

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: P591976

Luminaire Tested: **GRZ-05L-935-17x30-X-UNV-STD-2F**

Issue Date: 2/2/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P591976  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2111-457-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/2/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: iO LED  
Catalog Number: GRZ-05L-935-17x30-X-UNV-STD-2F  
Description: iO LED GRAZER WITH 17x30 OPTIC  
500 LUMENS PER FOOT, 2 FOOT FIXTURE  
SUMULATED RESULTS  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

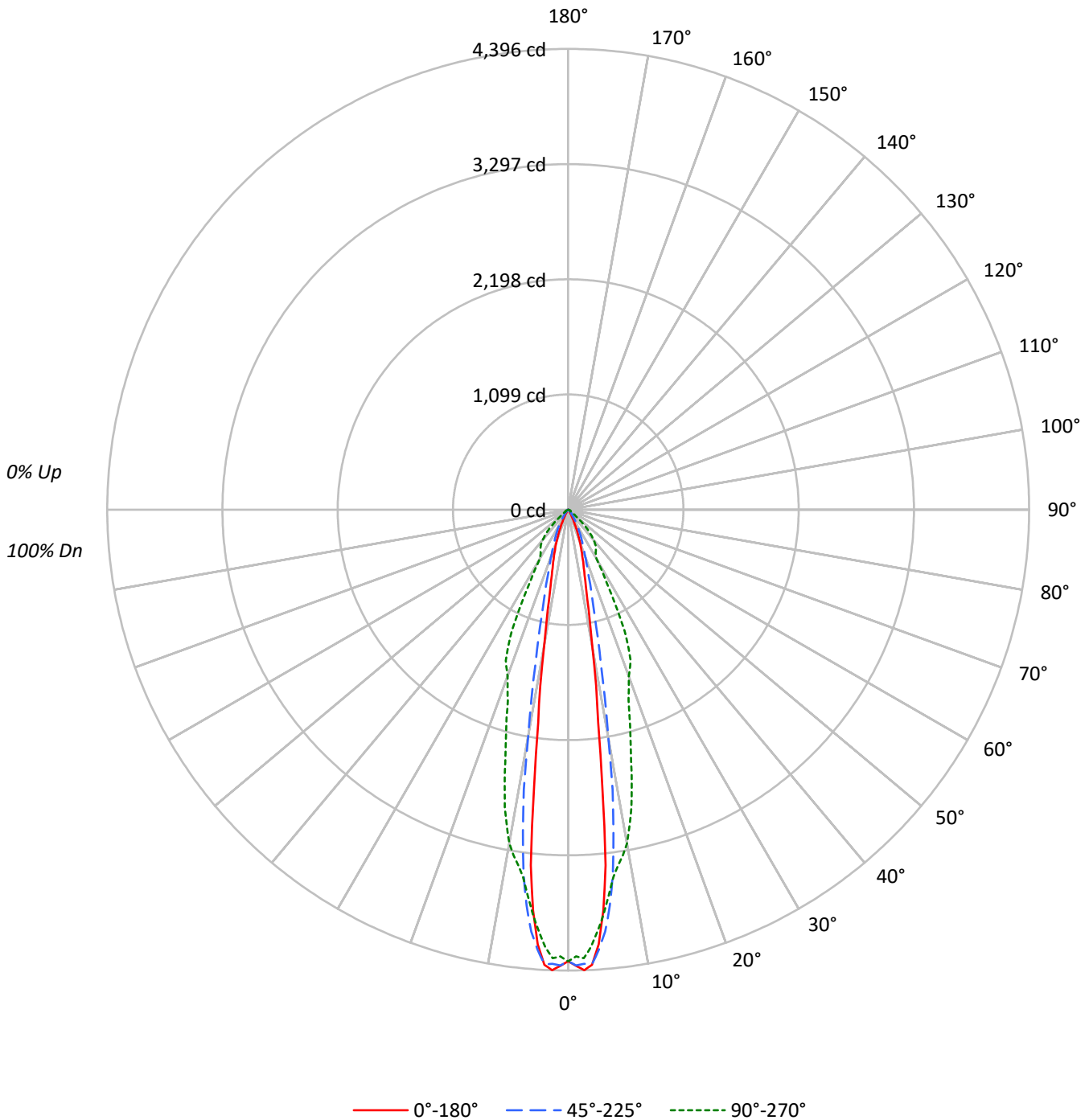
Lumens per Lamp: N/A  
Luminaire Lumens: 1045.0 lumens  
Efficiency: N/A  
Efficacy: 108.9 lumens/watt  
Spacing Criteria (0/90/45): 0.27 / 0.52 / 0.34  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.6  
Input Voltage (V): 120  
Input Current (Ain): 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: P591976  
CATALOG NUMBER: GRZ-05L-935-17x30-X-UNV-STD-2F

