

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: P130694

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130694
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-DIMRF-LW
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS AND LUMAWATT WIRELESS SENSOR.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10060.8 lumens
Efficiency: N/A
Efficacy: 93.2 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

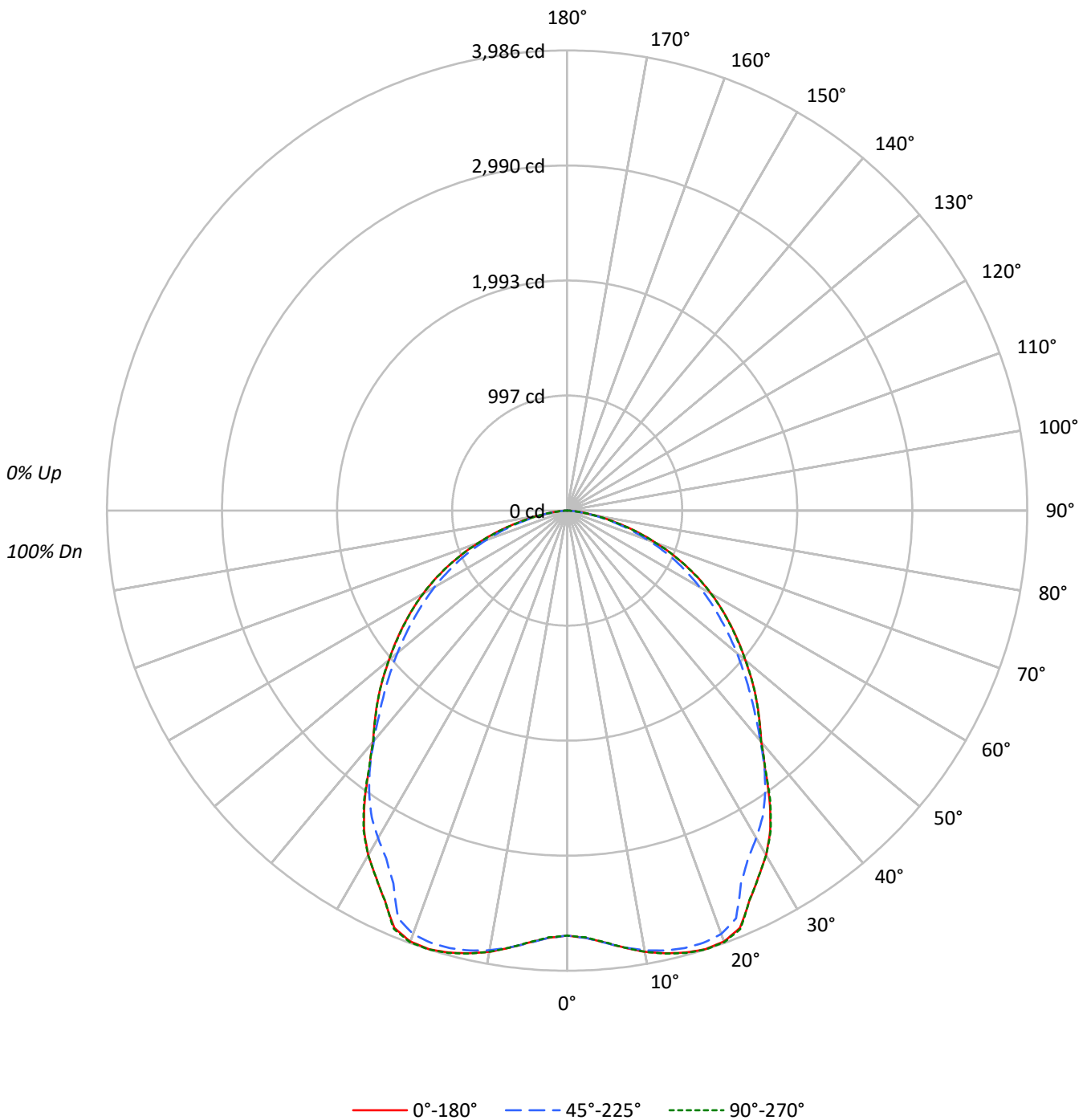
Input Watts (W): 108
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	39871	39871	39871
5°	40821	40847	40794
10°	42678	42517	42665
15°	44431	43993	44473
20°	45771	44981	45841
25°	44606	42560	44577
30°	43087	40960	43102
35°	40410	39536	40540
40°	36986	36814	36934
45°	35518	34337	35518
50°	33920	32311	33961
55°	32631	30437	32538
60°	31208	28718	31208
65°	29149	26643	29149
70°	25870	23625	25870
75°	21442	19396	21137
80°	15484	14187	15178
85°	9269	8511	8970



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	362.4	3.6
10°-20°	1116.2	11.1
20°-30°	1685.8	16.8
30°-40°	1840.4	18.3
40°-50°	1796.2	17.9
50°-60°	1543.0	15.3
60°-70°	1090.7	10.8
70°-80°	527.7	5.2
80°-90°	98.4	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°	3164.4	31.5
0°-40°	5004.8	49.7
0°-60°	8344.0	82.9
0°-90°	10060.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10060.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3682	3682	3682	3682	3682	
5°	3755	3757	3758	3756	3753	363
15°	3963	3956	3924	3957	3967	1121
25°	3733	3744	3562	3745	3731	1721
35°	3057	2898	2991	2892	3067	1902
45°	2319	2364	2242	2357	2319	1788
55°	1728	1749	1612	1744	1724	1546
65°	1138	1102	1040	1101	1138	1122
75°	512	487	464	486	505	548
85°	75	71	68	69	72	102
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°	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0
2.5°	3704.0	3702.8	3701.5	3702.8	3705.2	3705.2	3705.2	3704.0	3704.0	3705.2	3704.0
5°	3755.4	3752.9	3754.1	3752.9	3757.8	3756.6	3756.6	3757.8	3757.8	3757.8	3756.6
7.5°	3819.0	3816.5	3816.5	3816.5	3817.7	3817.7	3817.7	3817.7	3816.5	3816.5	3816.5
10°	3881.3	3877.7	3878.9	3877.7	3878.9	3876.5	3874.0	3871.6	3869.1	3866.7	3867.9
12.5°	3927.8	3926.6	3929.1	3929.1	3926.6	3922.9	3916.8	3910.7	3905.8	3903.4	3905.8
15°	3963.3	3965.7	3967.0	3965.7	3960.9	3951.1	3943.7	3933.9	3927.8	3924.2	3927.8
