

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: P591985

Luminaire Tested: **GRZ-05L-940-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591985
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-05L-940-10x10-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x10 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

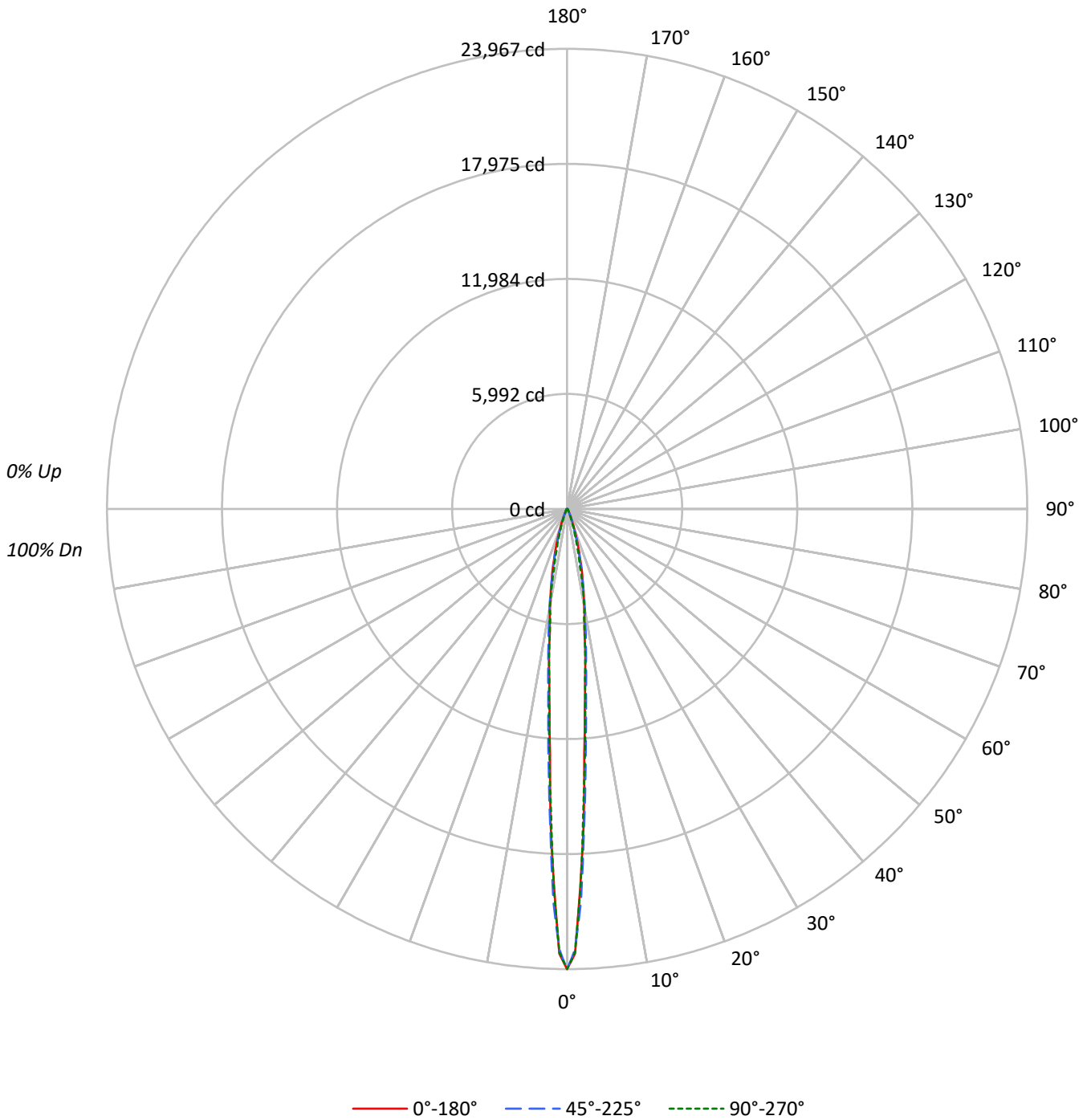
Lumens per Lamp: N/A
Luminaire Lumens: 1918.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 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							
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°	386967	386967	386967
5°	170406	181907	175689
10°	83980	86454	84719
15°	42364	39035	33638
20°	17775	15057	12787
25°	7208	6032	5079
30°	3440	3069	2716
35°	2170	1900	1508
40°	1547	1414	1060
45°	1388	1222	886
50°	1316	1158	686
55°	1179	1033	591
60°	946	814	575
65°	921	802	600
70°	939	793	543
75°	848	786	524
80°	781	679	483
85°	574	574	389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	900.7	47.0
10°-20°	666.0	34.7
20°-30°	181.7	9.5
30°-40°	64.2	3.3
40°-50°	40.5	2.1
50°-60°	30.0	1.6
60°-70°	19.7	1.0
70°-80°	11.9	0.6
80°-90°	3.1	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°	1748.5	91.2
0°-40°	1812.7	94.5
0°-60°	1883.3	98.2
0°-90°	1918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23967	23967	23967	23967	23967	
5°	10514	10978	11224	10808	10840	873
15°	2534	2502	2335	2067	2012	718
25°	405	397	339	300	285	213
35°	110	108	96	88	76	71
45°	61	59	54	45	39	47
55°	42	40	37	27	21	38
65°	24	21	21	18	16	24
75°	14	12	13	10	8	15
