

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: P130676

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P130676  
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  
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.  
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS.  
Light Source: (160) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10856.8 lumens  
Efficiency: N/A  
Efficacy: 100.5 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

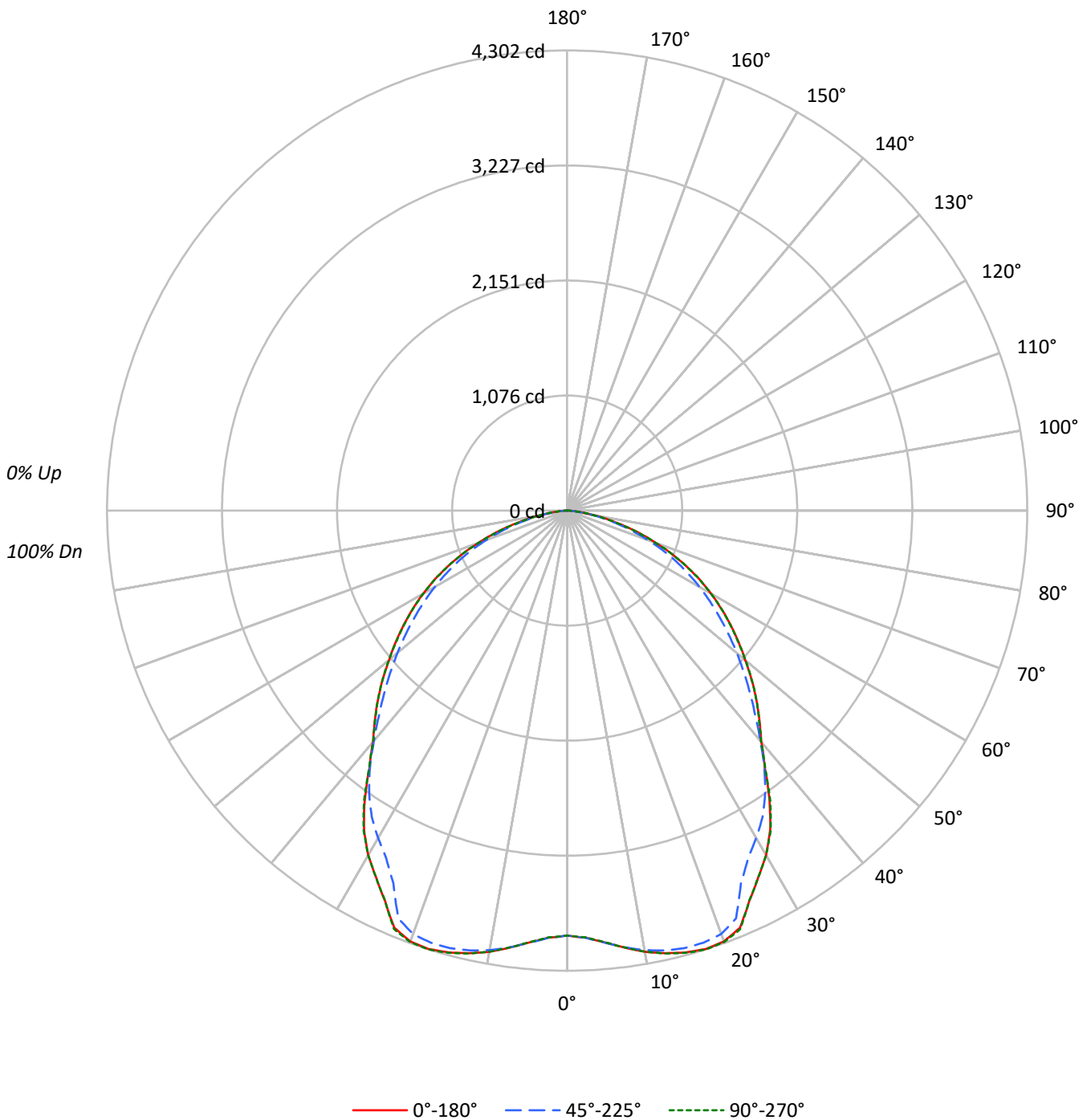
Input Watts (W): 108  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	43026	43026	43026
5°	44051	44079	44021
10°	46054	45881	46040
15°	47947	47473	47991
20°	49391	48540	49468
25°	48135	45927	48104
30°	46496	44201	46512
35°	43607	42666	43747
40°	39913	39726	39857
45°	38328	37054	38328
50°	36604	34869	36648
55°	35214	32846	35113
60°	33677	30990	33677
65°	31455	28749	31455
70°	27919	25493	27919
75°	23141	20932	22811
80°	16712	15309	16382
85°	10002	9182	9679



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	391.1	3.6
10°-20°	1204.5	11.1
20°-30°	1819.1	16.8
30°-40°	1986.0	18.3
40°-50°	1938.3	17.9
50°-60°	1665.1	15.3
60°-70°	1177.0	10.8
70°-80°	569.4	5.2
80°-90°	106.2	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°	3414.8	31.5
0°-40°	5400.8	49.7
0°-60°	9004.2	82.9
0°-90°	10856.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10856.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3973	3973	3973	3973	3973	
5°	4052	4054	4055	4053	4050	391
15°	4277	4269	4235	4270	4281	1210
25°	4029	4040	3844	4041	4026	1857
35°	3299	3128	3228	3121	3309	2053
45°	2503	2552	2420	2543	2503	1929
55°	1865	1887	1740	1882	1860	1668
65°	1228	1189	1122	1188	1228	1211
75°	553	526	500	525	545	592
85°	80	77	74	75	78	110
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°	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3
2.5°	3997.0	3995.7	3994.4	3995.7	3998.3	3998.3	3998.3	3997.0	3997.0	3998.3	3997.0
5°	4052.5	4049.8	4051.1	4049.8	4055.1	4053.8	4053.8	4055.1	4055.1	4055.1	4053.8
7.5°	4121.1	4118.5	4118.5	4118.5	4119.8	4119.8	4119.8	4119.8	4118.5	4118.5	4118.5
10°	4188.4	4184.5	4185.8	4184.5	4185.8	4183.2	4180.5	4177.9	4175.2	4172.6	4173.9
12.5°	4238.6	4237.3	4239.9	4239.9	4237.3	4233.3	4226.7	4220.1	4214.8	4212.2	4214.8
