

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: P592068

Luminaire Tested: **GRZ-15L-927-10x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592068  
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-15L-927-10x30-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 10x30 OPTIC  
1500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

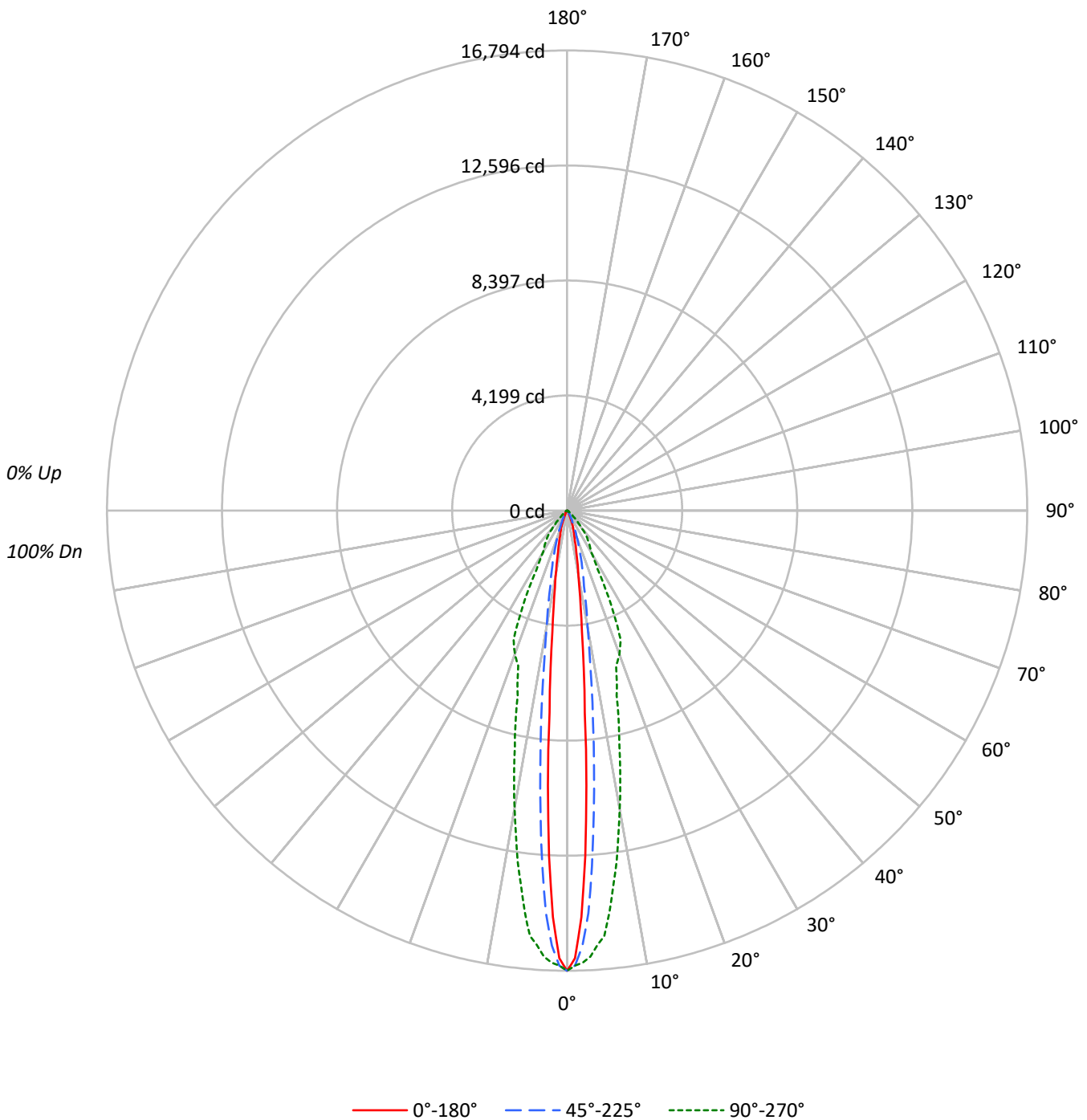
Lumens per Lamp: N/A  
Luminaire Lumens: 2662.0 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 0.16 / 0.44 / 0.26  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	542313	542313	542313
5°	240195	360656	505179
10°	77932	140701	362203
15°	34006	69513	233518
20°	19151	35553	191686
25°	6855	15759	135704
30°	4195	8106	65603
35°	3154	5223	52607
40°	2529	3794	34764
45°	2169	2283	17692
50°	2512	1382	8284
55°	2674	1126	4082
60°	2260	969	2422
65°	1910	1146	1910
70°	1652	1180	1652
75°	1248	936	1248
80°	930	930	930
85°	926	926	926



