Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P591947

Luminaire Tested: **GRZ-05L-927-30x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Report Generated By 670245626 / DESKTOP-25HFRC3

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Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P591947
	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-927-30x60-X-UNV-STD-4F
Description:	iO LED GRAZER WITH 30x60 OPTIC
	500 LUMENS PER FOOT, 4 FOOT FIXTURE
	SUMULATED RESULTS
Light Source:	2700K CCT, 90 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1836.0 lumens
Efficiency:	N/A
Efficacy:	95.1 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):	19.3
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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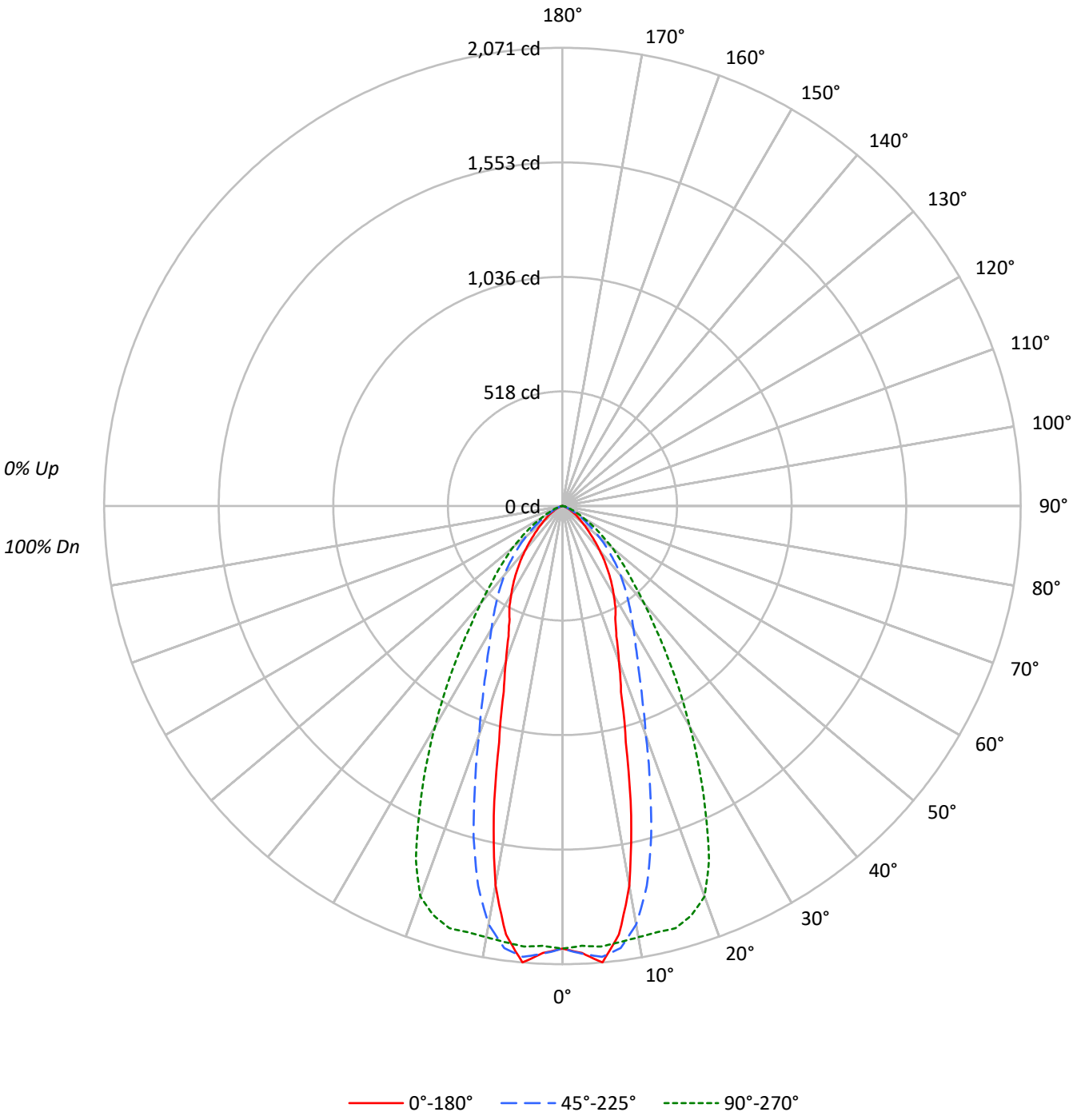
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60	59
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51
9	71	60	54	49	70	60	53	49	59	53	49	58	53	49	57	52	49	47
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	54	49	46	44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32301	32301	32301
5°	33563	33154	32396
10°	28548	31470	32446
15°	18481	25916	33020
20°	12809	18935	32270
25°	10073	14500	27268
30°	8628	11951	21451
35°	7098	10151	16184
40°	5503	8616	12069
45°	4071	6948	9334
50°	2984	5338	7417
55°	2229	3803	5424
60°	1569	2558	3662
65°	1100	1650	2476
70°	765	1105	1614
75°	561	674	1123
80°	335	502	837
85°	333	333	333

