

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: P592049

Luminaire Tested: **GRZ-10L-940-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592049
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-10L-940-10x10-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x10 OPTIC
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

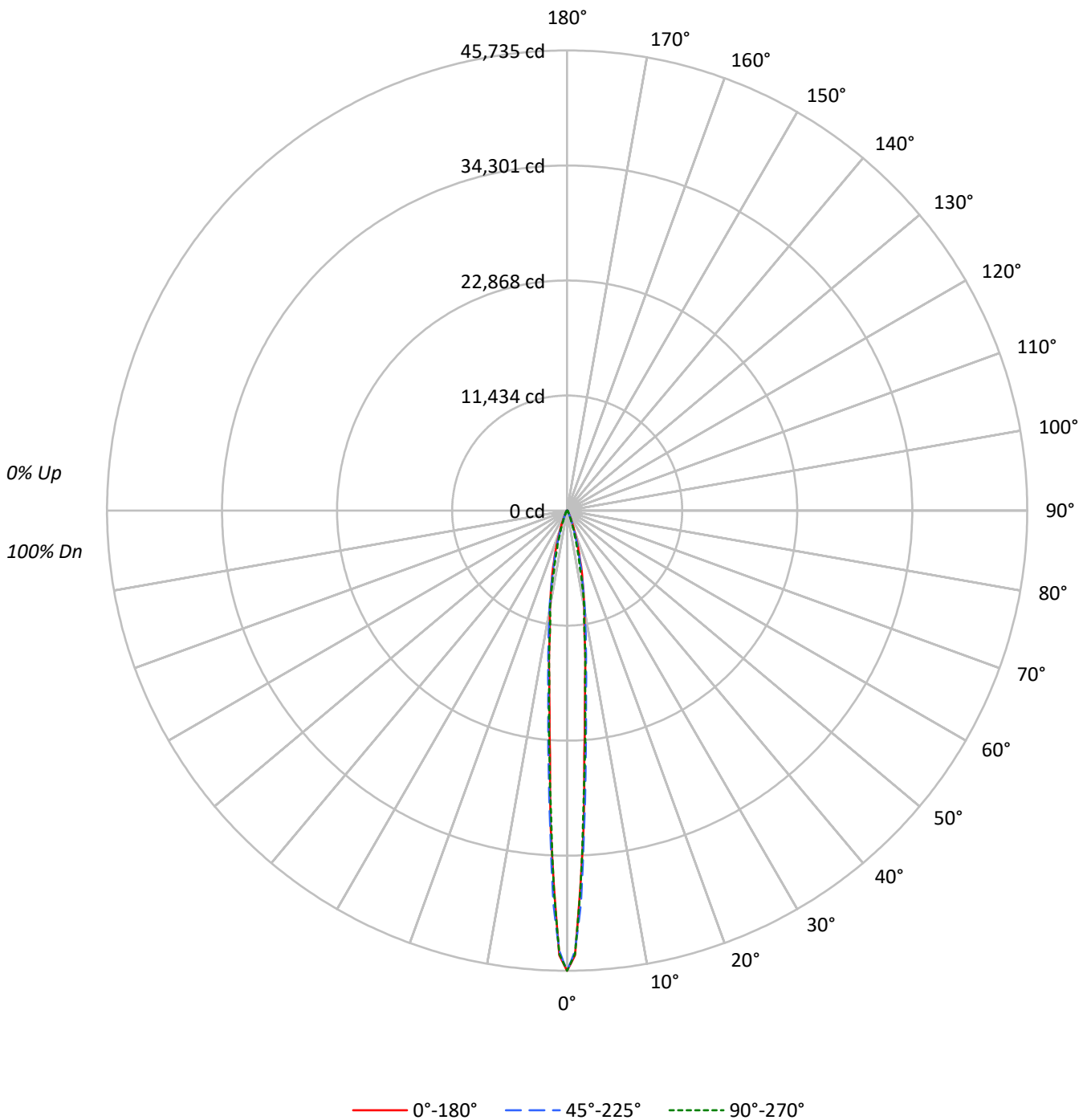
Lumens per Lamp: N/A
Luminaire Lumens: 3660.0 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
Input Voltage (V): 120
Input Current (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					
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	100	100	100	100	100		
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	96	96	96	96	96	96		
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	95	93	93	93	93	93	93	93		
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90	90	90	90	90	90	90		
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	93	90	89	87	87	87	87	87	87	87		
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	90	88	86	85	85	85	85	85	85	85		
6	99	93	89	86	98	92	88	86	91	88	85	90	87	85	88	86	84	83	83	83	83	83	83	83		
7	96	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81	81	81	81	81	81	81		
8	94	88	84	81	93	87	84	81	86	83	81	86	83	80	85	82	80	79	79	79	79	79	79	79		
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78	78	78	78	78	78	78		
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	82	79	77	76	76	76	76	76	76	76		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	738427	738427	738427
5°	325175	347121	335256
10°	160254	164975	161664
15°	80841	74489	64190
20°	33919	28730	24400
25°	13753	11508	9691
30°	6563	5854	5183
35°	4139	3627	2878
40°	2951	2698	2023
45°	2649	2329	1690
50°	2512	2210	1306
55°	2252	1970	1126
60°	1808	1550	1098
65°	1757	1528	1146
70°	1794	1511	1039
75°	1622	1497	998
80°	1488	1302	930
85°	1112	1112	741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1718.8	47.0
10°-20°	1271.0	34.7
20°-30°	346.8	9.5
30°-40°	122.6	3.3
40°-50°	77.2	2.1
50°-60°	57.3	1.6
60°-70°	37.6	1.0
70°-80°	22.7	0.6
80°-90°	5.9	0.2
