

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: P291891

Luminaire Tested: **22GR-LD5-28-F1-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291891  
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-5700K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2751.0 lumens  
Efficiency: N/A  
Efficacy: 121.2 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

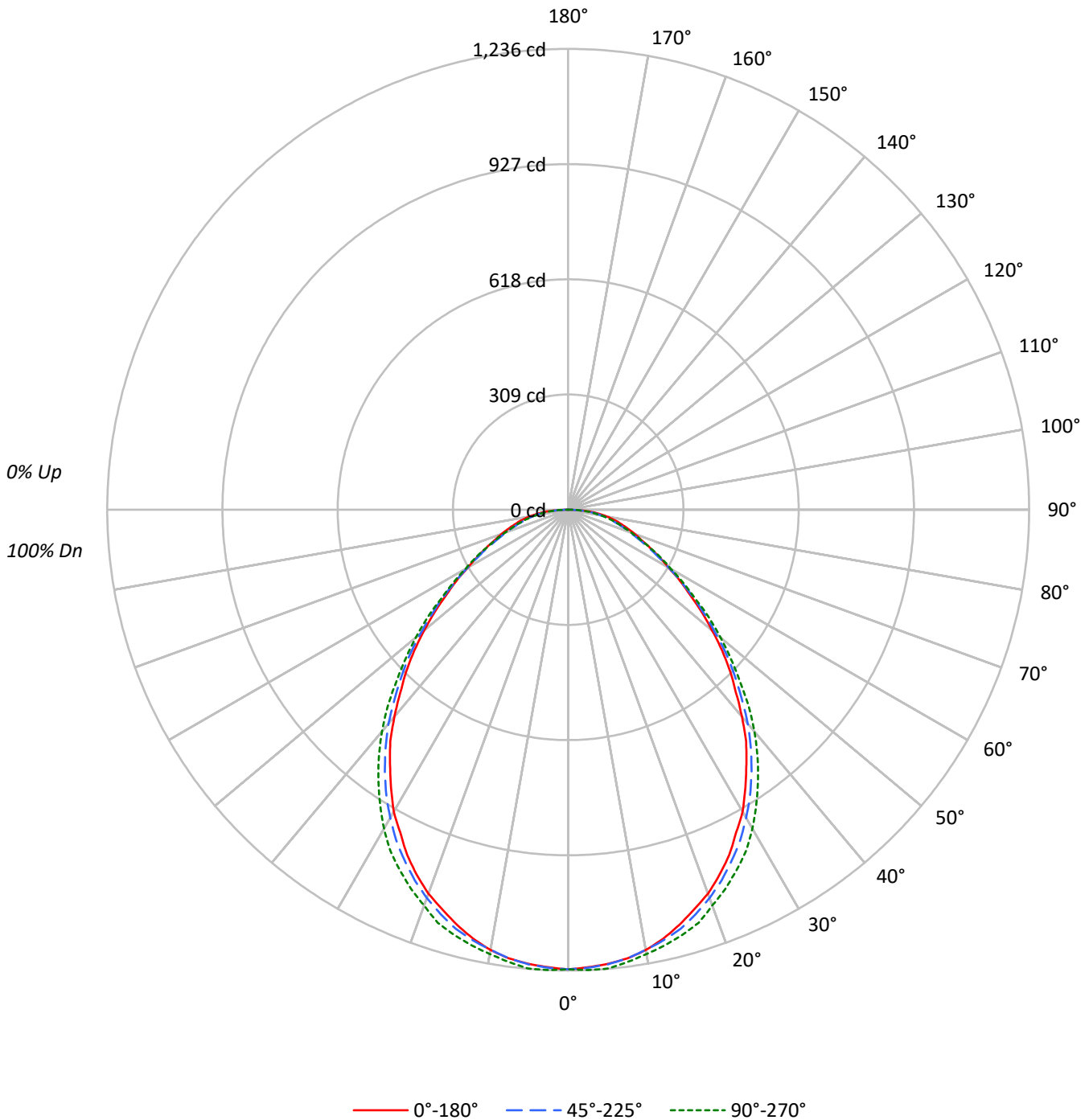
Input Watts (W): 22.692  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3317	3317	3317
5°	3303	3306	3337
10°	3277	3275	3306
15°	3211	3243	3290
20°	3138	3174	3235
25°	3034	3083	3169
30°	2906	2965	3069
35°	2736	2815	2914
40°	2546	2633	2728
45°	2337	2405	2479
50°	2108	2161	2230
55°	1871	1915	1947
60°	1676	1680	1714
65°	1545	1493	1545
70°	1492	1382	1422
75°	1518	1354	1380
80°	1635	1420	1420
85°	1815	1504	1482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.3	4.2
10°-20°	328.0	11.9
20°-30°	478.7	17.4
30°-40°	536.0	19.5
40°-50°	487.8	17.7
50°-60°	367.1	13.3
60°-70°	239.6	8.7
70°-80°	143.7	5.2
80°-90°	53.9	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°	923.0	33.6
0°-40°	1459.0	53.0
0°-60°	2313.9	84.1
0°-90°	2751.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2751.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1223	1221	1224	1228	1235	116
15°	1152	1154	1164	1173	1181	325
25°	1022	1025	1038	1057	1067	469
35°	833	840	857	877	887	520
45°	614	620	632	645	652	473
55°	399	404	408	414	415	360
