

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P291756

Luminaire Tested: **22GR-LD5-36-F1-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291756  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-36-F1-UNV-L83050-W2A1-U-4500K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3835.0 lumens  
Efficiency: N/A  
Efficacy: 130.1 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.19 / 1.24  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

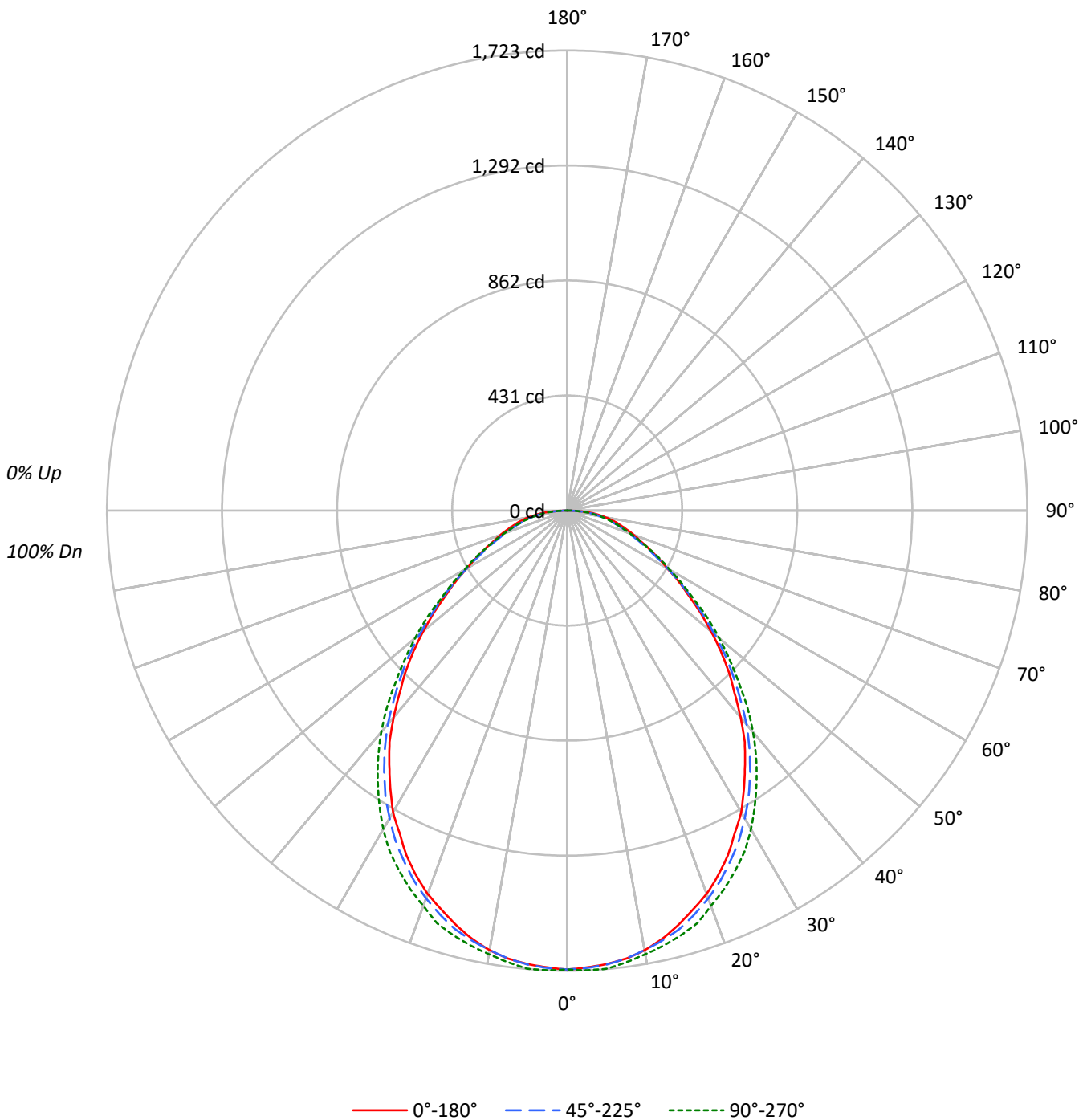
Input Watts (W): 29.481  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55					55			
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48					48			
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43					43			
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38					38			
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34					34			
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31					31			
10	56	43	36	31	55	43	35	30	42	35	30	41	35	30	40	34	30	28					28			

