

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: P592086

Luminaire Tested: **GRZ-15L-930-10x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592086
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-18)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-15L-930-10x60-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x60 OPTIC
1500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

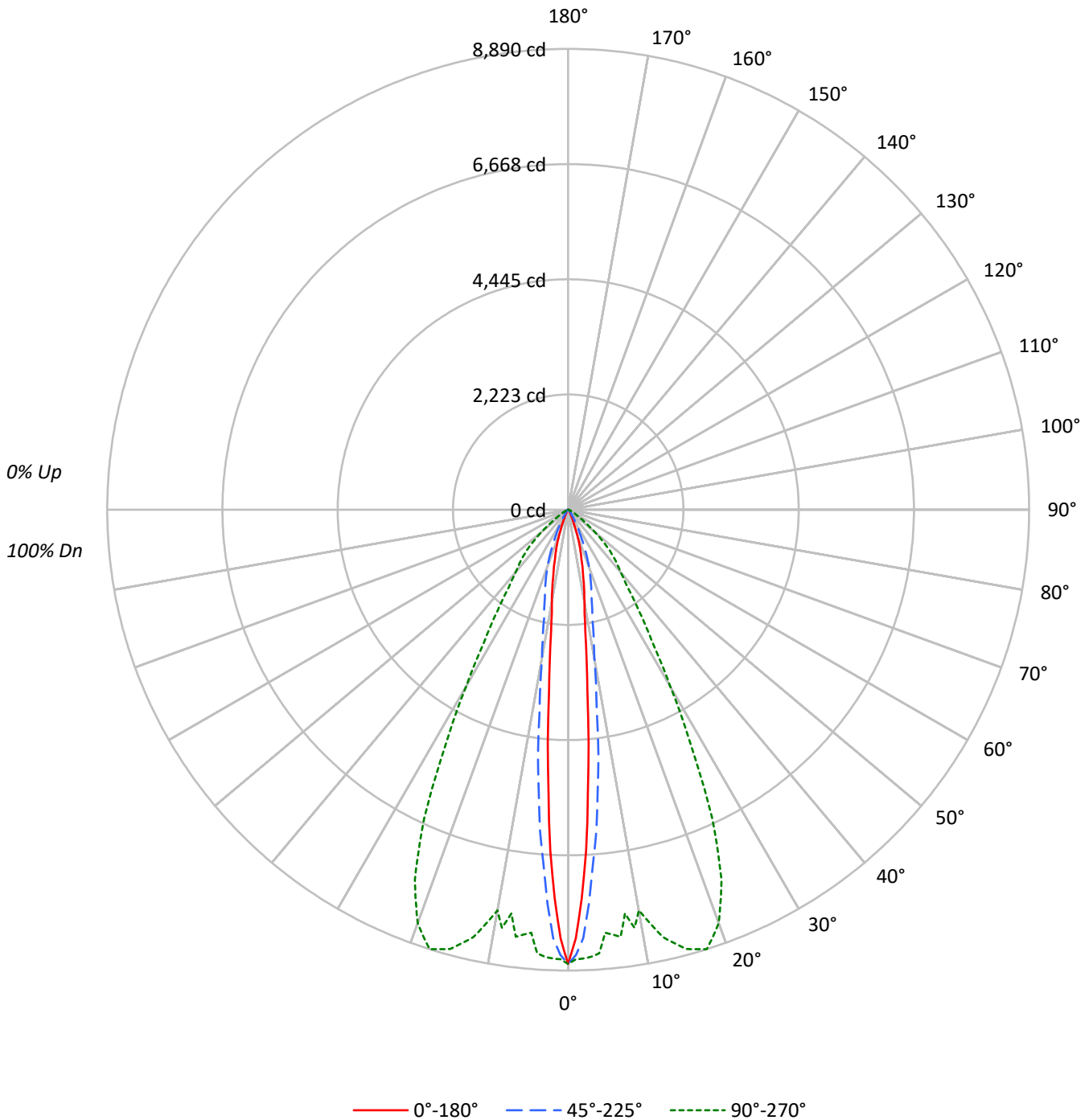
Lumens per Lamp: N/A
Luminaire Lumens: 2719.0 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Spacing Criteria (0/90/45): 0.18 / 0.97 / 0.31
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 29
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	114	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94				94
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88				88
3	103	97	92	89	101	96	91	88	93	90	86	91	88	85	89	86	84	82				82
4	98	91	86	82	97	90	85	82	88	84	81	86	83	80	84	81	79	77				77
5	94	86	81	77	92	85	80	76	83	79	76	82	78	75	80	77	74	73				73
6	90	82	76	72	88	81	75	72	79	75	71	78	74	71	77	73	70	69				69
7	86	77	72	68	85	77	71	68	75	71	67	74	70	67	73	69	67	65				65
8	82	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	63	62				62
9	79	70	65	61	78	70	64	61	69	64	61	68	64	60	67	63	60	59				59
10	76	67	62	58	75	67	61	58	66	61	58	65	61	58	64	60	58	56				56