17.5°	3982.9	3982.9	3980.4	3973.1	3964.5	3956.0	3945.0	3935.2	3929.1	3925.4	3930.3
20°	3971.9	3970.6	3962.1	3951.1	3937.6	3926.6	3916.8	3908.3	3904.6	3903.4	3905.8
22.5°	3911.9	3914.4	3909.5	3902.1	3892.4	3876.5	3858.1	3841.0	3827.5	3822.6	3827.5
25°	3733.3	3732.1	3740.7	3755.4	3765.1	3722.3	3664.8	3609.8	3571.9	3562.1	3571.9
27.5°	3584.1	3582.9	3563.3	3520.5	3470.3	3431.2	3420.2	3414.1	3400.6	3394.5	3403.1
30°	3445.9	3433.6	3363.9	3274.6	3211.0	3195.1	3219.6	3252.6	3270.9	3275.8	3267.3
32.5°	3275.8	3242.8	3148.6	3070.3	3042.2	3030.0	3038.5	3081.3	3125.4	3149.8	3122.9
35°	3056.9	3028.7	2954.1	2911.3	2905.2	2891.7	2880.7	2906.4	2960.2	2990.8	2954.1
37.5°	2814.7	2828.1	2796.3	2774.3	2774.3	2760.9	2738.8	2747.4	2778.0	2807.3	2775.5
40°	2616.5	2641.0	2648.3	2642.2	2639.8	2622.6	2601.8	2596.9	2598.2	2604.3	2594.5
42.5°	2464.8	2468.5	2501.5	2512.5	2502.8	2484.4	2472.2	2464.8	2429.4	2413.5	2434.2
45°	2319.3	2321.7	2348.6	2380.4	2374.3	2354.7	2345.0	2321.7	2259.3	2242.2	2264.2
47.5°	2167.6	2181.0	2200.6	2233.6	2239.8	2220.2	2206.7	2166.4	2091.7	2077.1	2093.0
50°	2013.5	2039.1	2062.4	2078.3	2086.8	2069.7	2055.0	2007.3	1935.2	1918.0	1933.9
52.5°	1872.8	1896.0	1926.6	1921.7	1918.0	1914.4	1904.6	1855.7	1787.2	1763.9	1785.9
55°	1728.4	1751.7	1782.3	1761.5	1745.6	1751.7	1740.7	1700.3	1641.6	1612.2	1641.6
57.5°	1585.3	1603.7	1628.1	1602.4	1579.2	1586.5	1579.2	1551.1	1496.0	1467.9	1496.0
60°	1441.0	1452.0	1469.1	1442.2	1417.7	1422.6	1420.2	1390.8	1348.0	1326.0	1348.0
62.5°	1293.0	1299.1	1307.6	1282.0	1261.2	1259.9	1261.2	1231.8	1198.8	1184.1	1200.0
65°	1137.6	1140.1	1145.0	1119.3	1104.6	1098.5	1100.9	1074.0	1049.5	1039.8	1050.8
67.5°	978.6	981.0	982.3	957.8	948.0	939.4	940.7	921.1	899.1	893.0	901.5
70°	817.1	820.8	820.8	798.8	792.7	781.7	781.7	769.4	751.1	746.2	752.3
72.5°	665.4	663.0	663.0	644.6	639.8	628.7	627.5	623.9	606.7	601.8	608.0
75°	512.5	510.1	511.3	496.6	491.7	483.2	482.0	482.0	468.5	463.6	469.7
77.5°	370.6	373.1	371.9	360.9	356.0	352.3	356.0	356.0	343.7	338.8	345.0
80°	248.3	250.8	250.8	242.2	238.5	236.1	241.0	238.5	232.4	227.5	232.4
82.5°	150.5	150.5	150.5	148.0	143.1	143.1	146.8	146.8	140.7	137.0	140.7
85°	74.6	74.6	73.4	73.4	70.9	70.9	73.4	73.4	69.7	68.5	69.7
