

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: P291842

Luminaire Tested: **22GR-LD5-28-F1-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291842  
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-LD5-28-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: 2480.0 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

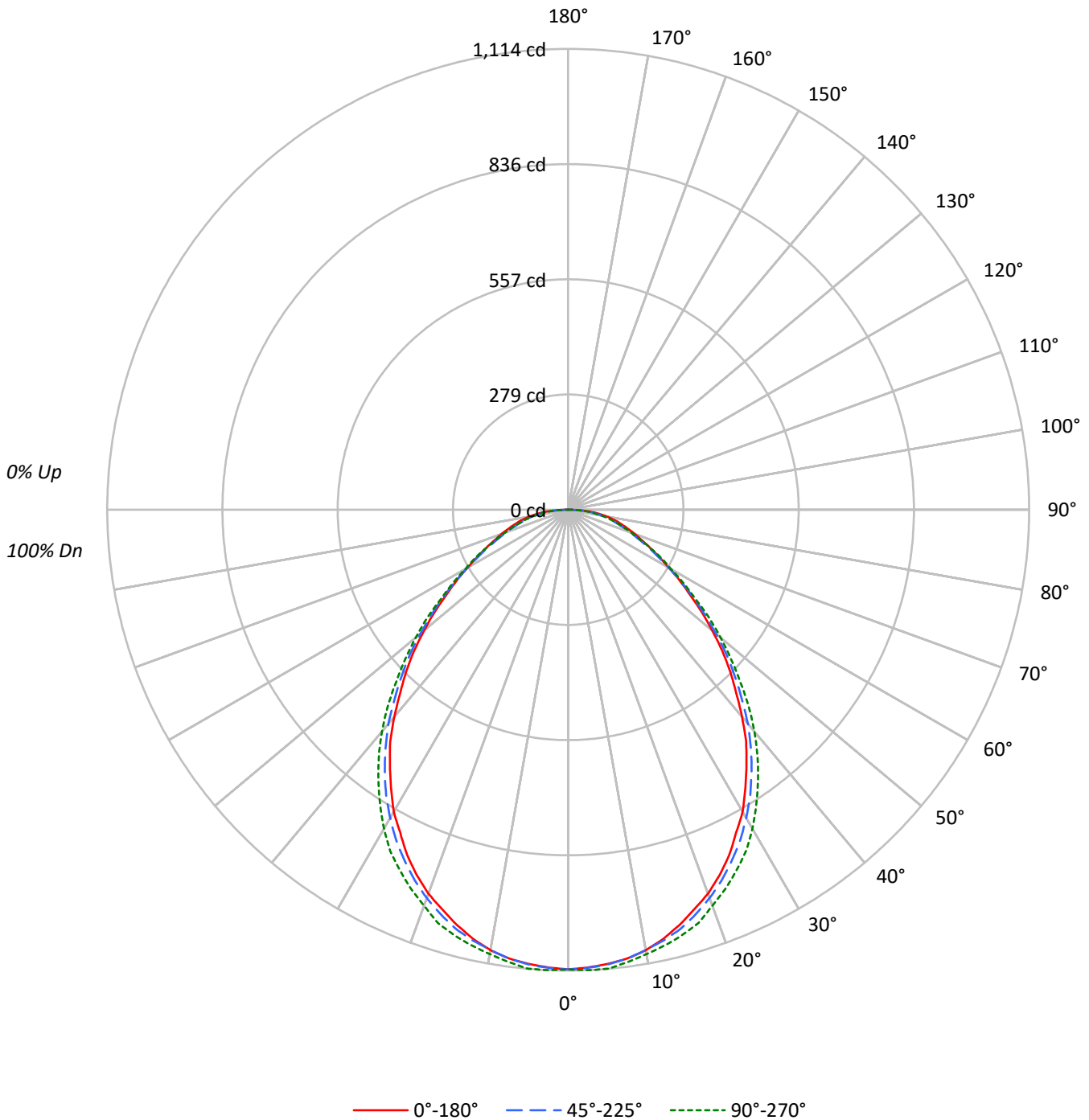
Input Watts (W): 22.506  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2990	2990	2990
5°	2977	2981	3008
10°	2954	2953	2981
15°	2895	2923	2966
20°	2828	2861	2917
25°	2735	2779	2857
30°	2619	2673	2766
35°	2466	2537	2627
40°	2295	2373	2459
45°	2107	2168	2235
50°	1901	1948	2010
55°	1686	1727	1756
60°	1511	1514	1545
65°	1393	1345	1393
70°	1345	1246	1282
75°	1368	1220	1243
80°	1474	1280	1280
85°	1636	1355	1337



