

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: P291745

Luminaire Tested: **22GR-LD5-28-F1-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291745  
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-L83050-W2A1-U-4000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3064.0 lumens  
Efficiency: N/A  
Efficacy: 136.1 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

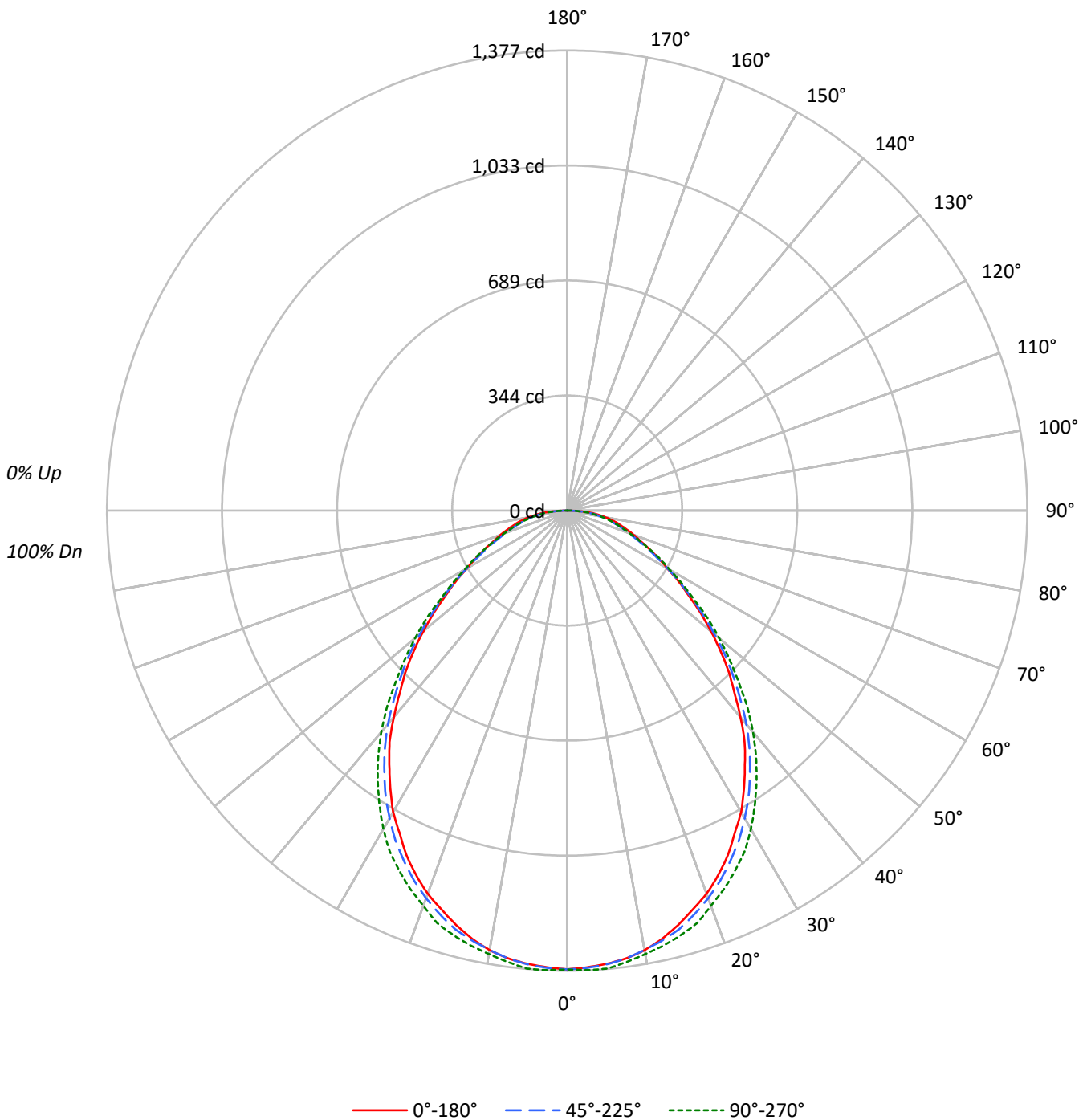
Input Watts (W): 22.506  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3695	3695	3695
5°	3679	3682	3717
10°	3650	3648	3683
15°	3576	3611	3664
20°	3495	3535	3603
25°	3379	3433	3529
30°	3237	3302	3418
35°	3047	3135	3246
40°	2836	2932	3038
45°	2603	2678	2761
50°	2348	2407	2484
55°	2084	2133	2169
60°	1868	1871	1909
65°	1720	1663	1720
70°	1661	1539	1584
75°	1691	1508	1537
80°	1821	1581	1581
85°	2022	1673	1652