15°	4276.9	4279.5	4280.8	4279.5	4274.2	4263.7	4255.8	4245.2	4238.6	4234.6	4238.6
17.5°	4298.0	4298.0	4295.4	4287.4	4278.2	4269.0	4257.1	4246.5	4239.9	4236.0	4241.2
20°	4286.1	4284.8	4275.6	4263.7	4249.2	4237.3	4226.7	4217.5	4213.5	4212.2	4214.8
22.5°	4221.4	4224.1	4218.8	4210.9	4200.3	4183.2	4163.4	4144.9	4130.4	4125.1	4130.4
25°	4028.7	4027.4	4036.6	4052.5	4063.0	4016.8	3954.8	3895.4	3854.5	3843.9	3854.5
27.5°	3867.7	3866.3	3845.2	3799.0	3744.9	3702.7	3690.8	3684.2	3669.7	3663.1	3672.3
30°	3718.5	3705.3	3630.1	3533.7	3465.1	3447.9	3474.3	3509.9	3529.7	3535.0	3525.8
32.5°	3535.0	3499.4	3397.7	3313.3	3282.9	3269.7	3278.9	3325.1	3372.7	3399.1	3370.0
35°	3298.7	3268.4	3187.9	3141.7	3135.1	3120.5	3108.7	3136.4	3194.5	3227.5	3187.9
37.5°	3037.4	3051.9	3017.6	2993.8	2993.8	2979.3	2955.5	2964.8	2997.8	3029.5	2995.1
40°	2823.5	2849.9	2857.8	2851.2	2848.6	2830.1	2807.7	2802.4	2803.7	2810.3	2799.8
42.5°	2659.8	2663.8	2699.4	2711.3	2700.8	2681.0	2667.8	2659.8	2621.6	2604.4	2626.8
45°	2502.8	2505.4	2534.4	2568.8	2562.2	2541.0	2530.5	2505.4	2438.1	2419.6	2443.4
47.5°	2339.1	2353.6	2374.7	2410.4	2417.0	2395.8	2381.3	2337.8	2257.2	2241.4	2258.6
50°	2172.8	2200.5	2225.6	2242.7	2252.0	2233.5	2217.6	2166.2	2088.3	2069.8	2087.0
52.5°	2021.0	2046.0	2079.0	2073.8	2069.8	2065.8	2055.3	2002.5	1928.6	1903.5	1927.2
55°	1865.2	1890.3	1923.3	1900.8	1883.7	1890.3	1878.4	1834.8	1771.5	1739.8	1771.5
57.5°	1710.7	1730.5	1756.9	1729.2	1704.1	1712.1	1704.1	1673.8	1614.4	1584.0	1614.4
60°	1555.0	1566.9	1585.3	1556.3	1529.9	1535.2	1532.5	1500.9	1454.7	1430.9	1454.7
62.5°	1395.3	1401.9	1411.1	1383.4	1360.9	1359.6	1360.9	1329.3	1293.6	1277.8	1294.9
65°	1227.6	1230.3	1235.5	1207.8	1192.0	1185.4	1188.0	1159.0	1132.6	1122.0	1133.9
67.5°	1056.0	1058.7	1060.0	1033.6	1023.0	1013.8	1015.1	994.0	970.2	963.6	972.9
70°	881.8	885.7	885.7	862.0	855.4	843.5	843.5	830.3	810.5	805.2	811.8
72.5°	718.1	715.5	715.5	695.7	690.4	678.5	677.2	673.2	654.7	649.5	656.1
75°	553.1	550.4	551.8	535.9	530.6	521.4	520.1	520.1	505.6	500.3	506.9
77.5°	400.0	402.6	401.3	389.4	384.1	380.2	384.1	384.1	370.9	365.6	372.2
80°	268.0	270.6	270.6	261.4	257.4	254.8	260.0	257.4	250.8	245.5	250.8
82.5°	162.4	162.4	162.4	159.7	154.4	154.4	158.4	158.4	151.8	147.8	151.8
85°	80.5	80.5	79.2	79.2	76.6	76.6	79.2	79.2	75.2	73.9	75.2
