

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: P592113

Luminaire Tested: **GRZ-15L-940-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592113
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-15L-940-10x10-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x10 OPTIC
1500 LUMENS PER FOOT, 4 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

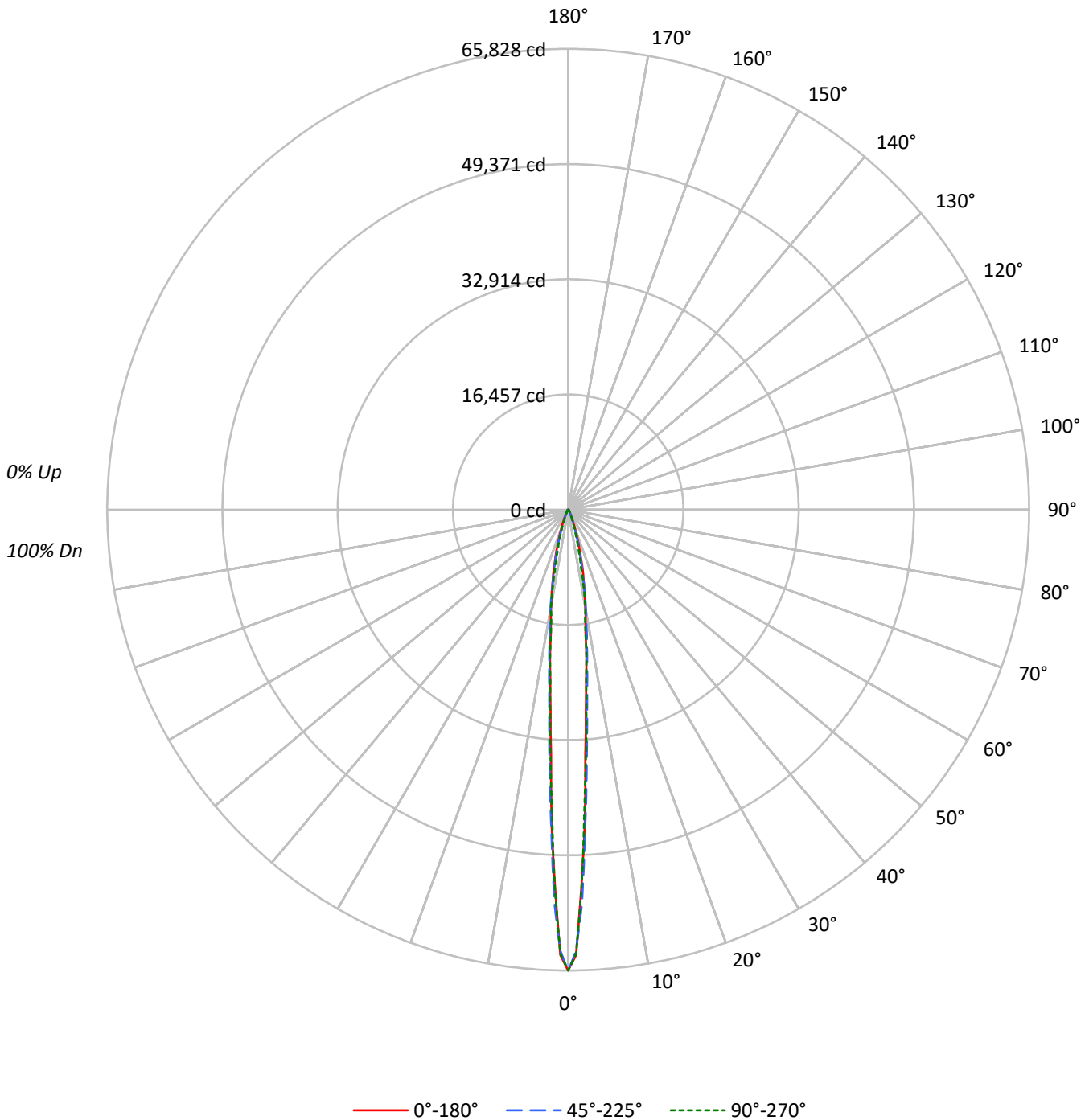
Lumens per Lamp: N/A
Luminaire Lumens: 5268.0 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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	77	77	77	77	77	77	77		
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°	1062850	1062850	1062850
5°	468039	499627	482550
10°	230660	237457	232690
15°	116358	107214	92393
20°	48821	41352	35120
25°	19796	16566	13951
30°	9447	8427	7461
35°	5958	5221	4143
40°	4247	3882	2913
45°	3813	3352	2432
50°	3615	3183	1881
55°	3243	2837	1621
60°	2603	2231	1579
65°	2529	2201	1650
70°	2582	2176	1496
75°	2333	2152	1435
80°	2139	1878	1339
85°	1593	1593	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2473.9	47.0
10°-20°	1829.3	34.7
20°-30°	499.1	9.5
30°-40°	176.4	3.3
40°-50°	111.2	2.1
50°-60°	82.5	1.6
60°-70°	54.2	1.0
70°-80°	32.7	0.6
80°-90°	8.6	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°	4802.4	91.2
0°-40°	4978.9	94.5
0°-60°	5172.6	98.2
0°-90°	5268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	65828	65828	65828	65828	65828	
5°	28878	30153	30827	29684	29773	2398
15°	6961	6872	6414	5677	5527	1973
25°	1111	1091	930	823	783	586
35°	302	296	265	242	210	196
45°	167	161	147	124	106	129
55°	115	109	101	75	58	103
65°	66	58	58	49	43	66
