

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: P294084

Luminaire Tested: **24GR-LD5-85-A19/156-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P294084  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33308)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-85-A19/156-UNV-L93050-W2A1-U-3500K  
Description: GRLED 2x4 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6858.0 lumens  
Efficiency: N/A  
Efficacy: 107.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.25  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

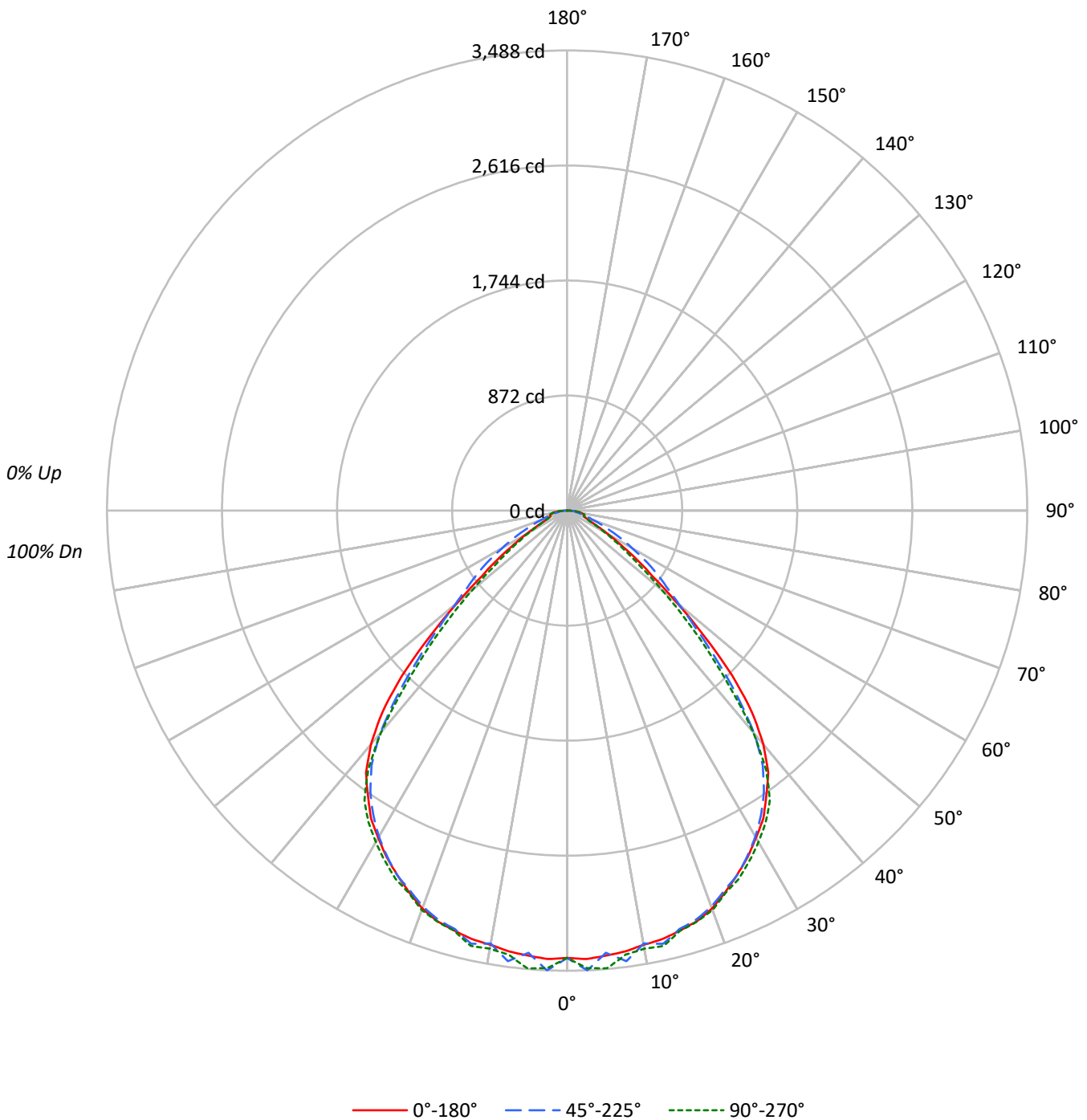
Input Watts (W): 63.588657  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	90	88					88			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77					77			
3	95	86	79	74	93	85	78	73	82	77	72	79	75	71	77	73	70	68					68			
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60					60			
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53					53			
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	48					48			
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43					43			
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39					39			
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36					36			
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33					33			

