

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: P592119

Luminaire Tested: **GRZ-15L-940-10x60-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P592119
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-18)
Test Lab: INNOVATION CENTER
Issue Date: 2/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: iO LED
Catalog Number: GRZ-15L-940-10x60-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x60 OPTIC
1500 LUMENS PER FOOT, 4 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

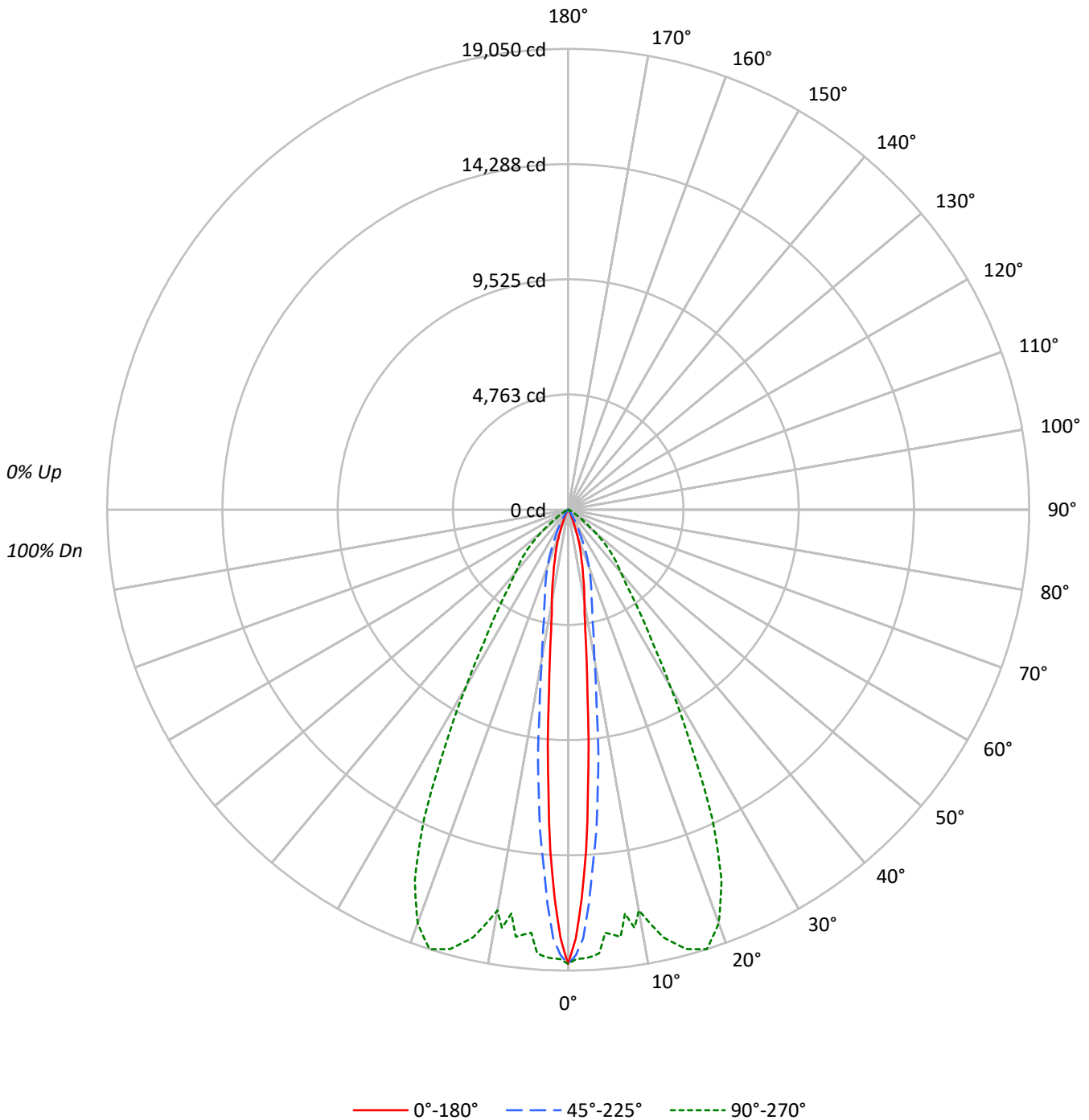
Lumens per Lamp: N/A
Luminaire Lumens: 5826.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 0.18 / 0.97 / 0.31
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 56
Input Voltage (V): 120
Input Current (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	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94					94			
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88					88			
3	103	97	92	89	101	96	91	88	93	90	86	91	88	85	89	86	84	82					82			
4	98	91	86	82	97	90	85	82	88	84	81	86	83	80	84	81	79	77					77			
5	94	86	81	77	92	85	80	76	83	79	76	82	78	75	80	77	74	73					73			
6	90	82	76	72	88	81	75	72	79	75	71	78	74	71	77	73	70	69					69			
7	86	77	72	68	85	77	71	68	75	71	67	74	70	67	73	69	67	65					65			
8	82	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	63	62					62			
9	79	70	65	61	78	70	64	61	69	64	61	68	64	60	67	63	60	59					59			
10	76	67	62	58	75	67	61	58	66	61	58	65	61	58	64	60	58	56					56			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	303180	303180	303180
5°	157028	215881	284452
10°	63538	101952	275633
15°	35545	62273	314246
20°	17362	42929	312526
25°	6232	23245	250744
30°	3313	10765	157236
35°	2298	5034	100462
40°	1990	3044	71151
45°	1774	2662	56796
50°	1673	2788	36120
55°	1407	2657	17503
60°	1434	1973	8964
65°	1486	1272	4455
70°	1572	1048	2620
75°	1385	1042	1734
80°	1032	1032	1032
85°	1037	1037	0



