

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: P592017

Luminaire Tested: **GRZ-10L-930-10x10-X-UNV-STD-4F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P592017  
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-930-10x10-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: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

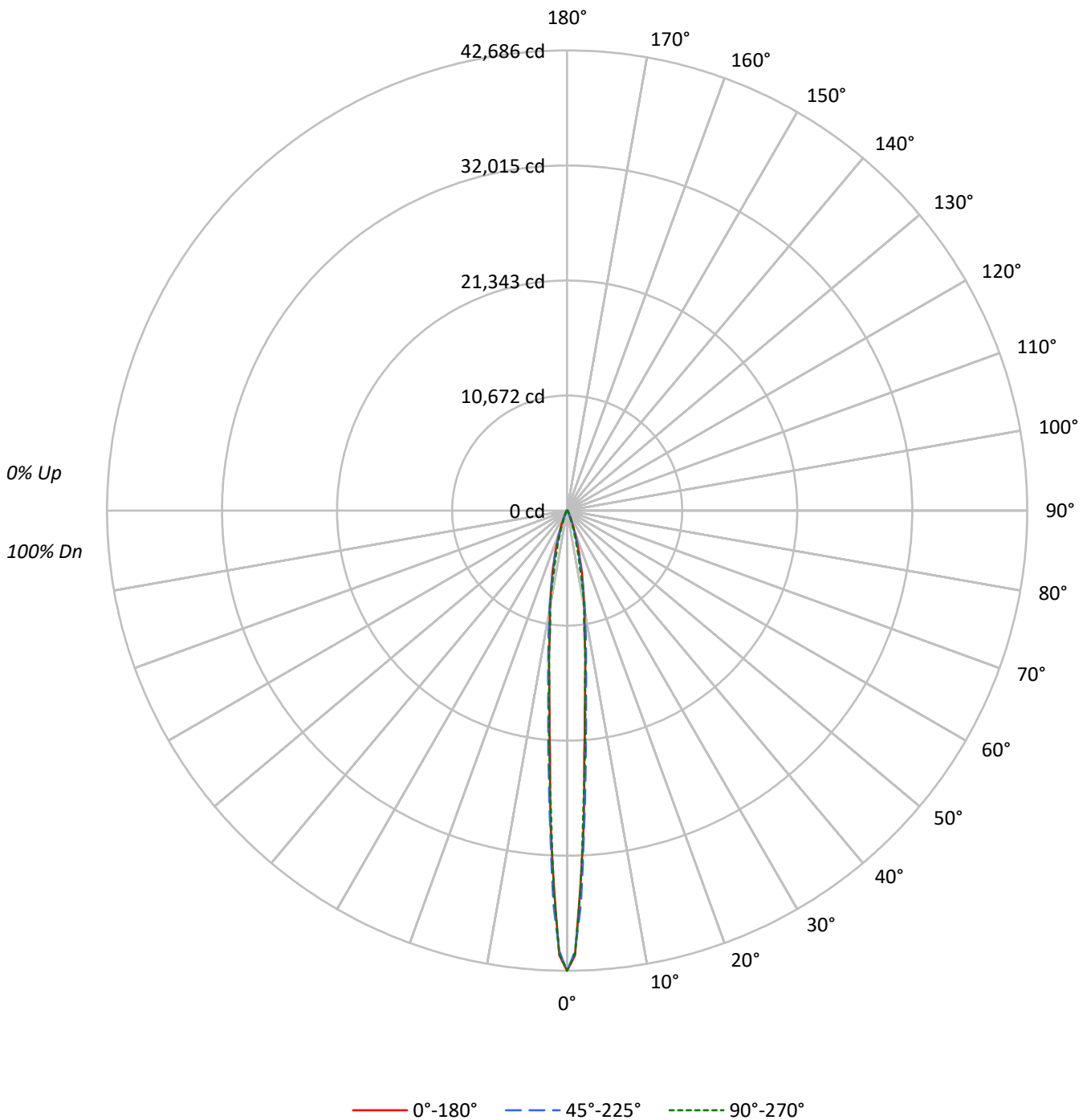
Lumens per Lamp: N/A  
Luminaire Lumens: 3416.0 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Spacing Criteria (0/90/45): 0.15 / 0.16 / 0.22  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 38  
Input Voltage (V): 120  
Input Current (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	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°	689198	689198	689198
5°	303497	323980	312906
10°	149571	153978	150886
15°	75452	69523	59911
20°	31658	26814	22773
25°	12837	10742	9046
30°	6126	5464	4838
35°	3863	3384	2687
40°	2755	2519	1888
45°	2473	2174	1578
50°	2344	2062	1218
55°	2103	1838	1050
60°	1689	1447	1024
65°	1639	1425	1070
70°	1676	1411	968
75°	1516	1397	930
80°	1385	1218	865
85°	1037	1037	685