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

	0°	45°	90°
0°	4624	4624	4624
5°	4604	4609	4652
10°	4568	4566	4609
15°	4476	4520	4586
20°	4374	4424	4510
25°	4229	4297	4418
30°	4051	4133	4278
35°	3814	3924	4063
40°	3549	3670	3803
45°	3258	3352	3456
50°	2939	3013	3109
55°	2608	2670	2715
60°	2337	2342	2390
65°	2153	2081	2153
70°	2079	1927	1982
75°	2116	1887	1923
80°	2280	1979	1979
85°	2529	2093	2066



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.1	4.2
10°-20°	457.2	11.9
20°-30°	667.3	17.4
30°-40°	747.1	19.5
40°-50°	680.0	17.7
50°-60°	511.8	13.3
60°-70°	334.0	8.7
70°-80°	200.3	5.2
80°-90°	75.1	2.0
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°	1286.7	33.6
0°-40°	2033.8	53.0
0°-60°	3225.6	84.1
0°-90°	3835.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3835.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1718	1718	1718	1718	1718	
5°	1704	1702	1706	1712	1722	162
15°	1607	1608	1622	1636	1646	452
25°	1424	1429	1447	1474	1488	654
35°	1161	1172	1194	1223	1237	726
45°	856	865	881	899	908	659
55°	556	564	569	577	579	502
65°	338	335	327	332	338	338
75°	204	196	182	182	185	216
85°	82	79	68	64	67	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1718.5	1718.5	1718.5	1718.5	1718.5
2.5°	1712.4	1711.5	1714.1	1718.5	1723.0
5°	1704.5	1701.8	1706.2	1712.4	1722.1
7.5°	1692.1	1692.1	1692.1	1703.6	1705.3
10°	1671.9	1673.6	1671.0	1682.4	1686.8
12.5°	1642.8	1643.7	1649.0	1660.4	1668.3
15°	1606.7	1608.4	1622.5	1635.7	1646.3
17.5°	1566.2	1572.3	1585.5	1606.7	1619.9
20°	1527.4	1534.4	1545.0	1567.9	1575.0
22.5°	1478.1	1486.0	1499.2	1519.5	1534.4
25°	1424.3	1428.7	1447.2	1473.7	1487.8
27.5°	1360.0	1369.7	1392.6	1419.9	1439.3
30°	1303.7	1308.9	1330.1	1361.8	1376.8
32.5°	1232.3	1248.2	1265.8	1294.0	1308.1
35°	1161.0	1171.5	1194.4	1222.6	1236.7
37.5°	1092.3	1098.4	1121.3	1145.1	1162.7
40°	1010.3	1021.8	1044.7	1070.2	1082.6
42.5°	928.4	945.2	960.1	985.7	998.9
45°	856.2	865.0	880.9	899.4	908.2
47.5°	780.4	784.8	803.3	814.8	824.5
50°	702.0	707.3	719.7	731.1	742.6
52.5°	629.8	634.2	642.1	652.7	664.2
55°	555.8	563.7	569.0	577.0	578.7
57.5°	495.9	495.0	498.6	504.7	510.9
60°	434.3	436.0	435.1	441.3	444.0
62.5°	383.2	382.3	377.0	385.8	392.9
65°	338.2	334.7	326.8	332.1	338.2
67.5°	296.8	295.1	281.9	286.3	291.6
70°	264.3	258.1	244.9	247.5	251.9
72.5°	232.5	225.5	212.3	213.2	215.8
75°	203.5	196.4	181.5	182.3	185.0
77.5°	176.2	167.4	154.1	152.4	154.1
80°	147.1	139.2	127.7	122.4	127.7
82.5°	117.2	112.7	99.5	94.3	96.0
85°	81.9	79.3	67.8	64.3	66.9
87.5°	37.9	40.5	34.4	31.7	32.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)