

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: P291865

Luminaire Tested: **22GR-LD5-43-F1-UNV-L93050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291865  
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-LD5-43-F1-UNV-L93050-W2A1-U-5000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4067.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 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

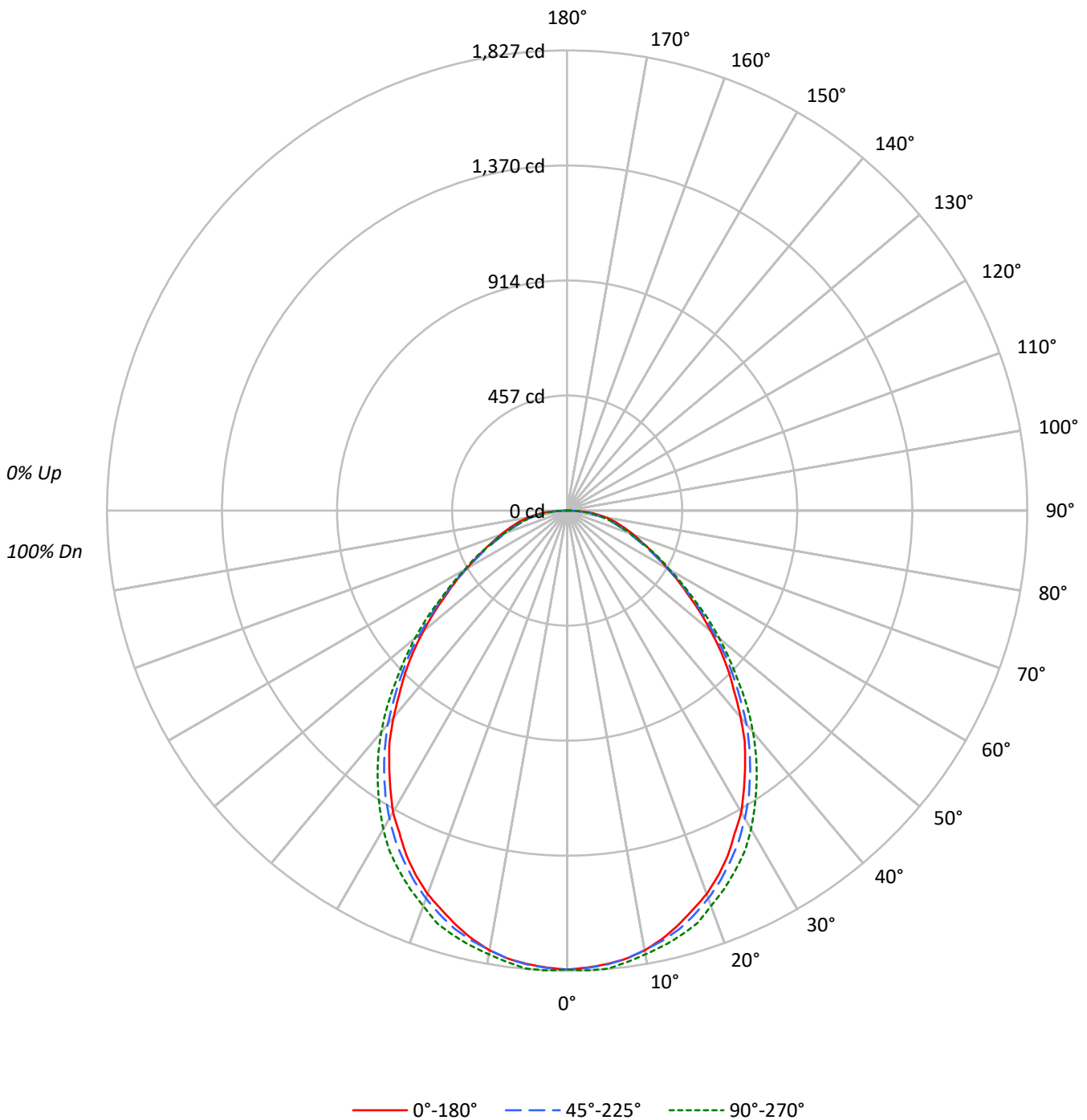
Input Watts (W): 36.642  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4904	4904	4904
5°	4883	4888	4933
10°	4845	4842	4888
15°	4747	4794	4864
20°	4639	4692	4783
25°	4485	4557	4685
30°	4296	4383	4537
35°	4045	4161	4308
40°	3764	3892	4033
45°	3456	3555	3665
50°	3117	3195	3297
55°	2765	2831	2879
60°	2478	2484	2534
65°	2284	2207	2284
70°	2205	2043	2102
75°	2244	2000	2040
80°	2417	2100	2100
85°	2683	2220	2192