87.5°	25.7	24.5	24.5	24.5	23.2	24.5	24.5	24.5	23.2	23.2	23.2
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°	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0	3682.0
2.5°	3705.2	3705.2	3704.0	3704.0	3704.0	3702.8	3701.5	3700.3
5°	3759.0	3757.8	3755.4	3756.6	3755.4	3755.4	3754.1	3752.9
7.5°	3819.0	3820.2	3817.7	3820.2	3820.2	3820.2	3819.0	3817.7
10°	3871.6	3875.2	3876.5	3880.1	3881.3	3882.6	3881.3	3880.1
12.5°	3911.9	3918.0	3922.9	3929.1	3932.7	3933.9	3931.5	3930.3
15°	3935.2	3943.7	3952.3	3962.1	3968.2	3970.6	3969.4	3967.0
17.5°	3936.4	3946.2	3957.2	3965.7	3974.3	3980.4	3985.3	3986.5
20°	3909.5	3918.0	3927.8	3938.8	3952.3	3963.3	3974.3	3978.0
22.5°	3837.3	3858.1	3878.9	3889.9	3900.9	3908.3	3914.4	3922.9
25°	3601.2	3663.6	3730.9	3759.0	3754.1	3730.9	3727.2	3730.9
27.5°	3416.5	3423.9	3432.4	3465.4	3511.9	3554.7	3579.2	3584.1
30°	3251.4	3215.9	3189.0	3204.9	3266.1	3350.5	3426.3	3447.1
32.5°	3080.1	3033.6	3022.6	3033.6	3060.5	3130.3	3234.2	3282.0
35°	2897.9	2878.3	2886.8	2896.6	2902.8	2940.7	3017.7	3066.7
37.5°	2737.6	2735.2	2752.3	2764.5	2764.5	2779.2	2818.3	2819.6
40°	2587.2	2599.4	2612.8	2630.0	2633.6	2639.8	2630.0	2612.8
42.5°	2455.0	2468.5	2477.1	2494.2	2504.0	2490.5	2458.7	2461.2
45°	2316.8	2342.5	2347.4	2365.7	2373.1	2337.6	2313.1	2319.3
47.5°	2161.5	2204.3	2214.1	2233.6	2227.5	2193.3	2176.1	2168.8
50°	2001.2	2057.5	2066.1	2079.5	2072.2	2055.0	2033.0	2015.9
52.5°	1856.9	1902.1	1908.3	1913.1	1919.3	1922.9	1894.8	1867.9
55°	1702.8	1738.2	1746.8	1741.9	1759.0	1778.6	1750.5	1723.5
57.5°	1553.5	1578.0	1584.1	1575.5	1600.0	1625.7	1604.9	1584.1
60°	1394.5	1419.0	1420.2	1416.5	1441.0	1463.0	1454.4	1441.0
62.5°	1237.9	1259.9	1256.3	1259.9	1279.5	1307.6	1301.5	1293.0
65°	1078.9	1099.7	1097.2	1104.6	1119.3	1145.0	1145.0	1137.6
67.5°	927.2	939.4	938.2	948.0	959.0	983.5	985.9	978.6
70°	775.5	781.7	780.4	791.4	800.0	825.7	825.7	817.1
72.5°	628.7	632.4	627.5	642.2	645.9	667.9	667.9	658.1
75°	488.1	486.8	482.0	490.5	501.5	517.4	513.8	505.2
77.5°	357.2	353.5	348.6	358.4	364.5	376.8	373.1	364.5
80°	242.2	238.5	232.4	241.0	245.9	253.2	249.5	243.4
82.5°	148.0	144.3	139.4	145.6	148.0	152.9	150.5	145.6
85°	73.4	70.9	68.5	69.7	73.4	74.6	73.4	72.2
87.5°	24.5	23.2	22.0	23.2	23.2	24.5	24.5	23.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)