

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: P592005

Luminaire Tested: **GRZ-10L-927-10x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592005
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-10L-927-10x30-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x30 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

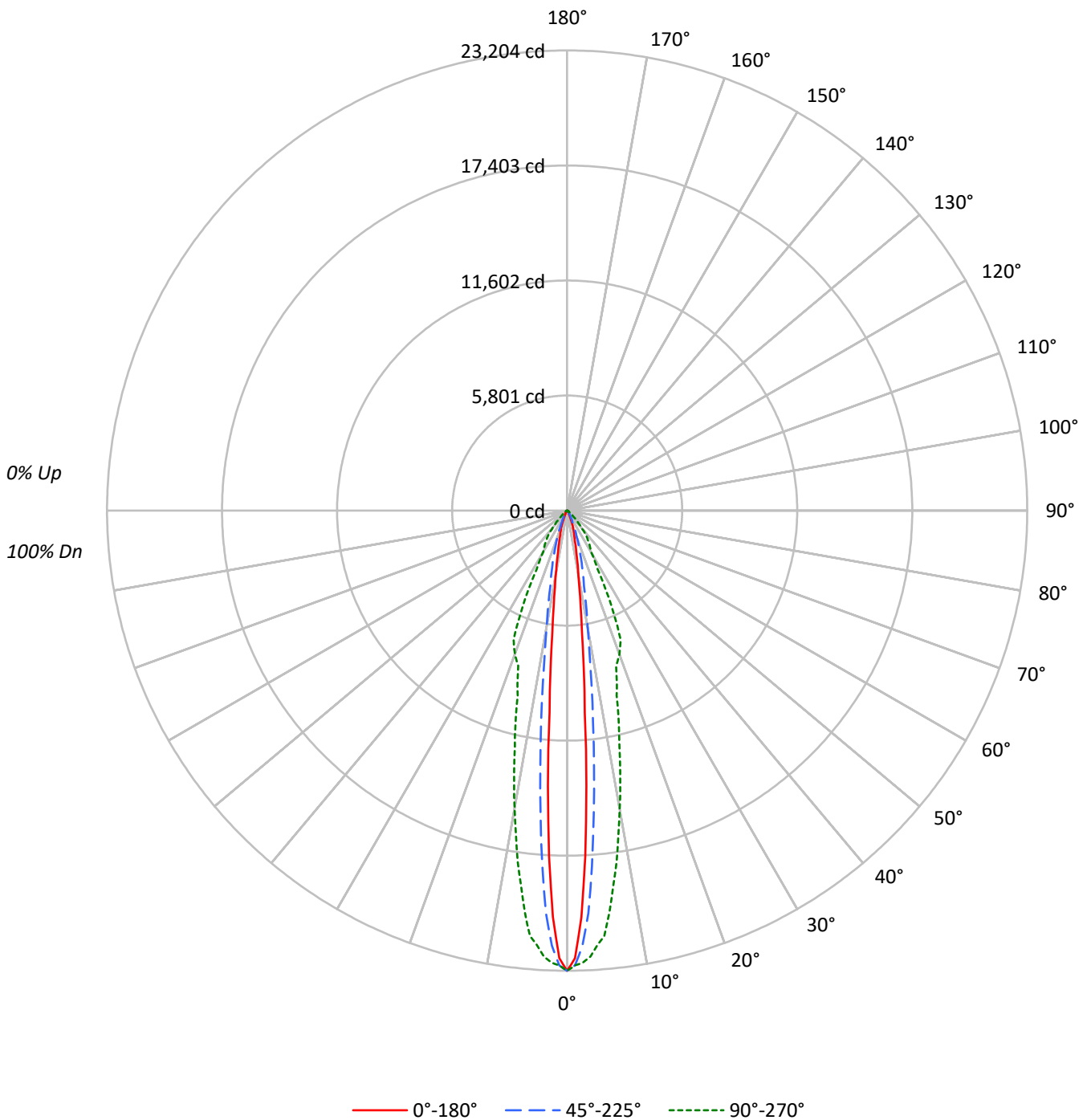
Lumens per Lamp: N/A
Luminaire Lumens: 3678.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
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°	374650	374650	374650
5°	165934	249153	348993
10°	53838	97202	250222
15°	23492	48022	161322
20°	13230	24562	132424
25°	4737	10889	93748
30°	2897	5601	45321
35°	2178	3607	36344
40°	1747	2620	24017
45°	1498	1578	12221
50°	1736	955	5724
55°	1847	777	2818
60°	1560	668	1673
65°	1318	791	1318
70°	1142	817	1142
75°	861	649	861
80°	642	642	642
85°	648	648	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1234.2	33.6
10°-20°	1205.3	32.8
20°-30°	675.5	18.4
30°-40°	305.0	8.3
40°-50°	154.2	4.2
50°-60°	57.5	1.6
60°-70°	28.6	0.8
70°-80°	14.8	0.4
80°-90°	2.9	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°	3115.0	84.7
0°-40°	3420.0	93.0
0°-60°	3631.8	98.7
0°-90°	3678.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3678.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23204	23204	23204	23204	23204	
5°	10238	11739	15373	19732	21533	783
15°	1405	1734	2873	6282	9651	434
25°	266	297	611	2282	5262	151
35°	110	75	183	728	1844	70
45°	66	57	69	328	535	55
55°	66	32	28	101	100	56
65°	34	27	21	30	34	35
75°	14	16	10	11	14	15
85°	4	4	4	1	4	3
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°	23204.1	23204.1	23204.1	23204.1	23204.1	23204.1	23204.1	23204.1	23204.1	23204.1	23204.1
1°	22572.2	22575.6	22744.8	22634.3	22903.6	22941.6	22907.1	22969.3	22986.5	22889.8	22941.6
2°	20507.3	20569.4	20669.6	21249.7	21515.5	21947.2	22309.7	22620.5	22755.2	22810.4	22803.5
3°	17458.3	17416.9	17910.6	18466.6	19419.6	20324.3	21215.1	21802.1	22320.1	22485.8	22516.9
4°	13905.2	13742.9	14588.9	15058.5	16346.4	17972.8	19561.2	20828.4	21681.3	22033.5	21950.6
5°	10238.1	10524.7	11115.2	11947.3	13352.7	15372.7	17496.3	19395.4	20742.1	21336.0	21532.8
6°	7976.4	7921.1	8397.7	9412.8	10832.0	13000.5	15427.9	17810.5	19485.2	20200.0	20369.2
7°	6153.2	6118.7	6591.7	7313.4	8504.7	10735.3	13421.8	16204.9	18259.4	19067.4	19060.5
