

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: P130649

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130649
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-DOS
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
MEDIUM DISTRIBUTION WITH DIMMING OCCUPANCY SENSOR.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10241.9 lumens
Efficiency: N/A
Efficacy: 94.8 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

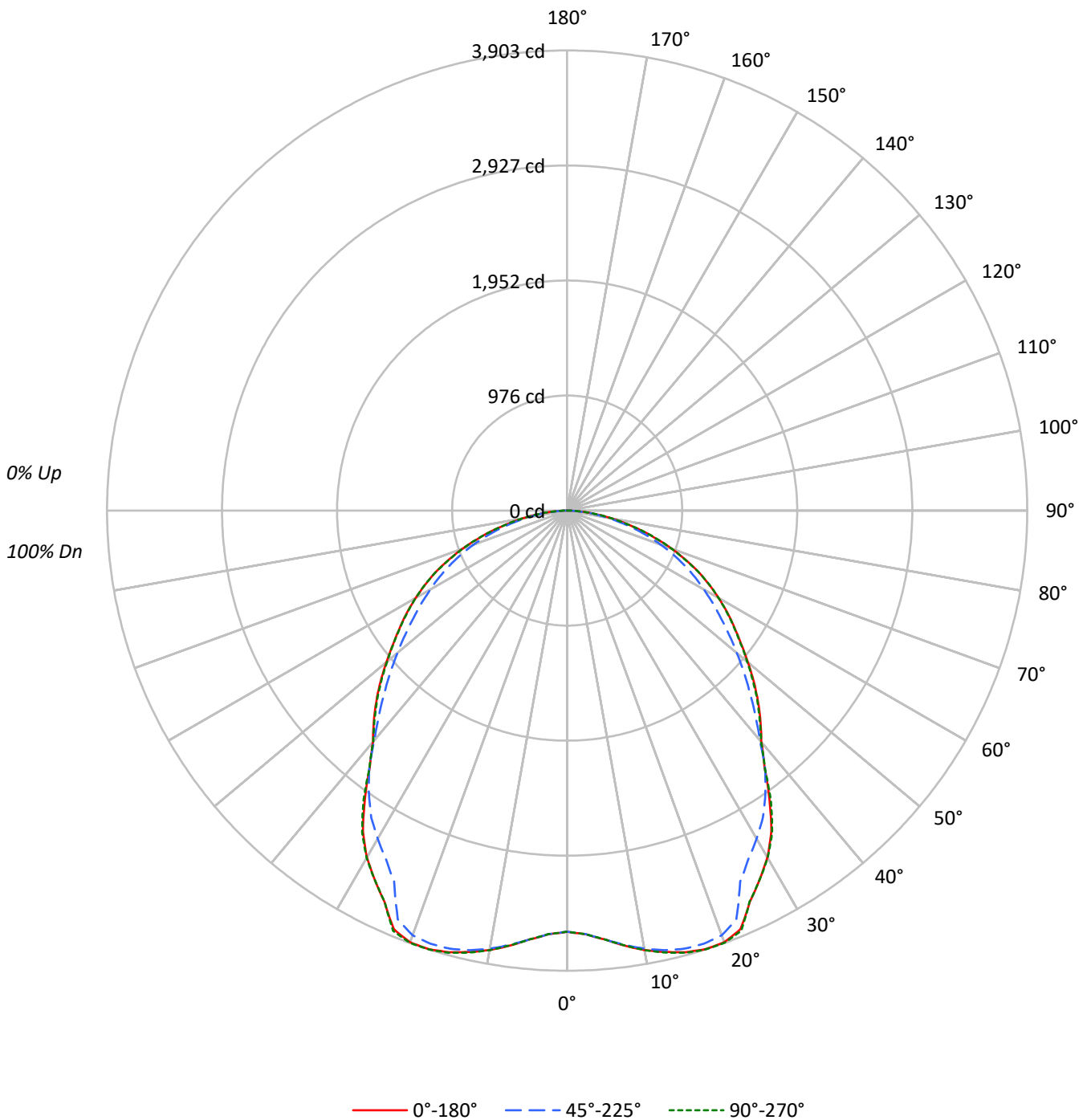
Input Watts (W): 108
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	38688	38688	38688
5°	39698	39698	39684
10°	41625	41487	41625
15°	43469	43131	43525
20°	44901	44175	44958
25°	43786	41484	43741
30°	42484	40185	42532
35°	39555	38755	39838
40°	36226	35960	36174
45°	35062	33614	34945
50°	33711	31675	33583
55°	32714	30076	32644
60°	32129	29019	32129
65°	31462	28136	31365
70°	29863	26753	29825
75°	27187	24605	27291
80°	23797	21595	23871
85°	20650	17991	20650



