

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: P130703

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130703
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-CMS
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS AND MINI SENSOR.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10405.2 lumens
Efficiency: N/A
Efficacy: 96.3 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

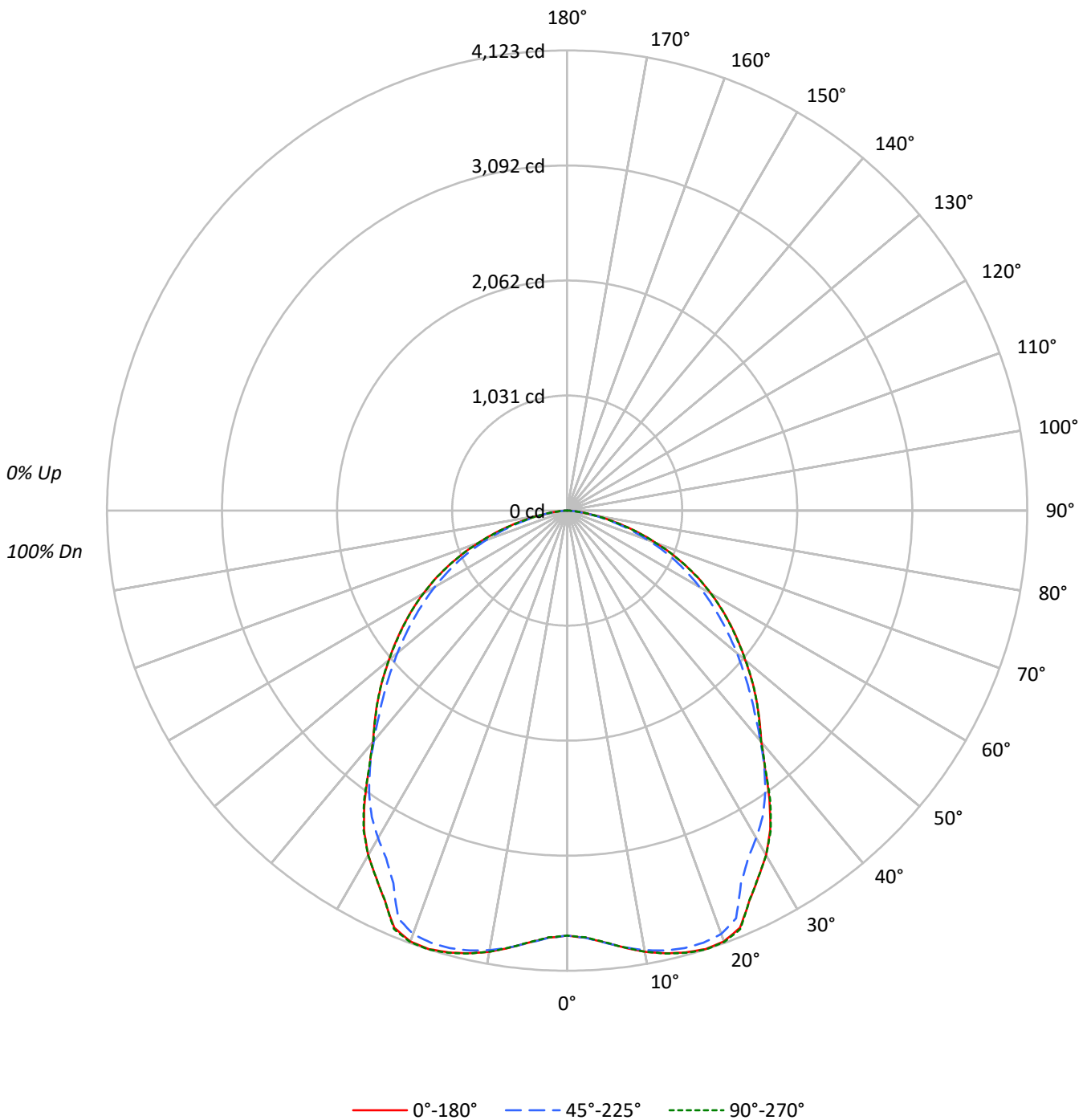
Input Watts (W): 108
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	41236	41236	41236
5°	42218	42245	42190
10°	44139	43972	44125
15°	45951	45499	45994
20°	47337	46521	47409
25°	46133	44017	46103
30°	44561	42363	44578
35°	41793	40890	41927
40°	38253	38073	38199
45°	36732	35512	36732
50°	35081	33418	35123
55°	33748	31479	33652
60°	32276	29701	32276
65°	30145	27552	30145
70°	26757	24433	26757
75°	22179	20062	21861
80°	16014	14673	15702
85°	9592	8797	9269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.8	3.6
10°-20°	1154.4	11.1
20°-30°	1743.4	16.8
30°-40°	1903.4	18.3
40°-50°	1857.6	17.9
50°-60°	1595.8	15.3
60°-70°	1128.1	10.8
70°-80°	545.7	5.2
80°-90°	101.8	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°	3272.7	31.5
0°-40°	5176.1	49.7
0°-60°	8629.6	82.9
0°-90°	10405.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10405.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3808	3808	3808	3808	3808	
5°	3884	3886	3886	3884	3881	375
15°	4099	4091	4058	4093	4103	1160
25°	3861	3872	3684	3873	3859	1780
35°	3162	2998	3093	2991	3172	1967
45°	2399	2445	2319	2437	2399	1849
55°	1788	1808	1667	1804	1782	1599
65°	1176	1139	1075	1139	1176	1161
75°	530	504	480	503	522	567
85°	77	73	71	71	75	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°	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0
2.5°	3830.7	3829.5	3828.2	3829.5	3832.0	3832.0	3832.0	3830.7	3830.7	3832.0	3830.7
5°	3883.9	3881.3	3882.6	3881.3	3886.4	3885.1	3885.1	3886.4	3886.4	3886.4	3885.1
7.5°	3949.7	3947.1	3947.1	3947.1	3948.4	3948.4	3948.4	3948.4	3947.1	3947.1	3947.1
10°	4014.2	4010.4	4011.7	4010.4	4011.7	4009.1	4006.6	4004.1	4001.5	3999.0	4000.3
12.5°	4062.3	4061.0	4063.5	4063.5	4061.0	4057.2	4050.9	4044.5	4039.5	4037.0	4039.5
15°	4098.9	4101.5	4102.7	4101.5	4096.4	4086.3	4078.7	4068.6	4062.3	4058.5	4062.3