### Luminous Intensity Polar Plot





TEST NUMBER: P591976

CATALOG NUMBER: GRZ-05L-935-17x30-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	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97					95				
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92					90				
3	105	100	95	92	103	98	94	91	96	93	90	93	91	88	91	89	87					86				
4	101	95	90	86	99	94	89	86	92	88	85	90	86	84	88	85	83					82				
5	97	90	85	82	96	89	85	81	88	84	81	86	83	80	85	82	79					78				
6	94	86	81	78	92	86	81	77	84	80	77	83	79	76	82	78	76					75				
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73					72				
8	87	79	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70					69				
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68					67				
10	82	74	69	66	81	73	69	66	73	69	66	72	68	66	71	68	65					64				

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

	0°	45°	90°
0°	139106	139106	139106
5°	124406	130957	125566
10°	43342	72036	106026
15°	19266	29934	76807
20°	11230	16048	58086
25°	4824	10233	45236
30°	1622	6346	19975
35°	989	3280	18181
40°	856	1876	15976
45°	927	1457	11170
50°	728	678	4908
55°	653	653	1959
60°	626	685	1808
65°	665	665	1696
70°	642	548	1275
75°	487	487	599
80°	353	353	353
85°	371	371	371



TEST NUMBER: P591976

CATALOG NUMBER: GRZ-05L-935-17x30-X-UNV-STD-2F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	316.4	30.3
10°-20°	334.6	32.0
20°-30°	207.1	19.8
30°-40°	104.8	10.0
40°-50°	51.9	5.0
50°-60°	15.4	1.5
60°-70°	9.5	0.9
70°-80°	4.5	0.4
80°-90°	0.8	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°	858.1	82.1
0°-40°	962.9	92.1
0°-60°	1030.2	98.6
0°-90°	1045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1045.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4308	4308	4308	4308	4308	
5°	3838	3921	4040	3928	3874	268
15°	576	639	895	1567	2298	171
25°	135	169	287	688	1270	69
35°	25	27	83	308	461	17
45°	20	18	32	84	245	15
55°	12	11	12	17	35	10
65°	9	10	9	6	22	8
75°	4	6	4	2	5	4
85°	1	1	1	0	1	1
90°	0	0	0	0	0	