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CATALOG NUMBER: GRZ-15L-940-10x60-X-UNV-STD-4F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1123.2	19.3
10°-20°	1790.1	30.7
20°-30°	1506.6	25.9
30°-40°	761.3	13.1
40°-50°	386.2	6.6
50°-60°	174.6	3.0
60°-70°	58.1	1.0
70°-80°	22.1	0.4
80°-90°	3.8	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°	4420.0	75.9
0°-40°	5181.2	88.9
0°-60°	5742.0	98.6
0°-90°	5826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	18778	18778	18778	18778	18778	
5°	9689	10513	13320	16262	17551	725
15°	2126	2514	3726	8913	18800	599
25°	350	478	1305	4607	14075	194
35°	117	136	255	1931	5097	77
45°	78	87	117	601	2487	60
55°	50	64	94	229	622	47
65°	39	33	33	67	117	39
75°	22	22	17	22	28	23
85°	6	6	6	0	0	5
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°	18777.6	18777.6	18777.6	18777.6	18777.6	18777.6	18777.6	18777.6	18777.6	18777.6	18777.6
1°	17722.7	18416.7	18905.3	18189.1	18744.3	18405.6	18638.8	18261.3	18522.2	18733.2	18583.3
2°	16084.8	16967.6	16939.8	16856.6	17000.9	17717.2	18366.8	18305.7	18594.4	18472.3	18561.1
3°	14119.3	14591.3	14746.7	14985.5	15607.3	16312.4	17112.0	17817.1	18533.3	18677.7	18500.0
4°	11693.0	11865.1	12392.6	12459.2	13641.8	14646.8	15996.0	16795.5	18211.3	18444.5	18383.4
5°	9688.6	9638.7	10138.4	10638.1	12115.0	13319.8	14974.4	15807.2	17628.3	18261.3	17550.6
6°	7534.4	7939.7	8422.7	8889.1	10166.1	11687.4	13464.1	15363.0	17439.5	18005.9	17661.6
7°	6268.5	6351.7	6707.1	7073.5	8456.0	10260.5	11787.4	14191.5	16467.9	17628.3	17789.3
8°	5085.8	5085.8	5546.7	5879.8	7195.7	8489.4	10910.1	13097.7	15923.8	17617.2	16856.6
9°	4330.7	4430.7	4647.2	5174.7	5946.4	7345.6	9427.7	12098.3	15507.4	17295.2	17495.1
10°	3875.5	4008.7	4125.3	4325.2	5152.5	6218.5	8367.2	11126.7	15152.0	17311.8	16812.1
12.5°	2876.1	2948.2	3087.0	3320.2	3947.6	4597.2	6296.2	9211.1	13430.8	17611.7	18094.7
15°	2126.5	2148.7	2343.0	2570.7	3098.1	3725.5	4863.8	7645.4	12714.6	18139.1	18799.8
