

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: P291844

Luminaire Tested: **22GR-LD5-28-F1-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P291844
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-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: 2725.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

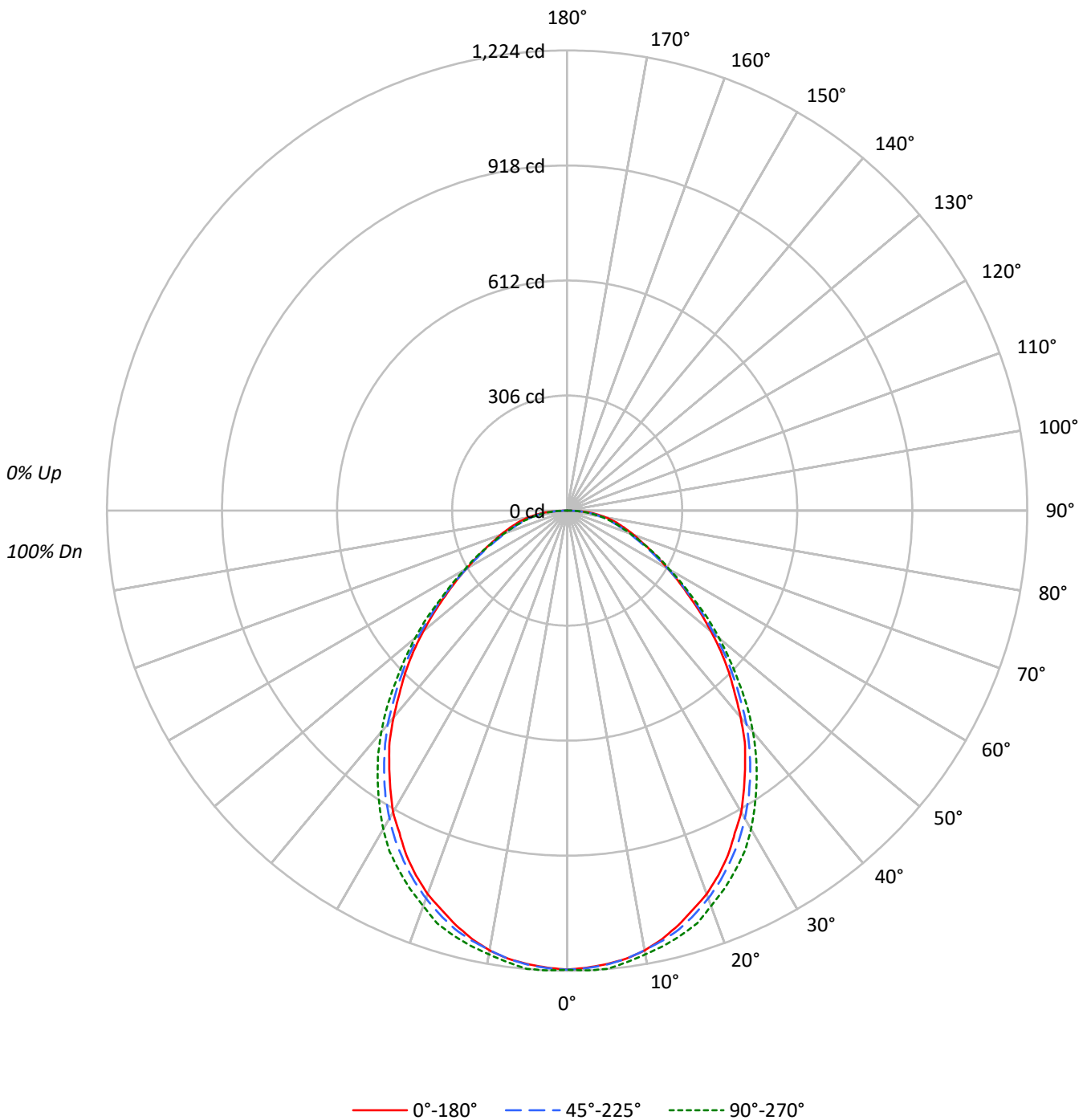
Input Watts (W): 22.971
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3286	3286	3286
5°	3271	3275	3305
10°	3246	3244	3275
15°	3180	3212	3259
20°	3108	3144	3205
25°	3005	3053	3139
30°	2878	2937	3040
35°	2710	2788	2887
40°	2522	2608	2702
45°	2315	2382	2456
50°	2088	2141	2209
55°	1853	1897	1929
60°	1661	1664	1698
65°	1530	1479	1530
70°	1478	1369	1408
75°	1503	1340	1366
80°	1619	1407	1407
85°	1797	1488	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.2	4.2
10°-20°	324.9	11.9
20°-30°	474.2	17.4
30°-40°	530.9	19.5
40°-50°	483.2	17.7
50°-60°	363.7	13.3
60°-70°	237.3	8.7
70°-80°	142.3	5.2
80°-90°	53.4	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°	914.3	33.6
0°-40°	1445.2	53.0
0°-60°	2292.0	84.1
0°-90°	2725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1221	1221	1221	1221	1221	
5°	1211	1209	1212	1217	1224	115
15°	1142	1143	1153	1162	1170	322
25°	1012	1015	1028	1047	1057	465
35°	825	832	849	869	879	516
45°	608	615	626	639	645	468
55°	395	401	404	410	411	357
65°	240	238	232	236	240	240
75°	145	140	129	130	131	153
