

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: P591946

Luminaire Tested: **GRZ-05L-927-30x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591946  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-05L-927-30x60-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 30x60 OPTIC  
500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

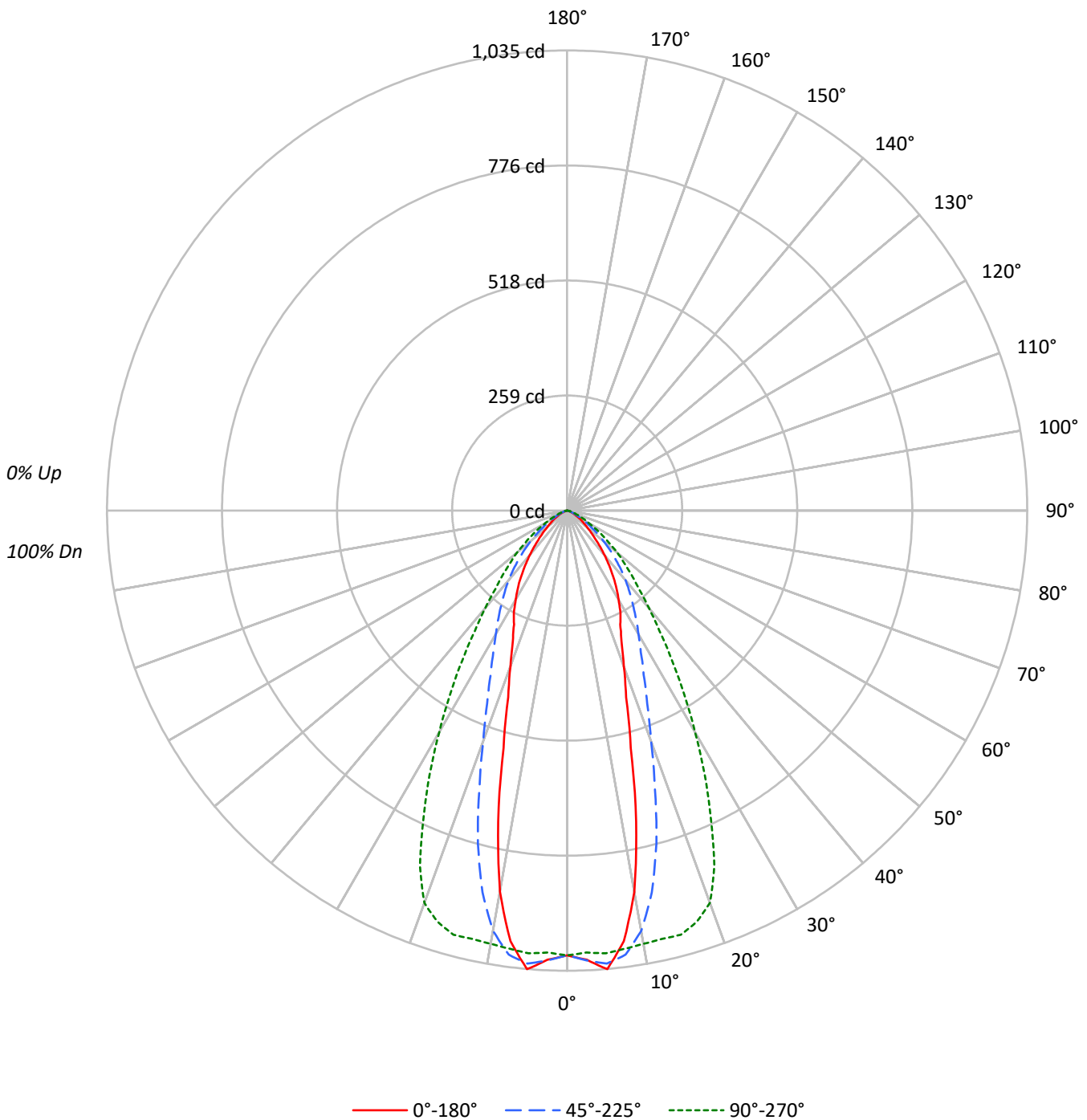
Lumens per Lamp: N/A  
Luminaire Lumens: 918.0 lumens  
Efficiency: N/A  
Efficacy: 95.6 lumens/watt  
Spacing Criteria (0/90/45): 0.53 / 1.01 / 0.76  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.6  
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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92					92			
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83					83			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69					69			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64					64			
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60	59					59			
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54					54			
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51					51			
9	71	60	54	49	70	60	53	49	59	53	49	58	53	49	57	52	49	47					47			
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	54	49	46	44					44			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	32301	32301	32301
5°	33563	33154	32396
10°	28547	31472	32446
15°	18481	25916	33020
20°	12807	18935	32271
25°	10073	14501	27268
30°	8628	11951	21451
35°	7100	10151	16186
40°	5505	8616	12069
45°	4069	6951	9334
50°	2984	5335	7420
55°	2229	3800	5422
60°	1569	2558	3662
65°	1100	1650	2476
70°	765	1105	1614
75°	561	674	1123
80°	335	502	837
85°	333	333	333



