

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: P130685

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130685
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25358)
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-CG-DOS
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS AND DIMMING OCCUPANCY SENSOR.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10357.8 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.33
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

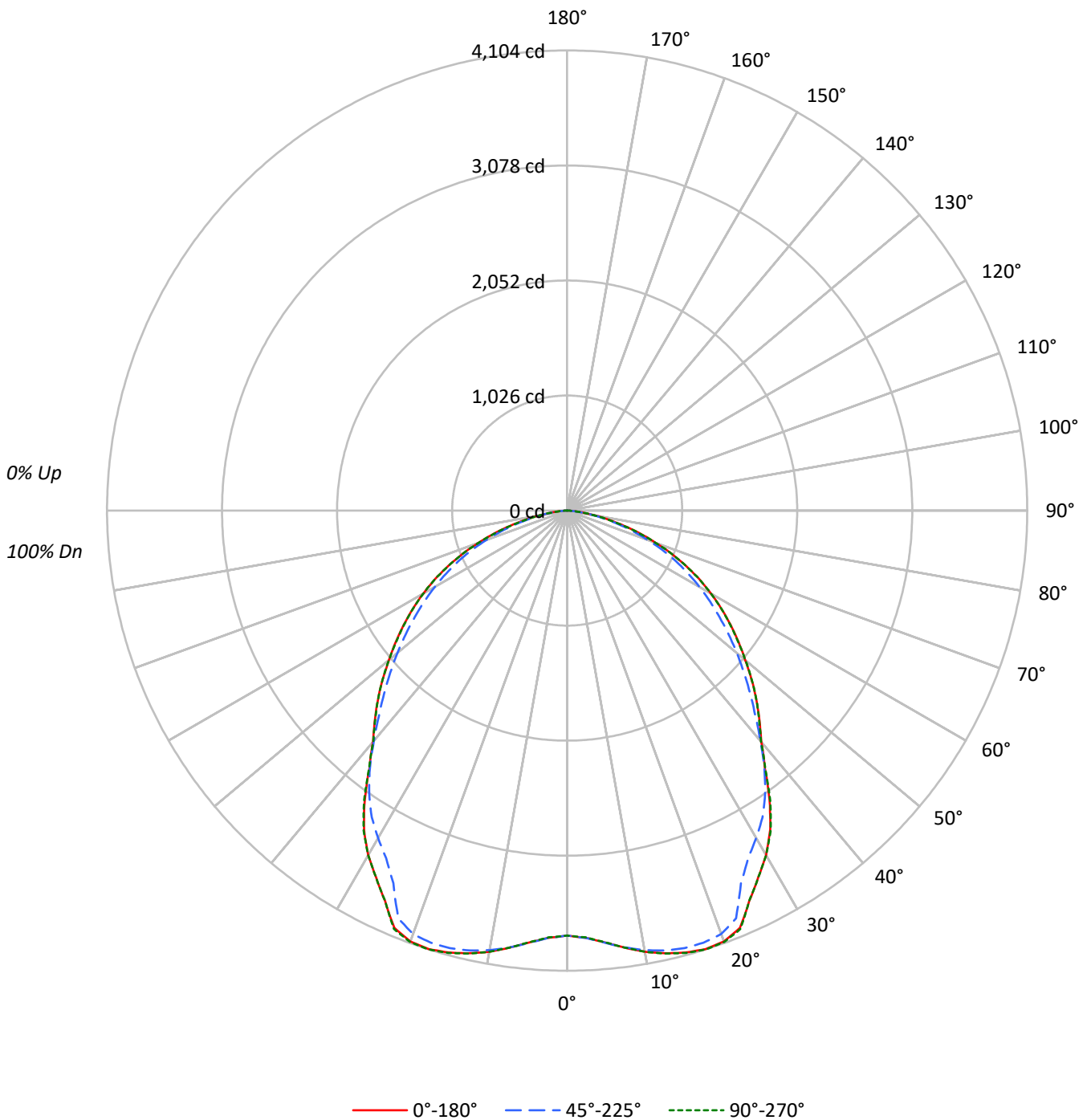
Input Watts (W): 108
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	41047	41047	41047
5°	42026	42053	41999
10°	43938	43772	43924
15°	45743	45291	45785
20°	47121	46309	47194
25°	45923	43816	45893
30°	44359	42169	44374
35°	41603	40704	41736
40°	38078	37900	38025
45°	36565	35351	36565
50°	34921	33267	34963
55°	33596	31336	33499
60°	32129	29564	32129
65°	30009	27427	30009
70°	26633	24322	26633
75°	22078	19970	21760
80°	15939	14605	15627
85°	9542	8759	9231



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.1	3.6
10°-20°	1149.2	11.1
20°-30°	1735.5	16.8
30°-40°	1894.7	18.3
40°-50°	1849.2	17.9
50°-60°	1588.6	15.3
60°-70°	1122.9	10.8
70°-80°	543.2	5.2
80°-90°	101.4	1.0
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°	3257.8	31.5
0°-40°	5152.5	49.7
0°-60°	8590.3	82.9
0°-90°	10357.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10357.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3791	3791	3791	3791	3791	
5°	3866	3868	3869	3867	3864	373
15°	4080	4073	4040	4074	4084	1154
25°	3844	3854	3667	3856	3841	1772
35°	3147	2984	3079	2977	3157	1958
45°	2388	2434	2308	2426	2388	1841
55°	1780	1800	1660	1796	1774	1591
65°	1171	1134	1070	1133	1171	1155
75°	528	502	477	501	520	564
85°	77	73	70	71	74	105
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°	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6
2.5°	3813.3	3812.0	3810.8	3812.0	3814.6	3814.6	3814.6	3813.3	3813.3	3814.6	3813.3
5°	3866.2	3863.7	3864.9	3863.7	3868.7	3867.4	3867.4	3868.7	3868.7	3868.7	3867.4
7.5°	3931.7	3929.2	3929.2	3929.2	3930.4	3930.4	3930.4	3930.4	3929.2	3929.2	3929.2
10°	3995.9	3992.1	3993.4	3992.1	3993.4	3990.9	3988.3	3985.8	3983.3	3980.8	3982.0
12.5°	4043.8	4042.5	4045.0	4045.0	4042.5	4038.7	4032.4	4026.1	4021.1	4018.6	4021.1
