

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: P592084

Luminaire Tested: **GRZ-15L-930-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592084
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-15L-930-10x30-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x30 OPTIC
1500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

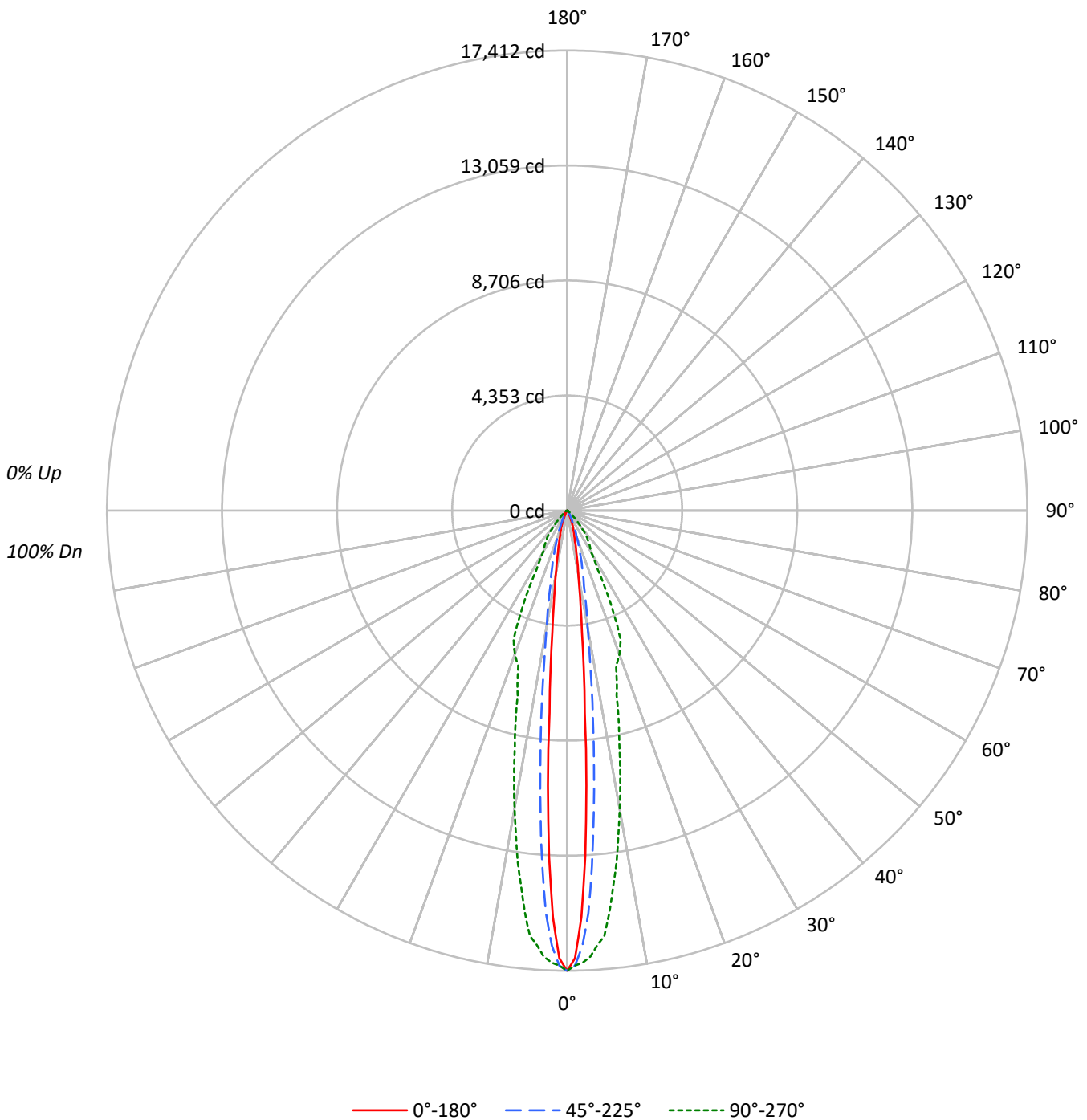
Lumens per Lamp: N/A
Luminaire Lumens: 2760.0 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 29
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	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					100			
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	102	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91					91			
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83					83			
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80					80			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77					77			
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74					74			
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71					71			
9	86	79	74	71	85	78	74	71	77	73	71	77	73	70	76	73	70	69					69			
10	84	76	72	69	83	76	71	68	75	71	68	74	71	68	74	70	68	67					67			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	562279	562279	562279
5°	249038	373933	523775
10°	80801	145882	375539
15°	35256	72070	242116
20°	19856	36862	198741
25°	7108	16340	140699
30°	4348	8405	68019
35°	3268	5412	54547
40°	2622	3933	36046
45°	2247	2366	18340
50°	2602	1432	8591
55°	2770	1165	4228
60°	2344	1001	2512
65°	1979	1184	1979
70°	1709	1227	1709
75°	1298	973	1298
80°	967	967	967
85°	963	963	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	926.2	33.6
10°-20°	904.5	32.8
20°-30°	506.9	18.4
30°-40°	228.9	8.3
40°-50°	115.7	4.2
50°-60°	43.1	1.6
60°-70°	21.4	0.8
70°-80°	11.1	0.4
80°-90°	2.2	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°	2337.5	84.7
0°-40°	2566.4	93.0
0°-60°	2725.3	98.7
0°-90°	2760.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2760.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	17412	17412	17412	17412	17412	
5°	7683	8809	11536	14807	16158	587
15°	1055	1301	2156	4714	7242	326
25°	200	223	459	1712	3949	113
35°	83	56	137	546	1384	53
45°	49	43	52	246	402	41
55°	49	24	21	76	75	42
65°	26	20	16	23	26	26
75°	10	12	8	8	10	11
85°	3	3	3	1	3	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°	17412.5	17412.5	17412.5	17412.5	17412.5	17412.5	17412.5	17412.5	17412.5	17412.5	17412.5
1°	16938.3	16940.9	17067.9	16985.0	17187.1	17215.6	17189.7	17236.3	17249.3	17176.7	17215.6
2°	15388.8	15435.5	15510.6	15945.9	16145.4	16469.3	16741.4	16974.6	17075.7	17117.1	17111.9