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.9	4.2
10°-20°	484.9	11.9
20°-30°	707.7	17.4
30°-40°	792.3	19.5
40°-50°	721.1	17.7
50°-60°	542.8	13.3
60°-70°	354.2	8.7
70°-80°	212.4	5.2
80°-90°	79.7	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°	1364.5	33.6
0°-40°	2156.9	53.0
0°-60°	3420.7	84.1
0°-90°	4067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4067.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1822	1822	1822	1822	1822	
5°	1808	1805	1809	1816	1826	172
15°	1704	1706	1721	1735	1746	480
25°	1510	1515	1535	1563	1578	693
35°	1231	1242	1267	1297	1312	769
45°	908	917	934	954	963	699
55°	589	598	604	612	614	533
65°	359	355	347	352	359	359
75°	216	208	192	193	196	229
85°	87	84	72	68	71	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1822.5	1822.5	1822.5	1822.5	1822.5
2.5°	1816.0	1815.0	1817.8	1822.5	1827.2
5°	1807.6	1804.8	1809.4	1816.0	1826.2
7.5°	1794.5	1794.5	1794.5	1806.6	1808.5
10°	1773.0	1774.9	1772.1	1784.2	1788.9
12.5°	1742.2	1743.1	1748.7	1760.9	1769.3
15°	1703.9	1705.7	1720.7	1734.7	1745.9
17.5°	1660.9	1667.4	1681.5	1703.9	1717.9
20°	1619.8	1627.3	1638.5	1662.8	1670.2
22.5°	1567.5	1575.9	1589.9	1611.4	1627.3
25°	1510.5	1515.2	1534.8	1562.8	1577.8
27.5°	1442.3	1452.6	1476.9	1505.8	1526.4
30°	1382.5	1388.1	1410.6	1444.2	1460.1
32.5°	1306.9	1323.7	1342.4	1372.3	1387.2
35°	1231.2	1242.4	1266.7	1296.6	1311.5
37.5°	1158.3	1164.9	1189.2	1214.4	1233.1
40°	1071.5	1083.6	1107.9	1135.0	1148.1
42.5°	984.6	1002.3	1018.2	1045.3	1059.3
45°	908.0	917.3	934.1	953.8	963.1
47.5°	827.6	832.3	851.9	864.1	874.4
50°	744.5	750.1	763.2	775.3	787.5
52.5°	667.9	672.6	681.0	692.2	704.3
55°	589.4	597.9	603.5	611.9	613.7
57.5°	525.9	525.0	528.7	535.3	541.8
60°	460.5	462.4	461.5	468.0	470.8
62.5°	406.4	405.4	399.8	409.2	416.6
65°	358.7	355.0	346.6	352.2	358.7
67.5°	314.8	312.9	298.9	303.6	309.2
70°	280.2	273.7	259.7	262.5	267.2
72.5°	246.6	239.1	225.1	226.1	228.9
75°	215.8	208.3	192.4	193.4	196.2
77.5°	186.8	177.5	163.5	161.6	163.5
80°	156.0	147.6	135.5	129.8	135.5
82.5°	124.2	119.6	105.6	100.0	101.8
85°	86.9	84.1	71.9	68.2	71.0
87.5°	40.2	43.0	36.4	33.6	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)