

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: P591994

Luminaire Tested: **GRZ-05L-940-30x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591994
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-940-30x60-X-UNV-STD-2F
Description: iO LED GRAZER WITH 30x60 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

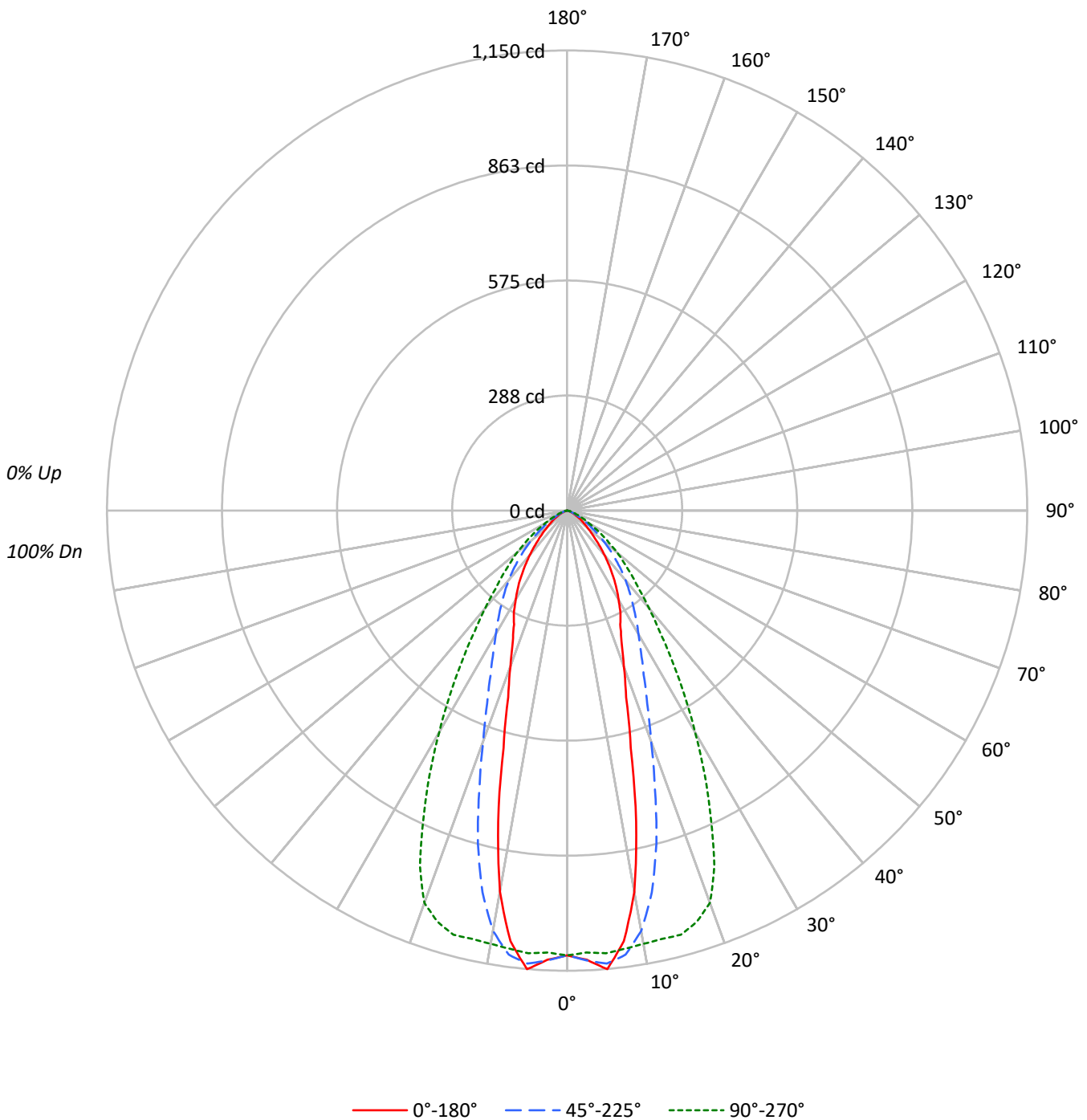
Lumens per Lamp: N/A
Luminaire Lumens: 1020.0 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

