

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: P592059

Luminaire Tested: **GRZ-10L-940-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592059
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-940-30x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 30x60 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

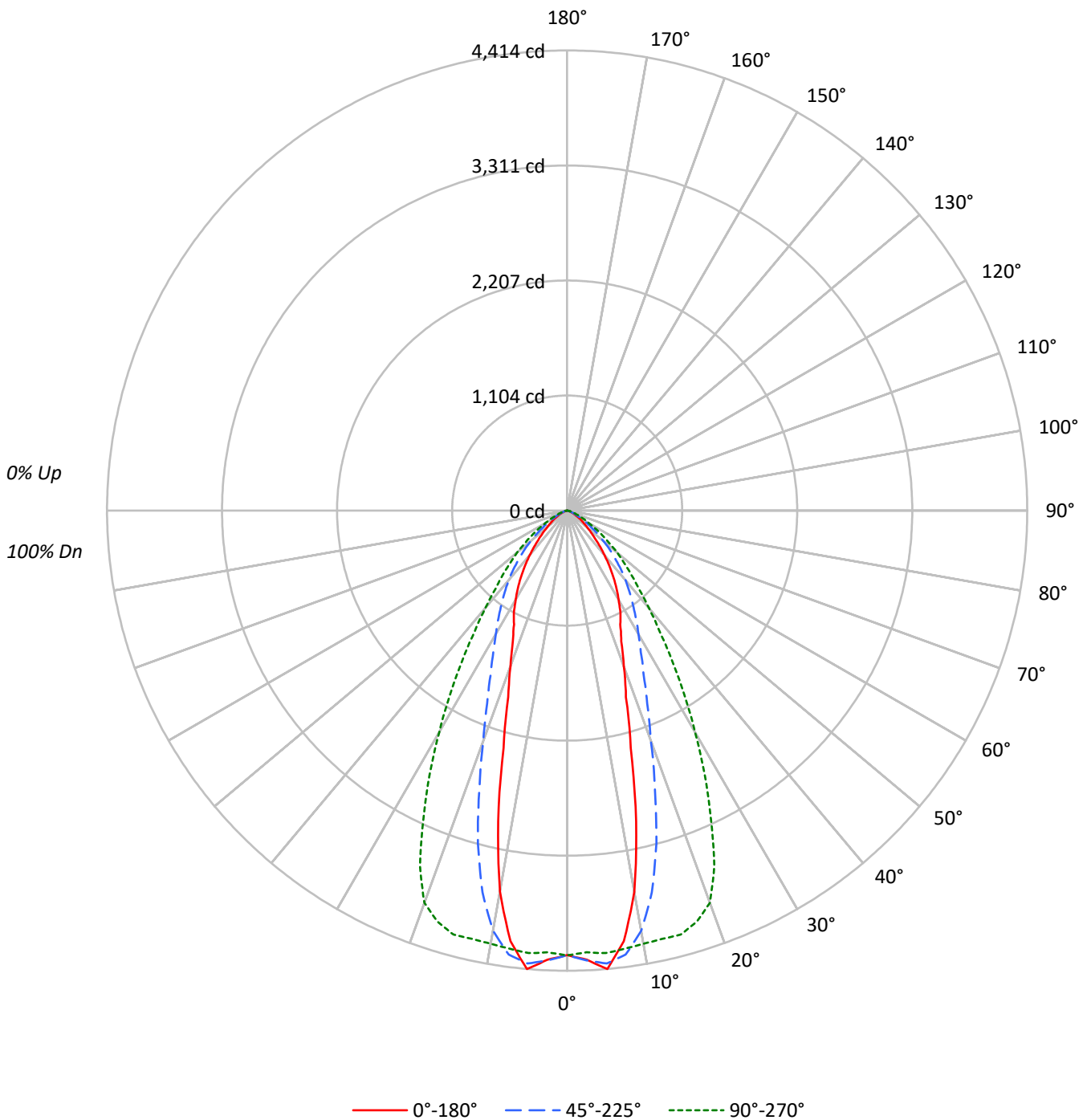
Lumens per Lamp: N/A
Luminaire Lumens: 3914.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
Input Voltage (V): 120
Input Current (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



TEST NUMBER: P592059
CATALOG NUMBER: GRZ-10L-940-30x60-X-UNV-STD-4F

Luminous Intensity Polar Plot





TEST NUMBER: P592059

CATALOG NUMBER: GRZ-10L-940-30x60-X-UNV-STD-4F

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	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°	68859	68859	68859
5°	71548	70678	69060
10°	60860	67090	69167
15°	39398	55248	70390
20°	27306	40366	68793
25°	21474	30911	58128
30°	18394	25478	45733
35°	15132	21640	34503
40°	11731	18366	25729
45°	8677	14812	19897
50°	6365	11379	15815
55°	4754	8104	11561
60°	3345	5454	7808
65°	2346	3519	5280
70°	1629	2356	3441
75°	1198	1435	2395
80°	716	1069	1785
85°	704	704	704



