

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: P591937

Luminaire Tested: **GRZ-05L-927-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591937
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-05L-927-10x10-X-UNV-STD-4F
Description: iO LED GRAZER WITH 10x10 OPTIC
500 LUMENS PER FOOT, 4 FOOT FIXTURE
SCALED BASED ON PHOTOMETRIC TESTING
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

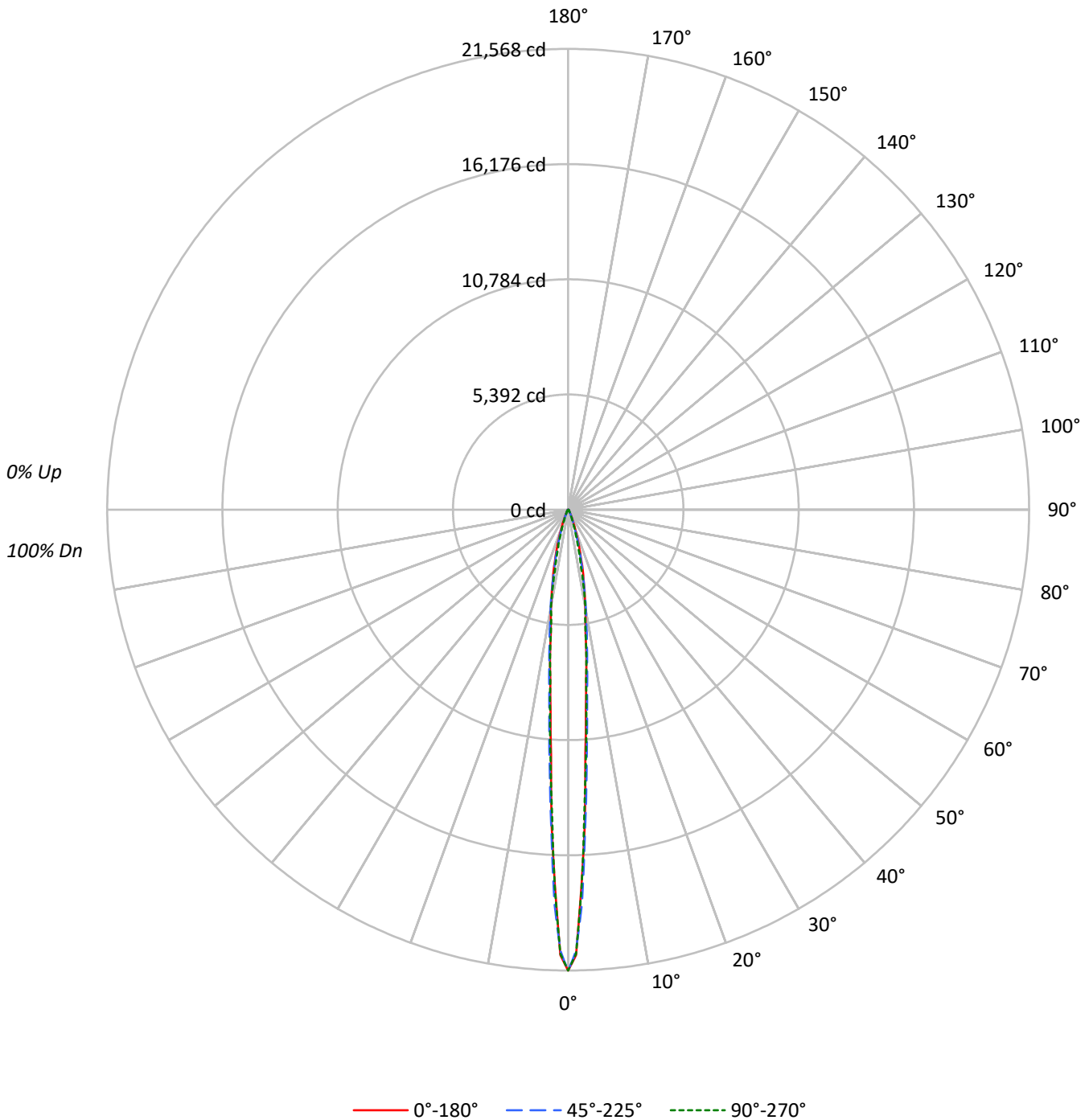
Lumens per Lamp: N/A
Luminaire Lumens: 1726.0 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	115	113	111	109	113	111	109	107	107	105	104		103	102	101		100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	99		100	98	96		97	96	95	93
3	108	103	99	96	106	102	98	96	99	96	94		97	95	93		95	93	91	90
4	104	99	95	92	103	98	94	92	96	93	91		94	92	90		93	90	89	87
5	102	96	92	89	100	95	91	88	93	90	88		92	89	87		90	88	86	85
6	99	93	89	86	98	92	88	86	91	88	85		90	87	85		88	86	84	83
7	96	90	86	83	95	90	86	83	89	85	83		88	85	82		87	84	82	81
8	94	88	84	81	93	87	84	81	86	83	81		86	83	80		85	82	80	79
9	92	86	82	79	91	85	82	79	85	81	79		84	81	79		83	80	78	78
10	90	84	80	77	89	83	80	77	83	79	77		82	79	77		82	79	77	76

