

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: P592027

Luminaire Tested: **GRZ-10L-930-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592027
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-10L-930-30x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 30x60 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

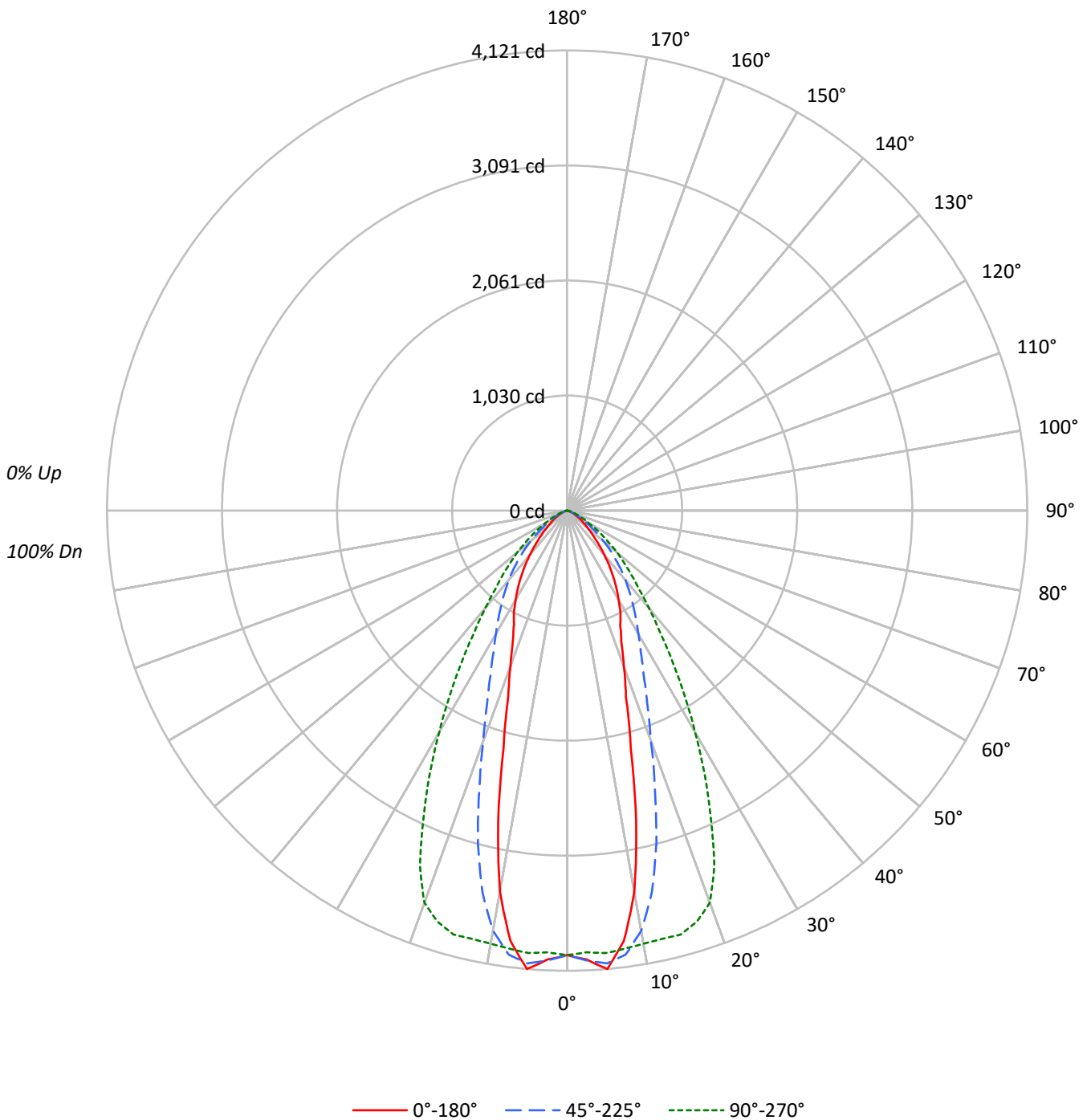
Lumens per Lamp: N/A
Luminaire Lumens: 3654.0 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
Input Voltage (V): 120
Input Current (Ain): 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	93	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°	64285	64285	64285
5°	66796	65982	64472
10°	56817	62633	64571
15°	36781	51577	65715
20°	25493	37684	64223
25°	20047	28857	54268
30°	17171	23786	42694
35°	14126	20201	32211
40°	10952	17146	24019
45°	8101	13830	18575
50°	5941	10623	14762
55°	4439	7567	10795
60°	3126	5092	7291
65°	2189	3286	4928
70°	1525	2200	3215
75°	1117	1341	2233
80°	669	1004	1664
85°	667	667	667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	376.5	10.3
10°-20°	857.9	23.5
20°-30°	876.8	24.0
30°-40°	701.5	19.2
40°-50°	469.0	12.8
50°-60°	247.3	6.8
60°-70°	93.4	2.6
70°-80°	27.5	0.8
80°-90°	4.2	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°	2111.2	57.8
0°-40°	2812.7	77.0
0°-60°	3529.0	96.6
0°-90°	3654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3982	3982	3982	3982	3982	
5°	4121	4061	4071	4009	3978	370
15°	2200	2428	3086	3745	3931	628
25°	1125	1215	1620	2663	3046	528
35°	717	779	1025	1484	1634	446
45°	355	411	606	801	814	279
55°	158	178	269	368	384	143
65°	57	64	86	116	129	59
75°	18	18	22	30	36	20
85°	4	4	4	4	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°	3981.5	3981.5	3981.5	3981.5	3981.5	3981.5	3981.5	3981.5	3981.5	3981.5	3981.5
2.5°	4024.5	4021.0	4060.4	4031.7	4042.5	4031.7	3999.4	3981.5	3977.9	3942.1	3960.0
5°	4121.3	4064.0	4074.7	4056.8	4074.7	4071.1	4035.3	4013.8	3995.9	3974.4	3977.9
7.5°	3888.4	3895.5	3927.8	3942.1	3992.3	4010.2	3992.3	3977.9	3963.6	3952.9	3956.4
10°	3465.5	3490.6	3537.1	3630.3	3734.3	3820.3	3856.1	3895.5	3927.8	3931.4	3938.5