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

	0°	45°	90°
0°	4563	4563	4563
5°	4573	4543	4704
10°	4565	4552	4608
15°	4592	4576	4595
20°	4595	4576	4614
25°	4524	4528	4572
30°	4449	4435	4507
35°	4323	4271	4400
40°	4060	3879	3857
45°	3366	3045	2888
50°	2264	2310	1973
55°	1493	1938	1294
60°	957	1529	886
65°	617	1168	599
70°	546	836	546
75°	704	664	710
80°	862	572	904
85°	1003	851	1054



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	324.7	4.7
10°-20°	932.3	13.6
20°-30°	1403.6	20.5
30°-40°	1626.8	23.7
40°-50°	1270.8	18.5
50°-60°	678.6	9.9
60°-70°	348.9	5.1
70°-80°	197.4	2.9
80°-90°	75.0	1.1
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°	2660.5	38.8
0°-40°	4287.3	62.5
0°-60°	6236.7	90.9
0°-90°	6858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6858.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3391	3391	3391	3391	3391	
5°	3386	3480	3364	3456	3482	322
15°	3296	3317	3285	3306	3299	931
25°	3048	3038	3050	3045	3079	1404
35°	2632	2620	2600	2652	2678	1641
45°	1769	1770	1600	1586	1518	1333
55°	637	805	826	744	552	587
65°	194	404	367	403	188	213
75°	136	254	128	238	137	137
85°	65	85	55	85	68	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3391.1	3391.1	3391.1	3391.1	3391.1
2.5°	3402.1	3463.8	3488.0	3458.3	3471.5
5°	3385.6	3480.3	3363.6	3456.1	3482.5
7.5°	3370.2	3360.2	3445.1	3356.9	3394.4
10°	3341.5	3348.1	3331.6	3394.4	3372.4
12.5°	3328.3	3366.9	3363.6	3331.6	3380.1
15°	3296.4	3317.3	3285.4	3306.3	3298.6
17.5°	3264.4	3254.5	3251.2	3260.0	3267.7
20°	3209.4	3176.3	3196.1	3198.3	3222.6
22.5°	3130.1	3110.2	3114.6	3134.5	3136.7
25°	3047.5	3037.5	3049.7	3045.3	3079.4
27.5°	2961.6	2948.3	2956.0	2972.6	2993.5
30°	2863.5	2860.2	2854.7	2869.0	2901.0
32.5°	2766.6	2740.2	2735.8	2765.5	2801.9
35°	2632.2	2620.1	2600.3	2652.1	2678.5
37.5°	2504.5	2467.0	2435.1	2465.9	2477.0
40°	2311.8	2283.1	2208.2	2211.5	2196.1
42.5°	2075.0	2054.0	1910.9	1885.5	1842.6
45°	1768.8	1769.9	1600.3	1586.0	1517.7
47.5°	1413.0	1475.8	1328.2	1311.7	1210.4
50°	1081.5	1195.0	1103.6	1077.1	942.8
52.5°	811.7	978.0	949.4	892.1	707.1
55°	636.6	805.1	826.0	744.5	551.8
57.5°	479.1	663.0	697.2	630.0	426.2
60°	355.7	558.4	568.3	541.9	329.3
62.5°	264.3	474.7	461.5	464.8	244.5
65°	193.8	404.2	366.8	403.1	188.3
67.5°	158.6	350.2	285.3	349.1	153.1
70°	138.8	310.6	212.6	307.3	138.8
72.5°	134.4	285.3	168.5	273.1	135.5
75°	135.5	254.4	127.8	237.9	136.6
77.5°	124.5	209.3	96.9	202.7	130.0
80°	111.2	158.6	73.8	160.8	116.7
82.5°	94.7	115.6	59.5	118.9	98.0
85°	65.0	84.8	55.1	84.8	68.3
87.5°	30.8	50.7	34.1	48.5	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)