

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: P291849

Luminaire Tested: **22GR-LD5-32-F1-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291849  
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-4500K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3010.0 lumens  
Efficiency: N/A  
Efficacy: 117.7 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

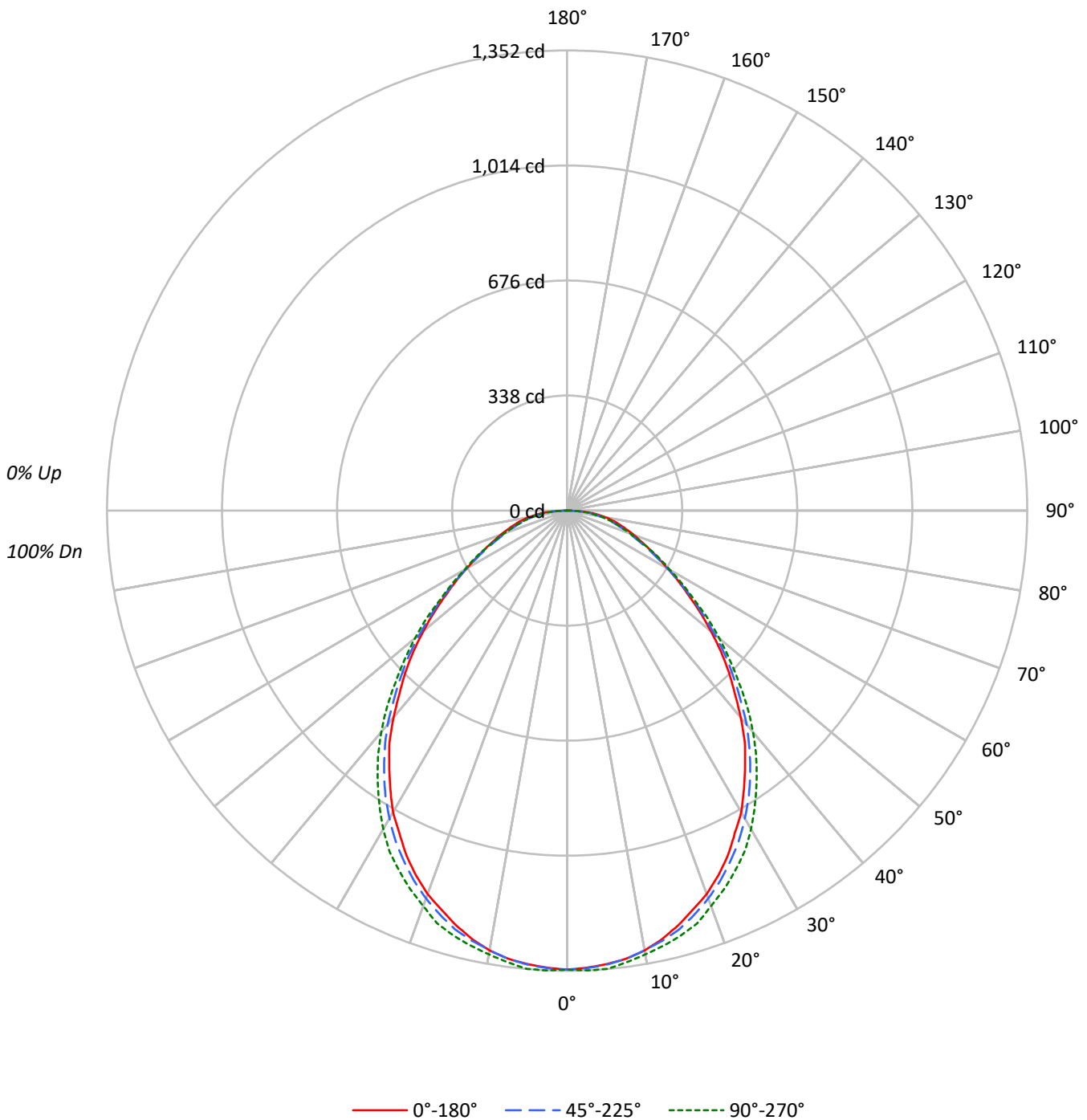
Input Watts (W): 25.575  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3630	3630	3630
5°	3614	3618	3651
10°	3586	3584	3618
15°	3513	3548	3600
20°	3433	3472	3540
25°	3319	3373	3467
30°	3179	3244	3358
35°	2993	3080	3189
40°	2786	2881	2985
45°	2557	2631	2713
50°	2307	2364	2440
55°	2046	2095	2131
60°	1834	1838	1875
65°	1691	1633	1691
70°	1632	1512	1555
75°	1660	1481	1510
80°	1790	1553	1553
85°	1985	1643	1621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.2	4.2
10°-20°	358.9	11.9
20°-30°	523.8	17.4
30°-40°	586.4	19.5
40°-50°	533.7	17.7
50°-60°	401.7	13.3
60°-70°	262.1	8.7
70°-80°	157.2	5.2
80°-90°	59.0	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°	1009.9	33.6
0°-40°	1596.3	53.0
0°-60°	2531.7	84.1
0°-90°	3010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3010.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1349	1349	1349	1349	1349	
5°	1338	1336	1339	1344	1352	127
15°	1261	1262	1274	1284	1292	355
25°	1118	1121	1136	1157	1168	513
35°	911	920	938	960	971	569
45°	672	679	691	706	713	517
55°	436	442	447	453	454	394
