

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: P592085

Luminaire Tested: **GRZ-15L-930-10x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592085
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-4F
Description: iO LED GRAZER WITH 10x30 OPTIC
1500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

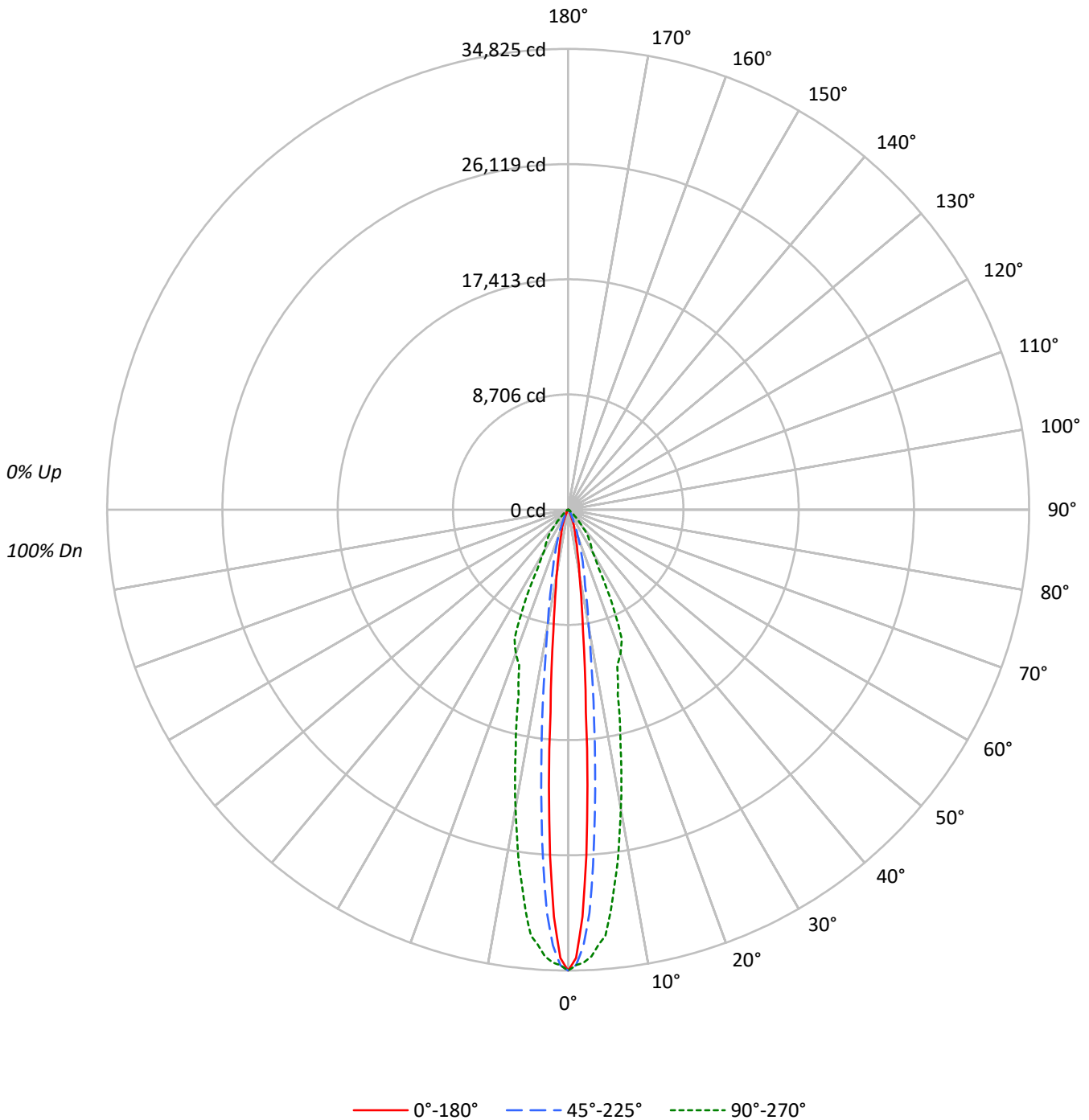
Lumens per Lamp: N/A
Luminaire Lumens: 5520.0 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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°	562279	562279	562279
5°	249037	373933	523775
10°	80801	145882	375537
15°	35256	72072	242114
20°	19857	36864	198743
25°	7108	16342	140699
30°	4348	8406	68017
35°	3268	5414	54545
40°	2622	3933	36046
45°	2249	2366	18342
50°	2602	1432	8591
55°	2773	1168	4231
60°	2344	1004	2509
65°	1979	1188	1979
70°	1714	1223	1714
75°	1291	967	1291
80°	967	967	967
85°	963	963	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1852.3	33.6
10°-20°	1808.9	32.8
20°-30°	1013.8	18.4
30°-40°	457.8	8.3
40°-50°	231.5	4.2
50°-60°	86.3	1.6
60°-70°	42.9	0.8
70°-80°	22.2	0.4
80°-90°	4.3	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°	4675.0	84.7
0°-40°	5132.8	93.0
0°-60°	5450.6	98.7
0°-90°	5520.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5520.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	34825	34825	34825	34825	34825	
5°	15366	17618	23072	29614	32317	1174
15°	2109	2603	4312	9428	14484	652
25°	399	446	917	3424	7898	226
35°	166	113	275	1092	2767	106
45°	98	86	104	492	803	82
55°	98	48	42	152	150	85
65°	52	40	31	45	52	52
75°	21	25	16	17	21	23
85°	5	5	5	1	5	4
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°	34825.0	34825.0	34825.0	34825.0	34825.0	34825.0	34825.0	34825.0	34825.0	34825.0	34825.0
1°	33876.7	33881.8	34135.8	33969.9	34374.2	34431.2	34379.3	34472.6	34498.5	34353.4	34431.2
2°	30777.6	30870.9	31021.2	31891.8	32290.9	32938.7	33482.8	33949.2	34151.3	34234.2	34223.9
3°	26201.7	26139.5	26880.6	27714.9	29145.2	30503.0	31840.0	32721.0	33498.3	33747.1	33793.7
4°	20869.1	20625.5	21895.2	22600.0	24533.0	26973.8	29357.7	31259.6	32539.6	33068.2	32943.8
5°	15365.5	15795.6	16681.8	17930.7	20039.9	23071.6	26258.7	29108.9	31130.0	32021.4	32316.8
6°	11971.1	11888.2	12603.3	14126.9	16256.9	19511.3	23154.5	26730.3	29243.7	30316.4	30570.4
7°	9234.8	9183.0	9893.0	10976.1	12764.0	16111.8	20143.6	24320.5	27404.0	28616.6	28606.3