TEST NUMBER: P592059

CATALOG NUMBER: GRZ-10L-940-30x60-X-UNV-STD-4F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.2	10.3
10°-20°	919.0	23.5
20°-30°	939.2	24.0
30°-40°	751.5	19.2
40°-50°	502.4	12.8
50°-60°	264.8	6.8
60°-70°	100.0	2.6
70°-80°	29.4	0.8
80°-90°	4.5	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°	2261.4	57.8
0°-40°	3012.8	77.0
0°-60°	3780.1	96.6
0°-90°	3914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3914.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4265	4265	4265	4265	4265	
5°	4414	4350	4361	4295	4261	396
15°	2357	2601	3305	4011	4211	672
25°	1205	1301	1735	2852	3263	566
35°	768	835	1098	1589	1750	478
45°	380	441	649	858	871	299
55°	169	191	288	394	411	153
65°	61	68	92	125	138	63
75°	19	19	23	32	38	22
85°	4	4	4	4	4	3
90°	0	0	0	0	0	



TEST NUMBER: P592059

CATALOG NUMBER: GRZ-10L-940-30x60-X-UNV-STD-4F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4264.8	4264.8	4264.8	4264.8	4264.8	4264.8	4264.8	4264.8	4264.8	4264.8	4264.8
2.5°	4310.9	4307.1	4349.3	4318.6	4330.1	4318.6	4284.0	4264.8	4261.0	4222.6	4241.8
5°	4414.5	4353.1	4364.6	4345.4	4364.6	4360.8	4322.4	4299.4	4280.2	4257.2	4261.0
7.5°	4165.0	4172.7	4207.3	4222.6	4276.4	4295.5	4276.4	4261.0	4245.6	4234.1	4238.0
10°	3712.1	3738.9	3788.8	3888.6	4000.0	4092.1	4130.5	4172.7	4207.3	4211.1	4218.8
12.5°	3055.6	3094.0	3174.6	3282.1	3527.8	3750.4	3938.5	4084.4	4168.9	4214.9	4207.3
15°	2357.0	2368.5	2468.3	2644.9	2913.6	3305.2	3677.5	3973.1	4126.6	4234.1	4211.1
17.5°	1877.1	1892.5	1973.1	2107.5	2364.7	2798.4	3355.1	3796.5	4076.7	4153.5	4134.3
20°	1589.2	1577.7	1639.1	1750.5	1965.4	2349.3	2929.0	3520.1	3873.3	3980.8	4003.8
22.5°	1358.9	1370.4	1408.8	1497.1	1685.2	2003.8	2533.6	3159.3	3550.8	3669.8	3689.0
25°	1205.4	1216.9	1255.3	1316.7	1470.2	1735.1	2191.9	2756.2	3140.1	3255.2	3262.9
27.5°	1105.6	1097.9	1124.7	1170.8	1305.2	1531.7	1907.9	2376.2	2733.2	2848.3	2856.0
30°	986.6	982.7	1009.6	1059.5	1167.0	1366.6	1685.2	2065.2	2318.6	2429.9	2453.0
32.5°	879.1	875.2	905.9	948.2	1055.7	1228.4	1504.8	1800.4	1973.1	2065.2	2088.3
35°	767.7	771.6	794.6	848.4	944.3	1097.9	1351.2	1558.5	1681.4	1727.4	1750.5
37.5°	660.3	664.1	694.8	748.6	844.5	982.7	1186.2	1347.4	1420.3	1454.9	1451.0
40°	556.6	564.3	583.5	644.9	740.9	871.4	1036.5	1155.5	1205.4	1209.2	1220.7
42.5°	464.5	464.5	495.2	545.1	637.2	760.1	905.9	990.4	1028.8	1024.9	1017.3
45°	380.0	383.9	403.1	453.0	537.4	648.7	775.4	852.2	875.2	859.9	871.4
47.5°	310.9	314.8	330.1	376.2	449.1	556.6	656.4	729.4	748.6	737.0	737.0
50°	253.4	257.2	268.7	303.3	364.7	453.0	545.1	606.5	625.7	621.9	629.6
52.5°	207.3	207.3	218.8	245.7	295.6	368.5	441.5	495.2	510.6	506.7	502.9
55°	168.9	168.9	176.6	195.8	234.2	287.9	349.3	391.6	403.1	406.9	410.7
57.5°	134.4	134.4	138.2	153.5	180.4	222.6	268.7	299.4	310.9	314.8	318.6
60°	103.6	103.6	111.3	119.0	142.0	168.9	199.6	222.6	238.0	238.0	241.8
62.5°	80.6	80.6	84.5	92.1	107.5	126.7	145.9	165.1	172.7	180.4	184.3
65°	61.4	61.4	65.3	69.1	80.6	92.1	107.5	122.8	130.5	134.4	138.2
67.5°	46.1	46.1	46.1	53.7	61.4	69.1	76.8	88.3	92.1	99.8	103.6
70°	34.5	34.5	34.5	38.4	42.2	49.9	53.7	61.4	69.1	72.9	72.9
72.5°	26.9	26.9	26.9	26.9	30.7	34.5	38.4	42.2	49.9	53.7	53.7
75°	19.2	19.2	19.2	19.2	23.0	23.0	26.9	30.7	34.5	38.4	38.4
77.5°	15.4	15.4	11.5	15.4	15.4	15.4	19.2	19.2	23.0	26.9	26.9
80°	7.7	7.7	7.7	7.7	11.5	11.5	11.5	15.4	15.4	15.4	19.2
82.5°	3.8	3.8	3.8	3.8	7.7	7.7	7.7	7.7	7.7	11.5	11.5
85°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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)