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	282988	282988	282988
5°	146571	201505	265508
10°	59307	95163	257276
15°	33177	58126	293319
20°	16206	40072	291713
25°	5815	21695	234046
30°	3091	10049	146766
35°	2144	4699	93770
40°	1859	2841	66413
45°	1658	2484	53015
50°	1562	2602	33714
55°	1312	2483	16338
60°	1337	1841	8370
65°	1383	1184	4157
70°	1463	982	2445
75°	1298	973	1622
80°	967	967	967
85°	963	963	0



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CATALOG NUMBER: GRZ-15L-930-10x60-X-UNV-STD-2F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	524.2	19.3
10°-20°	835.5	30.7
20°-30°	703.1	25.9
30°-40°	355.3	13.1
40°-50°	180.2	6.6
50°-60°	81.5	3.0
60°-70°	27.1	1.0
70°-80°	10.3	0.4
80°-90°	1.8	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°	2062.8	75.9
0°-40°	2418.1	88.9
0°-60°	2679.8	98.6
0°-90°	2719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8764	8764	8764	8764	8764	
5°	4522	4906	6216	7590	8191	338
15°	992	1173	1739	4160	8774	280
25°	163	223	609	2150	6569	91
35°	54	64	119	901	2379	36
45°	36	41	54	280	1161	28
55°	23	30	44	107	290	22
65°	18	16	16	31	54	18
75°	10	10	8	10	13	11
85°	3	3	3	0	0	2
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°	8763.5	8763.5	8763.5	8763.5	8763.5	8763.5	8763.5	8763.5	8763.5	8763.5	8763.5
1°	8271.2	8595.1	8823.1	8488.9	8748.0	8589.9	8698.8	8522.6	8644.3	8742.8	8672.8
2°	7506.8	7918.8	7905.8	7867.0	7934.3	8268.6	8571.8	8543.3	8678.0	8621.0	8662.5
3°	6589.5	6809.8	6882.3	6993.7	7283.9	7613.0	7986.2	8315.3	8649.5	8716.9	8634.0
4°	5457.1	5537.5	5783.6	5814.7	6366.7	6835.7	7465.3	7838.5	8499.2	8608.1	8579.6
5°	4521.7	4498.4	4731.6	4964.8	5654.1	6216.4	6988.5	7377.2	8227.2	8522.6	8190.9
6°	3516.3	3705.5	3930.9	4148.6	4744.5	5454.5	6283.7	7169.9	8139.1	8403.4	8242.7
7°	2925.5	2964.4	3130.2	3301.2	3946.4	4788.6	5501.2	6623.2	7685.6	8227.2	8302.3
8°	2373.6	2373.6	2588.6	2744.1	3358.2	3962.0	5091.8	6112.7	7431.6	8222.0	7867.0
9°	2021.2	2067.8	2168.9	2415.0	2775.2	3428.2	4399.9	5646.3	7237.3	8071.7	8165.0
10°	1808.7	1870.9	1925.3	2018.6	2404.7	2902.2	3905.0	5192.8	7071.5	8079.5	7846.2
