

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: P291847

Luminaire Tested: **22GR-LD5-32-F1-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291847  
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-LD5-32-F1-UNV-L93050-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: 2740.0 lumens  
Efficiency: N/A  
Efficacy: 109.5 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

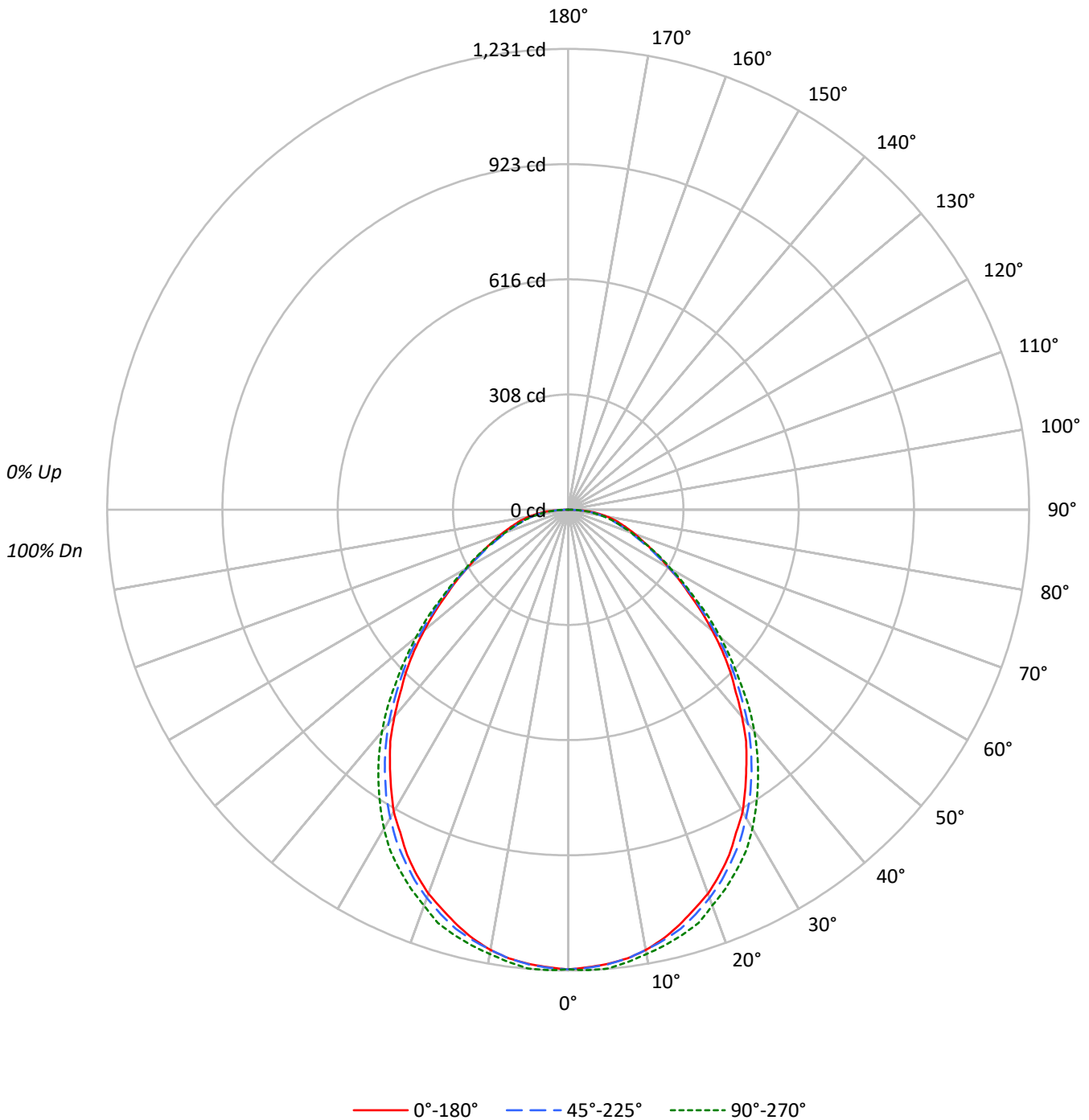
Input Watts (W): 25.017  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3304	3304	3304
5°	3290	3293	3324
10°	3264	3262	3293
15°	3198	3230	3277
20°	3125	3161	3222
25°	3022	3070	3156
30°	2894	2953	3057
35°	2725	2803	2903
40°	2536	2622	2717
45°	2328	2395	2469
50°	2100	2153	2221
55°	1863	1908	1940
60°	1670	1673	1707
65°	1539	1487	1539
70°	1485	1377	1416
75°	1512	1347	1375
80°	1629	1415	1415
85°	1806	1497	1476