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.5	4.2
10°-20°	365.3	11.9
20°-30°	533.2	17.4
30°-40°	596.9	19.5
40°-50°	543.3	17.7
50°-60°	408.9	13.3
60°-70°	266.8	8.7
70°-80°	160.0	5.2
80°-90°	60.0	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°	1028.0	33.6
0°-40°	1625.0	53.0
0°-60°	2577.1	84.1
0°-90°	3064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3064.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1373	1373	1373	1373	1373	
5°	1362	1360	1363	1368	1376	129
15°	1284	1285	1296	1307	1315	362
25°	1138	1142	1156	1177	1189	522
35°	928	936	954	977	988	580
45°	684	691	704	718	726	527
55°	444	450	455	461	462	401
65°	270	267	261	265	270	270
75°	163	157	145	146	148	172
85°	66	63	54	51	54	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1373.0	1373.0	1373.0	1373.0	1373.0
2.5°	1368.1	1367.4	1369.5	1373.0	1376.6
5°	1361.8	1359.7	1363.2	1368.1	1375.9
7.5°	1351.9	1351.9	1351.9	1361.1	1362.5
10°	1335.7	1337.2	1335.0	1344.2	1347.7
12.5°	1312.5	1313.2	1317.4	1326.6	1332.9
15°	1283.7	1285.1	1296.3	1306.9	1315.3
17.5°	1251.3	1256.2	1266.8	1283.7	1294.2
20°	1220.3	1226.0	1234.4	1252.7	1258.3
22.5°	1180.9	1187.3	1197.8	1214.0	1226.0
25°	1138.0	1141.5	1156.3	1177.4	1188.7
27.5°	1086.6	1094.4	1112.7	1134.5	1150.0
30°	1041.6	1045.8	1062.7	1088.0	1100.0
32.5°	984.6	997.2	1011.3	1033.8	1045.1
35°	927.6	936.0	954.3	976.8	988.1
37.5°	872.7	877.6	895.9	914.9	929.0
40°	807.2	816.4	834.7	855.1	864.9
42.5°	741.8	755.1	767.1	787.5	798.1
45°	684.1	691.1	703.8	718.5	725.6
47.5°	623.5	627.1	641.8	651.0	658.7
50°	560.9	565.1	575.0	584.1	593.3
52.5°	503.2	506.7	513.0	521.5	530.6
55°	444.1	450.4	454.6	461.0	462.4
57.5°	396.2	395.5	398.3	403.3	408.2
60°	347.0	348.4	347.7	352.6	354.7
62.5°	306.1	305.4	301.2	308.2	313.9
65°	270.2	267.4	261.1	265.3	270.2
67.5°	237.2	235.8	225.2	228.7	232.9
70°	211.1	206.2	195.6	197.8	201.3
72.5°	185.8	180.2	169.6	170.3	172.4
75°	162.6	156.9	145.0	145.7	147.8
77.5°	140.8	133.7	123.2	121.8	123.2
80°	117.5	111.2	102.0	97.8	102.0
82.5°	93.6	90.1	79.5	75.3	76.7
85°	65.5	63.3	54.2	51.4	53.5
87.5°	30.3	32.4	27.4	25.3	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)