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	348230	348230	348230
5°	153347	163698	158101
10°	75572	77800	76238
15°	38123	35127	30272
20°	15996	13548	11507
25°	6486	5428	4571
30°	3095	2761	2444
35°	1951	1711	1358
40°	1391	1273	955
45°	1249	1098	797
50°	1186	1042	615
55°	1061	929	532
60°	853	730	517
65°	829	722	539
70°	845	713	491
75°	767	705	468
80°	697	614	437
85°	519	519	352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	810.6	47.0
10°-20°	599.4	34.7
20°-30°	163.5	9.5
30°-40°	57.8	3.3
40°-50°	36.4	2.1
50°-60°	27.0	1.6
60°-70°	17.8	1.0
70°-80°	10.7	0.6
80°-90°	2.8	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°	1573.5	91.2
0°-40°	1631.3	94.5
0°-60°	1694.7	98.2
0°-90°	1726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	21568	21568	21568	21568	21568	
5°	9462	9879	10100	9726	9755	786
15°	2281	2252	2102	1860	1811	646
25°	364	358	305	270	257	192
35°	99	97	87	79	69	64
45°	55	53	48	41	35	42
55°	38	36	33	24	19	34
65°	22	19	19	16	14	22
75°	12	10	11	9	8	13
85°	3	2	3	2	2	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	21567.8	21567.8	21567.8	21567.8	21567.8
1°	20846.2	20429.3	20671.7	20662.3	20783.0
2°	17636.4	18941.9	18433.5	18377.8	17798.7
3°	14754.9	15332.1	15009.6	15199.1	14291.8
4°	11488.5	12209.1	12319.5	12071.4	11751.7
5°	9461.5	9879.4	10100.1	9725.6	9754.8
6°	7969.3	8498.5	8465.5	8475.8	8056.1
7°	6981.8	7257.2	7296.8	7057.2	6943.1
8°	5851.8	6326.2	6289.4	6109.3	5853.7
9°	5216.0	5507.5	5461.3	5139.6	5046.3
10°	4609.5	4769.9	4745.4	4391.7	4650.1
12.5°	3319.2	3334.3	3172.1	2979.7	2825.9
15°	2280.7	2251.5	2101.5	1860.0	1811.0
17.5°	1497.8	1501.6	1298.8	1116.8	1088.5
20°	931.0	936.6	788.5	687.6	669.7
22.5°	585.7	560.3	468.8	426.3	415.0
25°	364.1	357.5	304.7	269.8	256.6
27.5°	246.2	241.5	198.1	182.0	181.1
30°	166.0	172.6	148.1	134.9	131.1
32.5°	125.4	125.4	115.1	105.6	95.3
35°	99.0	97.2	86.8	79.2	68.9
37.5°	75.5	79.2	69.8	64.1	53.8
40°	66.0	66.0	60.4	52.8	45.3
42.5°	58.5	60.4	52.8	45.3	37.7
45°	54.7	52.8	48.1	40.6	34.9
47.5°	50.0	49.0	44.3	35.8	30.2
50°	47.2	45.3	41.5	32.1	24.5
52.5°	44.3	41.5	37.7	28.3	20.8
55°	37.7	35.8	33.0	24.5	18.9
57.5°	33.0	29.2	27.4	20.8	17.0
60°	26.4	23.6	22.6	18.9	16.0
62.5°	23.6	21.7	20.8	17.9	15.1
65°	21.7	18.9	18.9	16.0	14.1
67.5°	19.8	17.0	17.0	14.1	12.3
70°	17.9	15.1	15.1	12.3	10.4
72.5°	15.1	12.3	13.2	10.4	9.4
75°	12.3	10.4	11.3	9.4	7.5
77.5°	10.4	8.5	8.5	7.5	5.7
80°	7.5	6.6	6.6	5.7	4.7
82.5°	4.7	3.8	4.7	3.8	2.8
85°	2.8	1.9	2.8	1.9	1.9
87.5°	0.9	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)