

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: P591962

Luminaire Tested: **GRZ-05L-930-30x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591962
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-21)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-05L-930-30x60-X-UNV-STD-2F
Description: iO LED GRAZER WITH 30x60 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

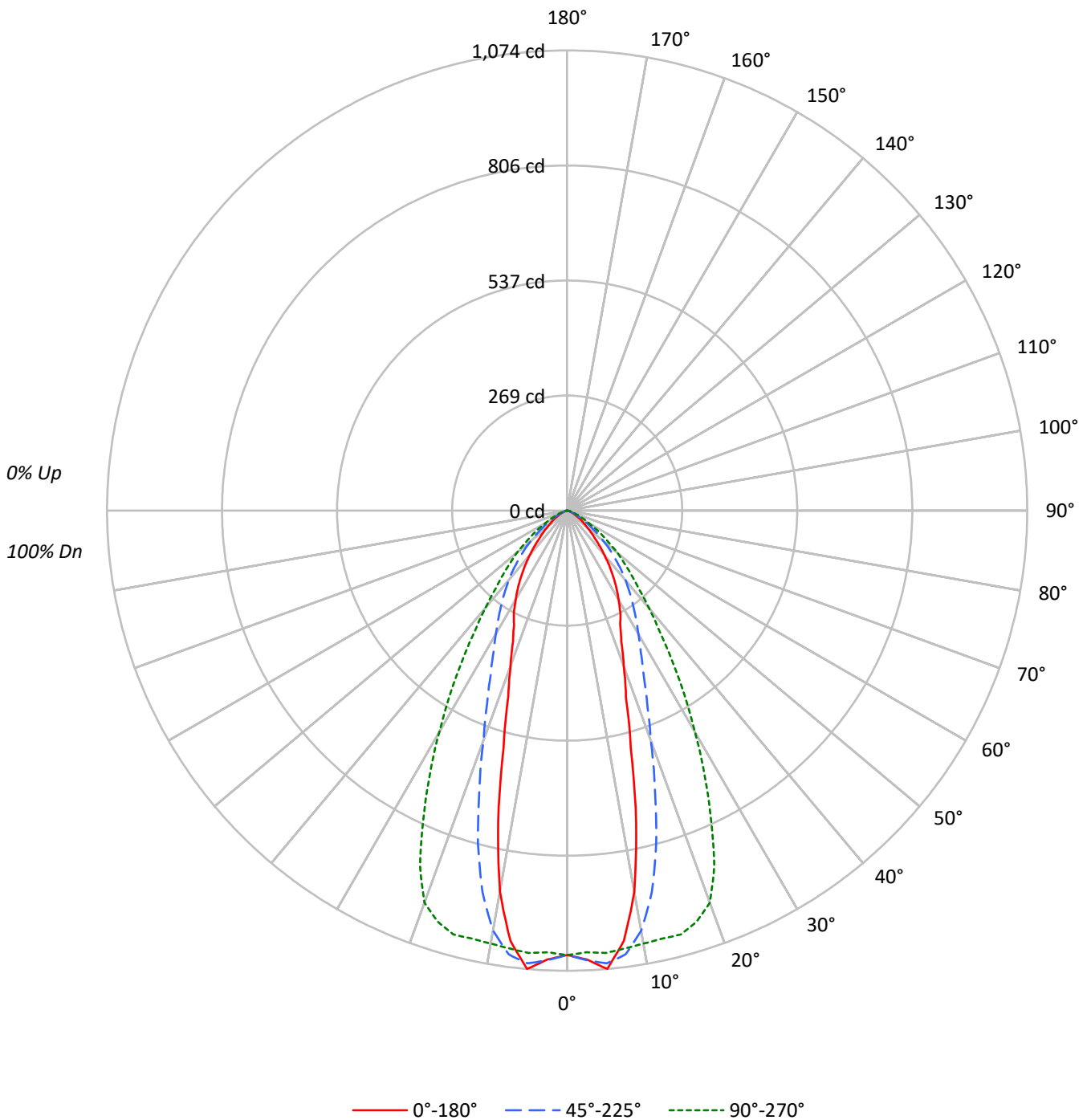
Lumens per Lamp: N/A
Luminaire Lumens: 952.0 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92					92			
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83					83			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69					69			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64					64			
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60	59					59			
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54					54			
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51					51			
9	71	60	54	49	70	60	53	49	59	53	49	58	53	49	57	52	49	47					47			
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	54	49	46	44					44			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33496	33496	33496
5°	34804	34383	33595
10°	29606	32636	33646
15°	19166	26875	34243
20°	13282	19636	33464
25°	10447	15036	28276
30°	8949	12394	22246
35°	7360	10525	16785
40°	5708	8932	12515
45°	4220	7206	9677
50°	3095	5536	7691
55°	2314	3941	5624
60°	1628	2654	3798
65°	1138	1712	2567
70°	793	1142	1671
75°	586	699	1160
80°	353	521	874
85°	333	333	333