15°	4080.3	4082.8	4084.1	4082.8	4077.8	4067.7	4060.1	4050.0	4043.8	4040.0	4043.8
17.5°	4100.4	4100.4	4097.9	4090.3	4081.5	4072.7	4061.4	4051.3	4045.0	4041.2	4046.3
20°	4089.1	4087.8	4079.0	4067.7	4053.8	4042.5	4032.4	4023.6	4019.8	4018.6	4021.1
22.5°	4027.4	4029.9	4024.9	4017.3	4007.2	3990.9	3972.0	3954.3	3940.5	3935.4	3940.5
25°	3843.5	3842.3	3851.1	3866.2	3876.3	3832.2	3773.0	3716.3	3677.3	3667.2	3677.3
27.5°	3689.9	3688.6	3668.5	3624.4	3572.8	3532.5	3521.1	3514.8	3501.0	3494.7	3503.5
30°	3547.6	3535.0	3463.2	3371.3	3305.8	3289.4	3314.6	3348.6	3367.5	3372.5	3363.7
32.5°	3372.5	3338.5	3241.6	3161.0	3132.0	3119.4	3128.2	3172.3	3217.6	3242.8	3215.1
35°	3147.1	3118.1	3041.3	2997.2	2990.9	2977.1	2965.8	2992.2	3047.6	3079.1	3041.3
37.5°	2897.7	2911.6	2878.9	2856.2	2856.2	2842.3	2819.7	2828.5	2860.0	2890.2	2857.5
40°	2693.7	2718.9	2726.5	2720.2	2717.7	2700.0	2678.6	2673.6	2674.8	2681.1	2671.1
42.5°	2537.6	2541.4	2575.4	2586.7	2576.6	2557.7	2545.1	2537.6	2501.1	2484.7	2506.1
45°	2387.7	2390.2	2417.9	2450.7	2444.4	2424.2	2414.2	2390.2	2326.0	2308.4	2331.0
47.5°	2231.6	2245.4	2265.6	2299.6	2305.9	2285.7	2271.9	2230.3	2153.5	2138.4	2154.7
50°	2072.9	2099.3	2123.3	2139.6	2148.4	2130.8	2115.7	2066.6	1992.3	1974.7	1991.0
52.5°	1928.1	1952.0	1983.5	1978.4	1974.7	1970.9	1960.8	1910.4	1839.9	1816.0	1838.6
55°	1779.5	1803.4	1834.9	1813.5	1797.1	1803.4	1792.0	1750.5	1690.0	1659.8	1690.0
57.5°	1632.1	1651.0	1676.2	1649.7	1625.8	1633.4	1625.8	1596.8	1540.2	1511.2	1540.2
60°	1483.5	1494.8	1512.5	1484.8	1459.6	1464.6	1462.1	1431.9	1387.8	1365.1	1387.8
62.5°	1331.1	1337.4	1346.2	1319.8	1298.4	1297.1	1298.4	1268.2	1234.2	1219.0	1235.4
65°	1171.2	1173.7	1178.7	1152.3	1137.2	1130.9	1133.4	1105.7	1080.5	1070.4	1081.8
67.5°	1007.5	1010.0	1011.3	986.1	976.0	967.2	968.4	948.3	925.6	919.3	928.1
70°	841.2	845.0	845.0	822.4	816.1	804.7	804.7	792.1	773.2	768.2	774.5
72.5°	685.1	682.6	682.6	663.7	658.6	647.3	646.0	642.3	624.6	619.6	625.9
75°	527.7	525.1	526.4	511.3	506.3	497.4	496.2	496.2	482.3	477.3	483.6
77.5°	381.6	384.1	382.8	371.5	366.5	362.7	366.5	366.5	353.9	348.8	355.1
80°	255.6	258.2	258.2	249.4	245.6	243.1	248.1	245.6	239.3	234.2	239.3
82.5°	154.9	154.9	154.9	152.4	147.3	147.3	151.1	151.1	144.8	141.0	144.8
85°	76.8	76.8	75.6	75.6	73.0	73.0	75.6	75.6	71.8	70.5	71.8
