

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: P292234

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292234  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33296)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-28-A-UNV-L93050-W2A1-U-3500K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2473.0 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

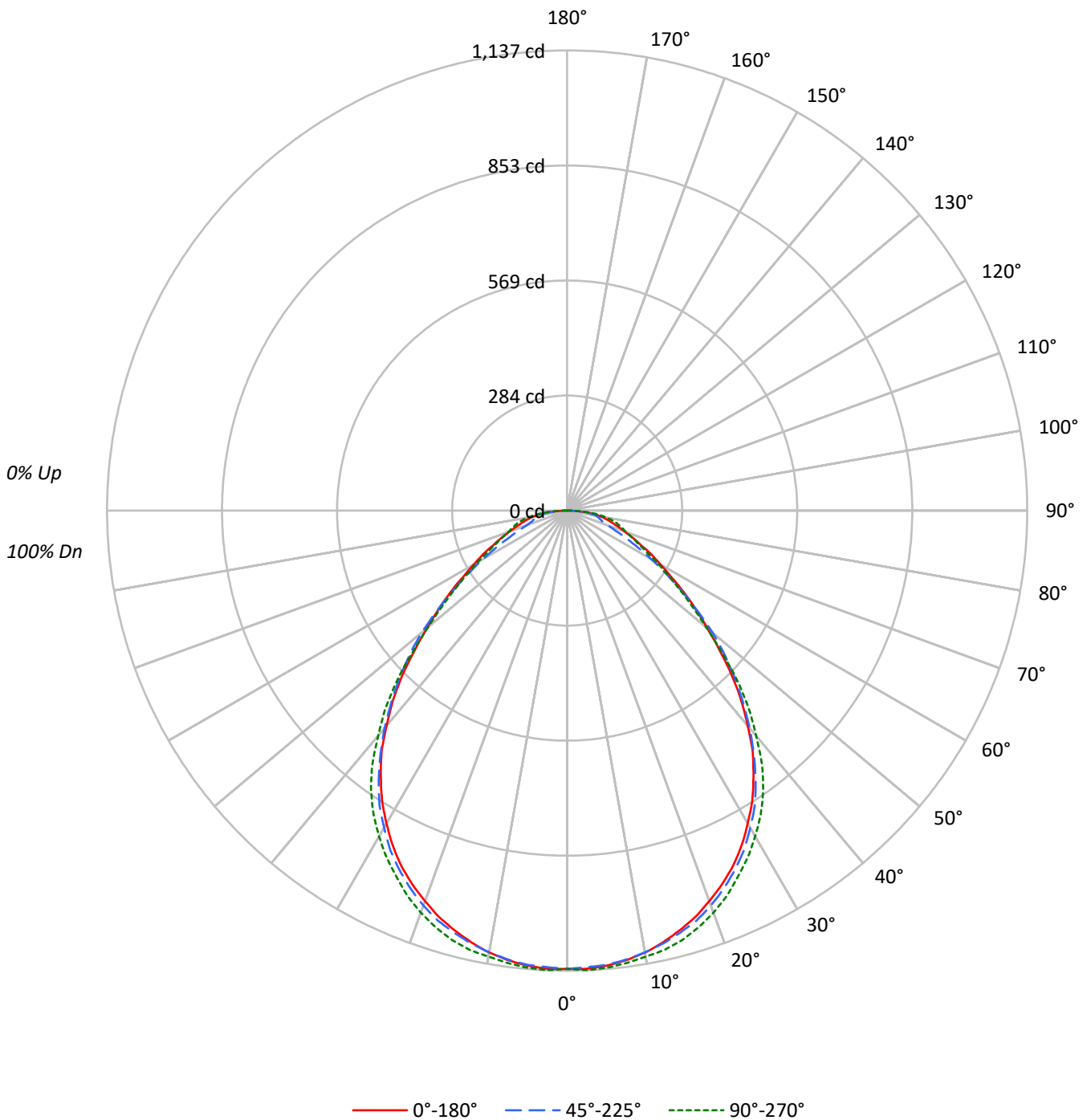
Input Watts (W): 22.506  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	99	92	86	81	88	84	79	85	81	78	82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	68	76	71	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	60	69	63	59	67	62	58	56
5	80	68	59	53	78	67	59	53	65	58	53	63	57	52	61	56	51	49
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37	36
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3048	3048	3048
5°	3048	3044	3062
10°	3030	3029	3058
15°	2992	3008	3061
20°	2940	2975	3027
25°	2877	2910	2963
30°	2774	2811	2888
35°	2637	2667	2775
40°	2438	2464	2551
45°	2190	2229	2264
50°	1894	1961	1874
55°	1652	1609	1588
60°	1431	1288	1375
65°	1279	1011	1235
70°	1186	838	1218
75°	1184	886	1353
80°	1311	1114	1525
85°	1368	1207	1723



