

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: P291924

Luminaire Tested: **22GR-LD5-43-F1-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291924  
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-L92765-W2A1-U-4500K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3945.0 lumens  
Efficiency: N/A  
Efficacy: 110.2 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

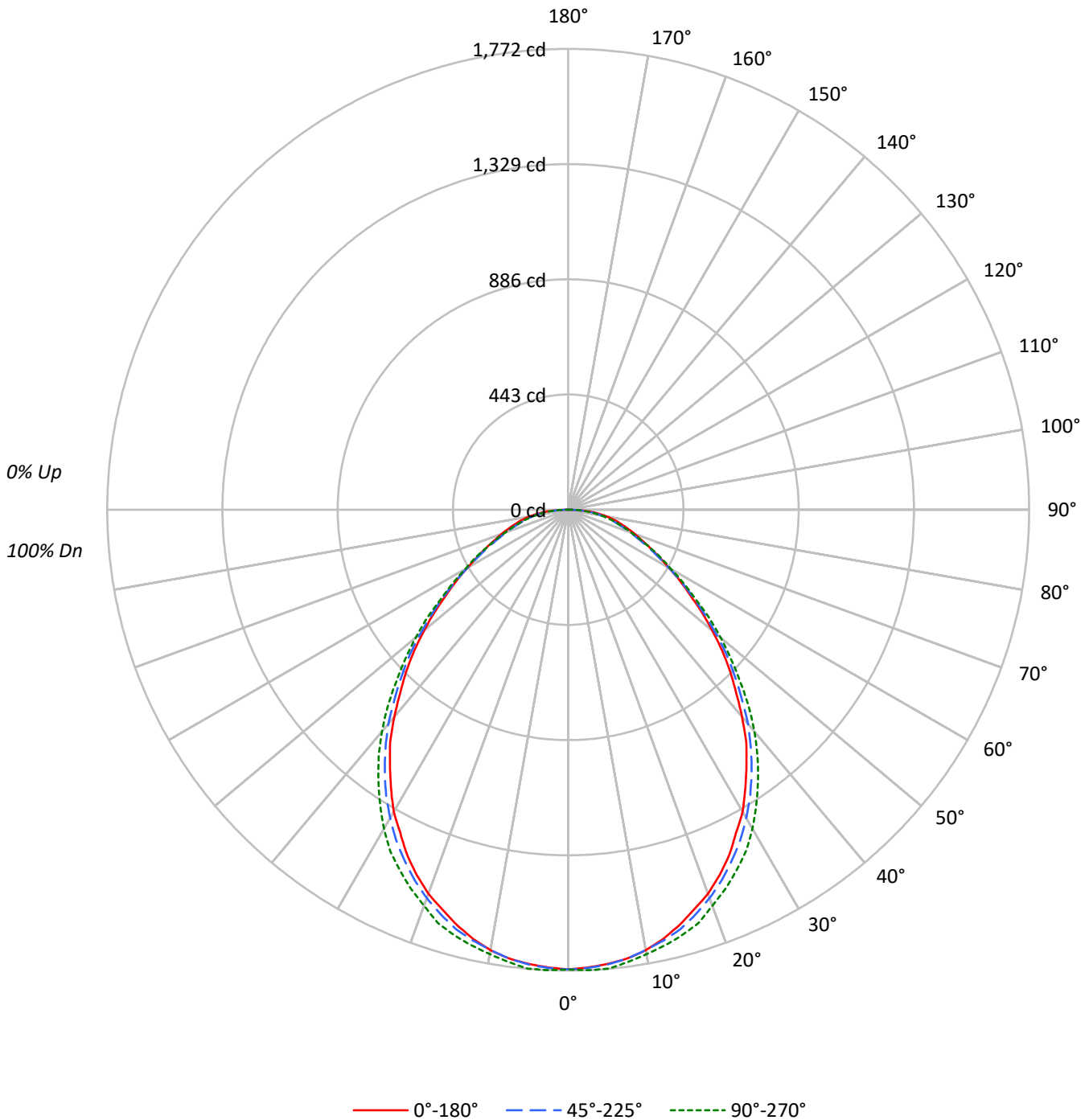
Input Watts (W): 35.805  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4757	4757	4757
5°	4736	4741	4785
10°	4699	4697	4741
15°	4605	4650	4718
20°	4499	4551	4639
25°	4350	4420	4544
30°	4167	4251	4401
35°	3923	4036	4179
40°	3651	3775	3912
45°	3352	3448	3555
50°	3023	3099	3198
55°	2683	2746	2793
60°	2404	2409	2458
65°	2215	2141	2215
70°	2138	1982	2039
75°	2176	1941	1979
80°	2345	2036	2036
85°	2603	2155	2127