12.5°	2852.7	2888.5	2963.7	3064.1	3293.5	3501.3	3676.9	3813.1	3891.9	3934.9	3927.8
15°	2200.4	2211.2	2304.3	2469.2	2720.1	3085.6	3433.2	3709.2	3852.5	3952.9	3931.4
17.5°	1752.4	1766.8	1842.0	1967.5	2207.6	2612.5	3132.2	3544.3	3805.9	3877.6	3859.7
20°	1483.7	1472.9	1530.3	1634.2	1834.9	2193.2	2734.4	3286.3	3616.0	3716.3	3737.8
22.5°	1268.6	1279.4	1315.2	1397.7	1573.3	1870.7	2365.3	2949.4	3315.0	3426.1	3444.0
25°	1125.3	1136.0	1171.9	1229.2	1372.6	1619.8	2046.3	2573.1	2931.5	3039.0	3046.2
27.5°	1032.1	1024.9	1050.0	1093.0	1218.5	1429.9	1781.1	2218.3	2551.6	2659.1	2666.3
30°	921.0	917.4	942.5	989.1	1089.5	1275.8	1573.3	1928.0	2164.6	2268.5	2290.0
32.5°	820.7	817.1	845.8	885.2	985.5	1146.8	1404.8	1680.8	1842.0	1928.0	1949.6
35°	716.7	720.3	741.8	792.0	881.6	1024.9	1261.5	1455.0	1569.7	1612.7	1634.2
37.5°	616.4	620.0	648.7	698.8	788.4	917.4	1107.4	1257.9	1326.0	1358.2	1354.7
40°	519.6	526.8	544.7	602.1	691.7	813.5	967.6	1078.7	1125.3	1128.9	1139.6
42.5°	433.6	433.6	462.3	508.9	594.9	709.6	845.8	924.6	960.4	956.9	949.7
45°	354.8	358.4	376.3	422.9	501.7	605.7	723.9	795.6	817.1	802.8	813.5
47.5°	290.3	293.9	308.2	351.2	419.3	519.6	612.8	680.9	698.8	688.1	688.1
50°	236.5	240.1	250.9	283.1	340.5	422.9	508.9	566.2	584.1	580.6	587.7
52.5°	193.5	193.5	204.3	229.4	275.9	344.0	412.1	462.3	476.6	473.1	469.5
55°	157.7	157.7	164.9	182.8	218.6	268.8	326.1	365.5	376.3	379.9	383.5
57.5°	125.4	125.4	129.0	143.3	168.4	207.9	250.9	279.5	290.3	293.9	297.5
60°	96.8	96.8	103.9	111.1	132.6	157.7	186.4	207.9	222.2	222.2	225.8
62.5°	75.3	75.3	78.8	86.0	100.3	118.3	136.2	154.1	161.3	168.4	172.0
65°	57.3	57.3	60.9	64.5	75.3	86.0	100.3	114.7	121.8	125.4	129.0
67.5°	43.0	43.0	43.0	50.2	57.3	64.5	71.7	82.4	86.0	93.2	96.8
70°	32.3	32.3	32.3	35.8	39.4	46.6	50.2	57.3	64.5	68.1	68.1
72.5°	25.1	25.1	25.1	25.1	28.7	32.3	35.8	39.4	46.6	50.2	50.2
75°	17.9	17.9	17.9	17.9	21.5	21.5	25.1	28.7	32.3	35.8	35.8
77.5°	14.3	14.3	10.8	14.3	14.3	14.3	17.9	17.9	21.5	25.1	25.1
80°	7.2	7.2	7.2	7.2	10.8	10.8	10.8	14.3	14.3	14.3	17.9
82.5°	3.6	3.6	3.6	3.6	7.2	7.2	7.2	7.2	7.2	10.8	10.8
85°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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)