

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: P291886

Luminaire Tested: **22GR-LD5-28-F1-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291886  
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-L92765-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: 2497.0 lumens  
Efficiency: N/A  
Efficacy: 112.8 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

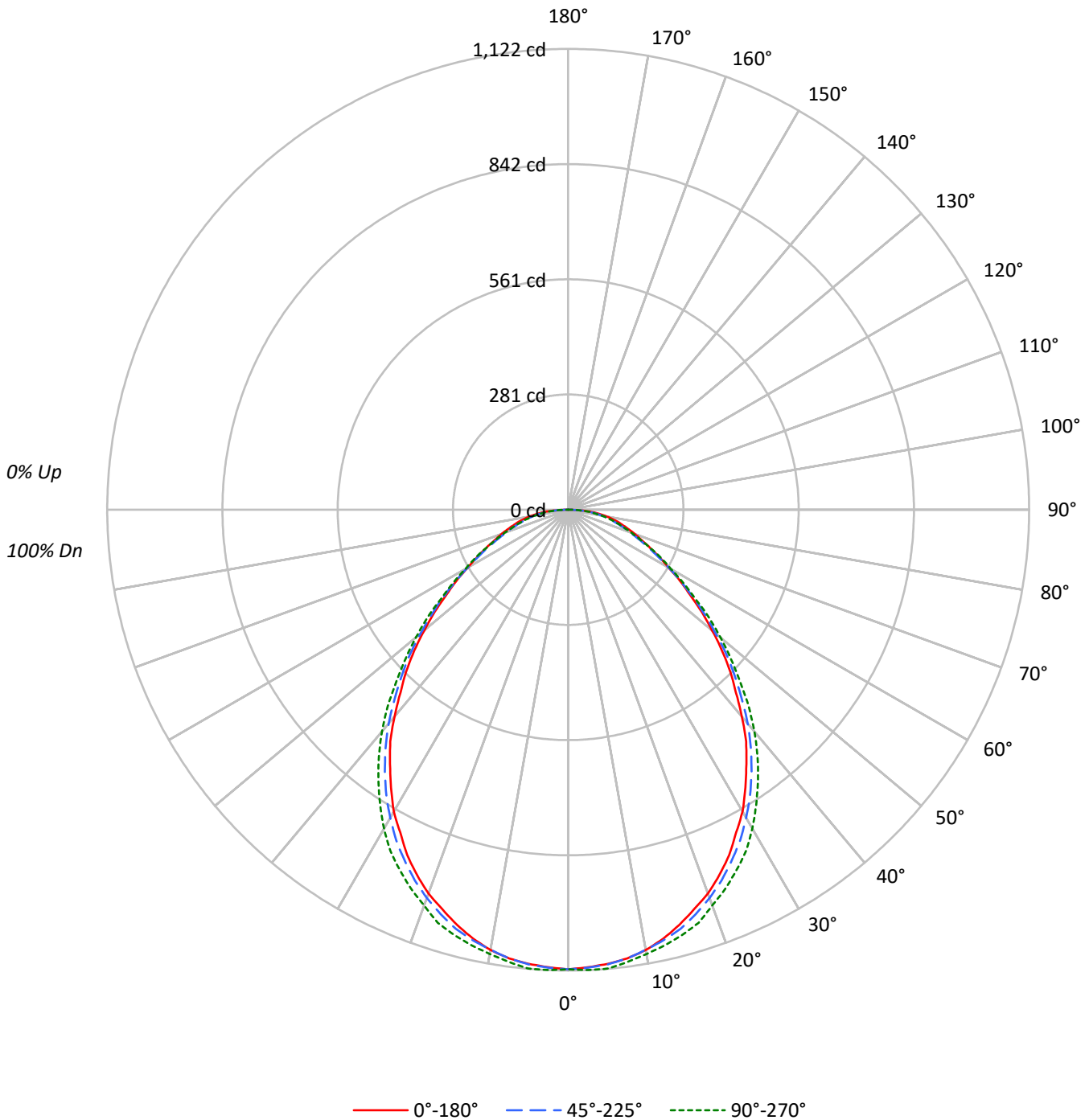
Input Watts (W): 22.134  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3011	3011	3011
5°	2998	3001	3029
10°	2975	2973	3001
15°	2914	2943	2986
20°	2848	2881	2937
25°	2754	2798	2876
30°	2637	2691	2785
35°	2483	2555	2645
40°	2311	2389	2476
45°	2122	2183	2250
50°	1914	1962	2024
55°	1698	1738	1768
60°	1522	1525	1556
65°	1402	1355	1402
70°	1354	1254	1290
75°	1378	1228	1252
80°	1485	1289	1289
85°	1646	1365	1346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.6	4.2
10°-20°	297.7	11.9
20°-30°	434.5	17.4
30°-40°	486.5	19.5
40°-50°	442.7	17.7
50°-60°	333.2	13.3
60°-70°	217.4	8.7
70°-80°	130.4	5.2
80°-90°	48.9	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°	837.8	33.6
0°-40°	1324.2	53.0
0°-60°	2100.2	84.1
0°-90°	2497.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2497.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1119	1119	1119	1119	1119	
5°	1110	1108	1111	1115	1121	105
15°	1046	1047	1056	1065	1072	295
25°	927	930	942	960	969	426
35°	756	763	778	796	805	472
45°	558	563	574	586	591	429
55°	362	367	370	376	377	327
65°	220	218	213	216	220	220
75°	132	128	118	119	120	141
85°	53	52	44	42	44	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1119.0	1119.0	1119.0	1119.0	<i>1119.0</i>