17.5°	4119.2	4119.2	4116.7	4109.1	4100.2	4091.4	4080.0	4069.8	4063.5	4059.7	4064.8
20°	4107.8	4106.5	4097.7	4086.3	4072.4	4061.0	4050.9	4042.0	4038.2	4037.0	4039.5
22.5°	4045.8	4048.3	4043.3	4035.7	4025.6	4009.1	3990.1	3972.4	3958.5	3953.5	3958.5
25°	3861.1	3859.8	3868.7	3883.9	3894.0	3849.7	3790.3	3733.3	3694.1	3684.0	3694.1
27.5°	3706.8	3705.5	3685.3	3641.0	3589.1	3548.6	3537.2	3530.9	3517.0	3510.7	3519.5
30°	3563.8	3551.2	3479.0	3386.7	3320.9	3304.5	3329.8	3363.9	3382.9	3388.0	3379.1
32.5°	3388.0	3353.8	3256.4	3175.4	3146.3	3133.7	3142.5	3186.8	3232.3	3257.6	3229.8
35°	3161.5	3132.4	3055.2	3011.0	3004.6	2990.7	2979.3	3005.9	3061.6	3093.2	3055.2
37.5°	2911.0	2924.9	2892.0	2869.3	2869.3	2855.3	2832.6	2841.4	2873.1	2903.4	2870.5
40°	2706.1	2731.4	2739.0	2732.6	2730.1	2712.4	2690.9	2685.8	2687.1	2693.4	2683.3
42.5°	2549.2	2553.0	2587.1	2598.5	2588.4	2569.4	2556.8	2549.2	2512.5	2496.1	2517.6
45°	2398.6	2401.2	2429.0	2461.9	2455.6	2435.3	2425.2	2401.2	2336.7	2318.9	2341.7
47.5°	2241.8	2255.7	2275.9	2310.1	2316.4	2296.2	2282.3	2240.5	2163.3	2148.2	2164.6
50°	2082.4	2108.9	2133.0	2149.4	2158.3	2140.6	2125.4	2076.0	2001.4	1983.7	2000.1
52.5°	1936.9	1960.9	1992.5	1987.5	1983.7	1979.9	1969.8	1919.2	1848.3	1824.3	1847.1
55°	1787.6	1811.6	1843.3	1821.8	1805.3	1811.6	1800.2	1758.5	1697.8	1667.4	1697.8
57.5°	1639.6	1658.6	1683.9	1657.3	1633.3	1640.8	1633.3	1604.2	1547.2	1518.1	1547.2
60°	1490.3	1501.7	1519.4	1491.6	1466.3	1471.3	1468.8	1438.4	1394.1	1371.4	1394.1
62.5°	1337.2	1343.5	1352.4	1325.8	1304.3	1303.1	1304.3	1274.0	1239.8	1224.6	1241.1
65°	1176.5	1179.1	1184.1	1157.6	1142.4	1136.1	1138.6	1110.8	1085.5	1075.3	1086.7
67.5°	1012.1	1014.6	1015.9	990.6	980.5	971.6	972.9	952.6	929.9	923.5	932.4
70°	845.1	848.9	848.9	826.1	819.8	808.4	808.4	795.8	776.8	771.7	778.0
72.5°	688.2	685.7	685.7	666.7	661.7	650.3	649.0	645.2	627.5	622.4	628.8
75°	530.1	527.5	528.8	513.6	508.6	499.7	498.5	498.5	484.5	479.5	485.8
77.5°	383.3	385.9	384.6	373.2	368.1	364.4	368.1	368.1	355.5	350.4	356.8
80°	256.8	259.3	259.3	250.5	246.7	244.2	249.2	246.7	240.4	235.3	240.4
82.5°	155.6	155.6	155.6	153.1	148.0	148.0	151.8	151.8	145.5	141.7	145.5
85°	77.2	77.2	75.9	75.9	73.4	73.4	75.9	75.9	72.1	70.8	72.1
