

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: P130640

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130640
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
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
MEDIUM DISTRIBUTION.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

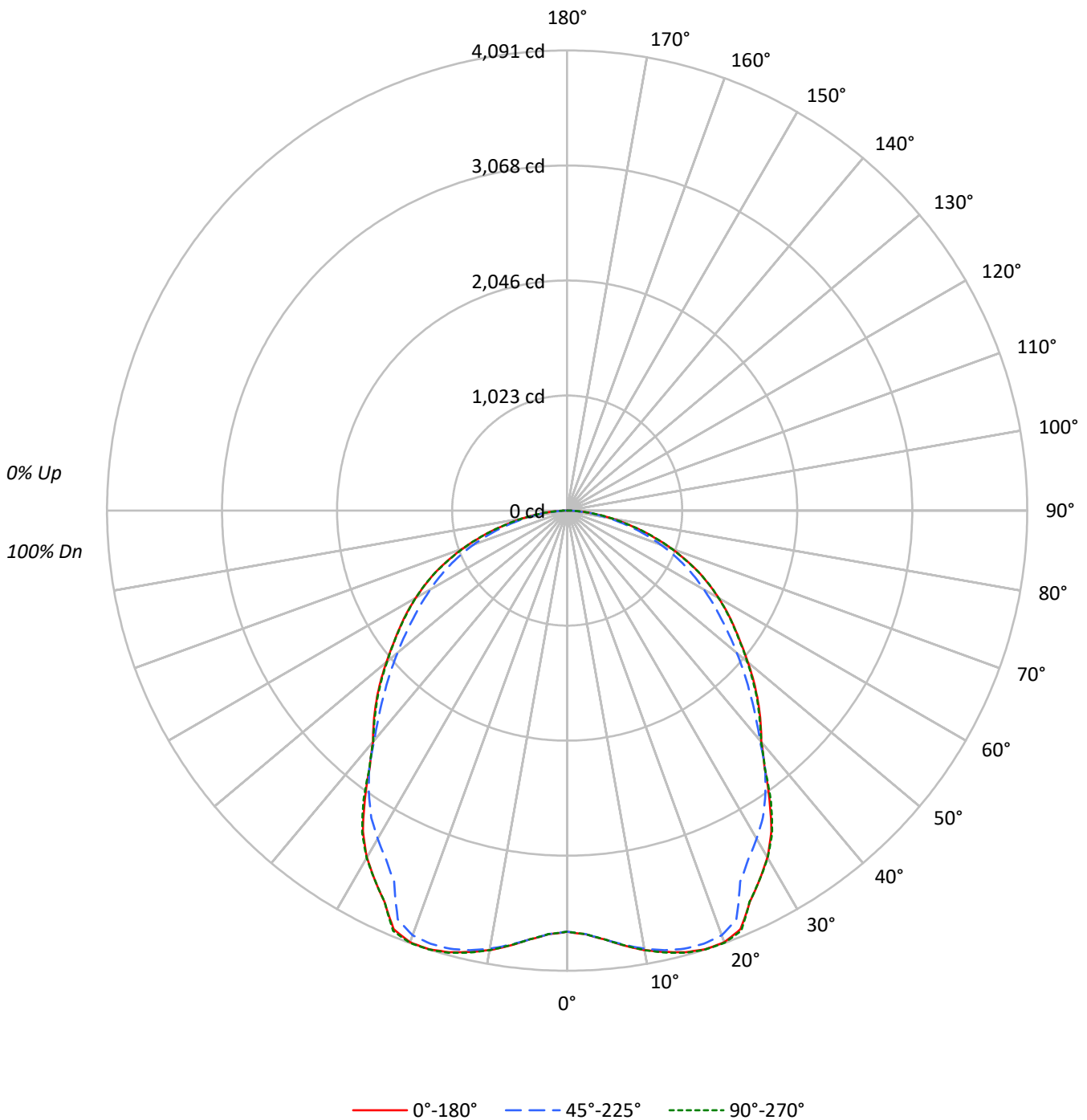
Lumens per Lamp: N/A
Luminaire Lumens: 10735.4 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

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°	40552	40552	40552
5°	41611	41611	41596
10°	43631	43486	43631
15°	45564	45208	45623
20°	47064	46303	47125
25°	45895	43483	45849
30°	44531	42122	44581
35°	41461	40623	41757
40°	37972	37692	37917
45°	36751	35235	36630
50°	35335	33201	35202
55°	34290	31525	34217
60°	33677	30418	33677
65°	32977	29494	32877
70°	31303	28042	31262
75°	28496	25789	28609
80°	24944	22637	25025
85°	21643	18860	21643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	369.8	3.4
10°-20°	1146.1	10.7
20°-30°	1733.2	16.1
30°-40°	1892.0	17.6
40°-50°	1857.4	17.3
50°-60°	1626.0	15.1
60°-70°	1221.8	11.4
70°-80°	698.5	6.5
80°-90°	190.5	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°	3249.1	30.3
0°-40°	5141.2	47.9
0°-60°	8624.5	80.3
0°-90°	10735.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10735.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3745	3745	3745	3745	3745	
5°	3828	3829	3828	3828	3827	370
15°	4064	4061	4033	4063	4070	1150
25°	3841	3846	3639	3846	3837	1774
35°	3136	2983	3073	2971	3159	1956
45°	2400	2449	2301	2433	2392	1850
55°	1816	1845	1670	1839	1812	1629
65°	1287	1237	1151	1236	1283	1266
75°	681	655	616	655	684	723
85°	174	164	152	164	174	195
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°	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9
2.5°	3770.0	3767.3	3768.6	3767.3	3770.0	3770.0	3768.6	3770.0	3768.6	3768.6	3768.6
5°	3828.0	3825.4	3826.7	3824.1	3828.0	3829.4	3828.0	3829.4	3829.4	3828.0	3828.0
7.5°	3900.6	3895.4	3896.7	3894.0	3898.0	3898.0	3896.7	3896.7	3895.4	3894.0	3895.4
10°	3968.0	3965.3	3965.3	3964.0	3966.6	3965.3	3962.7	3961.4	3956.1	3954.8	3957.4
12.5°	4019.4	4022.1	4026.0	4026.0	4024.7	4023.4	4016.8	4012.8	4004.9	4003.6	4006.2
15°	4064.3	4065.6	4069.6	4068.3	4064.3	4057.7	4051.1	4043.2	4036.6	4032.6	4036.6
