

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: P291862

Luminaire Tested: **22GR-LD5-43-F1-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291862  
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-3500K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3701.0 lumens  
Efficiency: N/A  
Efficacy: 103.4 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

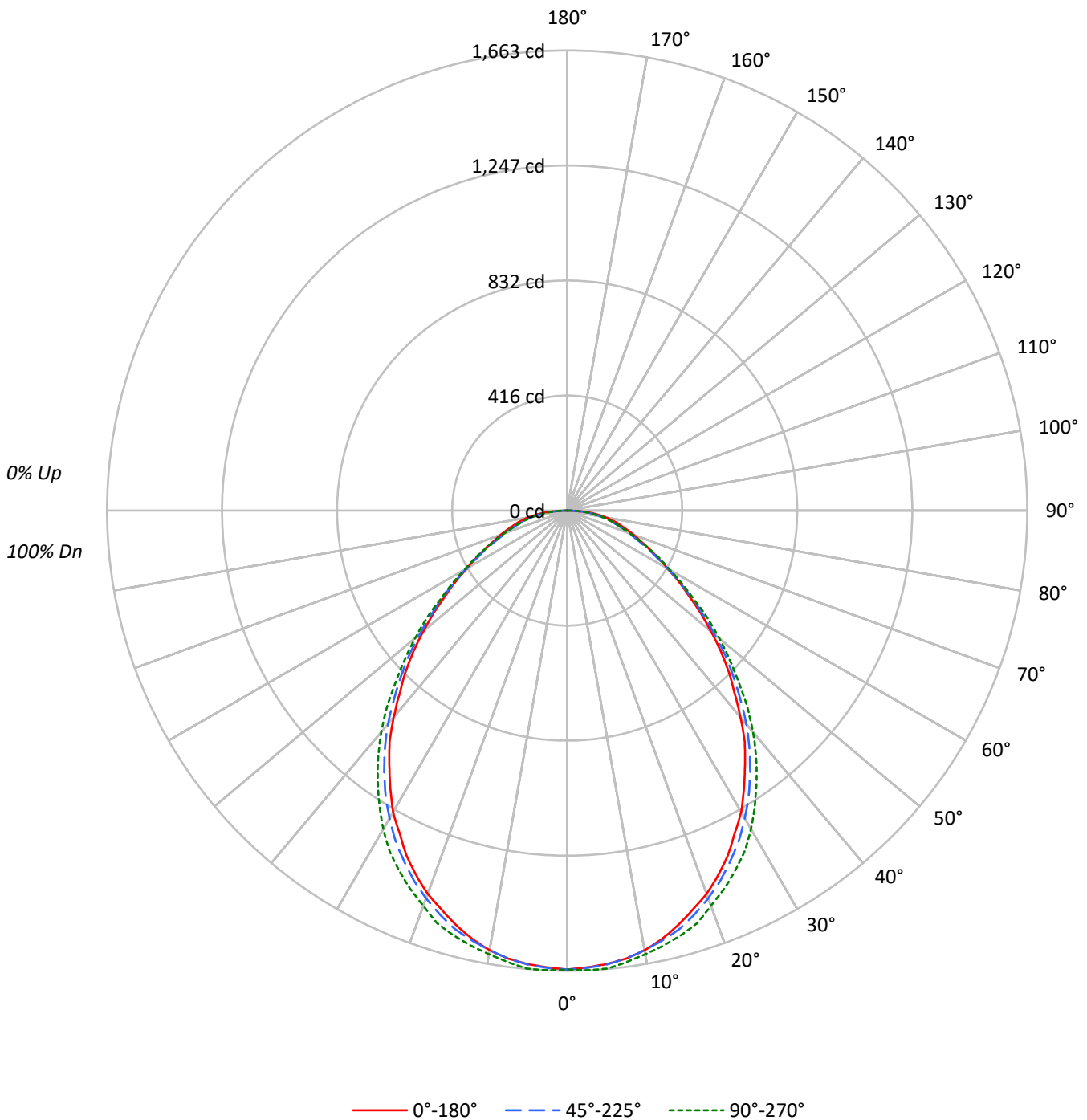
Input Watts (W): 35.805  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4463	4463	4463
5°	4443	4448	4489
10°	4409	4406	4448
15°	4320	4362	4426
20°	4221	4270	4353
25°	4081	4147	4263
30°	3909	3988	4129
35°	3681	3787	3921
40°	3425	3542	3670
45°	3145	3235	3335
50°	2836	2907	3000
55°	2517	2576	2620
60°	2256	2260	2306
65°	2078	2008	2078
70°	2006	1859	1913
75°	2042	1821	1856
80°	2201	1911	1911
85°	2442	2022	1995