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.8	3.4
10°-20°	1093.5	10.7
20°-30°	1653.6	16.1
30°-40°	1805.1	17.6
40°-50°	1772.0	17.3
50°-60°	1551.2	15.1
60°-70°	1165.7	11.4
70°-80°	666.4	6.5
80°-90°	181.7	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°	3099.8	30.3
0°-40°	4904.9	47.9
0°-60°	8228.1	80.3
0°-90°	10241.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10241.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3573	3573	3573	3573	3573	
5°	3652	3653	3652	3652	3651	353
15°	3878	3874	3847	3876	3882	1097
25°	3665	3670	3472	3669	3661	1692
35°	2992	2845	2932	2834	3014	1866
45°	2290	2336	2195	2322	2282	1765
55°	1733	1760	1593	1754	1729	1554
65°	1228	1180	1098	1179	1224	1208
75°	650	625	588	625	652	690
85°	166	156	145	157	166	186
90°	0	0	0	0	0	



TEST NUMBER: P130649

CATALOG NUMBER: TBLED-LD1-11-M-UNV-L840-CD1-DOS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7
2.5°	3596.7	3594.1	3595.4	3594.1	3596.7	3596.7	3595.4	3596.7	3595.4	3595.4	3595.4
5°	3652.1	3649.6	3650.8	3648.3	3652.1	3653.3	3652.1	3653.3	3653.3	3652.1	3652.1
7.5°	3721.3	3716.3	3717.6	3715.0	3718.8	3718.8	3717.6	3717.6	3716.3	3715.0	3716.3
10°	3785.6	3783.0	3783.0	3781.8	3784.3	3783.0	3780.5	3779.3	3774.2	3773.0	3775.5
12.5°	3834.7	3837.2	3841.0	3841.0	3839.7	3838.5	3832.2	3828.4	3820.8	3819.6	3822.1
15°	3877.5	3878.7	3882.5	3881.3	3877.5	3871.2	3864.9	3857.3	3851.0	3847.3	3851.0
17.5°	3900.2	3900.2	3898.9	3895.1	3887.6	3880.0	3871.2	3863.6	3857.3	3852.3	3857.3
20°	3896.4	3896.4	3890.1	3882.5	3869.9	3858.6	3849.8	3842.2	3835.9	3833.4	3837.2
22.5°	3843.5	3847.3	3842.2	3841.0	3830.9	3815.8	3798.2	3779.3	3759.1	3752.8	3761.6
25°	3664.7	3662.1	3664.7	3688.6	3694.9	3644.5	3580.3	3521.1	3485.8	3472.0	3490.9
27.5°	3532.4	3529.9	3498.4	3448.1	3378.8	3346.1	3351.1	3346.1	3337.2	3330.9	3339.8
30°	3397.7	3378.8	3293.2	3201.2	3134.5	3124.4	3153.4	3189.9	3212.6	3213.8	3210.0
32.5°	3223.9	3186.1	3075.3	3004.8	2977.1	2972.0	2980.8	3018.6	3070.3	3090.4	3064.0
35°	2992.2	2970.8	2902.8	2857.4	2848.6	2842.3	2827.2	2846.1	2910.3	2931.7	2907.8
37.5°	2751.6	2771.8	2742.8	2726.5	2725.2	2712.6	2691.2	2693.7	2727.7	2757.9	2723.9
40°	2562.7	2582.9	2601.8	2600.5	2595.5	2576.6	2560.2	2551.4	2548.9	2543.9	2551.4
42.5°	2428.0	2420.4	2457.0	2477.1	2464.5	2451.9	2438.1	2431.8	2385.2	2363.8	2391.5
45°	2289.5	2287.0	2312.1	2355.0	2344.9	2327.2	2323.5	2298.3	2218.9	2195.0	2225.2
47.5°	2147.2	2157.2	2179.9	2215.2	2221.5	2206.4	2195.0	2143.4	2062.8	2033.8	2061.5
50°	2001.1	2023.8	2055.2	2069.1	2075.4	2066.6	2059.0	1992.3	1910.4	1880.2	1911.7
52.5°	1861.3	1892.8	1934.3	1923.0	1918.0	1921.7	1909.2	1848.7	1769.4	1732.8	1770.6
55°	1732.8	1763.1	1799.6	1776.9	1753.0	1766.8	1755.5	1707.7	1638.4	1593.1	1635.9
57.5°	1611.9	1630.8	1659.8	1629.6	1601.9	1618.2	1606.9	1569.1	1504.9	1465.9	1507.4
60°	1483.5	1498.6	1515.0	1486.0	1457.0	1465.9	1460.8	1426.8	1373.9	1339.9	1371.4
62.5°	1355.0	1362.6	1373.9	1342.5	1318.5	1318.5	1316.0	1283.3	1241.7	1222.8	1240.4
65°	1227.9	1226.6	1230.4	1198.9	1181.3	1178.7	1173.7	1143.5	1110.7	1098.1	1112.0
67.5°	1084.3	1086.8	1088.1	1059.1	1045.2	1039.0	1035.2	1007.5	981.0	972.2	982.3
70°	943.2	944.5	944.5	918.1	908.0	897.9	894.1	872.7	851.3	845.0	853.8
72.5°	794.6	803.5	799.7	778.3	770.7	758.1	755.6	741.7	725.4	716.6	725.4
75°	649.8	662.4	658.6	639.7	630.9	618.3	619.6	612.0	594.4	588.1	596.9
77.5°	510.0	517.6	518.8	508.8	494.9	486.1	489.9	488.6	476.0	460.9	472.3
80°	381.6	390.4	391.7	382.8	371.5	363.9	369.0	369.0	358.9	346.3	356.4
82.5°	265.7	272.0	272.0	267.0	261.9	254.4	256.9	258.2	251.9	239.3	248.1
85°	166.2	167.5	165.0	161.2	157.4	154.9	154.9	157.4	152.4	144.8	151.1
87.5°	61.7	63.0	61.7	65.5	61.7	60.4	61.7	65.5	60.4	60.4	61.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P130649