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.1	10.3
10°-20°	223.5	23.5
20°-30°	228.4	24.0
30°-40°	182.8	19.2
40°-50°	122.2	12.8
50°-60°	64.4	6.8
60°-70°	24.3	2.6
70°-80°	7.1	0.8
80°-90°	1.1	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°	550.0	57.8
0°-40°	732.8	77.0
0°-60°	919.4	96.6
0°-90°	952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	952.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1074	1058	1061	1045	1036	96
15°	573	633	804	976	1024	164
25°	293	317	422	694	794	138
35°	187	203	267	387	426	116
45°	92	107	158	209	212	73
55°	41	46	70	96	100	37
65°	15	17	22	30	34	15
75°	5	5	6	8	9	5
85°	1	1	1	1	1	1
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°	1037.3	1037.3	1037.3	1037.3	1037.3	1037.3	1037.3	1037.3	1037.3	1037.3	1037.3
2.5°	1048.5	1047.6	1057.9	1050.4	1053.2	1050.4	1042.0	1037.3	1036.4	1027.1	1031.7
5°	1073.7	1058.8	1061.6	1056.9	1061.6	1060.7	1051.3	1045.7	1041.1	1035.5	1036.4
7.5°	1013.1	1014.9	1023.3	1027.1	1040.1	1044.8	1040.1	1036.4	1032.7	1029.9	1030.8
10°	902.9	909.4	921.6	945.8	972.9	995.3	1004.7	1014.9	1023.3	1024.3	1026.1
12.5°	743.2	752.6	772.2	798.3	858.1	912.2	958.0	993.4	1014.0	1025.2	1023.3
15°	573.3	576.1	600.4	643.3	708.7	803.9	894.5	966.4	1003.7	1029.9	1024.3
17.5°	456.6	460.3	479.9	512.6	575.2	680.7	816.0	923.4	991.6	1010.3	1005.6
20°	386.5	383.7	398.7	425.8	478.1	571.4	712.4	856.2	942.1	968.2	973.8
22.5°	330.5	333.3	342.7	364.1	409.9	487.4	616.2	768.4	863.7	892.6	897.3
25°	293.2	296.0	305.3	320.3	357.6	422.0	533.1	670.4	763.8	791.8	793.6
27.5°	268.9	267.0	273.6	284.8	317.5	372.5	464.0	578.0	664.8	692.8	694.7
30°	240.0	239.0	245.6	257.7	283.8	332.4	409.9	502.3	564.0	591.0	596.6
32.5°	213.8	212.9	220.4	230.6	256.8	298.8	366.0	437.9	479.9	502.3	507.9
35°	186.7	187.7	193.3	206.3	229.7	267.0	328.7	379.1	409.0	420.2	425.8
37.5°	160.6	161.5	169.0	182.1	205.4	239.0	288.5	327.7	345.5	353.9	352.9
40°	135.4	137.3	141.9	156.9	180.2	211.9	252.1	281.0	293.2	294.1	296.9
42.5°	113.0	113.0	120.4	132.6	155.0	184.9	220.4	240.9	250.2	249.3	247.4
45°	92.4	93.4	98.0	110.2	130.7	157.8	188.6	207.3	212.9	209.1	211.9
47.5°	75.6	76.6	80.3	91.5	109.2	135.4	159.7	177.4	182.1	179.3	179.3
50°	61.6	62.6	65.4	73.8	88.7	110.2	132.6	147.5	152.2	151.3	153.1
52.5°	50.4	50.4	53.2	59.8	71.9	89.6	107.4	120.4	124.2	123.2	122.3
55°	41.1	41.1	42.9	47.6	57.0	70.0	85.0	95.2	98.0	99.0	99.9
57.5°	32.7	32.7	33.6	37.3	43.9	54.2	65.4	72.8	75.6	76.6	77.5
60°	25.2	25.2	27.1	28.9	34.5	41.1	48.6	54.2	57.9	57.9	58.8
62.5°	19.6	19.6	20.5	22.4	26.1	30.8	35.5	40.1	42.0	43.9	44.8
65°	14.9	14.9	15.9	16.8	19.6	22.4	26.1	29.9	31.7	32.7	33.6
67.5°	11.2	11.2	11.2	13.1	14.9	16.8	18.7	21.5	22.4	24.3	25.2
70°	8.4	8.4	8.4	9.3	10.3	12.1	13.1	14.9	16.8	17.7	17.7
72.5°	6.5	6.5	6.5	6.5	7.5	8.4	9.3	10.3	12.1	13.1	13.1
75°	4.7	4.7	4.7	4.7	5.6	5.6	6.5	7.5	8.4	9.3	9.3
77.5°	3.7	3.7	2.8	3.7	3.7	3.7	4.7	4.7	5.6	6.5	6.5
80°	1.9	1.9	1.9	1.9	2.8	2.8	2.8	3.7	3.7	3.7	4.7
82.5°	0.9	0.9	0.9	0.9	1.9	1.9	1.9	1.9	1.9	2.8	2.8
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)