2.5°	<i>1114.9</i>	<i>1114.4</i>	<i>1116.1</i>	<i>1119.0</i>	<i>1121.8</i>
5°	1109.8	1108.1	1110.9	1114.9	<i>1121.3</i>
7.5°	1101.8	1101.8	1101.8	1109.2	<i>1110.4</i>
10°	1088.6	1089.7	1088.0	1095.4	<i>1098.3</i>
12.5°	1069.6	1070.2	1073.7	1081.1	<i>1086.3</i>
15°	1046.1	1047.3	1056.4	1065.0	<i>1071.9</i>
17.5°	1019.7	1023.8	1032.4	1046.1	<i>1054.7</i>
20°	994.5	999.1	1006.0	1020.9	<i>1025.5</i>
22.5°	962.4	967.5	976.2	989.3	<i>999.1</i>
25°	927.4	930.3	942.3	959.5	<i>968.7</i>
27.5°	885.5	891.8	906.8	924.5	<i>937.2</i>
30°	848.8	852.3	866.0	886.7	<i>896.4</i>
32.5°	802.4	812.7	824.2	842.5	<i>851.7</i>
35°	755.9	762.8	777.7	796.1	<i>805.2</i>
37.5°	711.2	715.2	730.1	745.6	<i>757.1</i>
40°	657.8	665.3	680.2	696.8	<i>704.9</i>
42.5°	604.5	615.4	625.1	641.8	<i>650.4</i>
45°	557.5	563.2	573.5	585.6	<i>591.3</i>
47.5°	508.1	511.0	523.1	530.5	<i>536.8</i>
50°	457.1	460.5	468.6	476.0	<i>483.5</i>
52.5°	410.1	412.9	418.1	425.0	<i>432.4</i>
55°	361.9	367.1	370.5	375.7	<i>376.8</i>
57.5°	322.9	322.3	324.6	328.6	<i>332.6</i>
60°	282.8	283.9	283.3	287.3	<i>289.1</i>
62.5°	249.5	248.9	245.5	251.2	<i>255.8</i>
65°	220.2	217.9	212.8	216.2	<i>220.2</i>
67.5°	193.3	192.1	183.5	186.4	<i>189.8</i>
70°	172.1	168.0	159.4	161.2	<i>164.0</i>
72.5°	151.4	146.8	138.2	138.8	<i>140.5</i>
75°	132.5	127.9	118.1	118.7	<i>120.4</i>
77.5°	114.7	109.0	100.4	99.2	<i>100.4</i>
80°	95.8	90.6	83.2	79.7	<i>83.2</i>
82.5°	76.3	73.4	64.8	61.4	<i>62.5</i>
85°	53.3	51.6	44.2	41.9	<i>43.6</i>
87.5°	24.7	26.4	22.4	20.6	<i>21.2</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)