

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: P292627

Luminaire Tested: **22GR-LD5-28-A19/156-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P292627  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33284)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-28-A19/156-UNV-L93050-W2A1-U-4000K  
Description: GRLED 2x2 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2638.0 lumens  
Efficiency: N/A  
Efficacy: 116.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.21  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

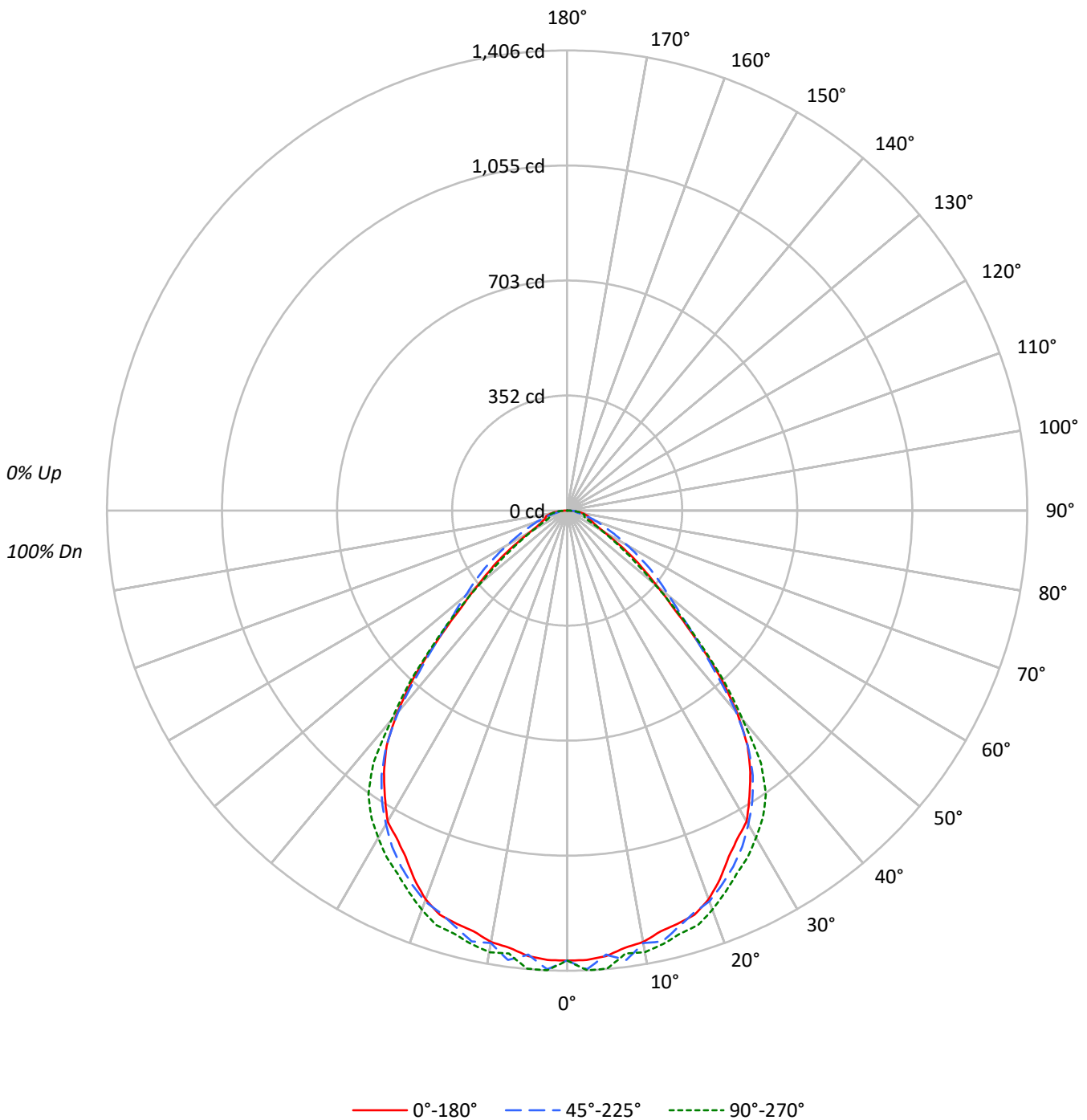
Input Watts (W): 22.599  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	91	90	88					88			
2	103	96	90	85	100	94	89	85	91	86	83	88	84	81	85	82	79	77					77			
3	95	86	79	74	93	85	79	73	82	77	72	79	75	71	77	73	70	68					68			
4	88	78	71	65	86	77	70	64	75	68	64	72	67	63	70	66	62	60					60			
5	82	71	63	58	80	70	63	57	68	62	57	66	61	56	64	59	56	54					54			
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48					48			
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46	55	49	45	44					44			
8	67	55	47	42	66	54	47	42	53	46	42	52	46	41	51	45	41	40					40			
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36					36			
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35	33					33			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3700	3700	3700
5°	3690	3679	3794
10°	3657	3667	3743
15°	3640	3667	3726
20°	3620	3638	3716
25°	3466	3564	3638
30°	3409	3440	3586
35°	3206	3247	3477
40°	2840	2821	2932
45°	2122	2127	2186
50°	1494	1699	1447
55°	1102	1435	989
60°	689	1134	646
65°	562	898	451
70°	558	748	445
75°	691	549	575
80°	770	434	704
85°	769	806	787



