

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: P130658

Luminaire Tested: **TBLED-LD1-11-M-UNV-L840-CD1-DIMRF-LW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P130658  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25346)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: TBLED-LD1-11-M-UNV-L840-CD1-DIMRF-LW  
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.  
MEDIUM DISTRIBUTION WITH LUMAWATT WIRELESS SENSOR.  
Light Source: (160) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9948.3 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
CIE Type: Direct

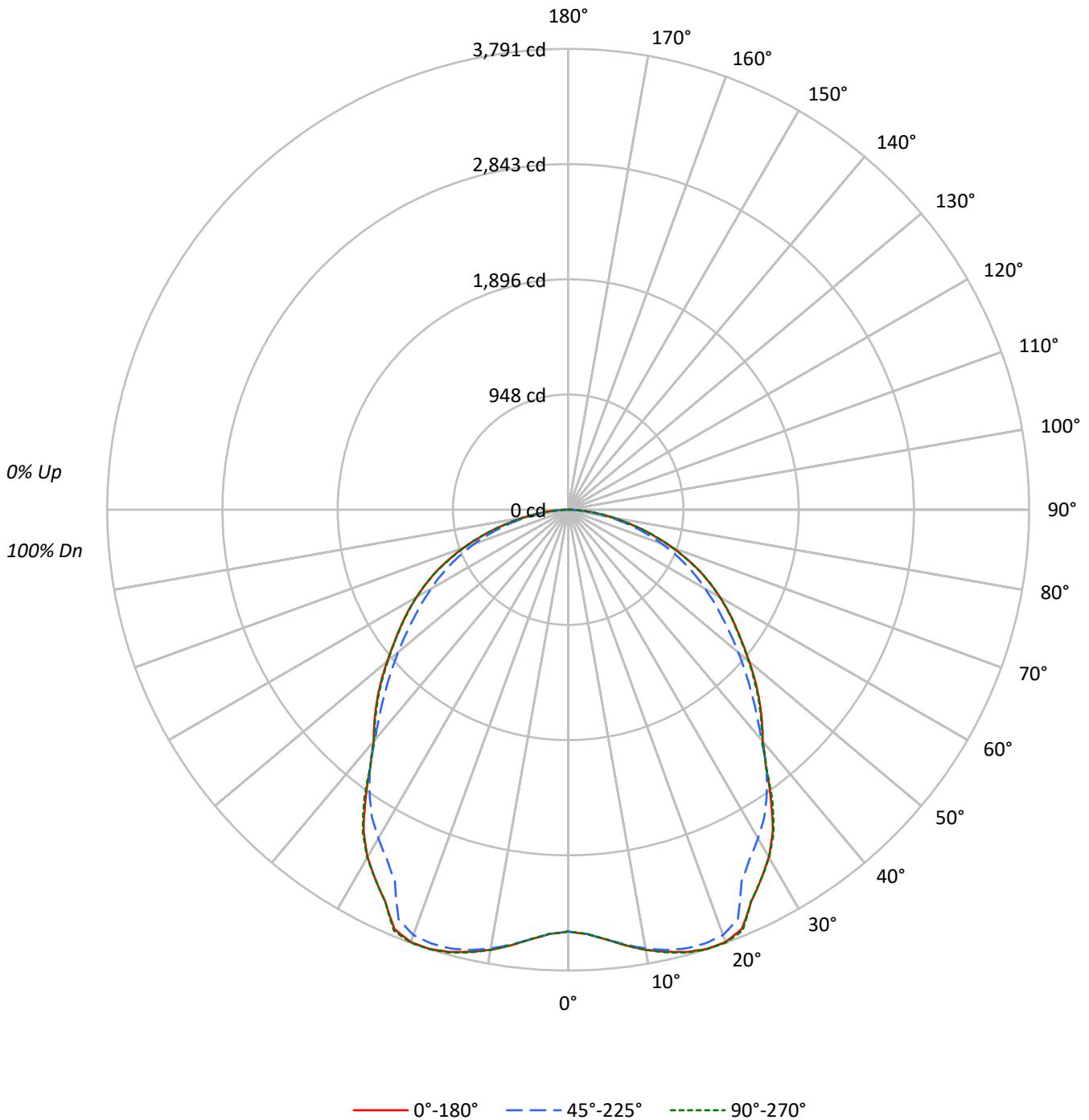
Input Watts (W): 108  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52					52			
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39					39			
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31					31			
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26					26			

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

	0°	45°	90°
0°	37579	37579	37579
5°	38560	38560	38547
10°	40431	40297	40431
15°	42223	41894	42278
20°	43614	42908	43670
25°	42531	40295	42486
30°	41267	39033	41313
35°	38421	37645	38696
40°	35188	34928	35136
45°	34055	32651	33944
50°	32744	30767	32621
55°	31778	29214	31708
60°	31208	28187	31208
65°	30560	27332	30466
70°	29008	25987	28970
75°	26409	23898	26509
80°	23111	20978	23192
85°	20066	17481	20066