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	893.3	33.6
10°-20°	872.3	32.8
20°-30°	488.9	18.4
30°-40°	220.8	8.3
40°-50°	111.6	4.2
50°-60°	41.6	1.6
60°-70°	20.7	0.8
70°-80°	10.7	0.4
80°-90°	2.1	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°	2254.5	84.7
0°-40°	2475.3	93.0
0°-60°	2628.6	98.7
0°-90°	2662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2662.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16794	16794	16794	16794	16794	
5°	7410	8496	11126	14281	15585	566
15°	1017	1255	2079	4547	6985	314
25°	192	215	442	1651	3809	109
35°	80	54	132	527	1334	51
45°	48	41	50	237	387	40
55°	48	23	20	73	72	41
65°	25	19	15	22	25	25
75°	10	12	8	8	10	11
85°	2	2	2	1	2	2
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°	16794.2	16794.2	16794.2	16794.2	16794.2	16794.2	16794.2	16794.2	16794.2	16794.2	16794.2
1°	16336.9	16339.4	16461.9	16381.9	16576.8	16604.3	16579.3	16624.3	16636.8	16566.8	16604.3
2°	14842.4	14887.4	14959.9	15379.7	15572.2	15884.5	16147.0	16371.9	16469.3	16509.3	16504.3
3°	12635.7	12605.7	12963.1	13365.4	14055.2	14710.0	15354.7	15779.6	16154.5	16274.4	16296.9
4°	10064.0	9946.6	10558.9	10898.8	11830.9	13008.0	14157.6	15074.8	15692.1	15947.0	15887.0
5°	7410.0	7617.4	8044.7	8647.0	9664.2	11126.2	12663.2	14037.7	15012.3	15442.2	15584.7
6°	5773.0	5733.0	6077.9	6812.7	7839.8	9409.3	11166.2	12890.6	14102.7	14620.0	14742.4
7°	4453.5	4428.5	4770.9	5293.2	6155.4	7769.8	9714.2	11728.5	13215.5	13800.3	13795.3
8°	3528.8	3513.8	3751.2	4163.6	4978.3	6342.8	8277.2	10448.9	12153.3	12940.6	12940.6
9°	2851.5	2884.0	3029.0	3393.8	4036.1	5178.2	7075.1	9364.3	11113.7	11883.4	11950.9
10°	2376.7	2394.2	2511.6	2811.5	3346.4	4291.0	5945.5	8102.2	10089.0	11063.7	11046.2
12.5°	1542.0	1579.5	1664.4	1856.9	2246.7	2836.5	3951.1	5680.6	7689.9	8664.5	8829.5
15°	1017.2	1024.6	1129.6	1297.1	1606.9	2079.3	2859.0	4148.6	5740.5	6845.2	6985.1
17.5°	759.7	767.2	792.2	892.2	1119.6	1522.0	2154.3	3153.9	4665.9	5780.5	5940.5
20°	557.3	532.3	524.8	582.3	759.7	1034.6	1572.0	2459.2	3786.2	5290.7	5578.1
22.5°	324.9	319.9	307.4	354.9	489.8	679.8	1069.6	1836.9	3201.4	4710.9	5108.2
25°	192.4	187.4	184.9	224.9	307.4	442.3	729.7	1389.5	2436.7	3463.8	3808.7
27.5°	140.0	135.0	122.5	140.0	202.4	304.9	514.8	1004.7	1671.9	2226.7	2414.2
30°	112.5	107.5	85.0	92.5	140.0	217.4	377.4	694.8	1187.1	1654.4	1759.4
32.5°	95.0	90.0	65.0	67.5	97.5	164.9	294.9	534.8	959.7	1432.0	1549.5
35°	80.0	75.0	52.5	55.0	75.0	132.5	242.4	439.8	787.2	1232.1	1334.5
37.5°	67.5	62.5	45.0	47.5	65.0	110.0	219.9	379.9	652.3	1012.2	1112.1
40°	60.0	55.0	40.0	45.0	60.0	90.0	194.9	322.4	534.8	782.2	824.7
42.5°	52.5	47.5	40.0	45.0	55.0	70.0	142.5	257.4	434.9	562.3	597.3
45°	47.5	45.0	37.5	42.5	47.5	50.0	90.0	199.9	349.9	387.4	387.4
47.5°	50.0	45.0	35.0	37.5	37.5	37.5	55.0	157.4	272.4	262.4	254.9
50°	50.0	42.5	32.5	30.0	30.0	27.5	37.5	122.5	202.4	167.4	164.9
52.5°	50.0	42.5	30.0	27.5	25.0	22.5	27.5	92.5	142.5	107.5	107.5
55°	47.5	40.0	25.0	22.5	20.0	20.0	22.5	65.0	97.5	75.0	72.5
57.5°	42.5	35.0	22.5	20.0	20.0	17.5	17.5	42.5	75.0	57.5	50.0
60°	35.0	30.0	20.0	20.0	20.0	15.0	15.0	27.5	60.0	42.5	37.5
62.5°	30.0	25.0	20.0	20.0	20.0	15.0	12.5	20.0	50.0	35.0	30.0
65°	25.0	20.0	17.5	20.0	20.0	15.0	10.0	15.0	42.5	27.5	25.0
67.5°	20.0	17.5	15.0	17.5	17.5	12.5	7.5	10.0	35.0	22.5	20.0
70°	17.5	15.0	12.5	15.0	17.5	12.5	7.5	10.0	27.5	17.5	17.5
72.5°	12.5	12.5	12.5	15.0	15.0	10.0	5.0	7.5	22.5	15.0	15.0
75°	10.0	10.0	10.0	12.5	12.5	7.5	5.0	5.0	17.5	12.5	10.0
77.5°	7.5	7.5	7.5	10.0	10.0	5.0	2.5	5.0	12.5	7.5	7.5
80°	5.0	5.0	5.0	7.5	7.5	5.0	2.5	2.5	7.5	5.0	5.0
82.5°	2.5	2.5	2.5	5.0	5.0	2.5	2.5	2.5	2.5	2.5	2.5
85°	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	2.5	2.5	2.5
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)