12.5°	1342.3	1375.9	1440.7	1549.6	1842.4	2145.5	2938.5	4298.9	6268.2	8219.4	8444.8
15°	992.4	1002.8	1093.5	1199.7	1445.9	1738.7	2269.9	3568.1	5933.9	8465.5	8773.9
17.5°	733.3	746.3	805.9	904.3	1072.8	1443.3	1953.8	2946.2	5545.2	8447.4	8890.5
20°	471.6	487.2	546.7	624.5	826.6	1166.1	1642.8	2430.6	4975.2	7841.1	8488.9
22.5°	279.9	295.4	316.1	391.3	580.4	873.2	1352.6	2091.1	3962.0	7032.6	7727.0
25°	163.2	160.7	184.0	235.8	355.0	608.9	1103.9	1787.9	3236.4	6066.1	6568.8
27.5°	106.2	108.8	119.2	145.1	220.3	409.4	870.7	1536.6	2542.0	4620.2	5130.6
30°	82.9	82.9	88.1	101.1	142.5	269.5	655.6	1280.1	2096.3	3526.7	3936.1
32.5°	64.8	67.4	70.0	77.7	101.1	176.2	471.6	1023.5	1707.6	2661.2	2995.5
35°	54.4	57.0	59.6	64.8	80.3	119.2	321.3	751.5	1350.0	2018.6	2378.7
37.5°	49.2	49.2	51.8	54.4	67.4	85.5	209.9	513.1	1031.3	1661.0	1873.5
40°	44.1	44.1	46.6	49.2	59.6	67.4	129.6	336.9	803.3	1370.8	1575.5
42.5°	38.9	41.5	44.1	44.1	51.8	59.6	90.7	251.3	653.0	1225.7	1368.2
45°	36.3	36.3	38.9	41.5	49.2	54.4	70.0	194.3	539.0	1031.3	1160.9
47.5°	33.7	33.7	36.3	38.9	46.6	51.8	57.0	150.3	450.9	834.4	925.1
50°	31.1	31.1	33.7	38.9	44.1	51.8	46.6	114.0	360.2	624.5	671.1
52.5°	25.9	28.5	31.1	33.7	38.9	49.2	38.9	88.1	298.0	437.9	440.5
55°	23.3	23.3	25.9	31.1	33.7	44.1	31.1	64.8	233.2	300.6	290.2
57.5°	23.3	20.7	23.3	25.9	28.5	38.9	23.3	49.2	173.6	202.1	186.6
60°	20.7	20.7	20.7	20.7	23.3	28.5	18.1	38.9	127.0	134.7	129.6
62.5°	18.1	18.1	18.1	18.1	18.1	23.3	15.5	28.5	85.5	85.5	80.3
65°	18.1	18.1	15.5	15.5	15.5	15.5	13.0	23.3	54.4	54.4	54.4
67.5°	18.1	15.5	15.5	13.0	13.0	13.0	10.4	18.1	33.7	38.9	36.3
70°	15.5	15.5	13.0	13.0	10.4	10.4	10.4	15.5	23.3	25.9	25.9
72.5°	13.0	13.0	13.0	10.4	10.4	7.8	7.8	13.0	18.1	18.1	18.1
75°	10.4	10.4	10.4	10.4	7.8	7.8	5.2	10.4	10.4	13.0	13.0
77.5°	7.8	7.8	7.8	7.8	7.8	5.2	5.2	7.8	7.8	7.8	7.8
80°	5.2	5.2	5.2	5.2	5.2	5.2	2.6	5.2	5.2	5.2	5.2
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	2.6	2.6	2.6	2.6	2.6	2.6	0.0	0.0	0.0	0.0	0.0
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)