65°	243	240	234	238	243	243
75°	146	141	130	131	133	155
85°	59	57	49	46	48	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1232.8	1232.8	1232.8	1232.8	1232.8
2.5°	1228.4	1227.7	1229.6	1232.8	1235.9
5°	1222.7	1220.8	1223.9	1228.4	1235.3
7.5°	1213.8	1213.8	1213.8	1222.0	1223.3
10°	1199.3	1200.6	1198.7	1206.9	1210.0
12.5°	1178.4	1179.1	1182.9	1191.1	1196.8
15°	1152.5	1153.8	1163.9	1173.4	1181.0
17.5°	1123.5	1127.9	1137.4	1152.5	1162.0
20°	1095.7	1100.7	1108.3	1124.7	1129.8
22.5°	1060.3	1066.0	1075.4	1090.0	1100.7
25°	1021.7	1024.9	1038.2	1057.1	1067.2
27.5°	975.6	982.6	999.0	1018.6	1032.5
30°	935.2	939.0	954.1	976.9	987.6
32.5°	884.0	895.4	908.0	928.2	938.3
35°	832.8	840.4	856.8	877.0	887.1
37.5°	783.5	787.9	804.4	821.4	834.1
40°	724.8	733.0	749.4	767.7	776.6
42.5°	666.0	678.0	688.7	707.1	716.5
45°	614.2	620.5	631.9	645.1	651.5
47.5°	559.8	563.0	576.3	584.5	591.4
50°	503.6	507.4	516.2	524.5	532.7
52.5°	451.8	454.9	460.6	468.2	476.4
55°	398.7	404.4	408.2	413.9	415.1
57.5°	355.7	355.1	357.6	362.1	366.5
60°	311.5	312.8	312.1	316.6	318.5
62.5°	274.9	274.2	270.4	276.8	281.8
65°	242.6	240.1	234.4	238.2	242.6
67.5°	212.9	211.7	202.2	205.4	209.1
70°	189.6	185.1	175.7	177.6	180.7
72.5°	166.8	161.8	152.3	152.9	154.8
75°	146.0	140.9	130.2	130.8	132.7
77.5°	126.4	120.1	110.6	109.3	110.6
80°	105.5	99.8	91.6	87.8	91.6
82.5°	84.0	80.9	71.4	67.6	68.9
85°	58.8	56.9	48.7	46.1	48.0
87.5°	27.2	29.1	24.6	22.7	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)