

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: P591942

Luminaire Tested: **GRZ-05L-927-10x60-X-UNV-STD-2F**

Issue Date: 2/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P591942
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-05L-927-10x60-X-UNV-STD-2F
Description: iO LED GRAZER WITH 10x60 OPTIC
500 LUMENS PER FOOT, 2 FOOT FIXTURE
SUMULATED RESULTS
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

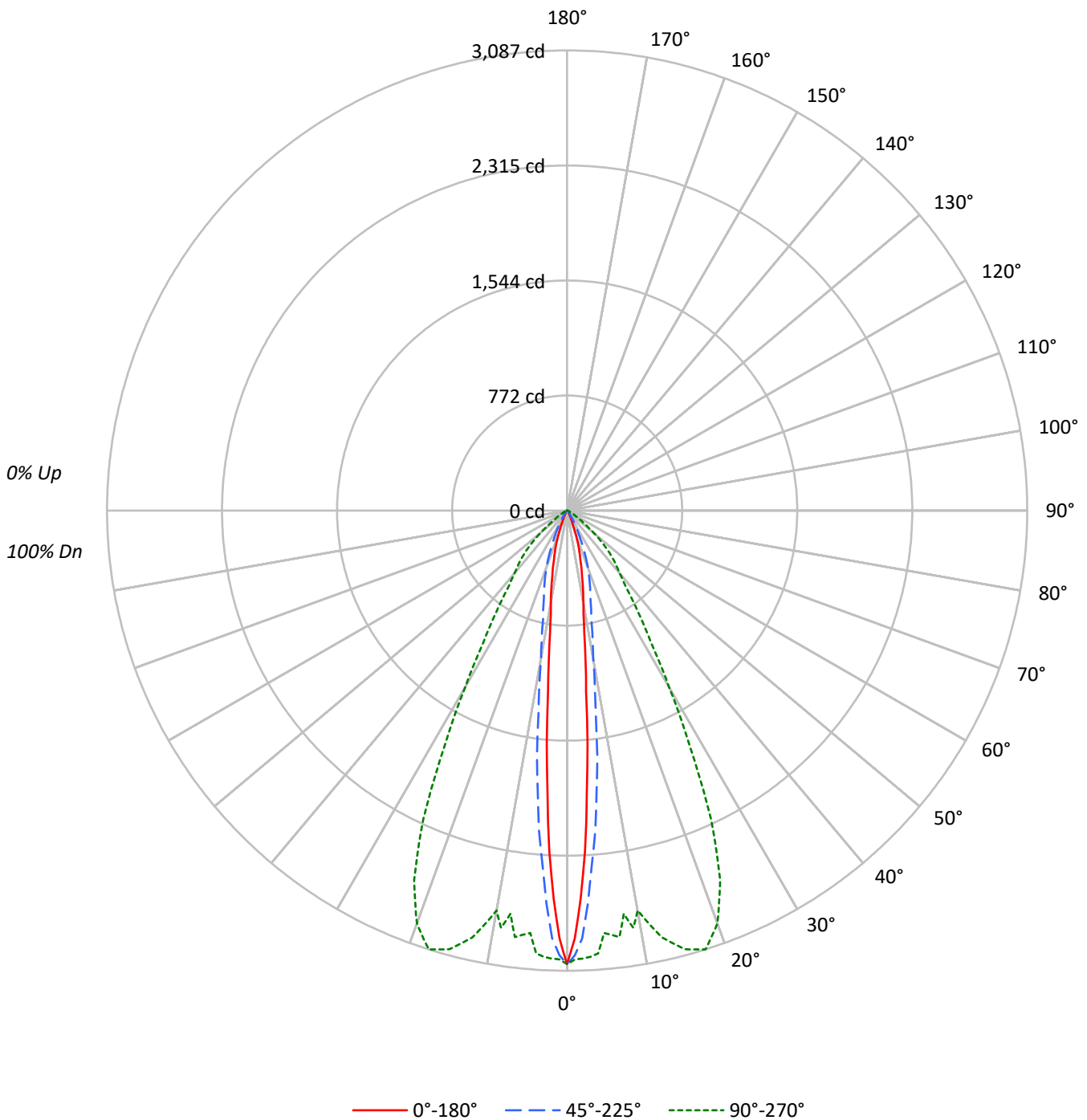
Lumens per Lamp: N/A
Luminaire Lumens: 944.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 0.18 / 0.97 / 0.31
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
Input Voltage (V): 120
Input Current (A_{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



TEST NUMBER: P591942
CATALOG NUMBER: GRZ-05L-927-10x60-X-UNV-STD-2F

Luminous Intensity Polar Plot





TEST NUMBER: P591942

CATALOG NUMBER: GRZ-05L-927-10x60-X-UNV-STD-2F

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°	98251	98251	98251
5°	50888	69958	92182
10°	20589	33039	89323
15°	11520	20182	101837
20°	5625	13911	101278
25°	2020	7532	81258
30°	1074	3490	50957
35°	745	1632	32558
40°	645	986	23058
45°	575	863	18404
50°	543	904	11705
55°	456	861	5675
60°	465	639	2906
65°	481	413	1444
70°	510	340	850
75°	449	337	561
80°	335	335	335
85°	333	333	0



