

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: P591978

Luminaire Tested: **GRZ-05L-935-30x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591978
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-935-30x60-X-UNV-STD-2F
Description: iO LED GRAZER WITH 30x60 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

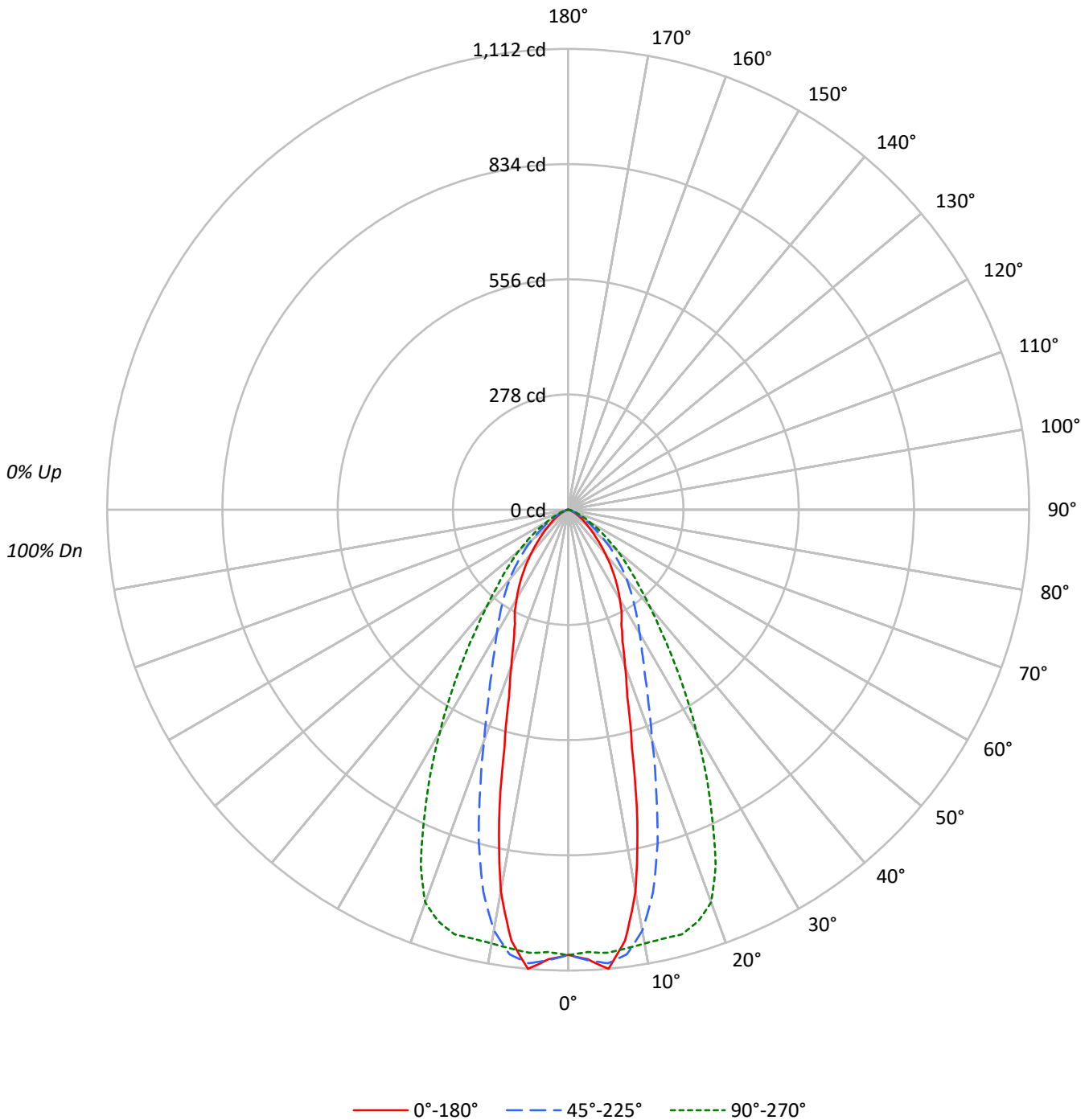
Lumens per Lamp: N/A
Luminaire Lumens: 986.0 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

