

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: P592016

Luminaire Tested: **GRZ-10L-930-10x10-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592016
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-10L-930-10x10-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x10 OPTIC
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

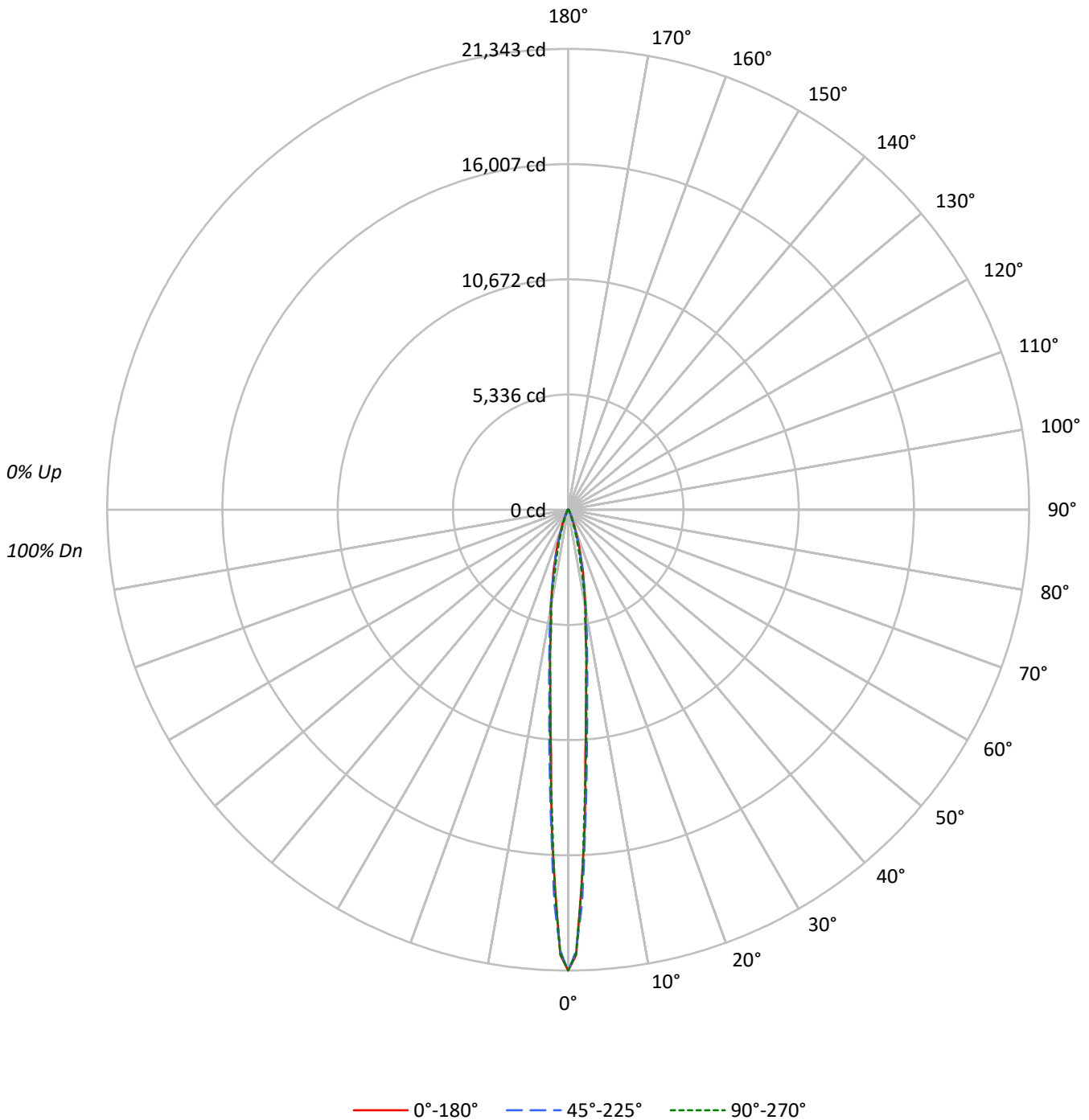
Lumens per Lamp: N/A
Luminaire Lumens: 1708.0 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	95	93
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	93	90	89	87
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	90	88	86	85
6	99	93	89	86	98	92	88	86	91	88	85	90	87	85	88	86	84	83
7	96	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81
8	94	88	84	81	93	87	84	81	86	83	81	86	83	80	85	82	80	79
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	82	79	77	76