CATALOG NUMBER: TBLED-LD1-11-M-UNV-L840-CD1-DOS

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7	3572.7
2.5°	3595.4	3596.7	3596.7	3595.4	3595.4	3595.4	3594.1	3595.4
5°	3652.1	3653.3	3653.3	3650.8	3652.1	3650.8	3649.6	3650.8
7.5°	3717.6	3720.1	3718.8	3720.1	3721.3	3718.8	3718.8	3718.8
10°	3778.0	3781.8	3784.3	3786.8	3788.1	3785.6	3786.8	3785.6
12.5°	3827.1	3834.7	3839.7	3842.2	3844.7	3844.7	3842.2	3839.7
15°	3857.3	3866.2	3872.5	3880.0	3885.0	3886.3	3883.8	3882.5
17.5°	3864.9	3872.5	3881.3	3888.8	3896.4	3901.4	3903.9	3902.7
20°	3843.5	3849.8	3859.9	3871.2	3881.3	3891.3	3898.9	3901.4
22.5°	3781.8	3799.4	3818.3	3832.2	3841.0	3846.0	3849.8	3858.6
25°	3528.7	3575.3	3643.3	3694.9	3686.1	3662.1	3653.3	3660.9
27.5°	3348.6	3343.5	3336.0	3376.3	3439.2	3494.7	3521.1	3533.7
30°	3187.4	3149.6	3114.3	3128.2	3192.4	3288.1	3368.7	3401.5
32.5°	3018.6	2967.0	2962.0	2970.8	3001.0	3065.2	3174.8	3236.5
35°	2841.1	2813.4	2828.5	2839.8	2849.9	2882.6	2958.2	3013.6
37.5°	2682.4	2677.3	2697.5	2711.3	2716.4	2732.8	2761.7	2754.2
40°	2542.6	2546.4	2564.0	2579.1	2589.2	2590.5	2572.8	2559.0
42.5°	2416.7	2433.0	2433.0	2451.9	2469.6	2445.6	2409.1	2419.2
45°	2288.2	2314.7	2313.4	2329.8	2346.1	2304.6	2274.4	2281.9
47.5°	2137.1	2187.5	2195.0	2212.7	2212.7	2169.8	2145.9	2137.1
50°	1983.5	2048.9	2057.8	2067.8	2062.8	2046.4	2014.9	1993.5
52.5°	1841.1	1902.9	1911.7	1907.9	1918.0	1925.5	1882.7	1856.3
55°	1701.4	1749.2	1760.5	1748.0	1771.9	1793.3	1753.0	1729.1
57.5°	1562.8	1599.4	1609.4	1599.4	1625.8	1649.7	1623.3	1606.9
60°	1423.0	1455.8	1462.1	1453.3	1484.8	1506.2	1493.6	1483.5
62.5°	1285.8	1308.4	1314.7	1318.5	1337.4	1362.6	1360.1	1358.8
65°	1147.3	1171.2	1173.7	1185.0	1197.6	1230.4	1224.1	1224.1
67.5°	1012.5	1028.9	1032.7	1050.3	1055.3	1086.8	1083.0	1078.0
70°	872.7	889.1	894.1	911.8	919.3	944.5	945.8	942.0
72.5°	744.3	750.6	755.6	772.0	778.3	802.2	802.2	797.2
75°	613.3	612.0	617.1	633.4	639.7	659.9	658.6	652.3
77.5°	489.9	483.6	487.4	498.7	506.3	521.4	516.3	511.3
80°	374.0	363.9	365.2	376.5	381.6	391.7	386.6	382.8
82.5°	264.5	255.6	253.1	261.9	269.5	270.8	269.5	267.0
85°	161.2	153.6	154.9	158.7	163.7	163.7	166.2	166.2
87.5°	63.0	59.2	59.2	63.0	63.0	64.2	63.0	60.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)