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	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°	34694	34694	34694
5°	36049	35611	34794
10°	30662	33803	34849
15°	19851	27834	35463
20°	13759	20337	34660
25°	10821	15574	29288
30°	9266	12838	23040
35°	7624	10904	17385
40°	5910	9253	12962
45°	4370	7462	10024
50°	3205	5732	7968
55°	2393	4082	5827
60°	1686	2745	3933
65°	1184	1773	2659
70°	821	1190	1737
75°	599	724	1210
80°	353	539	893
85°	371	371	371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	10.3
10°-20°	231.5	23.5
20°-30°	236.6	24.0
30°-40°	189.3	19.2
40°-50°	126.6	12.8
50°-60°	66.7	6.8
60°-70°	25.2	2.6
70°-80°	7.4	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°	569.7	57.8
0°-40°	759.0	77.0
0°-60°	952.2	96.6
0°-90°	986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1074	1074	1074	1074	1074	
5°	1112	1096	1099	1082	1073	100
15°	594	655	833	1011	1061	169
25°	304	328	437	718	822	143
35°	193	210	277	400	441	120
45°	96	111	163	216	220	75
55°	42	48	72	99	104	39
65°	16	17	23	31	35	16
75°	5	5	6	8	10	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°	1074.4	1074.4	1074.4	1074.4	1074.4	1074.4	1074.4	1074.4	1074.4	1074.4	1074.4
2.5°	1086.0	1085.0	1095.7	1087.9	1090.8	1087.9	1079.2	1074.4	1073.4	1063.7	1068.6
5°	1112.1	1096.6	1099.5	1094.7	1099.5	1098.6	1088.9	1083.1	1078.2	1072.4	1073.4
7.5°	1049.2	1051.2	1059.9	1063.7	1077.3	1082.1	1077.3	1073.4	1069.5	1066.6	1067.6
10°	935.1	941.9	954.5	979.6	1007.7	1030.9	1040.5	1051.2	1059.9	1060.8	1062.8
12.5°	769.8	779.4	799.7	826.8	888.7	944.8	992.2	1028.9	1050.2	1061.8	1059.9
15°	593.8	596.7	621.8	666.3	734.0	832.6	926.4	1000.9	1039.6	1066.6	1060.8
17.5°	472.9	476.8	497.1	530.9	595.7	705.0	845.2	956.4	1027.0	1046.3	1041.5
20°	400.4	397.5	412.9	441.0	495.1	591.8	737.9	886.8	975.7	1002.8	1008.6
22.5°	342.3	345.2	354.9	377.1	424.5	504.8	638.2	795.9	894.5	924.5	929.3
25°	303.7	306.6	316.2	331.7	370.4	437.1	552.2	694.3	791.0	820.0	822.0
27.5°	278.5	276.6	283.3	294.9	328.8	385.8	480.6	598.6	688.5	717.5	719.5
30°	248.5	247.6	254.3	266.9	294.0	344.3	424.5	520.3	584.1	612.1	617.9
32.5°	221.5	220.5	228.2	238.9	265.9	309.5	379.1	453.5	497.1	520.3	526.1
35°	193.4	194.4	200.2	213.7	237.9	276.6	340.4	392.6	423.6	435.2	441.0
37.5°	166.3	167.3	175.0	188.6	212.7	247.6	298.8	339.4	357.8	366.5	365.5
40°	140.2	142.2	147.0	162.5	186.6	219.5	261.1	291.1	303.7	304.6	307.5
42.5°	117.0	117.0	124.7	137.3	160.5	191.5	228.2	249.5	259.2	258.2	256.3
45°	95.7	96.7	101.5	114.1	135.4	163.4	195.3	214.7	220.5	216.6	219.5
47.5°	78.3	79.3	83.2	94.8	113.1	140.2	165.4	183.7	188.6	185.7	185.7
50°	63.8	64.8	67.7	76.4	91.9	114.1	137.3	152.8	157.6	156.7	158.6
52.5°	52.2	52.2	55.1	61.9	74.5	92.8	111.2	124.7	128.6	127.6	126.7
55°	42.5	42.5	44.5	49.3	59.0	72.5	88.0	98.6	101.5	102.5	103.5
57.5°	33.8	33.8	34.8	38.7	45.5	56.1	67.7	75.4	78.3	79.3	80.3
60°	26.1	26.1	28.0	30.0	35.8	42.5	50.3	56.1	60.0	60.0	60.9
62.5°	20.3	20.3	21.3	23.2	27.1	31.9	36.7	41.6	43.5	45.5	46.4
65°	15.5	15.5	16.4	17.4	20.3	23.2	27.1	30.9	32.9	33.8	34.8
67.5°	11.6	11.6	11.6	13.5	15.5	17.4	19.3	22.2	23.2	25.1	26.1
70°	8.7	8.7	8.7	9.7	10.6	12.6	13.5	15.5	17.4	18.4	18.4
72.5°	6.8	6.8	6.8	6.8	7.7	8.7	9.7	10.6	12.6	13.5	13.5
75°	4.8	4.8	4.8	4.8	5.8	5.8	6.8	7.7	8.7	9.7	9.7
77.5°	3.9	3.9	2.9	3.9	3.9	3.9	4.8	4.8	5.8	6.8	6.8
80°	1.9	1.9	1.9	1.9	2.9	2.9	2.9	3.9	3.9	3.9	4.8
82.5°	1.0	1.0	1.0	1.0	1.9	1.9	1.9	1.9	1.9	2.9	2.9
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)