TEST NUMBER: P591942

CATALOG NUMBER: GRZ-05L-927-10x60-X-UNV-STD-2F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	19.3
10°-20°	290.1	30.7
20°-30°	244.1	25.9
30°-40°	123.4	13.1
40°-50°	62.6	6.6
50°-60°	28.3	3.0
60°-70°	9.4	1.0
70°-80°	3.6	0.4
80°-90°	0.6	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°	716.2	75.9
0°-40°	839.5	88.9
0°-60°	930.4	98.6
0°-90°	944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3043	3043	3043	3043	3043	
5°	1570	1703	2158	2635	2844	117
15°	345	407	604	1444	3046	97
25°	57	77	211	747	2281	31
35°	19	22	41	313	826	12
45°	13	14	19	97	403	10
55°	8	10	15	37	101	8
65°	6	5	5	11	19	6
75°	4	4	3	4	4	4
85°	1	1	1	0	0	1
90°	0	0	0	0	0	



TEST NUMBER: P591942

CATALOG NUMBER: GRZ-05L-927-10x60-X-UNV-STD-2F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6
1°	2871.7	2984.1	3063.3	2947.2	3037.2	2982.3	3020.1	2958.9	3001.2	3035.4	3011.1
2°	2606.3	2749.3	2744.8	2731.3	2754.7	2870.8	2976.0	2966.1	3012.9	2993.1	3007.5
3°	2287.8	2364.3	2389.4	2428.1	2528.9	2643.1	2772.7	2886.9	3003.0	3026.4	2997.6
4°	1894.6	1922.5	2008.0	2018.8	2210.4	2373.3	2591.9	2721.4	2950.8	2988.6	2978.7
5°	1569.9	1561.8	1642.7	1723.7	1963.0	2158.2	2426.3	2561.3	2856.4	2958.9	2843.8
6°	1220.8	1286.5	1364.8	1440.3	1647.2	1893.7	2181.6	2489.3	2825.8	2917.5	2861.8
7°	1015.7	1029.2	1086.8	1146.1	1370.2	1662.5	1909.9	2299.5	2668.3	2856.4	2882.4
8°	824.1	824.1	898.7	952.7	1165.9	1375.5	1767.8	2122.3	2580.2	2854.6	2731.3
9°	701.7	717.9	753.0	838.5	963.5	1190.2	1527.6	1960.3	2512.7	2802.4	2834.8
10°	627.9	649.5	668.4	700.8	834.9	1007.6	1355.8	1802.9	2455.1	2805.1	2724.1
12.5°	466.0	477.7	500.2	538.0	639.6	744.9	1020.2	1492.5	2176.2	2853.7	2931.9
15°	344.6	348.2	379.6	416.5	502.0	603.7	788.1	1238.8	2060.2	2939.1	3046.2
17.5°	254.6	259.1	279.8	314.0	372.5	501.1	678.3	1022.9	1925.2	2932.8	3086.7
20°	163.7	169.1	189.8	216.8	287.0	404.8	570.4	843.9	1727.3	2722.3	2947.2
22.5°	97.2	102.6	109.8	135.8	201.5	303.2	469.6	726.0	1375.5	2441.6	2682.7
25°	56.7	55.8	63.9	81.9	123.3	211.4	383.2	620.8	1123.7	2106.1	2280.6
27.5°	36.9	37.8	41.4	50.4	76.5	142.1	302.3	533.5	882.5	1604.1	1781.3
30°	28.8	28.8	30.6	35.1	49.5	93.6	227.6	444.4	727.8	1224.4	1366.6
32.5°	22.5	23.4	24.3	27.0	35.1	61.2	163.7	355.4	592.9	923.9	1040.0
35°	18.9	19.8	20.7	22.5	27.9	41.4	111.6	260.9	468.7	700.8	825.9
37.5°	17.1	17.1	18.0	18.9	23.4	29.7	72.9	178.1	358.1	576.7	650.4
40°	15.3	15.3	16.2	17.1	20.7	23.4	45.0	117.0	278.9	475.9	547.0
42.5°	13.5	14.4	15.3	15.3	18.0	20.7	31.5	87.3	226.7	425.5	475.0
45°	12.6	12.6	13.5	14.4	17.1	18.9	24.3	67.5	187.1	358.1	403.0
47.5°	11.7	11.7	12.6	13.5	16.2	18.0	19.8	52.2	156.5	289.7	321.2
50°	10.8	10.8	11.7	13.5	15.3	18.0	16.2	39.6	125.0	216.8	233.0
52.5°	9.0	9.9	10.8	11.7	13.5	17.1	13.5	30.6	103.5	152.0	152.9
55°	8.1	8.1	9.0	10.8	11.7	15.3	10.8	22.5	81.0	104.4	100.8
57.5°	8.1	7.2	8.1	9.0	9.9	13.5	8.1	17.1	60.3	70.2	64.8
60°	7.2	7.2	7.2	7.2	8.1	9.9	6.3	13.5	44.1	46.8	45.0
62.5°	6.3	6.3	6.3	6.3	6.3	8.1	5.4	9.9	29.7	29.7	27.9
65°	6.3	6.3	5.4	5.4	5.4	5.4	4.5	8.1	18.9	18.9	18.9
67.5°	6.3	5.4	5.4	4.5	4.5	4.5	3.6	6.3	11.7	13.5	12.6
70°	5.4	5.4	4.5	4.5	3.6	3.6	3.6	5.4	8.1	9.0	9.0
72.5°	4.5	4.5	4.5	3.6	3.6	2.7	2.7	4.5	6.3	6.3	6.3
75°	3.6	3.6	3.6	3.6	2.7	2.7	1.8	3.6	3.6	4.5	4.5
77.5°	2.7	2.7	2.7	2.7	2.7	1.8	1.8	2.7	2.7	2.7	2.7
80°	1.8	1.8	1.8	1.8	1.8	1.8	0.9	1.8	1.8	1.8	1.8
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.9	0.9	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)