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	689198	689198	689198
5°	303495	323978	312906
10°	149571	153978	150886
15°	75450	69523	59911
20°	31660	26814	22773
25°	12837	10742	9046
30°	6126	5463	4836
35°	3863	3386	2685
40°	2753	2517	1888
45°	2471	2174	1576
50°	2346	2065	1221
55°	2100	1841	1053
60°	1686	1447	1027
65°	1643	1429	1070
70°	1671	1407	972
75°	1510	1397	936
80°	1395	1209	874
85°	1037	1037	704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	802.1	47.0
10°-20°	593.1	34.7
20°-30°	161.8	9.5
30°-40°	57.2	3.3
40°-50°	36.1	2.1
50°-60°	26.7	1.6
60°-70°	17.6	1.0
70°-80°	10.6	0.6
80°-90°	2.8	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°	1557.0	91.2
0°-40°	1614.3	94.5
0°-60°	1677.0	98.2
0°-90°	1708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	21343	21343	21343	21343	21343	
5°	9363	9776	9995	9624	9653	778
15°	2257	2228	2080	1841	1792	640
25°	360	354	302	267	254	190
35°	98	96	86	78	68	63
45°	54	52	48	40	34	42
55°	37	36	33	24	19	34
65°	22	19	19	16	14	21
75°	12	10	11	9	8	13
85°	3	2	3	2	2	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	21342.9	21342.9	21342.9	21342.9	21342.9
1°	20628.8	20216.3	20456.2	20446.8	20566.3
2°	17452.5	18744.3	18241.2	18186.2	17613.1
3°	14601.0	15172.2	14853.0	15040.6	14142.7
4°	11368.7	12081.8	12191.0	11945.5	11629.1
5°	9362.8	9776.3	9994.7	9624.2	9653.1
6°	7886.2	8409.8	8377.2	8387.4	7972.1
7°	6909.0	7181.5	7220.7	6983.6	6870.7
8°	5790.7	6260.2	6223.8	6045.6	5792.6
9°	5161.6	5450.1	5404.3	5086.0	4993.6
10°	4561.5	4720.2	4695.9	4345.9	4601.6
12.5°	3284.6	3299.5	3139.0	2948.6	2796.4
15°	2256.9	2228.0	2079.6	1840.6	1792.1
17.5°	1482.2	1486.0	1285.3	1105.1	1077.1
20°	921.3	926.9	780.3	680.4	662.7
22.5°	579.6	554.4	463.9	421.9	410.7
25°	360.3	353.8	301.5	266.9	253.9
27.5°	243.6	238.9	196.0	180.1	179.2
30°	164.3	170.8	146.5	133.5	129.7
32.5°	124.1	124.1	113.9	104.5	94.3
35°	98.0	96.1	85.9	78.4	68.1
37.5°	74.7	78.4	69.1	63.5	53.2
40°	65.3	65.3	59.7	52.3	44.8
42.5°	57.9	59.7	52.3	44.8	37.3
45°	54.1	52.3	47.6	40.1	34.5
47.5°	49.5	48.5	43.9	35.5	29.9
50°	46.7	44.8	41.1	31.7	24.3
52.5°	43.9	41.1	37.3	28.0	20.5
55°	37.3	35.5	32.7	24.3	18.7
57.5°	32.7	28.9	27.1	20.5	16.8
60°	26.1	23.3	22.4	18.7	15.9
62.5°	23.3	21.5	20.5	17.7	14.9
65°	21.5	18.7	18.7	15.9	14.0
67.5°	19.6	16.8	16.8	14.0	12.1
70°	17.7	14.9	14.9	12.1	10.3
72.5°	14.9	12.1	13.1	10.3	9.3
75°	12.1	10.3	11.2	9.3	7.5
77.5°	10.3	8.4	8.4	7.5	5.6
80°	7.5	6.5	6.5	5.6	4.7
82.5°	4.7	3.7	4.7	3.7	2.8
85°	2.8	1.9	2.8	1.9	1.9
87.5°	0.9	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)