

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: P291838

Luminaire Tested: **22GR-LD5-24-F1-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291838  
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-LD5-24-F1-UNV-L93050-W2A1-U-4000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2240.0 lumens  
Efficiency: N/A  
Efficacy: 120.4 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

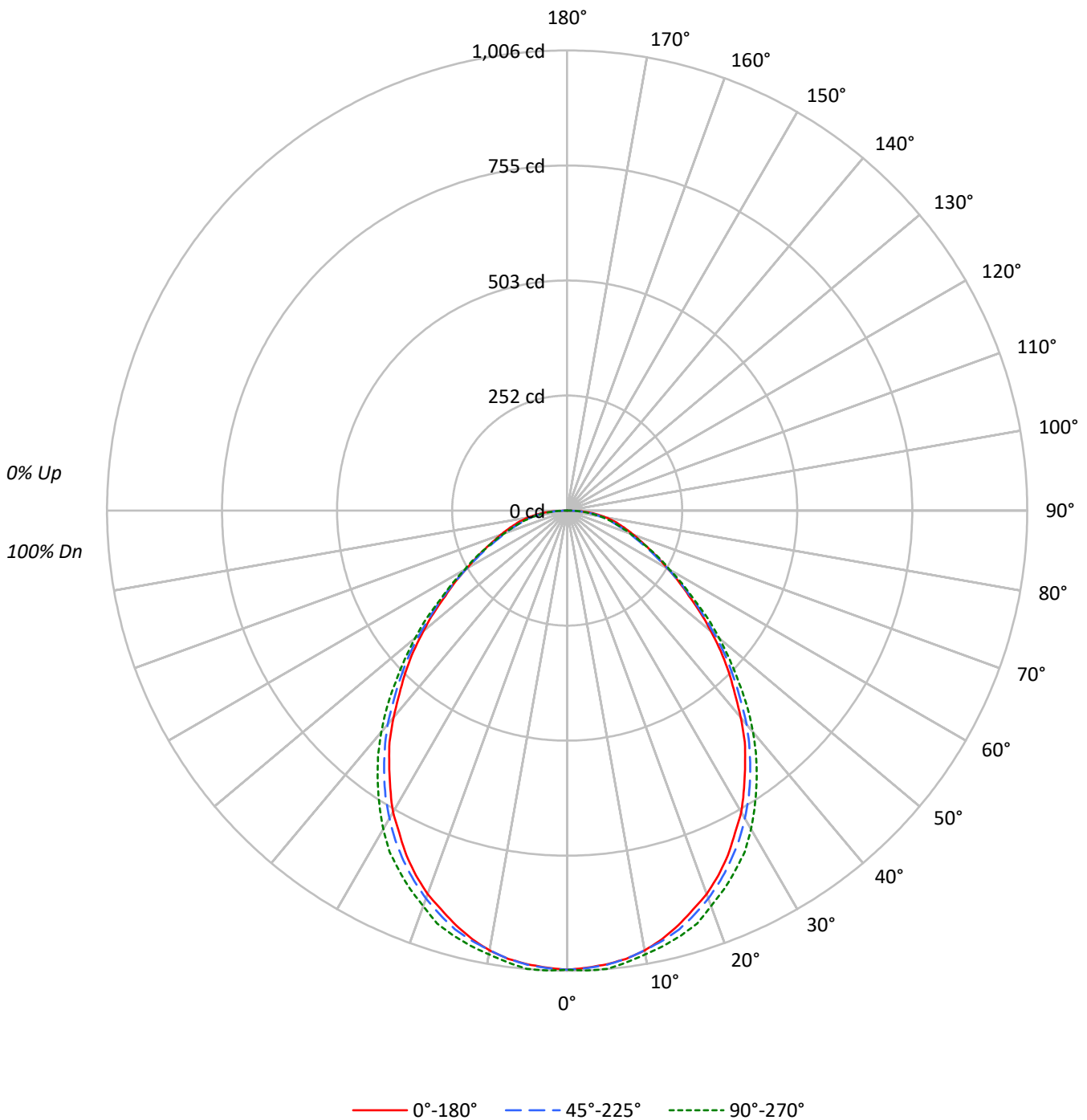
Input Watts (W): 18.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2701	2701	2701
5°	2689	2692	2717
10°	2668	2667	2692
15°	2615	2640	2679
20°	2555	2584	2634
25°	2470	2510	2580
30°	2366	2414	2499
35°	2228	2292	2373
40°	2073	2144	2221
45°	1903	1958	2019
50°	1717	1760	1816
55°	1523	1559	1586
60°	1365	1368	1396
65°	1258	1216	1258
70°	1215	1125	1157
75°	1235	1102	1123
80°	1331	1156	1156
85°	1476	1223	1207



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.7	4.2
10°-20°	267.1	11.9
20°-30°	389.8	17.4
30°-40°	436.4	19.5
40°-50°	397.2	17.7
50°-60°	298.9	13.3
60°-70°	195.1	8.7
70°-80°	117.0	5.2
80°-90°	43.9	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°	751.6	33.6
0°-40°	1188.0	53.0
0°-60°	1884.0	84.1
0°-90°	2240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2240.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	996	994	997	1000	1006	94
15°	938	940	948	955	962	264
25°	832	834	845	861	869	382
35°	678	684	698	714	722	424
45°	500	505	514	525	530	385
55°	325	329	332	337	338	293
65°	198	196	191	194	198	198
75°	119	115	106	106	108	126
85°	48	46	40	38	39	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1003.8	1003.8	1003.8	1003.8	1003.8
2.5°	1000.2	999.7	1001.2	1003.8	1006.4
5°	995.6	994.0	996.6	1000.2	1005.9
7.5°	988.4	988.4	988.4	995.0	996.1
10°	976.5	977.6	976.0	982.7	985.3
12.5°	959.5	960.1	963.1	969.8	974.5
15°	938.5	939.5	947.7	955.4	961.6
17.5°	914.8	918.4	926.1	938.5	946.2
20°	892.1	896.3	902.4	915.8	919.9
22.5°	863.3	868.0	875.7	887.5	896.3
25°	831.9	834.5	845.3	860.8	869.0
27.5°	794.4	800.0	813.4	829.4	840.7
30°	761.5	764.5	776.9	795.4	804.2
32.5°	719.8	729.0	739.3	755.8	764.0
35°	678.1	684.3	697.7	714.1	722.4
37.5°	638.0	641.6	655.0	668.9	679.1
40°	590.1	596.8	610.2	625.1	632.3
42.5°	542.3	552.1	560.8	575.7	583.4
45°	500.1	505.2	514.5	525.3	530.5
47.5°	455.8	458.4	469.2	475.9	481.6
50°	410.1	413.1	420.3	427.0	433.7
52.5°	367.9	370.4	375.1	381.2	387.9
55°	324.7	329.3	332.4	337.0	338.0
57.5°	289.7	289.1	291.2	294.8	298.4
60°	253.6	254.7	254.2	257.8	259.3
62.5°	223.8	223.3	220.2	225.4	229.5
65°	197.6	195.5	190.9	194.0	197.6
67.5°	173.4	172.4	164.6	167.2	170.3
70°	154.4	150.7	143.0	144.6	147.1
72.5°	135.8	131.7	124.0	124.5	126.1
75°	118.8	114.7	106.0	106.5	108.0
77.5°	102.9	97.8	90.0	89.0	90.0
80°	85.9	81.3	74.6	71.5	74.6
82.5°	68.4	65.9	58.1	55.1	56.1
85°	47.8	46.3	39.6	37.6	39.1
87.5°	22.1	23.7	20.1	18.5	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)