

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: P292521

Luminaire Tested: **22GR-LD5-20-A19/156-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292521  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33284)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-20-A19/156-UNV-L83050-W2A1-U-5000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2170.0 lumens  
Efficiency: N/A  
Efficacy: 134.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.21  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

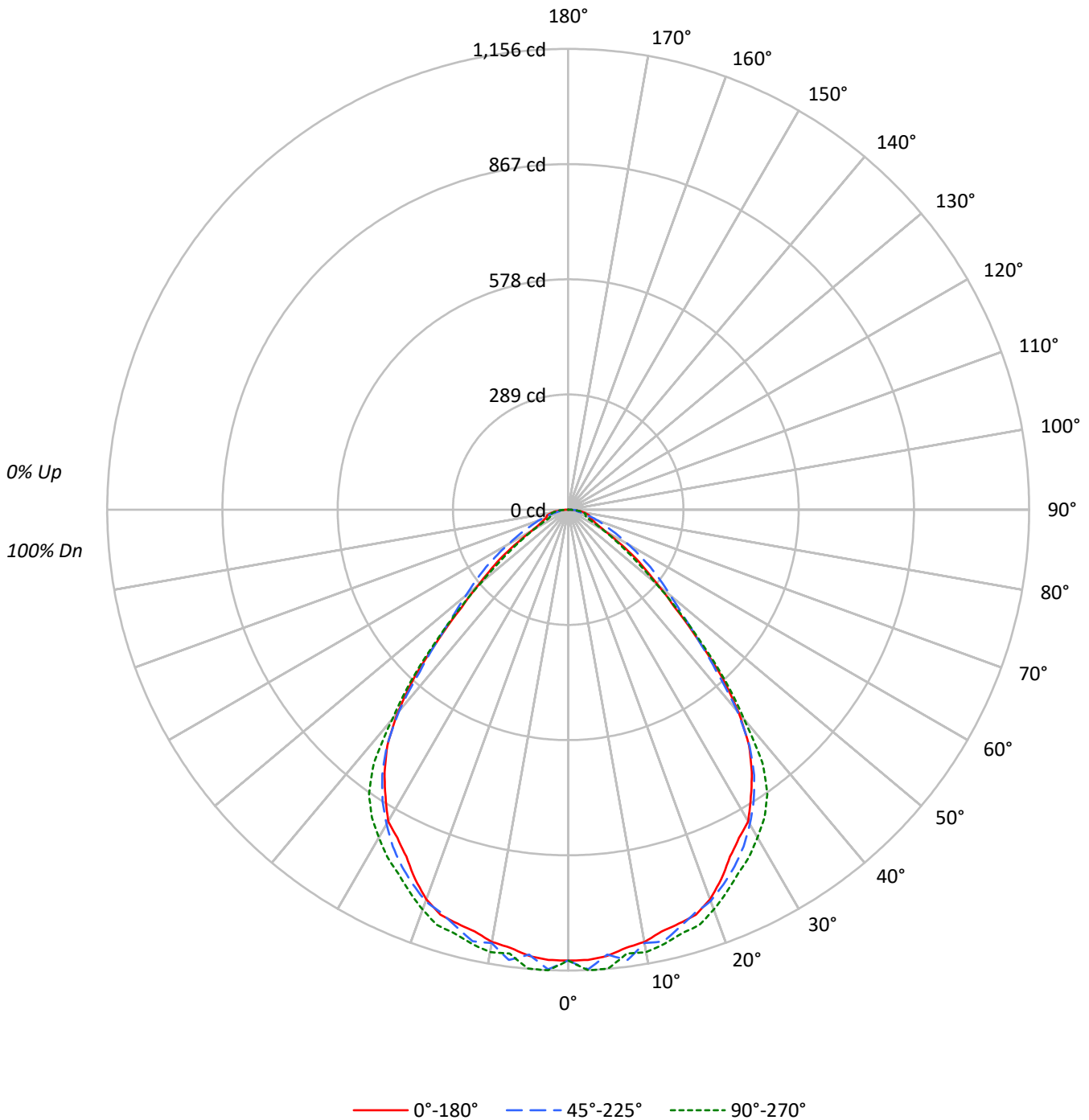
Input Watts (W): 16.182  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	107	103	100	108	105	102	99	101	98	96		97	95	93		93	91	90	88
2	103	96	90	85	100	94	89	85	91	86	83		88	84	81		85	82	79	77
3	95	86	79	74	93	85	79	73	82	77	72		79	75	71		77	73	70	68
4	88	78	71	65	86	77	70	64	75	68	64		72	67	63		70	66	62	60
5	82	71	63	58	80	70	63	57	68	62	57		66	61	56		64	59	56	54
6	77	65	57	51	75	64	57	51	62	56	51		61	55	50		59	54	50	48
7	72	60	52	46	70	59	51	46	57	51	46		56	50	46		55	49	45	44
8	67	55	47	42	66	54	47	42	53	46	42		52	46	41		51	45	41	40
9	63	51	43	38	62	50	43	38	49	43	38		48	42	38		47	42	38	36
10	59	47	40	35	58	47	40	35	46	39	35		45	39	35		44	39	35	33