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°	35889	35889	35889
5°	37290	36836	35994
10°	31721	34967	36049
15°	20533	28794	36687
20°	14234	21038	35855
25°	11191	16112	30296
30°	9587	13278	23834
35°	7888	11278	17984
40°	6117	9573	13409
45°	4521	7722	10371
50°	3316	5928	8244
55°	2477	4222	6024
60°	1744	2842	4069
65°	1223	1834	2751
70°	850	1227	1794
75°	624	749	1248
80°	372	558	930
85°	371	371	371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.1	10.3
10°-20°	239.5	23.5
20°-30°	244.7	24.0
30°-40°	195.8	19.2
40°-50°	130.9	12.8
50°-60°	69.0	6.8
60°-70°	26.1	2.6
70°-80°	7.7	0.8
80°-90°	1.2	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°	589.3	57.8
0°-40°	785.2	77.0
0°-60°	985.1	96.6
0°-90°	1020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1020.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1111	1111	1111	1111	1111	
5°	1150	1134	1136	1119	1110	103
15°	614	678	861	1045	1097	175
25°	314	339	452	743	850	148
35°	200	218	286	414	456	125
45°	99	115	169	224	227	78
55°	44	50	75	103	107	40
65°	16	18	24	32	36	17
75°	5	5	6	8	10	6
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P591994

CATALOG NUMBER: GRZ-05L-940-30x60-X-UNV-STD-2F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1111.4	1111.4	1111.4	1111.4	1111.4	1111.4	1111.4	1111.4	1111.4	1111.4	1111.4
2.5°	1123.4	1122.4	1133.4	1125.4	1128.4	1125.4	1116.4	1111.4	1110.4	1100.4	1105.4
5°	1150.4	1134.4	1137.4	1132.4	1137.4	1136.4	1126.4	1120.4	1115.4	1109.4	1110.4
7.5°	1085.4	1087.4	1096.4	1100.4	1114.4	1119.4	1114.4	1110.4	1106.4	1103.4	1104.4
10°	967.4	974.4	987.4	1013.4	1042.4	1066.4	1076.4	1087.4	1096.4	1097.4	1099.4
12.5°	796.3	806.3	827.3	855.3	919.4	977.4	1026.4	1064.4	1086.4	1098.4	1096.4
15°	614.2	617.2	643.2	689.3	759.3	861.3	958.4	1035.4	1075.4	1103.4	1097.4
17.5°	489.2	493.2	514.2	549.2	616.2	729.3	874.3	989.4	1062.4	1082.4	1077.4
20°	414.2	411.2	427.2	456.2	512.2	612.2	763.3	917.4	1009.4	1037.4	1043.4
22.5°	354.1	357.1	367.1	390.2	439.2	522.2	660.3	823.3	925.4	956.4	961.4
25°	314.1	317.1	327.1	343.1	383.1	452.2	571.2	718.3	818.3	848.3	850.3
27.5°	288.1	286.1	293.1	305.1	340.1	399.2	497.2	619.2	712.3	742.3	744.3
30°	257.1	256.1	263.1	276.1	304.1	356.1	439.2	538.2	604.2	633.2	639.2
32.5°	229.1	228.1	236.1	247.1	275.1	320.1	392.2	469.2	514.2	538.2	544.2
35°	200.1	201.1	207.1	221.1	246.1	286.1	352.1	406.2	438.2	450.2	456.2
37.5°	172.1	173.1	181.1	195.1	220.1	256.1	309.1	351.1	370.1	379.1	378.1
40°	145.1	147.1	152.1	168.1	193.1	227.1	270.1	301.1	314.1	315.1	318.1
42.5°	121.0	121.0	129.0	142.1	166.1	198.1	236.1	258.1	268.1	267.1	265.1
45°	99.0	100.0	105.0	118.0	140.1	169.1	202.1	222.1	228.1	224.1	227.1
47.5°	81.0	82.0	86.0	98.0	117.0	145.1	171.1	190.1	195.1	192.1	192.1
50°	66.0	67.0	70.0	79.0	95.0	118.0	142.1	158.1	163.1	162.1	164.1
52.5°	54.0	54.0	57.0	64.0	77.0	96.0	115.0	129.0	133.1	132.1	131.1
55°	44.0	44.0	46.0	51.0	61.0	75.0	91.0	102.0	105.0	106.0	107.0
57.5°	35.0	35.0	36.0	40.0	47.0	58.0	70.0	78.0	81.0	82.0	83.0
60°	27.0	27.0	29.0	31.0	37.0	44.0	52.0	58.0	62.0	62.0	63.0
62.5°	21.0	21.0	22.0	24.0	28.0	33.0	38.0	43.0	45.0	47.0	48.0
65°	16.0	16.0	17.0	18.0	21.0	24.0	28.0	32.0	34.0	35.0	36.0
67.5°	12.0	12.0	12.0	14.0	16.0	18.0	20.0	23.0	24.0	26.0	27.0
70°	9.0	9.0	9.0	10.0	11.0	13.0	14.0	16.0	18.0	19.0	19.0
72.5°	7.0	7.0	7.0	7.0	8.0	9.0	10.0	11.0	13.0	14.0	14.0
75°	5.0	5.0	5.0	5.0	6.0	6.0	7.0	8.0	9.0	10.0	10.0
77.5°	4.0	4.0	3.0	4.0	4.0	4.0	5.0	5.0	6.0	7.0	7.0
80°	2.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0
82.5°	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)