

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: P592052

Luminaire Tested: **GRZ-10L-940-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592052
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-17)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-10L-940-10x30-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x30 OPTIC
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

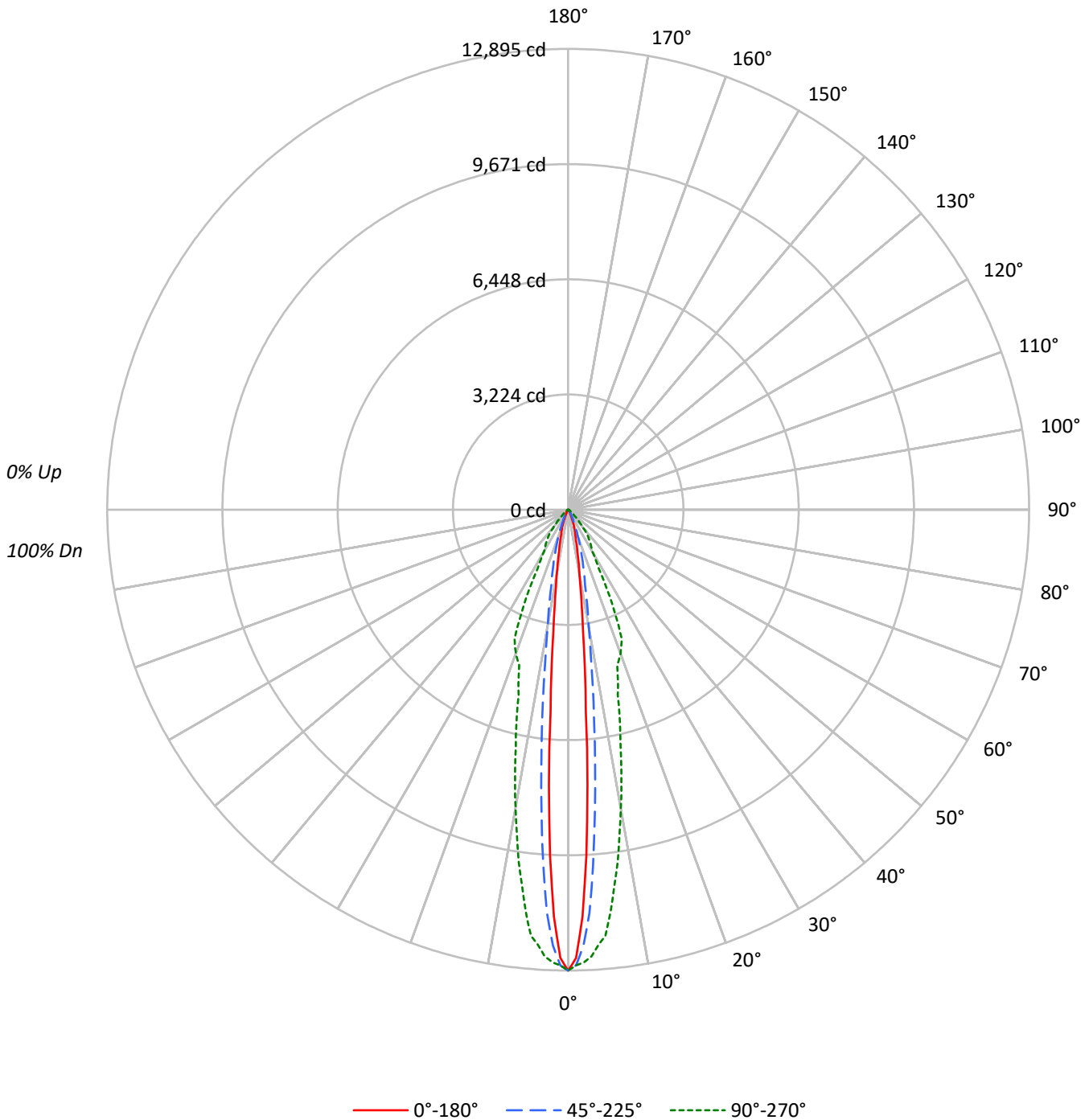
Lumens per Lamp: N/A
Luminaire Lumens: 2044.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	102	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91					91			
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83					83			
5	98	92	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80					80			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77					77			
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74					74			
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71					71			
9	86	79	74	71	85	78	74	71	77	73	71	77	73	70	76	73	70	69					69			
10	84	76	72	69	83	76	71	68	75	71	68	74	71	68	74	70	68	67					67			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	416411	416411	416411
5°	184432	276928	387898
10°	59838	108036	278117
15°	26109	53376	179306
20°	14704	27299	147185
25°	5266	12103	104200
30°	3222	6223	50371
35°	2420	4009	40395
40°	1943	2913	26696
45°	1667	1754	13581
50°	1929	1060	6365
55°	2055	867	3130
60°	1737	743	1860
65°	1467	879	1467
70°	1265	906	1265
75°	961	724	961
80°	707	707	707
85°	704	704	704



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CATALOG NUMBER: GRZ-10L-940-10x30-X-UNV-STD-2F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	685.9	33.6
10°-20°	669.8	32.8
20°-30°	375.4	18.4
30°-40°	169.5	8.3
40°-50°	85.7	4.2
50°-60°	32.0	1.6
60°-70°	15.9	0.8
70°-80°	8.2	0.4
80°-90°	1.6	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°	1731.1	84.7
0°-40°	1900.6	93.0
0°-60°	2018.3	98.7
0°-90°	2044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12895	12895	12895	12895	12895	
5°	5690	6524	8543	10966	11967	435
15°	781	964	1597	3491	5364	241
25°	148	165	340	1268	2924	84
35°	61	42	102	404	1025	39
45°	36	32	38	182	297	30
55°	36	18	15	56	56	31
65°	19	15	12	17	19	19
75°	8	9	6	6	8	8
85°	2	2	2	0	2	2
90°	0	0	0	0	0	