87.5°	26.4	25.2	25.2	25.2	23.9	25.2	25.2	25.2	23.9	23.9	23.9
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°	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6	3790.6
2.5°	3814.6	3814.6	3813.3	3813.3	3813.3	3812.0	3810.8	3809.5
5°	3870.0	3868.7	3866.2	3867.4	3866.2	3866.2	3864.9	3863.7
7.5°	3931.7	3932.9	3930.4	3932.9	3932.9	3932.9	3931.7	3930.4
10°	3985.8	3989.6	3990.9	3994.6	3995.9	3997.2	3995.9	3994.6
12.5°	4027.4	4033.7	4038.7	4045.0	4048.8	4050.0	4047.5	4046.3
15°	4051.3	4060.1	4068.9	4079.0	4085.3	4087.8	4086.6	4084.1
17.5°	4052.6	4062.6	4074.0	4082.8	4091.6	4097.9	4102.9	4104.2
20°	4024.9	4033.7	4043.8	4055.1	4068.9	4080.3	4091.6	4095.4
22.5°	3950.6	3972.0	3993.4	4004.7	4016.0	4023.6	4029.9	4038.7
25°	3707.5	3771.7	3841.0	3870.0	3864.9	3841.0	3837.2	3841.0
27.5°	3517.3	3524.9	3533.7	3567.7	3615.6	3659.7	3684.8	3689.9
30°	3347.3	3310.8	3283.1	3299.5	3362.4	3449.3	3527.4	3548.8
32.5°	3171.0	3123.2	3111.8	3123.2	3150.9	3222.7	3329.7	3378.8
35°	2983.4	2963.2	2972.1	2982.1	2988.4	3027.5	3106.8	3157.2
37.5°	2818.4	2815.9	2833.5	2846.1	2846.1	2861.2	2901.5	2902.8
40°	2663.5	2676.1	2690.0	2707.6	2711.4	2717.7	2707.6	2690.0
42.5°	2527.5	2541.4	2550.2	2567.8	2577.9	2564.0	2531.3	2533.8
45°	2385.2	2411.6	2416.7	2435.6	2443.1	2406.6	2381.4	2387.7
47.5°	2225.3	2269.3	2279.4	2299.6	2293.3	2258.0	2240.4	2232.8
50°	2060.3	2118.2	2127.0	2140.9	2133.3	2115.7	2093.0	2075.4
52.5°	1911.7	1958.3	1964.6	1969.6	1975.9	1979.7	1950.7	1923.0
55°	1753.0	1789.5	1798.3	1793.3	1810.9	1831.1	1802.1	1774.4
57.5°	1599.4	1624.6	1630.8	1622.0	1647.2	1673.7	1652.3	1630.8
60°	1435.7	1460.8	1462.1	1458.3	1483.5	1506.2	1497.4	1483.5
62.5°	1274.5	1297.1	1293.3	1297.1	1317.3	1346.2	1339.9	1331.1
65°	1110.7	1132.1	1129.6	1137.2	1152.3	1178.7	1178.7	1171.2
67.5°	954.6	967.2	965.9	976.0	987.3	1012.5	1015.0	1007.5
70°	798.4	804.7	803.5	814.8	823.6	850.1	850.1	841.2
72.5°	647.3	651.1	646.0	661.2	664.9	687.6	687.6	677.5
75°	502.5	501.2	496.2	505.0	516.3	532.7	528.9	520.1
77.5°	367.7	364.0	358.9	369.0	375.3	387.9	384.1	375.3
80°	249.4	245.6	239.3	248.1	253.1	260.7	256.9	250.6
82.5°	152.4	148.6	143.6	149.9	152.4	157.4	154.9	149.9
85°	75.6	73.0	70.5	71.8	75.6	76.8	75.6	74.3
87.5°	25.2	23.9	22.7	23.9	23.9	25.2	25.2	23.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)