85°	3	2	3	2	2	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	23967.0	23967.0	23967.0	23967.0	23967.0
1°	23165.2	22701.9	22971.3	22960.8	23095.0
2°	19598.3	21049.0	20484.0	20422.2	19778.6
3°	16396.2	17037.7	16679.2	16889.9	15881.6
4°	12766.5	13567.3	13689.9	13414.2	13058.9
5°	10514.0	10978.3	11223.6	10807.5	10840.0
6°	8855.8	9443.8	9407.2	9418.7	8952.3
7°	7758.4	8064.5	8108.5	7842.3	7715.4
8°	6502.7	7029.9	6989.1	6788.9	6504.8
9°	5796.3	6120.2	6068.8	5711.4	5607.6
10°	5122.3	5300.5	5273.2	4880.2	5167.4
12.5°	3688.4	3705.2	3524.9	3311.1	3140.3
15°	2534.4	2501.9	2335.3	2067.0	2012.4
17.5°	1664.5	1668.7	1443.3	1241.0	1209.6
20°	1034.5	1040.8	876.3	764.1	744.2
22.5°	650.9	622.6	520.9	473.8	461.2
25°	404.6	397.2	338.6	299.8	285.1
27.5°	273.6	268.3	220.1	202.3	201.2
30°	184.5	191.8	164.6	149.9	145.7
32.5°	139.4	139.4	127.9	117.4	105.9
35°	110.1	108.0	96.4	88.0	76.5
37.5°	83.9	88.0	77.6	71.3	59.7
40°	73.4	73.4	67.1	58.7	50.3
42.5°	65.0	67.1	58.7	50.3	41.9
45°	60.8	58.7	53.5	45.1	38.8
47.5°	55.6	54.5	49.3	39.8	33.5
50°	52.4	50.3	46.1	35.6	27.3
52.5°	49.3	46.1	41.9	31.4	23.1
55°	41.9	39.8	36.7	27.3	21.0
57.5°	36.7	32.5	30.4	23.1	18.9
60°	29.3	26.2	25.2	21.0	17.8
62.5°	26.2	24.1	23.1	19.9	16.8
65°	24.1	21.0	21.0	17.8	15.7
67.5°	22.0	18.9	18.9	15.7	13.6
70°	19.9	16.8	16.8	13.6	11.5
72.5°	16.8	13.6	14.7	11.5	10.5
75°	13.6	11.5	12.6	10.5	8.4
77.5°	11.5	9.4	9.4	8.4	6.3
80°	8.4	7.3	7.3	6.3	5.2
82.5°	5.2	4.2	5.2	4.2	3.1
85°	3.1	2.1	3.1	2.1	2.1
87.5°	1.0	1.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)