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.9	5.0
10°-20°	372.8	14.1
20°-30°	552.1	20.9
30°-40°	618.5	23.4
40°-50°	454.4	17.2
50°-60°	254.0	9.6
60°-70°	141.6	5.4
70°-80°	83.2	3.2
80°-90°	30.6	1.2
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°	1055.8	40.0
0°-40°	1674.2	63.5
0°-60°	2382.7	90.3
0°-90°	2638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2638.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1366	1392	1362	1390	1405	129
15°	1306	1315	1316	1336	1338	369
25°	1167	1177	1200	1217	1225	541
35°	976	976	988	1033	1058	605
45°	558	603	559	598	574	436
55°	235	286	306	305	211	210
65°	88	157	141	181	71	91
75°	66	94	53	106	55	67
85°	25	37	26	34	26	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1374.9	1374.9	1374.9	1374.9	1374.9
2.5°	1374.2	1386.7	1402.8	1404.7	1405.9
5°	1366.2	1391.6	1361.8	1389.8	1404.7
7.5°	1347.5	1363.0	1384.8	1356.8	1364.9
10°	1338.2	1341.9	1341.9	1376.7	1369.9
12.5°	1317.0	1341.9	1348.1	1341.3	1356.2
15°	1306.5	1314.6	1316.4	1336.3	1337.6
17.5°	1294.7	1292.8	1288.5	1302.8	1328.2
20°	1264.2	1257.4	1270.4	1287.8	1297.8
22.5°	1219.5	1221.3	1236.9	1251.2	1262.4
25°	1167.3	1176.6	1200.2	1217.0	1225.1
27.5°	1128.1	1141.8	1157.9	1177.8	1194.0
30°	1097.0	1095.8	1107.0	1135.6	1154.2
32.5°	1036.7	1041.1	1052.9	1087.1	1113.2
35°	975.8	976.4	988.3	1033.0	1058.5
37.5°	905.6	900.6	907.5	955.9	972.7
40°	808.6	809.9	803.0	837.2	834.7
42.5°	695.5	705.5	670.0	714.8	711.7
45°	557.5	602.9	558.8	598.5	574.3
47.5°	440.1	507.2	470.5	499.7	454.3
50°	356.8	425.8	405.9	418.9	345.6
52.5°	292.7	348.7	354.9	358.0	269.7
55°	234.9	285.9	305.8	305.2	210.7
57.5°	173.4	232.5	255.5	264.8	159.7
60°	128.0	193.3	210.7	231.2	120.0
62.5°	103.2	169.7	174.0	202.6	91.4
65°	88.3	156.6	141.1	180.9	70.9
67.5°	78.3	146.1	115.0	161.6	60.3
70°	70.9	129.9	95.1	144.8	56.6
72.5°	69.0	110.6	73.3	129.3	55.9
75°	66.5	93.9	52.8	106.3	55.3
77.5°	57.2	80.2	37.9	82.0	51.6
80°	49.7	64.0	28.0	61.5	45.4
82.5°	38.5	48.5	24.9	46.6	36.7
85°	24.9	36.7	26.1	33.6	25.5
87.5°	11.8	20.5	18.6	18.0	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)