8°	7317.4	7286.3	7778.6	8633.7	10323.1	13152.7	17163.8	21667.2	25201.5	26833.9	26833.9
9°	5913.0	5980.4	6280.9	7037.6	8369.4	10737.7	14671.1	19418.1	23045.7	24641.8	24781.7
10°	4928.4	4964.6	5208.2	5830.1	6939.1	8898.0	12328.7	16801.0	20920.9	22942.0	22905.7
12.5°	3197.5	3275.2	3451.4	3850.4	4658.9	5881.9	8193.2	11779.4	15945.9	17967.0	18309.0
15°	2109.2	2124.7	2342.4	2689.6	3332.2	4311.7	5928.5	8602.6	11903.7	14194.3	14484.5
17.5°	1575.4	1591.0	1642.8	1850.1	2321.7	3156.0	4467.1	6540.1	9675.3	11986.6	12318.3
20°	1155.7	1103.8	1088.3	1207.5	1575.4	2145.5	3259.7	5099.4	7851.2	10970.9	11566.9
22.5°	673.7	663.3	637.4	735.9	1015.7	1409.6	2218.0	3809.0	6638.5	9768.6	10592.6
25°	399.0	388.7	383.5	466.4	637.4	917.3	1513.2	2881.4	5052.7	7182.7	7897.8
27.5°	290.2	279.8	253.9	290.2	419.8	632.2	1067.6	2083.3	3467.0	4617.4	5006.1
30°	233.2	222.8	176.2	191.7	290.2	450.9	782.5	1440.7	2461.6	3430.7	3648.3
32.5°	196.9	186.6	134.7	139.9	202.1	342.0	611.5	1109.0	1990.0	2969.5	3213.0
35°	165.8	155.5	108.8	114.0	155.5	274.7	502.7	912.1	1632.4	2554.9	2767.3
37.5°	139.9	129.6	93.3	98.5	134.7	228.0	456.0	787.7	1352.6	2098.8	2306.1
40°	124.4	114.0	82.9	93.3	124.4	186.6	404.2	668.5	1109.0	1622.1	1710.2
42.5°	108.8	98.5	82.9	93.3	114.0	145.1	295.4	533.8	901.7	1166.0	1238.6
45°	98.5	93.3	77.7	88.1	98.5	103.6	186.6	414.6	725.5	803.3	803.3
47.5°	103.6	93.3	72.6	77.7	77.7	77.7	114.0	326.5	564.9	544.1	528.6
50°	103.6	88.1	67.4	62.2	62.2	57.0	77.7	253.9	419.8	347.2	342.0
52.5°	103.6	88.1	62.2	57.0	51.8	46.6	57.0	191.7	295.4	222.8	222.8
55°	98.5	82.9	51.8	46.6	41.5	41.5	46.6	134.7	202.1	155.5	150.3
57.5°	88.1	72.6	46.6	41.5	41.5	36.3	36.3	88.1	155.5	119.2	103.6
60°	72.6	62.2	41.5	41.5	41.5	31.1	31.1	57.0	124.4	88.1	77.7
62.5°	62.2	51.8	41.5	41.5	41.5	31.1	25.9	41.5	103.6	72.6	62.2
65°	51.8	41.5	36.3	41.5	41.5	31.1	20.7	31.1	88.1	57.0	51.8
67.5°	41.5	36.3	31.1	36.3	36.3	25.9	15.5	20.7	72.6	46.6	41.5
70°	36.3	31.1	25.9	31.1	36.3	25.9	15.5	20.7	57.0	36.3	36.3
72.5°	25.9	25.9	25.9	31.1	31.1	20.7	10.4	15.5	46.6	31.1	31.1
75°	20.7	20.7	20.7	25.9	25.9	15.5	10.4	10.4	36.3	25.9	20.7
77.5°	15.5	15.5	15.5	20.7	20.7	10.4	5.2	10.4	25.9	15.5	15.5
80°	10.4	10.4	10.4	15.5	15.5	10.4	5.2	5.2	15.5	10.4	10.4
82.5°	5.2	5.2	5.2	10.4	10.4	5.2	5.2	5.2	5.2	5.2	5.2
85°	5.2	5.2	5.2	5.2	5.2	5.2	0.0	0.0	5.2	5.2	5.2
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)