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	342.6	3.4
10°-20°	1062.1	10.7
20°-30°	1606.2	16.1
30°-40°	1753.3	17.6
40°-50°	1721.2	17.3
50°-60°	1506.8	15.1
60°-70°	1132.3	11.4
70°-80°	647.3	6.5
80°-90°	176.5	1.8
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°	3010.9	30.3
0°-40°	4764.3	47.9
0°-60°	7992.2	80.3
0°-90°	9948.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9948.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3470	3470	3470	3470	3470	
5°	3547	3548	3547	3547	3546	343
15°	3766	3763	3737	3765	3771	1065
25°	3560	3564	3372	3564	3556	1644
35°	2906	2764	2848	2753	2927	1812
45°	2224	2269	2132	2255	2216	1714
55°	1683	1709	1547	1704	1680	1510
65°	1193	1146	1067	1146	1189	1173
75°	631	607	571	607	634	670
85°	162	152	141	152	162	181
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3
2.5°	3493.6	3491.1	3492.3	3491.1	3493.6	3493.6	3492.3	3493.6	3492.3	3492.3	3492.3
5°	3547.4	3544.9	3546.2	3543.7	3547.4	3548.6	3547.4	3548.6	3548.6	3547.4	3547.4
7.5°	3614.7	3609.8	3611.0	3608.5	3612.2	3612.2	3611.0	3611.0	3609.8	3608.5	3609.8
10°	3677.0	3674.6	3674.6	3673.4	3675.8	3674.6	3672.1	3670.9	3666.0	3664.8	3667.3
12.5°	3724.7	3727.2	3730.9	3730.9	3729.6	3728.4	3722.3	3718.6	3711.3	3710.1	3712.5
15°	3766.3	3767.6	3771.2	3770.0	3766.3	3760.2	3754.1	3746.8	3740.6	3737.0	3740.6
17.5°	3788.4	3788.4	3787.1	3783.5	3776.1	3768.8	3760.2	3752.9	3746.8	3741.9	3746.8
20°	3784.7	3784.7	3778.6	3771.2	3759.0	3748.0	3739.4	3732.1	3726.0	3723.5	3727.2
22.5°	3733.3	3737.0	3732.1	3730.9	3721.1	3706.4	3689.3	3670.9	3651.3	3645.2	3653.8
25°	3559.6	3557.2	3559.6	3582.8	3589.0	3540.0	3477.6	3420.2	3385.9	3372.5	3390.8
27.5°	3431.2	3428.7	3398.1	3349.2	3281.9	3250.1	3255.0	3250.1	3241.6	3235.4	3244.0
30°	3300.3	3281.9	3198.8	3109.5	3044.6	3034.8	3063.0	3098.4	3120.5	3121.7	3118.0
32.5°	3131.5	3094.8	2987.1	2918.6	2891.7	2886.8	2895.4	2932.1	2982.2	3001.8	2976.1
35°	2906.4	2885.6	2819.6	2775.5	2767.0	2760.8	2746.2	2764.5	2826.9	2847.7	2824.4
37.5°	2672.8	2692.3	2664.2	2648.3	2647.1	2634.8	2614.0	2616.5	2649.5	2678.9	2645.9
40°	2489.3	2508.8	2527.2	2526.0	2521.1	2502.7	2486.8	2478.3	2475.8	2470.9	2478.3
42.5°	2358.4	2351.1	2386.5	2406.1	2393.9	2381.6	2368.2	2362.1	2316.8	2296.0	2322.9
45°	2223.8	2221.4	2245.9	2287.4	2277.7	2260.5	2256.9	2232.4	2155.3	2132.1	2161.5
47.5°	2085.6	2095.4	2117.4	2151.7	2157.8	2143.1	2132.1	2081.9	2003.7	1975.5	2002.4
50°	1943.7	1965.7	1996.3	2009.8	2015.9	2007.3	2000.0	1935.2	1855.6	1826.3	1856.9
52.5°	1807.9	1838.5	1878.9	1867.9	1863.0	1866.7	1854.4	1795.7	1718.6	1683.2	1719.9
55°	1683.2	1712.5	1748.0	1726.0	1702.7	1716.2	1705.2	1658.7	1591.4	1547.4	1589.0
57.5°	1565.7	1584.1	1612.2	1582.9	1556.0	1571.9	1560.8	1524.1	1461.8	1423.8	1464.2
60°	1441.0	1455.6	1471.5	1443.4	1415.3	1423.8	1418.9	1385.9	1334.5	1301.5	1332.1
62.5°	1316.2	1323.5	1334.5	1304.0	1280.7	1280.7	1278.3	1246.5	1206.1	1187.8	1204.9
