

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: P592057

Luminaire Tested: **GRZ-10L-940-17x30-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592057
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-19)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-10L-940-17x30-X-UNV-STD-4F
Description: iO LED GRAZER WITH 17x30 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

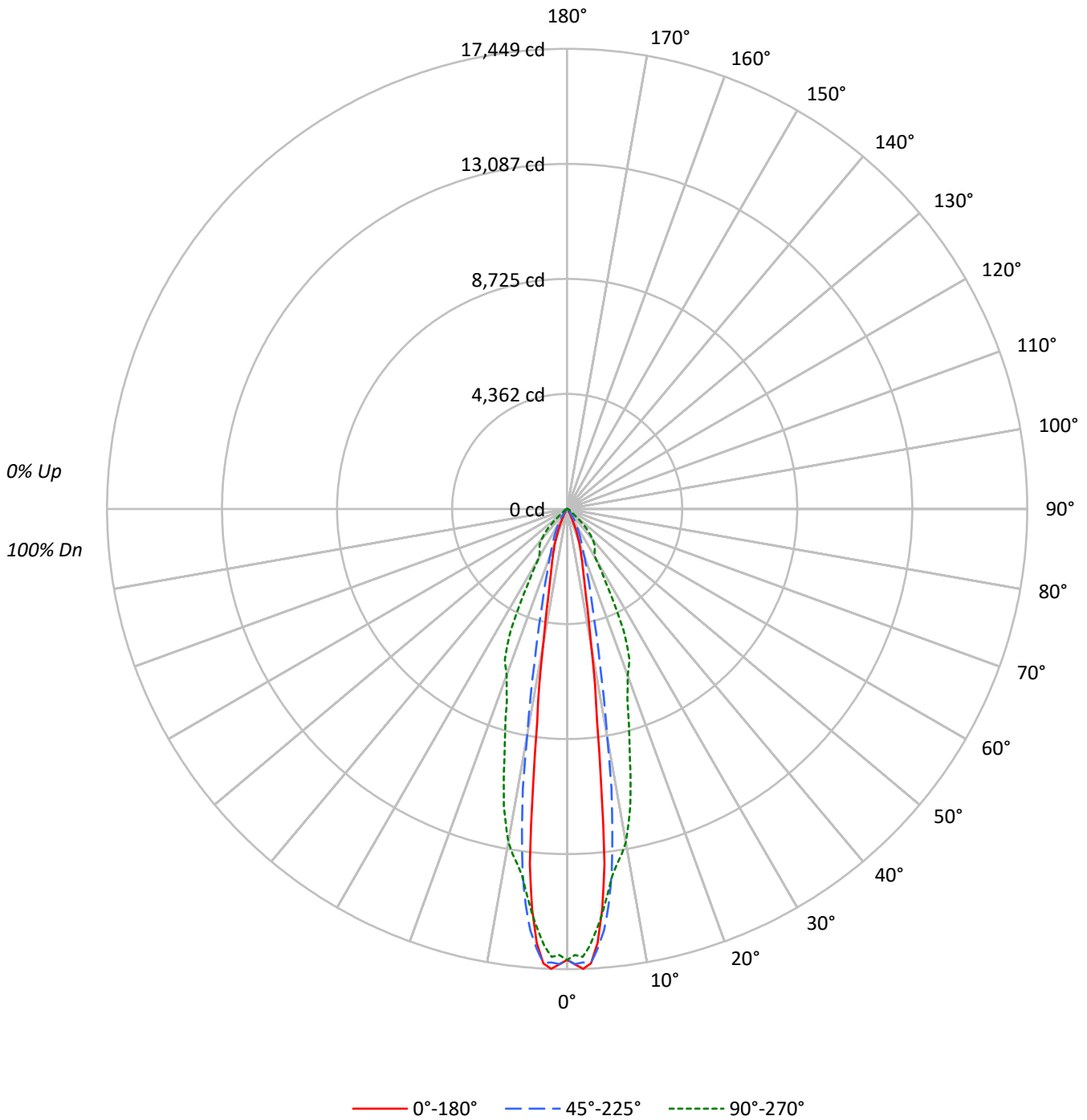
Lumens per Lamp: N/A
Luminaire Lumens: 4148.0 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