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.8	4.2
10°-20°	295.7	11.9
20°-30°	431.6	17.4
30°-40°	483.2	19.5
40°-50°	439.7	17.7
50°-60°	331.0	13.3
60°-70°	216.0	8.7
70°-80°	129.5	5.2
80°-90°	48.6	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°	832.1	33.6
0°-40°	1315.2	53.0
0°-60°	2085.9	84.1
0°-90°	2480.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2480.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1111	1111	1111	1111	1111	
5°	1102	1100	1103	1107	1114	105
15°	1039	1040	1049	1058	1065	293
25°	921	924	936	953	962	423
35°	751	758	772	791	800	469
45°	554	559	570	582	587	426
55°	359	365	368	373	374	325
65°	219	216	211	215	219	219
75°	132	127	117	118	120	140
85°	53	51	44	42	43	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1111.3	1111.3	1111.3	1111.3	<i>1111.3</i>
2.5°	<i>1107.4</i>	<i>1106.8</i>	<i>1108.5</i>	<i>1111.3</i>	<i>1114.2</i>
5°	1102.2	1100.5	1103.4	1107.4	<i>1113.6</i>
7.5°	1094.3	1094.3	1094.3	1101.7	<i>1102.8</i>
10°	1081.2	1082.3	1080.6	1088.0	<i>1090.8</i>
12.5°	1062.4	1062.9	1066.3	1073.7	<i>1078.9</i>
15°	1039.0	1040.1	1049.3	1057.8	<i>1064.6</i>
17.5°	1012.8	1016.8	1025.3	1039.0	<i>1047.5</i>
20°	987.7	992.3	999.1	1013.9	<i>1018.5</i>
22.5°	955.8	961.0	969.5	982.6	<i>992.3</i>
25°	921.1	923.9	935.9	953.0	<i>962.1</i>
27.5°	879.5	885.8	900.6	918.2	<i>930.8</i>
30°	843.0	846.5	860.1	880.6	<i>890.3</i>
32.5°	796.9	807.2	818.6	836.8	<i>845.9</i>
35°	750.8	757.6	772.4	790.6	<i>799.8</i>
37.5°	706.3	710.3	725.1	740.5	<i>751.9</i>
40°	653.4	660.8	675.6	692.1	<i>700.1</i>
42.5°	600.4	611.2	620.9	637.4	<i>646.0</i>
45°	553.7	559.4	569.6	581.6	<i>587.3</i>
47.5°	504.7	507.5	519.5	526.9	<i>533.2</i>
50°	454.0	457.4	465.4	472.8	<i>480.2</i>
52.5°	407.3	410.1	415.3	422.1	<i>429.5</i>
55°	359.4	364.6	368.0	373.1	<i>374.2</i>
57.5°	320.7	320.1	322.4	326.4	<i>330.4</i>
60°	280.8	282.0	281.4	285.4	<i>287.1</i>
62.5°	247.8	247.2	243.8	249.5	<i>254.1</i>
65°	218.7	216.5	211.3	214.7	<i>218.7</i>
67.5°	192.0	190.8	182.3	185.1	<i>188.5</i>
70°	170.9	166.9	158.4	160.1	<i>162.9</i>
72.5°	150.4	145.8	137.3	137.8	<i>139.6</i>
75°	131.6	127.0	117.3	117.9	<i>119.6</i>
77.5°	113.9	108.2	99.7	98.5	<i>99.7</i>
80°	95.1	90.0	82.6	79.2	<i>82.6</i>
82.5°	75.8	72.9	64.4	61.0	<i>62.1</i>
85°	53.0	51.3	43.9	41.6	<i>43.3</i>
87.5°	24.5	26.2	22.2	20.5	<i>21.1</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)