85°	58	56	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°	1221.1	1221.1	1221.1	1221.1	1221.1
2.5°	1216.8	1216.1	1218.0	1221.1	1224.3
5°	1211.1	1209.2	1212.4	1216.8	1223.6
7.5°	1202.4	1202.4	1202.4	1210.5	1211.7
10°	1188.0	1189.2	1187.3	1195.5	1198.6
12.5°	1167.3	1167.9	1171.7	1179.8	1185.5
15°	1141.6	1142.9	1152.9	1162.3	1169.8
17.5°	1112.9	1117.2	1126.6	1141.6	1151.0
20°	1085.3	1090.3	1097.8	1114.1	1119.1
22.5°	1050.3	1055.9	1065.3	1079.7	1090.3
25°	1012.1	1015.2	1028.4	1047.1	1057.1
27.5°	966.4	973.3	989.5	1009.0	1022.7
30°	926.3	930.1	945.1	967.6	978.3
32.5°	875.6	886.9	899.4	919.4	929.5
35°	824.9	832.4	848.7	868.7	878.8
37.5°	776.1	780.5	796.8	813.7	826.2
40°	717.9	726.0	742.3	760.5	769.2
42.5°	659.7	671.6	682.2	700.4	709.8
45°	608.4	614.6	625.9	639.0	645.3
47.5°	554.5	557.7	570.8	579.0	585.8
50°	498.8	502.6	511.4	519.5	527.6
52.5°	447.5	450.6	456.3	463.8	471.9
55°	394.9	400.6	404.3	410.0	411.2
57.5°	352.4	351.8	354.3	358.6	363.0
60°	308.6	309.8	309.2	313.6	315.5
62.5°	272.3	271.6	267.9	274.1	279.2
65°	240.3	237.8	232.2	236.0	240.3
67.5°	210.9	209.7	200.3	203.4	207.2
70°	187.8	183.4	174.0	175.9	179.0
72.5°	165.2	160.2	150.8	151.5	153.3
75°	144.6	139.6	128.9	129.6	131.4
77.5°	125.2	118.9	109.5	108.3	109.5
80°	104.5	98.9	90.8	87.0	90.8
82.5°	83.2	80.1	70.7	67.0	68.2
85°	58.2	56.3	48.2	45.7	47.6
87.5°	26.9	28.8	24.4	22.5	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)