65°	266	263	256	261	266	265
75°	160	154	142	143	145	169
85°	64	62	53	50	52	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1348.8	1348.8	1348.8	1348.8	1348.8
2.5°	1344.0	1343.3	1345.4	1348.8	1352.3
5°	1337.8	1335.7	1339.2	1344.0	1351.6
7.5°	1328.1	1328.1	1328.1	1337.1	1338.5
10°	1312.2	1313.6	1311.5	1320.5	1324.0
12.5°	1289.4	1290.1	1294.2	1303.2	1309.4
15°	1261.0	1262.4	1273.5	1283.9	1292.2
17.5°	1229.2	1234.1	1244.5	1261.0	1271.4
20°	1198.8	1204.4	1212.6	1230.6	1236.2
22.5°	1160.1	1166.3	1176.7	1192.6	1204.4
25°	1117.9	1121.4	1135.9	1156.6	1167.7
27.5°	1067.5	1075.1	1093.0	1114.5	1129.7
30°	1023.2	1027.4	1044.0	1068.8	1080.6
32.5°	967.2	979.7	993.5	1015.6	1026.7
35°	911.2	919.5	937.5	959.6	970.7
37.5°	857.3	862.1	880.1	898.8	912.6
40°	793.0	802.0	820.0	840.0	849.7
42.5°	728.7	741.8	753.6	773.6	784.0
45°	672.0	678.9	691.4	705.9	712.8
47.5°	612.5	616.0	630.5	639.5	647.1
50°	551.0	555.2	564.8	573.8	582.8
52.5°	494.3	497.8	504.0	512.3	521.3
55°	436.2	442.5	446.6	452.8	454.2
57.5°	389.2	388.5	391.3	396.2	401.0
60°	340.8	342.2	341.5	346.4	348.4
62.5°	300.7	300.1	295.9	302.8	308.3
65°	265.5	262.7	256.5	260.6	265.5
67.5°	233.0	231.6	221.2	224.7	228.8
70°	207.4	202.6	192.2	194.3	197.7
72.5°	182.5	177.0	166.6	167.3	169.4
75°	159.7	154.2	142.4	143.1	145.2
77.5°	138.3	131.4	121.0	119.6	121.0
80°	115.5	109.2	100.2	96.1	100.2
82.5°	92.0	88.5	78.1	74.0	75.4
85°	64.3	62.2	53.2	50.5	52.5
87.5°	29.7	31.8	27.0	24.9	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)