089	21047
40°	1012	1518	13907
45°	868	913	7078
50°	1005	553	3316
55°	1070	450	1633
60°	904	388	969
65°	764	458	764
70°	661	472	661
75°	499	374	499
80°	372	372	372
85°	371	371	371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.4	33.6
10°-20°	349.0	32.8
20°-30°	195.6	18.4
30°-40°	88.3	8.3
40°-50°	44.7	4.2
50°-60°	16.7	1.6
60°-70°	8.3	0.8
70°-80°	4.3	0.4
80°-90°	0.8	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°	902.0	84.7
0°-40°	990.3	93.0
0°-60°	1051.6	98.7
0°-90°	1065.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6719	6719	6719	6719	6719	
5°	2964	3399	4451	5714	6235	227
15°	407	502	832	1819	2795	126
25°	77	86	177	661	1524	44
35°	32	22	53	211	534	20
45°	19	16	20	95	155	16
55°	19	9	8	29	29	16
65°	10	8	6	9	10	10
75°	4	5	3	3	4	4
85°	1	1	1	0	1	1
90°	0	0	0	0	0	



TEST NUMBER: P591988

CATALOG NUMBER: GRZ-05L-940-10x30-X-UNV-STD-2F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6719.0	6719.0	6719.0	6719.0	6719.0	6719.0	6719.0	6719.0	6719.0	6719.0	6719.0
1°	6536.0	6537.0	6586.0	6554.0	6632.0	6643.0	6633.0	6651.0	6656.0	6628.0	6643.0
2°	5938.1	5956.1	5985.1	6153.0	6230.0	6355.0	6460.0	6550.0	6589.0	6605.0	6603.0
3°	5055.2	5043.2	5186.2	5347.2	5623.1	5885.1	6143.0	6313.0	6463.0	6511.0	6520.0
4°	4026.4	3979.4	4224.3	4360.3	4733.3	5204.2	5664.1	6031.1	6278.0	6380.0	6356.0
5°	2964.5	3047.5	3218.5	3459.5	3866.4	4451.3	5066.2	5616.1	6006.1	6178.0	6235.0
6°	2309.6	2293.6	2431.6	2725.6	3136.5	3764.4	4467.3	5157.2	5642.1	5849.1	5898.1
7°	1781.7	1771.7	1908.7	2117.7	2462.6	3108.5	3886.4	4692.3	5287.2	5521.1	5519.1
8°	1411.8	1405.8	1500.8	1665.7	1991.7	2537.6	3311.5	4180.4	4862.2	5177.2	5177.2
9°	1140.8	1153.8	1211.8	1357.8	1614.7	2071.7	2830.6	3746.4	4446.3	4754.3	4781.3
10°	950.9	957.9	1004.8	1124.8	1338.8	1716.7	2378.6	3241.5	4036.4	4426.3	4419.3
12.5°	616.9	631.9	665.9	742.9	898.9	1134.8	1580.8	2272.6	3076.5	3466.5	3532.5
15°	406.9	409.9	451.9	518.9	642.9	831.9	1143.8	1659.7	2296.6	2738.6	2794.6
17.5°	304.0	307.0	317.0	356.9	447.9	608.9	861.9	1261.8	1866.7	2312.6	2376.6
20°	223.0	213.0	210.0	233.0	304.0	413.9	628.9	983.8	1514.8	2116.7	2231.7
22.5°	130.0	128.0	123.0	142.0	196.0	272.0	427.9	734.9	1280.8	1884.7	2043.7
25°	77.0	75.0	74.0	90.0	123.0	177.0	292.0	555.9	974.8	1385.8	1523.8
27.5°	56.0	54.0	49.0	56.0	81.0	122.0	206.0	401.9	668.9	890.9	965.8
30°	45.0	43.0	34.0	37.0	56.0	87.0	151.0	278.0	474.9	661.9	703.9
32.5°	38.0	36.0	26.0	27.0	39.0	66.0	118.0	214.0	383.9	572.9	619.9
35°	32.0	30.0	21.0	22.0	30.0	53.0	97.0	176.0	315.0	492.9	533.9
37.5°	27.0	25.0	18.0	19.0	26.0	44.0	88.0	152.0	261.0	404.9	444.9
40°	24.0	22.0	16.0	18.0	24.0	36.0	78.0	129.0	214.0	313.0	329.9
42.5°	21.0	19.0	16.0	18.0	22.0	28.0	57.0	103.0	174.0	225.0	239.0
45°	19.0	18.0	15.0	17.0	19.0	20.0	36.0	80.0	140.0	155.0	155.0
47.5°	20.0	18.0	14.0	15.0	15.0	15.0	22.0	63.0	109.0	105.0	102.0
50°	20.0	17.0	13.0	12.0	12.0	11.0	15.0	49.0	81.0	67.0	66.0
52.5°	20.0	17.0	12.0	11.0	10.0	9.0	11.0	37.0	57.0	43.0	43.0
55°	19.0	16.0	10.0	9.0	8.0	8.0	9.0	26.0	39.0	30.0	29.0
57.5°	17.0	14.0	9.0	8.0	8.0	7.0	7.0	17.0	30.0	23.0	20.0
60°	14.0	12.0	8.0	8.0	8.0	6.0	6.0	11.0	24.0	17.0	15.0
62.5°	12.0	10.0	8.0	8.0	8.0	6.0	5.0	8.0	20.0	14.0	12.0
65°	10.0	8.0	7.0	8.0	8.0	6.0	4.0	6.0	17.0	11.0	10.0
67.5°	8.0	7.0	6.0	7.0	7.0	5.0	3.0	4.0	14.0	9.0	8.0
70°	7.0	6.0	5.0	6.0	7.0	5.0	3.0	4.0	11.0	7.0	7.0
72.5°	5.0	5.0	5.0	6.0	6.0	4.0	2.0	3.0	9.0	6.0	6.0
75°	4.0	4.0	4.0	5.0	5.0	3.0	2.0	2.0	7.0	5.0	4.0
77.5°	3.0	3.0	3.0	4.0	4.0	2.0	1.0	2.0	5.0	3.0	3.0
80°	2.0	2.0	2.0	3.0	3.0	2.0	1.0	1.0	3.0	2.0	2.0
82.5°	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)