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



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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				
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95				
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92	90				
3	105	100	95	92	103	98	94	91	96	93	90	93	91	88	91	89	87	86				
4	101	95	90	86	99	94	89	86	92	88	85	90	86	84	88	85	83	82				
5	97	90	85	82	96	89	85	81	88	84	81	86	83	80	85	82	79	78				
6	94	86	81	78	92	86	81	77	84	80	77	83	79	76	82	78	76	75				
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72				
8	87	79	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69				
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68	67				
10	82	74	69	66	81	73	69	66	73	69	66	72	68	66	71	68	65	64				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	276084	276084	276084
5°	246905	259907	249207
10°	86022	142972	210430
15°	38238	59410	152439
20°	22290	31854	115279
25°	9574	20309	89780
30°	3220	12594	39644
35°	1967	6506	36086
40°	1699	3722	31712
45°	1840	2893	22174
50°	1447	1349	9738
55°	1298	1298	3890
60°	1240	1363	3594
65°	1318	1318	3373
70°	1270	1086	2535
75°	961	961	1198
80°	716	716	716
85°	704	704	704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1255.8	30.3
10°-20°	1328.0	32.0
20°-30°	822.2	19.8
30°-40°	416.0	10.0
40°-50°	205.8	5.0
50°-60°	61.3	1.5
60°-70°	37.8	0.9
70°-80°	17.9	0.4
80°-90°	3.1	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°	3406.1	82.1
0°-40°	3822.1	92.1
0°-60°	4089.2	98.6
0°-90°	4148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	17099	17099	17099	17099	17099	
5°	15234	15563	16036	15591	15376	1063
15°	2288	2538	3554	6220	9120	680
25°	537	670	1140	2732	5040	272
35°	100	108	330	1222	1831	67
45°	81	72	127	335	971	59
55°	46	45	46	67	138	42
65°	34	41	34	22	88	33
75°	15	22	15	9	19	18
85°	4	4	4	0	4	3
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°	17099.4	17099.4	17099.4	17099.4	17099.4	17099.4	17099.4	17099.4	17099.4	17099.4	17099.4
1°	17272.1	17218.4	17229.9	17299.0	17341.2	17260.6	17145.4	17057.2	17095.5	16976.6	16919.0
2°	17448.7	17406.4	17379.6	17402.6	17310.5	17206.9	17087.9	17022.6	16999.6	16938.2	16995.8
3°	17256.8	17203.0	17218.4	17272.1	17226.0	17233.7	16938.2	16738.6	16719.4	16638.8	16573.5
4°	16496.8	16535.2	16611.9	16619.6	16673.3	16688.7	16585.1	16205.1	16212.7	16063.1	15990.1
5°	15234.0	15260.9	15491.2	15587.1	15932.6	16036.2	16063.1	15602.5	15556.4	15330.0	15376.0
6°	13541.3	13046.2	13664.2	13909.8	14604.5	15076.6	15241.7	15168.7	14938.5	14677.5	14681.3
7°	10566.7	10608.9	10962.0	11641.4	12934.9	13848.4	14527.8	14677.5	14370.4	14186.2	14013.4