87.5°	27.7	26.4	26.4	26.4	25.1	26.4	26.4	26.4	25.1	25.1	25.1
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°	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3	3973.3
2.5°	3998.3	3998.3	3997.0	3997.0	3997.0	3995.7	3994.4	3993.1
5°	4056.4	4055.1	4052.5	4053.8	4052.5	4052.5	4051.1	4049.8
7.5°	4121.1	4122.4	4119.8	4122.4	4122.4	4122.4	4121.1	4119.8
10°	4177.9	4181.8	4183.2	4187.1	4188.4	4189.8	4188.4	4187.1
12.5°	4221.4	4228.0	4233.3	4239.9	4243.9	4245.2	4242.6	4241.2
15°	4246.5	4255.8	4265.0	4275.6	4282.2	4284.8	4283.5	4280.8
17.5°	4247.8	4258.4	4270.3	4279.5	4288.8	4295.4	4300.6	4302.0
20°	4218.8	4228.0	4238.6	4250.5	4265.0	4276.9	4288.8	4292.7
22.5°	4140.9	4163.4	4185.8	4197.7	4209.6	4217.5	4224.1	4233.3
25°	3886.1	3953.5	4026.1	4056.4	4051.1	4026.1	4022.1	4026.1
27.5°	3686.8	3694.7	3704.0	3739.6	3789.8	3836.0	3862.4	3867.7
30°	3508.6	3470.3	3441.3	3458.5	3524.5	3615.5	3697.4	3719.8
32.5°	3323.8	3273.7	3261.8	3273.7	3302.7	3377.9	3490.1	3541.6
35°	3127.1	3106.0	3115.3	3125.8	3132.4	3173.3	3256.5	3309.3
37.5°	2954.2	2951.6	2970.1	2983.3	2983.3	2999.1	3041.3	3042.7
40°	2791.8	2805.0	2819.6	2838.0	2842.0	2848.6	2838.0	2819.6
42.5°	2649.3	2663.8	2673.0	2691.5	2702.1	2687.6	2653.2	2655.9
45°	2500.1	2527.8	2533.1	2552.9	2560.8	2522.6	2496.2	2502.8
47.5°	2332.5	2378.7	2389.2	2410.4	2403.8	2366.8	2348.3	2340.4
50°	2159.6	2220.3	2229.5	2244.0	2236.1	2217.6	2193.9	2175.4
52.5°	2003.8	2052.6	2059.2	2064.5	2071.1	2075.1	2044.7	2015.7
55°	1837.5	1875.8	1885.0	1879.7	1898.2	1919.3	1889.0	1859.9
57.5°	1676.4	1702.8	1709.4	1700.2	1726.6	1754.3	1731.9	1709.4
60°	1504.8	1531.2	1532.5	1528.6	1555.0	1578.7	1569.5	1555.0
62.5°	1335.9	1359.6	1355.7	1359.6	1380.7	1411.1	1404.5	1395.3
65°	1164.3	1186.7	1184.1	1192.0	1207.8	1235.5	1235.5	1227.6
67.5°	1000.6	1013.8	1012.5	1023.0	1034.9	1061.3	1063.9	1056.0
70°	836.9	843.5	842.2	854.1	863.3	891.0	891.0	881.8
72.5°	678.5	682.5	677.2	693.0	697.0	720.7	720.7	710.2
75°	526.7	525.4	520.1	529.3	541.2	558.4	554.4	545.2
77.5°	385.4	381.5	376.2	386.8	393.4	406.6	402.6	393.4
80°	261.4	257.4	250.8	260.0	265.3	273.2	269.3	262.7
82.5°	159.7	155.8	150.5	157.1	159.7	165.0	162.4	157.1
85°	79.2	76.6	73.9	75.2	79.2	80.5	79.2	77.9
87.5°	26.4	25.1	23.8	25.1	25.1	26.4	26.4	25.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)