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CATALOG NUMBER: GRZ-10L-940-10x30-X-UNV-STD-2F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	12895.3	12895.3	12895.3	12895.3	12895.3	12895.3	12895.3	12895.3	12895.3	12895.3	12895.3
1°	12544.2	12546.1	12640.1	12578.7	12728.4	12749.5	12730.3	12764.9	12774.5	12720.7	12749.5
2°	11396.6	11431.2	11486.8	11809.2	11957.0	12196.9	12398.3	12571.0	12645.9	12676.6	12672.8
3°	9702.2	9679.2	9953.6	10262.5	10792.2	11294.9	11790.0	12116.3	12404.1	12496.2	12513.5
4°	7727.6	7637.4	8107.6	8368.5	9084.3	9988.1	10870.9	11575.1	12049.1	12244.8	12198.8
5°	5689.7	5849.0	6177.1	6639.6	7420.6	8543.2	9723.3	10778.7	11527.1	11857.2	11966.6
6°	4432.8	4402.1	4666.9	5231.1	6019.7	7224.8	8573.9	9897.9	10828.6	11225.9	11319.9
7°	3419.6	3400.4	3663.3	4064.3	4726.4	5966.0	7459.0	9005.6	10147.4	10596.4	10592.6
8°	2709.6	2698.0	2880.3	3197.0	3822.5	4870.3	6355.6	8023.1	9331.9	9936.3	9936.3
9°	2189.5	2214.5	2325.8	2605.9	3099.1	3976.1	5432.5	7190.3	8533.6	9124.6	9176.4
10°	1824.9	1838.4	1928.5	2158.8	2569.5	3294.8	4565.2	6221.2	7746.8	8495.2	8481.8
12.5°	1184.0	1212.8	1278.0	1425.8	1725.1	2178.0	3033.9	4361.8	5904.6	6653.0	6779.7
15°	781.0	786.8	867.4	995.9	1233.9	1596.6	2195.3	3185.5	4407.8	5256.0	5363.5
17.5°	583.4	589.1	608.3	685.1	859.7	1168.6	1654.1	2421.7	3582.7	4438.5	4561.3
20°	427.9	408.7	403.0	447.1	583.4	794.4	1207.0	1888.2	2907.2	4062.4	4283.1
22.5°	249.5	245.6	236.0	272.5	376.1	522.0	821.3	1410.4	2458.2	3617.2	3922.3
25°	147.8	143.9	142.0	172.7	236.0	339.7	560.3	1066.9	1871.0	2659.7	2924.5
27.5°	107.5	103.6	94.0	107.5	155.4	234.1	395.3	771.4	1283.8	1709.8	1853.7
30°	86.4	82.5	65.2	71.0	107.5	166.9	289.8	533.5	911.5	1270.3	1350.9
32.5°	72.9	69.1	49.9	51.8	74.8	126.7	226.4	410.7	736.9	1099.6	1189.7
35°	61.4	57.6	40.3	42.2	57.6	101.7	186.1	337.7	604.5	946.0	1024.7
37.5°	51.8	48.0	34.5	36.5	49.9	84.4	168.9	291.7	500.8	777.2	853.9
40°	46.1	42.2	30.7	34.5	46.1	69.1	149.7	247.5	410.7	600.6	633.3
42.5°	40.3	36.5	30.7	34.5	42.2	53.7	109.4	197.7	333.9	431.8	458.6
45°	36.5	34.5	28.8	32.6	36.5	38.4	69.1	153.5	268.7	297.4	297.4
47.5°	38.4	34.5	26.9	28.8	28.8	28.8	42.2	120.9	209.2	201.5	195.7
50°	38.4	32.6	24.9	23.0	23.0	21.1	28.8	94.0	155.4	128.6	126.7
52.5°	38.4	32.6	23.0	21.1	19.2	17.3	21.1	71.0	109.4	82.5	82.5
55°	36.5	30.7	19.2	17.3	15.4	15.4	17.3	49.9	74.8	57.6	55.6
57.5°	32.6	26.9	17.3	15.4	15.4	13.4	13.4	32.6	57.6	44.1	38.4
60°	26.9	23.0	15.4	15.4	15.4	11.5	11.5	21.1	46.1	32.6	28.8
62.5°	23.0	19.2	15.4	15.4	15.4	11.5	9.6	15.4	38.4	26.9	23.0
65°	19.2	15.4	13.4	15.4	15.4	11.5	7.7	11.5	32.6	21.1	19.2
67.5°	15.4	13.4	11.5	13.4	13.4	9.6	5.8	7.7	26.9	17.3	15.4
70°	13.4	11.5	9.6	11.5	13.4	9.6	5.8	7.7	21.1	13.4	13.4
72.5°	9.6	9.6	9.6	11.5	11.5	7.7	3.8	5.8	17.3	11.5	11.5
75°	7.7	7.7	7.7	9.6	9.6	5.8	3.8	3.8	13.4	9.6	7.7
77.5°	5.8	5.8	5.8	7.7	7.7	3.8	1.9	3.8	9.6	5.8	5.8
80°	3.8	3.8	3.8	5.8	5.8	3.8	1.9	1.9	5.8	3.8	3.8
82.5°	1.9	1.9	1.9	3.8	3.8	1.9	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	1.9	1.9	1.9
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)