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1604.2	47.0
10°-20°	1186.2	34.7
20°-30°	323.7	9.5
30°-40°	114.4	3.3
40°-50°	72.1	2.1
50°-60°	53.5	1.6
60°-70°	35.1	1.0
70°-80°	21.2	0.6
80°-90°	5.6	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°	3114.1	91.2
0°-40°	3228.5	94.5
0°-60°	3354.1	98.2
0°-90°	3416.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3416.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	42686	42686	42686	42686	42686	
5°	18726	19553	19990	19248	19306	1555
15°	4514	4456	4159	3681	3584	1279
25°	721	708	603	534	508	380
35°	196	192	172	157	136	127
45°	108	104	95	80	69	84
55°	75	71	65	48	37	67
65°	43	37	37	32	28	43
75°	24	20	22	19	15	26
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°	42685.8	42685.8	42685.8	42685.8	42685.8
1°	41257.7	40432.6	40912.3	40893.7	41132.6
2°	34905.0	37488.7	36482.5	36372.3	35226.1
3°	29202.0	30344.5	29706.1	30081.3	28285.4
4°	22737.4	24163.6	24382.0	23891.0	23258.2
5°	18725.7	19552.6	19989.5	19248.4	19306.2
6°	15772.4	16819.7	16754.3	16774.9	15944.2
7°	13817.9	14363.0	14441.4	13967.2	13741.4
8°	11581.5	12520.5	12447.7	12091.1	11585.2
9°	10323.3	10900.1	10808.7	10172.1	9987.3
10°	9123.0	9440.3	9391.8	8691.7	9203.2
12.5°	6569.2	6599.1	6278.0	5897.2	5592.9
15°	4513.9	4456.0	4159.2	3681.3	3584.2
17.5°	2964.4	2971.9	2570.6	2210.3	2154.3
20°	1842.5	1853.7	1560.6	1360.9	1325.4
22.5°	1159.3	1108.9	927.8	843.8	821.4
25°	720.6	707.5	603.0	533.9	507.8
27.5°	487.2	477.9	392.0	360.3	358.4
30°	328.6	341.6	293.1	266.9	259.5
32.5°	248.3	248.3	227.7	209.1	188.5
35°	196.0	192.3	171.7	156.8	136.3
37.5°	149.3	156.8	138.1	126.9	106.4
40°	130.7	130.7	119.5	104.5	89.6
42.5°	115.7	119.5	104.5	89.6	74.7
45°	108.3	104.5	95.2	80.3	69.1
47.5°	98.9	97.1	87.7	70.9	59.7
50°	93.3	89.6	82.1	63.5	48.5
52.5°	87.7	82.1	74.7	56.0	41.1
55°	74.7	70.9	65.3	48.5	37.3
57.5°	65.3	57.9	54.1	41.1	33.6
60°	52.3	46.7	44.8	37.3	31.7
62.5°	46.7	42.9	41.1	35.5	29.9
65°	42.9	37.3	37.3	31.7	28.0
67.5°	39.2	33.6	33.6	28.0	24.3
70°	35.5	29.9	29.9	24.3	20.5
72.5°	29.9	24.3	26.1	20.5	18.7
75°	24.3	20.5	22.4	18.7	14.9
77.5°	20.5	16.8	16.8	14.9	11.2
80°	14.9	13.1	13.1	11.2	9.3
82.5°	9.3	7.5	9.3	7.5	5.6
85°	5.6	3.7	5.6	3.7	3.7
87.5°	1.9	1.9	1.9	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)