17.5°	4088.1	4088.1	4086.8	4082.8	4074.9	4067.0	4057.7	4049.8	4043.2	4037.9	4043.2
20°	4084.1	4084.1	4077.5	4069.6	4056.4	4044.5	4035.3	4027.4	4020.8	4018.1	4022.1
22.5°	4028.7	4032.6	4027.4	4026.0	4015.5	3999.6	3981.2	3961.4	3940.2	3933.6	3942.9
25°	3841.2	3838.6	3841.2	3866.3	3872.9	3820.1	3752.8	3690.8	3653.8	3639.3	3659.1
27.5°	3702.6	3700.0	3667.0	3614.2	3541.6	3507.3	3512.6	3507.3	3498.0	3491.4	3500.7
30°	3561.4	3541.6	3451.8	3355.5	3285.5	3275.0	3305.3	3343.6	3367.4	3368.7	3364.7
32.5°	3379.2	3339.6	3223.5	3149.6	3120.5	3115.2	3124.5	3164.1	3218.2	3239.3	3211.6
35°	3136.4	3113.9	3042.6	2995.1	2985.9	2979.3	2963.4	2983.2	3050.5	3073.0	3047.9
37.5°	2884.2	2905.3	2875.0	2857.8	2856.5	2843.3	2820.9	2823.5	2859.1	2890.8	2855.2
40°	2686.2	2707.3	2727.1	2725.8	2720.5	2700.7	2683.6	2674.3	2671.7	2666.4	2674.3
42.5°	2545.0	2537.1	2575.3	2596.5	2583.3	2570.1	2555.5	2548.9	2500.1	2477.7	2506.7
45°	2399.8	2397.1	2423.5	2468.4	2457.9	2439.4	2435.4	2409.0	2325.9	2300.8	2332.5
47.5°	2250.6	2261.2	2284.9	2321.9	2328.5	2312.7	2300.8	2246.7	2162.2	2131.8	2160.9
50°	2097.5	2121.3	2154.3	2168.8	2175.4	2166.1	2158.2	2088.3	2002.5	1970.8	2003.8
52.5°	1951.0	1984.0	2027.5	2015.7	2010.4	2014.3	2001.1	1937.8	1854.6	1816.3	1855.9
55°	1816.3	1848.0	1886.3	1862.5	1837.5	1852.0	1840.1	1789.9	1717.3	1669.8	1714.7
57.5°	1689.6	1709.4	1739.8	1708.1	1679.1	1696.2	1684.3	1644.7	1577.4	1536.5	1580.1
60°	1555.0	1570.8	1588.0	1557.6	1527.3	1536.5	1531.2	1495.6	1440.1	1404.5	1437.5
62.5°	1420.3	1428.3	1440.1	1407.1	1382.1	1382.1	1379.4	1345.1	1301.5	1281.7	1300.2
65°	1287.0	1285.7	1289.7	1256.7	1238.2	1235.5	1230.3	1198.6	1164.3	1151.1	1165.6
67.5°	1136.5	1139.2	1140.5	1110.1	1095.6	1089.0	1085.1	1056.0	1028.3	1019.1	1029.6
70°	988.7	990.0	990.0	962.3	951.7	941.2	937.2	914.8	892.3	885.7	895.0
72.5°	832.9	842.2	838.2	815.8	807.8	794.6	792.0	777.5	760.3	751.1	760.3
75°	681.1	694.3	690.4	670.6	661.3	648.1	649.4	641.5	623.0	616.4	625.7
77.5°	534.6	542.5	543.8	533.3	518.8	509.5	513.5	512.2	499.0	483.1	495.0
80°	400.0	409.2	410.5	401.3	389.4	381.5	386.8	386.8	376.2	363.0	373.6
82.5°	278.5	285.1	285.1	279.8	274.6	266.6	269.3	270.6	264.0	250.8	260.0
85°	174.2	175.6	172.9	169.0	165.0	162.4	162.4	165.0	159.7	151.8	158.4
87.5°	64.7	66.0	64.7	68.6	64.7	63.4	64.7	68.6	63.4	63.4	64.7