65°	1192.7	1191.4	1195.1	1164.5	1147.4	1144.9	1140.1	1110.7	1078.9	1066.7	1080.1
67.5°	1053.2	1055.6	1056.9	1028.7	1015.3	1009.2	1005.5	978.6	952.9	944.3	954.1
70°	916.2	917.4	917.4	891.7	882.0	872.2	868.5	847.7	826.9	820.8	829.4
72.5°	771.9	780.4	776.8	756.0	748.6	736.4	733.9	720.5	704.6	696.0	704.6
75°	631.2	643.4	639.8	621.4	612.8	600.6	601.8	594.5	577.4	571.2	579.8
77.5°	495.4	502.7	504.0	494.2	480.7	472.2	475.8	474.6	462.4	447.7	458.7
80°	370.6	379.2	380.4	371.9	360.9	353.5	358.4	358.4	348.6	336.4	346.2
82.5°	258.1	264.2	264.2	259.3	254.4	247.1	249.5	250.8	244.6	232.4	241.0
85°	161.5	162.7	160.2	156.6	152.9	150.5	150.5	152.9	148.0	140.7	146.8
87.5°	59.9	61.2	59.9	63.6	59.9	58.7	59.9	63.6	58.7	58.7	59.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3	3470.3
2.5°	3492.3	3493.6	3493.6	3492.3	3492.3	3492.3	3491.1	3492.3
5°	3547.4	3548.6	3548.6	3546.2	3547.4	3546.2	3544.9	3546.2
7.5°	3611.0	3613.4	3612.2	3613.4	3614.7	3612.2	3612.2	3612.2
10°	3669.7	3673.4	3675.8	3678.3	3679.5	3677.0	3678.3	3677.0
12.5°	3717.4	3724.7	3729.6	3732.1	3734.5	3734.5	3732.1	3729.6
15°	3746.8	3755.3	3761.4	3768.8	3773.7	3774.9	3772.4	3771.2
17.5°	3754.1	3761.4	3770.0	3777.3	3784.7	3789.6	3792.0	3790.8
20°	3733.3	3739.4	3749.2	3760.2	3770.0	3779.8	3787.1	3789.6
22.5°	3673.4	3690.5	3708.8	3722.3	3730.9	3735.8	3739.4	3748.0
25°	3427.5	3472.8	3538.8	3589.0	3580.4	3557.2	3548.6	3555.9
27.5°	3252.6	3247.7	3240.3	3279.5	3340.6	3394.5	3420.2	3432.4
30°	3096.0	3059.3	3025.1	3038.5	3100.9	3193.9	3272.1	3304.0
32.5°	2932.1	2881.9	2877.0	2885.6	2915.0	2977.3	3083.8	3143.7
35°	2759.6	2732.7	2747.4	2758.4	2768.2	2800.0	2873.4	2927.2
37.5°	2605.5	2600.6	2620.2	2633.6	2638.5	2654.4	2682.5	2675.2
40°	2469.7	2473.4	2490.5	2505.2	2515.0	2516.2	2499.1	2485.6
42.5°	2347.4	2363.3	2363.3	2381.6	2398.8	2375.5	2340.0	2349.8
45°	2222.6	2248.3	2247.1	2263.0	2278.9	2238.5	2209.2	2216.5
47.5°	2075.8	2124.8	2132.1	2149.2	2149.2	2107.6	2084.4	2075.8
50°	1926.6	1990.2	1998.8	2008.5	2003.7	1987.8	1957.2	1936.4
52.5°	1788.4	1848.3	1856.9	1853.2	1863.0	1870.3	1828.7	1803.0
55°	1652.6	1699.1	1710.1	1697.8	1721.1	1741.9	1702.7	1679.5
57.5°	1518.0	1553.5	1563.3	1553.5	1579.2	1602.4	1576.7	1560.8
60°	1382.3	1414.1	1420.2	1411.6	1442.2	1463.0	1450.8	1441.0
62.5°	1248.9	1270.9	1277.1	1280.7	1299.1	1323.5	1321.1	1319.9
65°	1114.4	1137.6	1140.1	1151.1	1163.3	1195.1	1189.0	1189.0
67.5°	983.5	999.4	1003.1	1020.2	1025.1	1055.6	1052.0	1047.1
70°	847.7	863.6	868.5	885.6	893.0	917.4	918.6	915.0
72.5°	722.9	729.0	733.9	749.8	756.0	779.2	779.2	774.3
75°	595.7	594.5	599.4	615.3	621.4	641.0	639.8	633.6
77.5°	475.8	469.7	473.4	484.4	491.7	506.4	501.5	496.6
80°	363.3	353.5	354.7	365.7	370.6	380.4	375.5	371.9
82.5°	256.9	248.3	245.9	254.4	261.8	263.0	261.8	259.3
85°	156.6	149.2	150.5	154.1	159.0	159.0	161.5	161.5
87.5°	61.2	57.5	57.5	61.2	61.2	62.4	61.2	58.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)