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.2	4.3
10°-20°	305.2	12.3
20°-30°	451.4	18.3
30°-40°	509.4	20.6
40°-50°	449.1	18.2
50°-60°	308.1	12.5
60°-70°	181.8	7.4
70°-80°	113.4	4.6
80°-90°	47.3	1.9
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°	863.9	34.9
0°-40°	1373.3	55.5
0°-60°	2130.5	86.2
0°-90°	2473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2473.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1128	1126	1127	1131	1134	107
15°	1074	1075	1080	1093	1099	303
25°	969	973	980	993	998	445
35°	803	810	812	832	845	500
45°	576	578	586	589	595	442
55°	352	344	343	332	338	316
65°	201	177	159	184	194	202
75°	114	102	85	119	130	122
85°	44	41	39	51	56	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1132.5	1132.5	1132.5	1132.5	<i>1132.5</i>
2.5°	<i>1133.1</i>	<i>1130.2</i>	<i>1129.1</i>	<i>1133.7</i>	<i>1136.6</i>
5°	1128.5	1126.2	1126.8	1130.8	<i>1133.7</i>
7.5°	1120.5	1118.7	1118.7	1124.5	<i>1127.4</i>
10°	1108.9	1108.4	1108.4	1115.3	<i>1119.3</i>
12.5°	1092.8	1093.4	1095.7	1104.9	<i>1111.8</i>
15°	1073.8	1075.0	1079.6	1092.8	<i>1098.6</i>
17.5°	1053.1	1053.1	1062.3	1072.7	<i>1079.6</i>
20°	1026.7	1028.4	1038.7	1050.3	<i>1057.2</i>
22.5°	999.6	1002.5	1011.1	1024.4	<i>1030.7</i>
25°	969.1	972.6	980.0	992.7	<i>997.9</i>
27.5°	933.4	938.0	946.1	955.3	<i>966.2</i>
30°	892.6	899.5	904.7	917.3	<i>929.4</i>
32.5°	851.1	857.5	863.2	876.5	<i>890.3</i>
35°	802.8	809.7	812.0	831.6	<i>844.8</i>
37.5°	753.3	756.2	757.3	776.9	<i>791.3</i>
40°	694.0	699.8	701.5	717.0	<i>726.3</i>
42.5°	637.1	639.4	642.8	654.3	<i>665.3</i>
45°	575.5	578.4	585.8	589.3	<i>595.0</i>
47.5°	511.0	519.7	528.3	517.4	<i>517.9</i>
50°	452.3	459.2	468.4	447.7	<i>447.7</i>
52.5°	400.0	403.4	404.0	386.7	<i>390.2</i>
55°	352.2	343.6	343.0	331.5	<i>338.4</i>
57.5°	304.4	292.9	288.9	285.4	<i>293.5</i>
60°	265.9	245.2	239.4	244.6	<i>255.5</i>
62.5°	234.2	207.7	196.8	210.1	<i>219.8</i>
65°	200.8	176.7	158.8	183.6	<i>193.9</i>
67.5°	174.9	151.9	128.9	164.0	<i>171.5</i>
70°	150.8	132.9	106.5	149.0	<i>154.8</i>
72.5°	131.2	117.4	92.1	134.7	<i>141.6</i>
75°	113.9	102.4	85.2	119.1	<i>130.1</i>
77.5°	100.1	87.5	79.4	103.0	<i>116.2</i>
80°	84.6	71.9	71.9	86.3	<i>98.4</i>
82.5°	66.8	56.4	58.1	70.2	<i>78.8</i>
85°	44.3	41.4	39.1	51.2	<i>55.8</i>
87.5°	22.4	23.0	20.7	26.5	<i>27.0</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)