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.8	4.2
10°-20°	470.4	11.9
20°-30°	686.5	17.4
30°-40°	768.6	19.5
40°-50°	699.5	17.7
50°-60°	526.5	13.3
60°-70°	343.6	8.7
70°-80°	206.1	5.2
80°-90°	77.3	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°	1323.6	33.6
0°-40°	2092.2	53.0
0°-60°	3318.1	84.1
0°-90°	3945.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3945.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1768	1768	1768	1768	1768	
5°	1753	1751	1755	1762	1772	166
15°	1653	1655	1669	1683	1694	465
25°	1465	1470	1489	1516	1530	673
35°	1194	1205	1229	1258	1272	746
45°	881	890	906	925	934	678
55°	572	580	585	594	595	517
65°	348	344	336	342	348	348
75°	209	202	187	188	190	222
85°	84	82	70	66	69	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1767.8	1767.8	1767.8	1767.8	1767.8
2.5°	1761.5	1760.6	1763.3	1767.8	1772.4
5°	1753.3	1750.6	1755.2	1761.5	1771.5
7.5°	1740.7	1740.7	1740.7	1752.4	1754.2
10°	1719.8	1721.6	1718.9	1730.7	1735.2
12.5°	1689.9	1690.8	1696.3	1708.0	1716.2
15°	1652.8	1654.6	1669.1	1682.7	1693.5
17.5°	1611.1	1617.4	1631.0	1652.8	1666.4
20°	1571.2	1578.5	1589.3	1612.9	1620.1
22.5°	1520.5	1528.6	1542.2	1563.1	1578.5
25°	1465.2	1469.7	1488.8	1515.9	1530.4
27.5°	1399.0	1409.0	1432.6	1460.7	1480.6
30°	1341.1	1346.5	1368.2	1400.9	1416.3
32.5°	1267.7	1284.0	1302.1	1331.1	1345.6
35°	1194.3	1205.1	1228.7	1257.7	1272.2
37.5°	1123.6	1129.9	1153.5	1178.0	1196.1
40°	1039.3	1051.1	1074.7	1100.9	1113.6
42.5°	955.1	972.3	987.7	1013.9	1027.5
45°	880.7	889.8	906.1	925.1	934.2
47.5°	802.8	807.4	826.4	838.2	848.1
50°	722.2	727.6	740.3	752.1	763.9
52.5°	647.9	652.4	660.6	671.4	683.2
55°	571.8	579.9	585.4	593.5	595.3
57.5°	510.1	509.2	512.9	519.2	525.5
60°	446.7	448.5	447.6	454.0	456.7
62.5°	394.2	393.3	387.8	396.9	404.1
65°	347.9	344.3	336.2	341.6	347.9
67.5°	305.4	303.6	290.0	294.5	299.9
70°	271.8	265.5	251.9	254.6	259.2
72.5°	239.2	232.0	218.4	219.3	222.0
75°	209.3	202.1	186.7	187.6	190.3
77.5°	181.2	172.2	158.6	156.8	158.6
80°	151.3	143.2	131.4	126.0	131.4
82.5°	120.5	116.0	102.4	97.0	98.8
85°	84.3	81.6	69.8	66.1	68.9
87.5°	39.0	41.7	35.3	32.6	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)