75°	37	32	34	29	23	41
85°	9	6	9	6	6	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	65828.1	65828.1	65828.1	65828.1	65828.1
1°	63625.7	62353.3	63093.1	63064.4	63432.9
2°	53829.0	57813.3	56261.6	56091.8	54324.1
3°	45034.0	46795.9	45811.3	46390.0	43620.5
4°	35064.5	37264.0	37600.8	36843.7	35867.7
5°	28877.9	30153.2	30826.9	29683.9	29773.2
6°	24323.5	25938.5	25837.8	25869.5	24588.4
7°	21309.3	22150.0	22270.9	21539.6	21191.3
8°	17860.5	19308.5	19196.3	18646.4	17866.2
9°	15920.1	16809.7	16668.6	15686.9	15401.9
10°	14069.0	14558.4	14483.6	13404.0	14192.8
12.5°	10130.7	10176.8	9681.6	9094.3	8625.1
15°	6961.1	6871.8	6414.1	5677.1	5527.4
17.5°	4571.6	4583.1	3964.2	3408.6	3322.2
20°	2841.4	2858.7	2406.7	2098.7	2044.0
22.5°	1787.8	1710.0	1430.8	1301.2	1266.7
25°	1111.2	1091.1	929.9	823.4	783.1
27.5°	751.4	737.0	604.6	555.6	552.7
30°	506.7	526.8	452.0	411.7	400.2
32.5°	382.9	382.9	351.2	322.4	290.8
35°	302.3	296.5	264.9	241.8	210.2
37.5°	230.3	241.8	213.0	195.8	164.1
40°	201.5	201.5	184.2	161.2	138.2
42.5°	178.5	184.2	161.2	138.2	115.2
45°	167.0	161.2	146.8	123.8	106.5
47.5°	152.6	149.7	135.3	109.4	92.1
50°	143.9	138.2	126.7	97.9	74.9
52.5°	135.3	126.7	115.2	86.4	63.3
55°	115.2	109.4	100.8	74.9	57.6
57.5°	100.8	89.2	83.5	63.3	51.8
60°	80.6	72.0	69.1	57.6	48.9
62.5°	72.0	66.2	63.3	54.7	46.1
65°	66.2	57.6	57.6	48.9	43.2
67.5°	60.5	51.8	51.8	43.2	37.4
70°	54.7	46.1	46.1	37.4	31.7
72.5°	46.1	37.4	40.3	31.7	28.8
75°	37.4	31.7	34.5	28.8	23.0
77.5°	31.7	25.9	25.9	23.0	17.3
80°	23.0	20.2	20.2	17.3	14.4
82.5°	14.4	11.5	14.4	11.5	8.6
85°	8.6	5.8	8.6	5.8	5.8
87.5°	2.9	2.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)