17.5°	1571.3	1599.0	1726.7	1937.7	2298.6	3092.6	4186.4	6312.9	11881.8	18100.3	19049.7
20°	1010.5	1043.8	1171.5	1338.1	1771.2	2498.5	3520.1	5208.0	10660.3	16801.0	18189.1
22.5°	599.6	633.0	677.4	838.4	1243.7	1871.1	2898.3	4480.6	8489.4	15068.7	16556.7
25°	349.8	344.2	394.2	505.3	760.7	1304.8	2365.2	3831.0	6934.7	12997.8	14074.9
27.5°	227.6	233.2	255.4	310.9	471.9	877.3	1865.5	3292.5	5446.7	9899.6	10993.4
30°	177.7	177.7	188.8	216.5	305.4	577.4	1404.7	2742.8	4491.8	7556.6	8433.8
32.5°	138.8	144.4	149.9	166.6	216.5	377.6	1010.5	2193.1	3658.9	5702.1	6418.4
35°	116.6	122.1	127.7	138.8	172.1	255.4	688.5	1610.1	2892.7	4325.2	5096.9
37.5°	105.5	105.5	111.0	116.6	144.4	183.2	449.7	1099.3	2209.8	3559.0	4014.3
40°	94.4	94.4	99.9	105.5	127.7	144.4	277.6	721.8	1721.2	2937.1	3375.8
42.5°	83.3	88.8	94.4	94.4	111.0	127.7	194.3	538.6	1399.2	2626.2	2931.6
45°	77.7	77.7	83.3	88.8	105.5	116.6	149.9	416.4	1154.9	2209.8	2487.4
47.5°	72.2	72.2	77.7	83.3	99.9	111.0	122.1	322.0	966.1	1787.8	1982.1
50°	66.6	66.6	72.2	83.3	94.4	111.0	99.9	244.3	771.8	1338.1	1438.0
52.5°	55.5	61.1	66.6	72.2	83.3	105.5	83.3	188.8	638.5	938.3	943.9
55°	50.0	50.0	55.5	66.6	72.2	94.4	66.6	138.8	499.7	644.1	621.8
57.5°	50.0	44.4	50.0	55.5	61.1	83.3	50.0	105.5	372.0	433.1	399.8
60°	44.4	44.4	44.4	44.4	50.0	61.1	38.9	83.3	272.1	288.7	277.6
62.5°	38.9	38.9	38.9	38.9	38.9	50.0	33.3	61.1	183.2	183.2	172.1
65°	38.9	38.9	33.3	33.3	33.3	33.3	27.8	50.0	116.6	116.6	116.6
67.5°	38.9	33.3	33.3	27.8	27.8	27.8	22.2	38.9	72.2	83.3	77.7
70°	33.3	33.3	27.8	27.8	22.2	22.2	22.2	33.3	50.0	55.5	55.5
72.5°	27.8	27.8	27.8	22.2	22.2	16.7	16.7	27.8	38.9	38.9	38.9
75°	22.2	22.2	22.2	22.2	16.7	16.7	11.1	22.2	22.2	27.8	27.8
77.5°	16.7	16.7	16.7	16.7	16.7	11.1	11.1	16.7	16.7	16.7	16.7
80°	11.1	11.1	11.1	11.1	11.1	11.1	5.6	11.1	11.1	11.1	11.1
82.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
85°	5.6	5.6	5.6	5.6	5.6	5.6	0.0	0.0	0.0	0.0	0.0
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)