87.5°	26.6	25.3	25.3	25.3	24.0	25.3	25.3	25.3	24.0	24.0	24.0
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°	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0
2.5°	3832.0	3832.0	3830.7	3830.7	3830.7	3829.5	3828.2	3826.9
5°	3887.7	3886.4	3883.9	3885.1	3883.9	3883.9	3882.6	3881.3
7.5°	3949.7	3950.9	3948.4	3950.9	3950.9	3950.9	3949.7	3948.4
10°	4004.1	4007.9	4009.1	4012.9	4014.2	4015.4	4014.2	4012.9
12.5°	4045.8	4052.1	4057.2	4063.5	4067.3	4068.6	4066.1	4064.8
15°	4069.8	4078.7	4087.6	4097.7	4104.0	4106.5	4105.3	4102.7
17.5°	4071.1	4081.2	4092.6	4101.5	4110.3	4116.7	4121.7	4123.0
20°	4043.3	4052.1	4062.3	4073.6	4087.6	4098.9	4110.3	4114.1
22.5°	3968.6	3990.1	4011.7	4023.0	4034.4	4042.0	4048.3	4057.2
25°	3724.5	3789.0	3858.6	3887.7	3882.6	3858.6	3854.8	3858.6
27.5°	3533.4	3541.0	3549.9	3584.0	3632.1	3676.4	3701.7	3706.8
30°	3362.7	3326.0	3298.1	3314.6	3377.8	3465.1	3543.6	3565.1
32.5°	3185.5	3137.5	3126.1	3137.5	3165.3	3237.4	3344.9	3394.3
35°	2997.0	2976.8	2985.7	2995.8	3002.1	3041.3	3121.0	3171.6
37.5°	2831.3	2828.8	2846.5	2859.1	2859.1	2874.3	2914.8	2916.1
40°	2675.7	2688.4	2702.3	2720.0	2723.8	2730.1	2720.0	2702.3
42.5°	2539.1	2553.0	2561.8	2579.6	2589.7	2575.8	2542.9	2545.4
45°	2396.1	2422.7	2427.7	2446.7	2454.3	2417.6	2392.3	2398.6
47.5°	2235.4	2279.7	2289.8	2310.1	2303.8	2268.3	2250.6	2243.0
50°	2069.7	2127.9	2136.8	2150.7	2143.1	2125.4	2102.6	2084.9
52.5°	1920.4	1967.2	1973.6	1978.6	1985.0	1988.7	1959.6	1931.8
55°	1761.0	1797.7	1806.6	1801.5	1819.2	1839.5	1810.4	1782.5
57.5°	1606.7	1632.0	1638.3	1629.5	1654.8	1681.3	1659.8	1638.3
60°	1442.2	1467.5	1468.8	1465.0	1490.3	1513.1	1504.2	1490.3
62.5°	1280.3	1303.1	1299.3	1303.1	1323.3	1352.4	1346.1	1337.2
65°	1115.8	1137.3	1134.8	1142.4	1157.6	1184.1	1184.1	1176.5
67.5°	959.0	971.6	970.3	980.5	991.8	1017.1	1019.7	1012.1
70°	802.1	808.4	807.1	818.5	827.4	853.9	853.9	845.1
72.5°	650.3	654.1	649.0	664.2	668.0	690.7	690.7	680.6
75°	504.8	503.5	498.5	507.3	518.7	535.1	531.3	522.5
77.5°	369.4	365.6	360.6	370.7	377.0	389.7	385.9	377.0
80°	250.5	246.7	240.4	249.2	254.3	261.9	258.1	251.8
82.5°	153.1	149.3	144.2	150.5	153.1	158.1	155.6	150.5
85°	75.9	73.4	70.8	72.1	75.9	77.2	75.9	74.6
87.5°	25.3	24.0	22.8	24.0	24.0	25.3	25.3	24.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)