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°	3336.5	91.2
0°-40°	3459.1	94.5
0°-60°	3593.7	98.2
0°-90°	3660.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3660.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	45735	45735	45735	45735	45735	
5°	20063	20949	21417	20623	20685	1666
15°	4836	4774	4456	3944	3840	1371
25°	772	758	646	572	544	407
35°	210	206	184	168	146	136
45°	116	112	102	86	74	90
55°	80	76	70	52	40	72
65°	46	40	40	34	30	46
75°	26	22	24	20	16	28
85°	6	4	6	4	4	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	45734.8	45734.8	45734.8	45734.8	45734.8
1°	44204.7	43320.6	43834.6	43814.6	44070.7
2°	37398.3	40166.4	39088.4	38970.4	37742.3
3°	31287.9	32512.0	31827.9	32229.9	30305.8
4°	24361.5	25889.6	26123.6	25597.5	24919.5
5°	20063.2	20949.3	21417.3	20623.2	20685.2
6°	16899.0	18021.1	17951.1	17973.1	17083.0
7°	14804.9	15388.9	15472.9	14964.9	14722.9
8°	12408.7	13414.8	13336.8	12954.8	12412.7
9°	11060.7	11678.7	11580.7	10898.7	10700.6
10°	9774.6	10114.6	10062.6	9312.6	9860.6
12.5°	7038.4	7070.4	6726.4	6318.4	5992.4
15°	4836.3	4774.3	4456.3	3944.2	3840.2
17.5°	3176.2	3184.2	2754.2	2368.1	2308.1
20°	1974.1	1986.1	1672.1	1458.1	1420.1
22.5°	1242.1	1188.1	994.1	904.1	880.1
25°	772.0	758.0	646.0	572.0	544.0
27.5°	522.0	512.0	420.0	386.0	384.0
30°	352.0	366.0	314.0	286.0	278.0
32.5°	266.0	266.0	244.0	224.0	202.0
35°	210.0	206.0	184.0	168.0	146.0
37.5°	160.0	168.0	148.0	136.0	114.0
40°	140.0	140.0	128.0	112.0	96.0
42.5°	124.0	128.0	112.0	96.0	80.0
45°	116.0	112.0	102.0	86.0	74.0
47.5°	106.0	104.0	94.0	76.0	64.0
50°	100.0	96.0	88.0	68.0	52.0
52.5°	94.0	88.0	80.0	60.0	44.0
55°	80.0	76.0	70.0	52.0	40.0
57.5°	70.0	62.0	58.0	44.0	36.0
60°	56.0	50.0	48.0	40.0	34.0
62.5°	50.0	46.0	44.0	38.0	32.0
65°	46.0	40.0	40.0	34.0	30.0
67.5°	42.0	36.0	36.0	30.0	26.0
70°	38.0	32.0	32.0	26.0	22.0
72.5°	32.0	26.0	28.0	22.0	20.0
75°	26.0	22.0	24.0	20.0	16.0
77.5°	22.0	18.0	18.0	16.0	12.0
80°	16.0	14.0	14.0	12.0	10.0
82.5°	10.0	8.0	10.0	8.0	6.0
85°	6.0	4.0	6.0	4.0	4.0
87.5°	2.0	2.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)