TEST NUMBER: P591976

CATALOG NUMBER: GRZ-05L-935-17x30-X-UNV-STD-2F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4307.8	4307.8	4307.8	4307.8	4307.8	4307.8	4307.8	4307.8	4307.8	4307.8	4307.8
1°	4351.3	4337.8	4340.7	4358.1	4368.7	4348.4	4319.4	4297.2	4306.9	4276.9	4262.4
2°	4395.8	4385.2	4378.4	4384.2	4361.0	4334.9	4304.9	4288.5	4282.7	4267.2	4281.7
3°	4347.5	4333.9	4337.8	4351.3	4339.7	4341.7	4267.2	4216.9	4212.1	4191.8	4175.4
4°	4156.0	4165.7	4185.0	4187.0	4200.5	4204.4	4178.3	4082.5	4084.5	4046.7	4028.4
5°	3837.9	3844.6	3902.7	3926.8	4013.9	4040.0	4046.7	3930.7	3919.1	3862.1	3873.7
6°	3411.4	3286.7	3442.4	3504.3	3679.3	3798.2	3839.8	3821.4	3763.4	3697.7	3698.6
7°	2662.1	2672.7	2761.6	2932.8	3258.7	3488.8	3660.0	3697.7	3620.3	3573.9	3530.4
8°	2052.9	2097.3	2224.0	2404.8	2728.8	3101.1	3411.4	3496.5	3477.2	3430.8	3424.0
9°	1699.9	1666.1	1767.6	1911.7	2222.1	2700.7	3083.6	3264.5	3320.6	3335.1	3338.0
10°	1321.8	1361.5	1409.8	1559.7	1822.7	2196.9	2699.8	2980.2	3127.2	3209.4	3233.5
11°	1070.4	1084.9	1146.8	1288.0	1486.2	1830.5	2339.1	2655.3	2881.6	3047.9	3069.1
12°	880.9	893.5	935.1	1039.5	1219.3	1493.0	1930.1	2325.5	2665.9	2860.3	2903.8
13°	748.4	762.9	796.8	878.0	1017.2	1256.1	1558.7	1987.1	2378.7	2654.3	2693.0
14°	643.0	659.5	681.7	753.3	866.4	1035.6	1293.8	1702.8	2122.5	2431.9	2483.2
15°	576.3	578.2	602.4	651.7	751.3	895.4	1117.8	1460.1	1887.5	2235.6	2297.5
17.5°	433.2	430.3	433.2	471.9	529.9	635.3	788.1	1084.9	1540.4	1843.0	1910.7
20°	326.8	327.8	321.0	343.3	391.6	467.0	593.7	882.8	1348.9	1651.6	1690.3
22.5°	227.2	225.3	228.2	249.5	295.9	365.5	465.1	720.4	1229.0	1523.9	1555.8
25°	135.4	138.3	149.9	175.0	220.5	287.2	380.0	582.1	1006.6	1202.9	1269.6
27.5°	78.3	79.3	89.0	116.0	159.5	223.4	312.3	453.5	697.2	801.6	819.0
30°	43.5	43.5	50.3	67.7	108.3	170.2	255.3	376.1	505.7	534.7	535.7
32.5°	29.0	29.0	30.9	39.6	66.7	123.8	207.9	323.9	439.0	480.6	487.3
35°	25.1	24.2	25.1	28.0	41.6	83.2	159.5	275.6	404.2	453.5	461.2
37.5°	22.2	22.2	23.2	26.1	31.9	54.1	113.1	218.5	357.8	419.7	428.4
40°	20.3	20.3	21.3	26.1	31.9	44.5	71.6	158.6	294.9	369.4	379.0
42.5°	19.3	19.3	19.3	23.2	30.0	40.6	41.6	101.5	227.2	303.6	318.1
45°	20.3	19.3	17.4	18.4	23.2	31.9	24.2	60.0	157.6	234.0	244.6
47.5°	19.3	19.3	18.4	17.4	17.4	21.3	15.5	32.9	98.6	162.4	168.3
50°	14.5	14.5	12.6	15.5	16.4	13.5	11.6	21.3	60.9	91.9	97.7
52.5°	12.6	12.6	11.6	11.6	13.5	12.6	8.7	17.4	38.7	51.2	53.2
55°	11.6	10.6	10.6	11.6	12.6	11.6	7.7	13.5	27.1	33.8	34.8
57.5°	10.6	10.6	10.6	10.6	12.6	11.6	7.7	9.7	21.3	27.1	30.0
60°	9.7	9.7	10.6	10.6	11.6	10.6	6.8	6.8	17.4	24.2	28.0
62.5°	8.7	9.7	9.7	10.6	11.6	9.7	5.8	4.8	13.5	22.2	26.1
65°	8.7	8.7	9.7	10.6	10.6	8.7	4.8	3.9	10.6	18.4	22.2
67.5°	7.7	7.7	8.7	9.7	10.6	7.7	2.9	2.9	8.7	15.5	18.4
70°	6.8	6.8	7.7	8.7	8.7	5.8	2.9	2.9	5.8	12.6	13.5
72.5°	5.8	5.8	6.8	7.7	7.7	4.8	1.9	1.9	3.9	9.7	8.7
75°	3.9	4.8	4.8	5.8	5.8	3.9	1.9	1.9	2.9	5.8	4.8
77.5°	2.9	2.9	3.9	4.8	4.8	2.9	1.0	1.0	1.9	3.9	2.9
80°	1.9	1.9	2.9	2.9	2.9	1.9	1.0	1.0	1.0	1.9	1.9
82.5°	1.0	1.0	1.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P591976  
CATALOG NUMBER: GRZ-05L-935-17x30-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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)