8°	4875.6	4854.9	5182.9	5752.7	6878.3	8763.7	11436.3	14436.9	16791.9	17879.6	17879.6
9°	3939.9	3984.7	4185.0	4689.2	5576.6	7154.6	9775.4	12938.3	15355.4	16418.9	16512.2
10°	3283.8	3308.0	3470.2	3884.6	4623.5	5928.8	8214.7	11194.6	13939.7	15286.4	15262.2
12.5°	2130.5	2182.3	2299.7	2565.6	3104.2	3919.1	5459.2	7848.6	10624.8	11971.5	12199.4
15°	1405.4	1415.7	1560.7	1792.1	2220.3	2872.9	3950.2	5732.0	7931.5	9457.7	9651.1
17.5°	1049.7	1060.1	1094.6	1232.7	1546.9	2102.9	2976.5	4357.7	6446.7	7986.8	8207.7
20°	770.0	735.5	725.1	804.5	1049.7	1429.5	2171.9	3397.7	5231.3	7310.0	7707.1
22.5°	448.9	442.0	424.7	490.3	676.8	939.2	1477.9	2537.9	4423.3	6508.9	7057.9
25°	265.9	259.0	255.5	310.8	424.7	611.2	1008.3	1919.9	3366.7	4785.8	5262.3
27.5°	193.4	186.5	169.2	193.4	279.7	421.3	711.3	1388.1	2310.0	3076.6	3335.6
30°	155.4	148.5	117.4	127.8	193.4	300.4	521.4	959.9	1640.2	2285.9	2430.9
32.5°	131.2	124.3	89.8	93.2	134.7	227.9	407.5	738.9	1325.9	1978.6	2140.9
35°	110.5	103.6	72.5	76.0	103.6	183.0	334.9	607.7	1087.7	1702.3	1843.9
37.5°	93.2	86.3	62.2	65.6	89.8	151.9	303.9	524.9	901.2	1398.5	1536.6
40°	82.9	76.0	55.2	62.2	82.9	124.3	269.3	445.4	738.9	1080.8	1139.5
42.5°	72.5	65.6	55.2	62.2	76.0	96.7	196.8	355.7	600.8	776.9	825.3
45°	65.6	62.2	51.8	58.7	65.6	69.1	124.3	276.2	483.4	535.2	535.2
47.5°	69.1	62.2	48.3	51.8	51.8	51.8	76.0	217.5	376.4	362.6	352.2
50°	69.1	58.7	44.9	41.4	41.4	38.0	51.8	169.2	279.7	231.3	227.9
52.5°	69.1	58.7	41.4	38.0	34.5	31.1	38.0	127.8	196.8	148.5	148.5
55°	65.6	55.2	34.5	31.1	27.6	27.6	31.1	89.8	134.7	103.6	100.1
57.5°	58.7	48.3	31.1	27.6	27.6	24.2	24.2	58.7	103.6	79.4	69.1
60°	48.3	41.4	27.6	27.6	27.6	20.7	20.7	38.0	82.9	58.7	51.8
62.5°	41.4	34.5	27.6	27.6	27.6	20.7	17.3	27.6	69.1	48.3	41.4
65°	34.5	27.6	24.2	27.6	27.6	20.7	13.8	20.7	58.7	38.0	34.5
67.5°	27.6	24.2	20.7	24.2	24.2	17.3	10.4	13.8	48.3	31.1	27.6
70°	24.2	20.7	17.3	20.7	24.2	17.3	10.4	13.8	38.0	24.2	24.2
72.5°	17.3	17.3	17.3	20.7	20.7	13.8	6.9	10.4	31.1	20.7	20.7
75°	13.8	13.8	13.8	17.3	17.3	10.4	6.9	6.9	24.2	17.3	13.8
77.5°	10.4	10.4	10.4	13.8	13.8	6.9	3.5	6.9	17.3	10.4	10.4
80°	6.9	6.9	6.9	10.4	10.4	6.9	3.5	3.5	10.4	6.9	6.9
82.5°	3.5	3.5	3.5	6.9	6.9	3.5	3.5	3.5	3.5	3.5	3.5
85°	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	3.5	3.5	3.5
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)