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.2	10.3
10°-20°	431.1	23.5
20°-30°	440.5	24.0
30°-40°	352.5	19.2
40°-50°	235.7	12.8
50°-60°	124.2	6.8
60°-70°	46.9	2.6
70°-80°	13.8	0.8
80°-90°	2.1	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°	1060.8	57.8
0°-40°	1413.3	77.0
0°-60°	1773.2	96.6
0°-90°	1836.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1836.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2001	2001	2001	2001	2001	
5°	2071	2041	2046	2015	1999	186
15°	1106	1220	1550	1882	1975	315
25°	565	610	814	1338	1531	266
35°	360	392	515	746	821	224
45°	178	207	304	402	409	140
55°	79	90	135	185	193	72
65°	29	32	43	58	65	30
75°	9	9	11	15	18	10
85°	2	2	2	2	2	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°	2000.6	2000.6	2000.6	2000.6	2000.6	2000.6	2000.6	2000.6	2000.6	2000.6	2000.6
2.5°	2022.2	2020.4	2040.2	2025.8	2031.2	2025.8	2009.6	2000.6	1998.8	1980.8	1989.8
5°	2070.8	2042.0	2047.4	2038.4	2047.4	2045.6	2027.6	2016.8	2007.8	1997.0	1998.8
7.5°	1953.8	1957.4	1973.6	1980.8	2006.0	2015.0	2006.0	1998.8	1991.6	1986.2	1988.0
10°	1741.3	1753.9	1777.3	1824.1	1876.3	1919.5	1937.5	1957.4	1973.6	1975.4	1979.0
12.5°	1433.4	1451.4	1489.2	1539.6	1654.8	1759.3	1847.5	1915.9	1955.6	1977.2	1973.6
15°	1105.6	1111.0	1157.8	1240.7	1366.7	1550.4	1725.1	1863.7	1935.7	1986.2	1975.4
17.5°	880.5	887.7	925.6	988.6	1109.2	1312.7	1573.8	1780.9	1912.3	1948.4	1939.3
20°	745.5	740.1	768.9	821.1	922.0	1102.0	1373.9	1651.2	1816.9	1867.3	1878.1
22.5°	637.4	642.8	660.9	702.3	790.5	940.0	1188.5	1482.0	1665.6	1721.5	1730.5
25°	565.4	570.8	588.8	617.6	689.7	813.9	1028.2	1292.9	1473.0	1527.0	1530.6
27.5°	518.6	515.0	527.6	549.2	612.2	718.5	894.9	1114.6	1282.1	1336.1	1339.7
30°	462.8	461.0	473.6	497.0	547.4	641.0	790.5	968.8	1087.6	1139.8	1150.6
32.5°	412.4	410.6	425.0	444.8	495.2	576.2	705.9	844.5	925.6	968.8	979.6
35°	360.1	361.9	372.7	398.0	443.0	515.0	633.8	731.1	788.7	810.3	821.1
37.5°	309.7	311.5	325.9	351.1	396.2	461.0	556.4	632.0	666.3	682.5	680.7
40°	261.1	264.7	273.7	302.5	347.5	408.8	486.2	542.0	565.4	567.2	572.6
42.5°	217.9	217.9	232.3	255.7	298.9	356.5	425.0	464.6	482.6	480.8	477.2
45°	178.3	180.1	189.1	212.5	252.1	304.3	363.7	399.8	410.6	403.4	408.8
47.5°	145.9	147.7	154.9	176.5	210.7	261.1	307.9	342.1	351.1	345.7	345.7
50°	118.8	120.6	126.0	142.3	171.1	212.5	255.7	284.5	293.5	291.7	295.3
52.5°	97.2	97.2	102.6	115.2	138.7	172.9	207.1	232.3	239.5	237.7	235.9
55°	79.2	79.2	82.8	91.8	109.8	135.1	163.9	183.7	189.1	190.9	192.7
57.5°	63.0	63.0	64.8	72.0	84.6	104.4	126.0	140.5	145.9	147.7	149.5
60°	48.6	48.6	52.2	55.8	66.6	79.2	93.6	104.4	111.6	111.6	113.4
62.5°	37.8	37.8	39.6	43.2	50.4	59.4	68.4	77.4	81.0	84.6	86.4
65°	28.8	28.8	30.6	32.4	37.8	43.2	50.4	57.6	61.2	63.0	64.8
67.5°	21.6	21.6	21.6	25.2	28.8	32.4	36.0	41.4	43.2	46.8	48.6
70°	16.2	16.2	16.2	18.0	19.8	23.4	25.2	28.8	32.4	34.2	34.2
72.5°	12.6	12.6	12.6	12.6	14.4	16.2	18.0	19.8	23.4	25.2	25.2
75°	9.0	9.0	9.0	9.0	10.8	10.8	12.6	14.4	16.2	18.0	18.0
77.5°	7.2	7.2	5.4	7.2	7.2	7.2	9.0	9.0	10.8	12.6	12.6
80°	3.6	3.6	3.6	3.6	5.4	5.4	5.4	7.2	7.2	7.2	9.0
82.5°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6	5.4	5.4
85°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)