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°	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9	3744.9
2.5°	3768.6	3770.0	3770.0	3768.6	3768.6	3768.6	3767.3	3768.6
5°	3828.0	3829.4	3829.4	3826.7	3828.0	3826.7	3825.4	3826.7
7.5°	3896.7	3899.3	3898.0	3899.3	3900.6	3898.0	3898.0	3898.0
10°	3960.0	3964.0	3966.6	3969.3	3970.6	3968.0	3969.3	3968.0
12.5°	4011.5	4019.4	4024.7	4027.4	4030.0	4030.0	4027.4	4024.7
15°	4043.2	4052.4	4059.0	4067.0	4072.2	4073.6	4070.9	4069.6
17.5°	4051.1	4059.0	4068.3	4076.2	4084.1	4089.4	4092.0	4090.7
20°	4028.7	4035.3	4045.8	4057.7	4068.3	4078.8	4086.8	4089.4
22.5°	3964.0	3982.5	4002.3	4016.8	4026.0	4031.3	4035.3	4044.5
25°	3698.7	3747.5	3818.8	3872.9	3863.7	3838.6	3829.4	3837.3
27.5°	3509.9	3504.6	3496.7	3539.0	3605.0	3663.0	3690.8	3704.0
30°	3341.0	3301.4	3264.4	3278.9	3346.2	3446.6	3531.0	3565.4
32.5°	3164.1	3110.0	3104.7	3113.9	3145.6	3212.9	3327.8	3392.4
35°	2977.9	2948.9	2964.7	2976.6	2987.2	3021.5	3100.7	3158.8
37.5°	2811.6	2806.3	2827.5	2842.0	2847.3	2864.4	2894.8	2886.9
40°	2665.1	2669.1	2687.5	2703.4	2713.9	2715.3	2696.8	2682.3
42.5°	2533.1	2550.3	2550.3	2570.1	2588.5	2563.5	2525.2	2535.7
45°	2398.5	2426.2	2424.9	2442.0	2459.2	2415.6	2383.9	2391.9
47.5°	2240.1	2292.9	2300.8	2319.3	2319.3	2274.4	2249.3	2240.1
50°	2079.0	2147.7	2156.9	2167.5	2162.2	2145.0	2112.0	2089.6
52.5°	1929.9	1994.5	2003.8	1999.8	2010.4	2018.3	1973.4	1945.7
55°	1783.3	1833.5	1845.4	1832.2	1857.3	1879.7	1837.5	1812.4
57.5°	1638.1	1676.4	1687.0	1676.4	1704.1	1729.2	1701.5	1684.3
60°	1491.6	1525.9	1532.5	1523.3	1556.3	1578.7	1565.5	1555.0
62.5°	1347.7	1371.5	1378.1	1382.1	1401.9	1428.3	1425.6	1424.3
65°	1202.5	1227.6	1230.3	1242.1	1255.3	1289.7	1283.1	1283.1
67.5°	1061.3	1078.5	1082.4	1100.9	1106.2	1139.2	1135.2	1129.9
70°	914.8	931.9	937.2	955.7	963.6	990.0	991.3	987.4
72.5°	780.1	786.7	792.0	809.2	815.8	840.8	840.8	835.6
75°	642.8	641.5	646.8	664.0	670.6	691.7	690.4	683.8
77.5°	513.5	506.9	510.8	522.7	530.6	546.5	541.2	535.9
80°	392.0	381.5	382.8	394.7	400.0	410.5	405.2	401.3
82.5°	277.2	268.0	265.3	274.6	282.5	283.8	282.5	279.8
85°	169.0	161.0	162.4	166.3	171.6	171.6	174.2	174.2
87.5°	66.0	62.0	62.0	66.0	66.0	67.3	66.0	63.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)