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

	0°	45°	90°
0°	3043	3043	3043
5°	3036	3026	3121
10°	3008	3016	3079
15°	2994	3017	3065
20°	2978	2993	3057
25°	2851	2931	2992
30°	2804	2829	2950
35°	2637	2670	2860
40°	2337	2321	2412
45°	1745	1749	1798
50°	1229	1398	1190
55°	907	1180	813
60°	567	933	531
65°	462	739	371
70°	459	615	366
75°	569	452	473
80°	634	356	578
85°	633	664	648



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.7	5.0
10°-20°	306.6	14.1
20°-30°	454.2	20.9
30°-40°	508.7	23.4
40°-50°	373.8	17.2
50°-60°	208.9	9.6
60°-70°	116.5	5.4
70°-80°	68.4	3.2
80°-90°	25.2	1.2
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°	868.5	40.0
0°-40°	1377.2	63.5
0°-60°	1960.0	90.3
0°-90°	2170.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2170.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1124	1145	1120	1143	1156	106
15°	1075	1081	1083	1099	1100	304
25°	960	968	987	1001	1008	445
35°	803	803	813	850	871	497
45°	459	496	460	492	472	358
55°	193	235	252	251	173	172
65°	73	129	116	149	58	75
75°	55	77	44	87	46	55
85°	20	30	22	28	21	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1130.9	1130.9	1130.9	1130.9	<i>1130.9</i>
2.5°	<i>1130.4</i>	<i>1140.7</i>	<i>1154.0</i>	<i>1155.5</i>	<i>1156.5</i>
5°	1123.8	1144.7	1120.2	1143.2	<i>1155.5</i>
7.5°	1108.4	1121.2	1139.1	1116.1	<i>1122.8</i>
10°	1100.8	1103.8	1103.8	1132.5	<i>1126.9</i>
12.5°	1083.4	1103.8	1109.0	1103.3	<i>1115.6</i>
15°	1074.7	1081.3	1082.9	1099.2	<i>1100.3</i>
17.5°	1065.0	1063.5	1059.9	1071.6	<i>1092.6</i>
20°	1039.9	1034.3	1045.0	1059.4	<i>1067.5</i>
22.5°	1003.1	1004.7	1017.4	1029.2	<i>1038.4</i>
25°	960.2	967.8	987.3	1001.1	<i>1007.7</i>
27.5°	928.0	939.2	952.5	968.9	<i>982.2</i>
30°	902.4	901.4	910.6	934.1	<i>949.4</i>
32.5°	852.8	856.4	866.1	894.2	<i>915.7</i>
35°	802.7	803.2	812.9	849.7	<i>870.7</i>
37.5°	744.9	740.8	746.5	786.3	<i>800.1</i>
40°	665.2	666.2	660.6	688.7	<i>686.6</i>
42.5°	572.1	580.3	551.2	588.0	<i>585.4</i>
45°	458.6	495.9	459.6	492.4	<i>472.4</i>
47.5°	362.0	417.2	387.0	411.1	<i>373.7</i>
50°	293.5	350.2	333.9	344.6	<i>284.3</i>
52.5°	240.8	286.8	291.9	294.5	<i>221.9</i>
55°	193.3	235.2	251.5	251.0	<i>173.3</i>
57.5°	142.6	191.2	210.1	217.8	<i>131.4</i>
60°	105.3	159.0	173.3	190.2	<i>98.7</i>
62.5°	84.9	139.6	143.2	166.7	<i>75.2</i>
65°	72.6	128.8	116.1	148.8	<i>58.3</i>
67.5°	64.4	120.1	94.6	132.9	<i>49.6</i>
70°	58.3	106.9	78.2	119.1	<i>46.5</i>
72.5°	56.8	91.0	60.3	106.3	<i>46.0</i>
75°	54.7	77.2	43.5	87.4	<i>45.5</i>
77.5°	47.0	66.0	31.2	67.5	<i>42.4</i>
80°	40.9	52.7	23.0	50.6	<i>37.3</i>
82.5°	31.7	39.9	20.5	38.3	<i>30.2</i>
85°	20.5	30.2	21.5	27.6	<i>21.0</i>
87.5°	9.7	16.9	15.3	14.8	<i>10.7</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)