3°	13100.8	13069.7	13440.3	13857.5	14572.6	15251.5	15920.0	16360.5	16749.2	16873.5	16896.9
4°	10434.5	10312.8	10947.6	11300.0	12266.5	13486.9	14678.8	15629.8	16269.8	16534.1	16471.9
5°	7682.8	7897.8	8340.9	8965.4	10020.0	11535.8	13129.3	14554.5	15565.0	16010.7	16158.4
6°	5985.5	5944.1	6301.7	7063.5	8128.4	9755.7	11577.2	13365.1	14621.8	15158.2	15285.2
7°	4617.4	4591.5	4946.5	5488.0	6382.0	8055.9	10071.8	12160.3	13702.0	14308.3	14303.1
8°	3658.7	3643.2	3889.3	4316.9	5161.6	6576.3	8581.9	10833.6	12600.7	13417.0	13417.0
9°	2956.5	2990.2	3140.5	3518.8	4184.7	5368.9	7335.5	9709.0	11522.8	12320.9	12390.9
10°	2464.2	2482.3	2604.1	2915.0	3469.5	4449.0	6164.3	8400.5	10460.5	11471.0	11452.9
12.5°	1598.7	1637.6	1725.7	1925.2	2329.4	2941.0	4096.6	5889.7	7973.0	8983.5	9154.5
15°	1054.6	1062.4	1171.2	1344.8	1666.1	2155.8	2964.3	4301.3	5951.9	7097.2	7242.3
17.5°	787.7	795.5	821.4	925.0	1160.8	1578.0	2233.6	3270.0	4837.7	5993.3	6159.2
20°	577.8	551.9	544.1	603.7	787.7	1072.7	1629.8	2549.7	3925.6	5485.5	5783.4
22.5°	336.8	331.7	318.7	367.9	507.9	704.8	1109.0	1904.5	3319.3	4884.3	5296.3
25°	199.5	194.3	191.7	233.2	318.7	458.6	756.6	1440.7	2526.4	3591.3	3948.9
27.5°	145.1	139.9	127.0	145.1	209.9	316.1	533.8	1041.6	1733.5	2308.7	2503.0
30°	116.6	111.4	88.1	95.9	145.1	225.4	391.3	720.3	1230.8	1715.3	1824.2
32.5°	98.5	93.3	67.4	70.0	101.1	171.0	305.8	554.5	995.0	1484.7	1606.5
35°	82.9	77.7	54.4	57.0	77.7	137.3	251.3	456.0	816.2	1277.4	1383.7
37.5°	70.0	64.8	46.6	49.2	67.4	114.0	228.0	393.9	676.3	1049.4	1153.1
40°	62.2	57.0	41.5	46.6	62.2	93.3	202.1	334.3	554.5	811.0	855.1
42.5°	54.4	49.2	41.5	46.6	57.0	72.6	147.7	266.9	450.9	583.0	619.3
45°	49.2	46.6	38.9	44.0	49.2	51.8	93.3	207.3	362.8	401.6	401.6
47.5°	51.8	46.6	36.3	38.9	38.9	38.9	57.0	163.2	282.4	272.1	264.3
50°	51.8	44.0	33.7	31.1	31.1	28.5	38.9	127.0	209.9	173.6	171.0
52.5°	51.8	44.0	31.1	28.5	25.9	23.3	28.5	95.9	147.7	111.4	111.4
55°	49.2	41.5	25.9	23.3	20.7	20.7	23.3	67.4	101.1	77.7	75.1
57.5°	44.0	36.3	23.3	20.7	20.7	18.1	18.1	44.0	77.7	59.6	51.8
60°	36.3	31.1	20.7	20.7	20.7	15.5	15.5	28.5	62.2	44.0	38.9
62.5°	31.1	25.9	20.7	20.7	20.7	15.5	13.0	20.7	51.8	36.3	31.1
65°	25.9	20.7	18.1	20.7	20.7	15.5	10.4	15.5	44.0	28.5	25.9
67.5°	20.7	18.1	15.5	18.1	18.1	13.0	7.8	10.4	36.3	23.3	20.7
70°	18.1	15.5	13.0	15.5	18.1	13.0	7.8	10.4	28.5	18.1	18.1
72.5°	13.0	13.0	13.0	15.5	15.5	10.4	5.2	7.8	23.3	15.5	15.5
75°	10.4	10.4	10.4	13.0	13.0	7.8	5.2	5.2	18.1	13.0	10.4
77.5°	7.8	7.8	7.8	10.4	10.4	5.2	2.6	5.2	13.0	7.8	7.8
80°	5.2	5.2	5.2	7.8	7.8	5.2	2.6	2.6	7.8	5.2	5.2
82.5°	2.6	2.6	2.6	5.2	5.2	2.6	2.6	2.6	2.6	2.6	2.6
85°	2.6	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6	2.6
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)