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.6	10.3
10°-20°	215.5	23.5
20°-30°	220.3	24.0
30°-40°	176.3	19.2
40°-50°	117.8	12.8
50°-60°	62.1	6.8
60°-70°	23.5	2.6
70°-80°	6.9	0.8
80°-90°	1.0	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°	530.4	57.8
0°-40°	706.6	77.0
0°-60°	886.6	96.6
0°-90°	918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	918.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	1035	1020	1023	1007	999	93
15°	553	610	775	941	988	158
25°	283	305	407	669	765	133
35°	180	196	258	373	411	112
45°	89	103	152	201	204	70
55°	40	45	68	92	96	36
65°	14	16	22	29	32	15
75°	4	4	5	7	9	5
85°	1	1	1	1	1	1
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°	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3
2.5°	1011.1	1010.2	1020.1	1012.9	1015.6	1012.9	1004.8	1000.3	999.4	990.4	994.9
5°	1035.4	1021.0	1023.7	1019.2	1023.7	1022.8	1013.8	1008.4	1003.9	998.5	999.4
7.5°	976.9	978.7	986.8	990.4	1003.0	1007.5	1003.0	999.4	995.8	993.1	994.0
10°	870.6	876.9	888.6	912.1	938.2	959.8	968.8	978.7	986.8	987.7	989.5
12.5°	716.7	725.7	744.6	769.8	827.4	879.6	923.8	958.0	977.8	988.6	986.8
15°	552.8	555.5	578.9	620.3	683.4	775.2	862.5	931.9	967.9	993.1	987.7
17.5°	440.3	443.9	462.8	494.3	554.6	656.4	786.9	890.4	956.2	974.2	969.7
20°	372.7	370.0	384.4	410.6	461.0	551.0	687.0	825.6	908.5	933.7	939.1
22.5°	318.7	321.4	330.4	351.1	395.3	470.0	594.2	741.0	832.8	860.7	865.2
25°	282.7	285.4	294.4	308.8	344.8	407.0	514.1	646.4	736.5	763.5	765.3
27.5°	259.3	257.5	263.8	274.6	306.1	359.2	447.5	557.3	641.0	668.1	669.9
30°	231.4	230.5	236.8	248.5	273.7	320.5	395.3	484.4	543.8	569.9	575.3
32.5°	206.2	205.3	212.5	222.4	247.6	288.1	352.9	422.3	462.8	484.4	489.8
35°	180.1	181.0	186.4	199.0	221.5	257.5	316.9	365.5	394.4	405.2	410.6
37.5°	154.9	155.8	163.0	175.6	198.1	230.5	278.2	316.0	333.1	341.2	340.3
40°	130.6	132.4	136.9	151.3	173.8	204.4	243.1	271.0	282.7	283.6	286.3
42.5°	108.9	108.9	116.1	127.8	149.5	178.3	212.5	232.3	241.3	240.4	238.6
45°	89.1	90.0	94.5	106.2	126.0	152.2	181.9	199.9	205.3	201.7	204.4
47.5°	72.9	73.8	77.4	88.2	105.3	130.6	154.0	171.1	175.6	172.9	172.9
50°	59.4	60.3	63.0	71.1	85.5	106.2	127.8	142.3	146.8	145.9	147.7
52.5°	48.6	48.6	51.3	57.6	69.3	86.4	103.5	116.1	119.7	118.8	117.9
55°	39.6	39.6	41.4	45.9	54.9	67.5	81.9	91.8	94.5	95.4	96.3
57.5°	31.5	31.5	32.4	36.0	42.3	52.2	63.0	70.2	72.9	73.8	74.7
60°	24.3	24.3	26.1	27.9	33.3	39.6	46.8	52.2	55.8	55.8	56.7
62.5°	18.9	18.9	19.8	21.6	25.2	29.7	34.2	38.7	40.5	42.3	43.2
65°	14.4	14.4	15.3	16.2	18.9	21.6	25.2	28.8	30.6	31.5	32.4
67.5°	10.8	10.8	10.8	12.6	14.4	16.2	18.0	20.7	21.6	23.4	24.3
70°	8.1	8.1	8.1	9.0	9.9	11.7	12.6	14.4	16.2	17.1	17.1
72.5°	6.3	6.3	6.3	6.3	7.2	8.1	9.0	9.9	11.7	12.6	12.6
75°	4.5	4.5	4.5	4.5	5.4	5.4	6.3	7.2	8.1	9.0	9.0
77.5°	3.6	3.6	2.7	3.6	3.6	3.6	4.5	4.5	5.4	6.3	6.3
80°	1.8	1.8	1.8	1.8	2.7	2.7	2.7	3.6	3.6	3.6	4.5
82.5°	0.9	0.9	0.9	0.9	1.8	1.8	1.8	1.8	1.8	2.7	2.7
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)