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.4	4.2
10°-20°	441.3	11.9
20°-30°	644.0	17.4
30°-40°	721.0	19.5
40°-50°	656.2	17.7
50°-60°	493.9	13.3
60°-70°	322.3	8.7
70°-80°	193.3	5.2
80°-90°	72.5	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°	1241.7	33.6
0°-40°	1962.8	53.0
0°-60°	3112.9	84.1
0°-90°	3701.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3701.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1658	1658	1658	1658	1658	
5°	1645	1642	1647	1652	1662	156
15°	1550	1552	1566	1579	1589	437
25°	1375	1379	1397	1422	1436	631
35°	1120	1131	1153	1180	1194	700
45°	826	835	850	868	876	636
55°	536	544	549	557	558	485
65°	326	323	315	320	326	326
75°	196	190	175	176	178	208
85°	79	76	66	62	65	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1658.5	1658.5	1658.5	1658.5	1658.5
2.5°	1652.5	1651.7	1654.2	1658.5	1662.7
5°	1644.9	1642.3	1646.6	1652.5	1661.9
7.5°	1633.0	1633.0	1633.0	1644.0	1645.7
10°	1613.4	1615.1	1612.6	1623.6	1627.9
12.5°	1585.4	1586.2	1591.3	1602.4	1610.0
15°	1550.5	1552.2	1565.8	1578.6	1588.8
17.5°	1511.4	1517.4	1530.1	1550.5	1563.3
20°	1474.0	1480.8	1491.0	1513.1	1519.9
22.5°	1426.4	1434.1	1446.8	1466.4	1480.8
25°	1374.6	1378.8	1396.7	1422.2	1435.8
27.5°	1312.5	1321.9	1344.0	1370.3	1389.0
30°	1258.1	1263.2	1283.6	1314.2	1328.7
32.5°	1189.3	1204.6	1221.6	1248.8	1262.4
35°	1120.4	1130.6	1152.7	1179.9	1193.5
37.5°	1054.1	1060.0	1082.1	1105.1	1122.1
40°	975.0	986.1	1008.2	1032.8	1044.7
42.5°	896.0	912.1	926.6	951.2	964.0
45°	826.3	834.8	850.1	867.9	876.4
47.5°	753.2	757.4	775.3	786.3	795.7
50°	677.5	682.6	694.5	705.6	716.6
52.5°	607.8	612.1	619.7	629.9	641.0
55°	536.4	544.0	549.1	556.8	558.5
57.5°	478.6	477.7	481.1	487.1	493.0
60°	419.1	420.8	419.9	425.9	428.4
62.5°	369.8	368.9	363.8	372.3	379.1
65°	326.4	323.0	315.4	320.5	326.4
67.5°	286.5	284.8	272.0	276.3	281.4
70°	255.0	249.1	236.3	238.9	243.1
72.5°	224.4	217.6	204.9	205.7	208.3
75°	196.4	189.6	175.1	176.0	178.5
77.5°	170.0	161.5	148.8	147.1	148.8
80°	142.0	134.3	123.3	118.2	123.3
82.5°	113.1	108.8	96.1	91.0	92.7
85°	79.1	76.5	65.5	62.1	64.6
87.5°	36.6	39.1	33.2	30.6	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)