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.8	4.2
10°-20°	326.7	11.9
20°-30°	476.8	17.4
30°-40°	533.8	19.5
40°-50°	485.8	17.7
50°-60°	365.7	13.3
60°-70°	238.6	8.7
70°-80°	143.1	5.2
80°-90°	53.7	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°	919.3	33.6
0°-40°	1453.1	53.0
0°-60°	2304.6	84.1
0°-90°	2740.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2740.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1218	1216	1219	1223	1230	116
15°	1148	1149	1159	1169	1176	323
25°	1018	1021	1034	1053	1063	467
35°	830	837	853	874	884	518
45°	612	618	629	643	649	471
55°	397	403	407	412	414	359
65°	242	239	234	237	242	242
75°	145	140	130	130	132	154
85°	58	57	48	46	48	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1223.4	1222.8	1224.7	1227.9	1231.0
5°	1217.8	1215.9	1219.0	1223.4	1230.4
7.5°	1209.0	1209.0	1209.0	1217.2	1218.4
10°	1194.5	1195.8	1193.9	1202.0	1205.2
12.5°	1173.7	1174.4	1178.1	1186.3	1192.0
15°	1147.9	1149.2	1159.3	1168.7	1176.2
17.5°	1119.0	1123.4	1132.8	1147.9	1157.4
20°	1091.3	1096.3	1103.9	1120.2	1125.3
22.5°	1056.0	1061.7	1071.1	1085.6	1096.3
25°	1017.7	1020.8	1034.0	1052.9	1063.0
27.5°	971.7	978.6	995.0	1014.5	1028.4
30°	931.4	935.2	950.3	973.0	983.7
32.5°	880.5	891.8	904.4	924.5	934.6
35°	829.5	837.0	853.4	873.5	883.6
37.5°	780.4	784.8	801.2	818.1	830.7
40°	721.9	730.0	746.4	764.7	773.5
42.5°	663.3	675.3	686.0	704.2	713.7
45°	611.7	618.0	629.3	642.6	648.9
47.5°	557.6	560.7	574.0	582.1	589.1
50°	501.6	505.4	514.2	522.4	530.5
52.5°	450.0	453.1	458.8	466.3	474.5
55°	397.1	402.8	406.6	412.2	413.5
57.5°	354.3	353.7	356.2	360.6	365.0
60°	310.3	311.5	310.9	315.3	317.2
62.5°	273.8	273.1	269.4	275.7	280.7
65°	241.7	239.2	233.5	237.3	241.7
67.5°	212.1	210.8	201.4	204.5	208.3
70°	188.8	184.4	175.0	176.8	180.0
72.5°	166.1	161.1	151.7	152.3	154.2
75°	145.4	140.3	129.6	130.3	132.2
77.5°	125.9	119.6	110.1	108.9	110.1
80°	105.1	99.4	91.3	87.5	91.3
82.5°	83.7	80.6	71.1	67.3	68.6
85°	58.5	56.6	48.5	45.9	47.8
87.5°	27.1	28.9	24.5	22.7	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)