8°	8148.6	8325.2	8828.0	9545.7	10831.5	12309.3	13541.3	13879.1	13802.3	13618.1	13591.2
9°	6747.6	6613.3	7016.3	7588.2	8820.3	10720.2	12240.2	12957.9	13180.5	13238.1	13249.6
10°	5246.9	5404.2	5596.2	6191.1	7235.1	8720.5	10716.4	11829.5	12412.9	12739.1	12835.1
11°	4248.9	4306.5	4552.2	5112.5	5899.4	7265.8	9284.7	10539.8	11438.0	12098.1	12182.6
12°	3496.6	3546.5	3711.6	4126.1	4840.0	5926.3	7661.1	9231.0	10582.0	11353.5	11526.3
13°	2970.8	3028.4	3162.7	3485.1	4037.8	4985.9	6187.3	7887.6	9442.1	10536.0	10689.5
14°	2552.4	2617.7	2706.0	2990.0	3439.1	4110.8	5135.6	6759.2	8424.9	9653.2	9856.6
15°	2287.6	2295.3	2391.2	2587.0	2982.3	3554.2	4437.0	5795.8	7492.3	8874.0	9119.7
17.5°	1719.5	1708.0	1719.5	1873.1	2103.4	2521.7	3128.2	4306.5	6114.3	7315.7	7584.4
20°	1297.3	1301.2	1274.3	1362.6	1554.5	1853.9	2356.7	3504.3	5354.4	6555.7	6709.3
22.5°	902.0	894.3	905.8	990.3	1174.5	1450.9	1846.2	2859.5	4878.4	6049.1	6175.7
25°	537.4	548.9	594.9	694.7	875.1	1140.0	1508.4	2310.6	3995.6	4774.8	5039.6
27.5°	310.9	314.7	353.1	460.6	633.3	886.6	1239.8	1800.1	2767.4	3181.9	3251.0
30°	172.7	172.7	199.6	268.7	429.9	675.5	1013.3	1493.1	2007.4	2122.5	2126.4
32.5°	115.1	115.1	122.8	157.4	264.8	491.3	825.2	1285.8	1742.6	1907.6	1934.5
35°	99.8	96.0	99.8	111.3	165.0	330.1	633.3	1093.9	1604.4	1800.1	1830.8
37.5°	88.3	88.3	92.1	103.6	126.7	214.9	449.1	867.4	1420.2	1665.8	1700.3
40°	80.6	80.6	84.4	103.6	126.7	176.6	284.0	629.5	1170.7	1466.2	1504.6
42.5°	76.8	76.8	76.8	92.1	119.0	161.2	165.0	403.0	902.0	1205.2	1262.8
45°	80.6	76.8	69.1	72.9	92.1	126.7	96.0	238.0	625.6	928.9	971.1
47.5°	76.8	76.8	72.9	69.1	69.1	84.4	61.4	130.5	391.5	644.8	667.9
50°	57.6	57.6	49.9	61.4	65.3	53.7	46.1	84.4	241.8	364.6	387.7
52.5°	49.9	49.9	46.1	46.1	53.7	49.9	34.5	69.1	153.5	203.4	211.1
55°	46.1	42.2	42.2	46.1	49.9	46.1	30.7	53.7	107.5	134.3	138.2
57.5°	42.2	42.2	42.2	42.2	49.9	46.1	30.7	38.4	84.4	107.5	119.0
60°	38.4	38.4	42.2	42.2	46.1	42.2	26.9	26.9	69.1	96.0	111.3
62.5°	34.5	38.4	38.4	42.2	46.1	38.4	23.0	19.2	53.7	88.3	103.6
65°	34.5	34.5	38.4	42.2	42.2	34.5	19.2	15.4	42.2	72.9	88.3
67.5°	30.7	30.7	34.5	38.4	42.2	30.7	11.5	11.5	34.5	61.4	72.9
70°	26.9	26.9	30.7	34.5	34.5	23.0	11.5	11.5	23.0	49.9	53.7
72.5°	23.0	23.0	26.9	30.7	30.7	19.2	7.7	7.7	15.4	38.4	34.5
75°	15.4	19.2	19.2	23.0	23.0	15.4	7.7	7.7	11.5	23.0	19.2
77.5°	11.5	11.5	15.4	19.2	19.2	11.5	3.8	3.8	7.7	15.4	11.5
80°	7.7	7.7	11.5	11.5	11.5	7.7	3.8	3.8	3.8	7.7	7.7
82.5°	3.8	3.8	7.7	7.7	7.7	3.8	3.8	3.8	3.8	3.8	3.8
85°	3.8	3.8	3.8	3.8	3.8	3.8	0.0	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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)