

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: P130721

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130721
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25252)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: TBLED-LD1-11-W-UNV-L840-CD1-DOS
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
WIDE DISTRIBUTION WITH DIMMING OCCUPANCY SENSOR.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9695.4 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.71
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

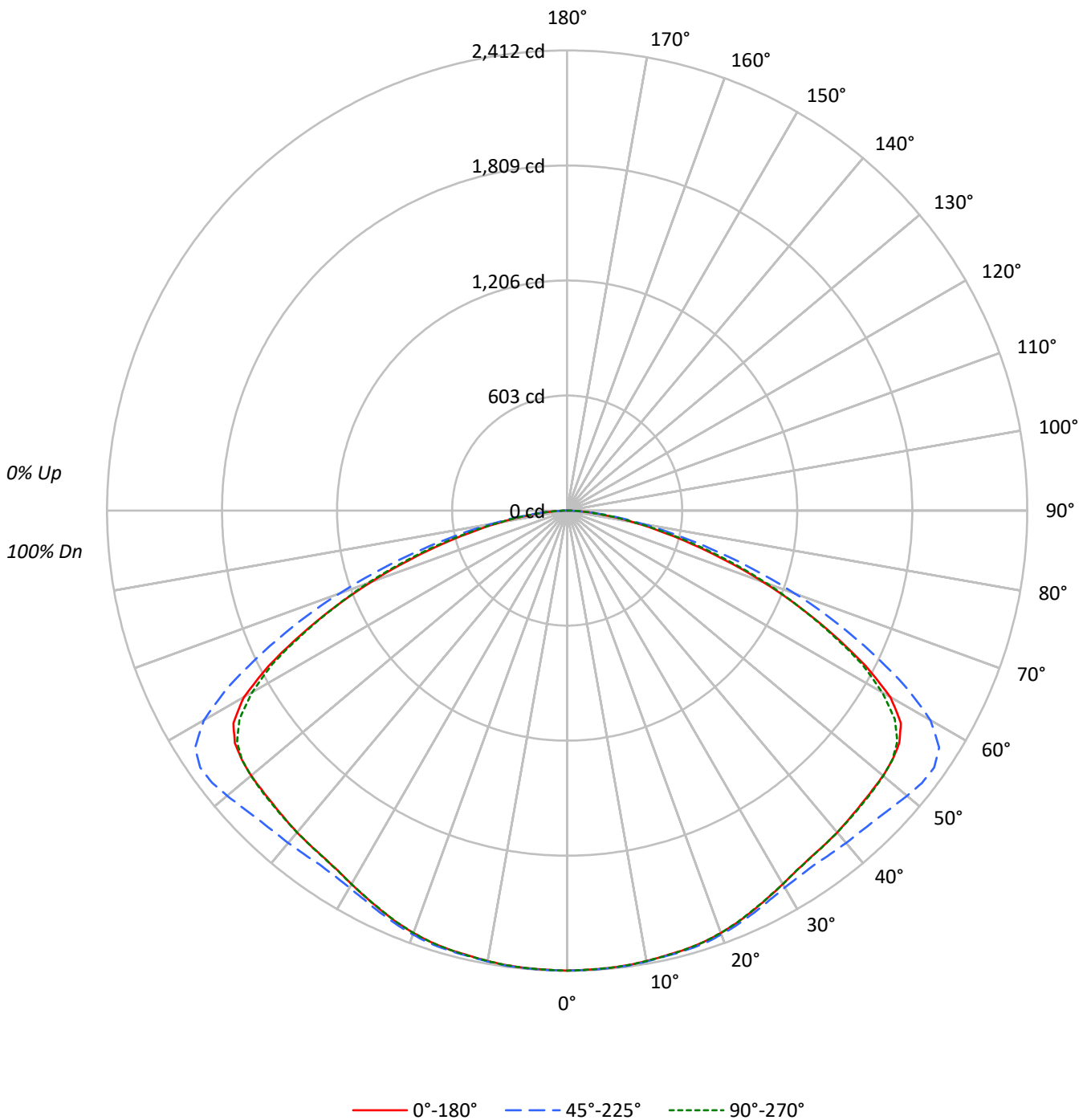
Input Watts (W): 108
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89		92	89	87		88	86	84	82
2	97	88	81	74	94	86	79	73	82	77	72		79	74	70		76	72	68	66
3	87	76	67	60	85	74	66	59	71	64	58		68	62	57		66	61	56	54
4	79	66	57	49	77	65	56	49	62	55	48		60	53	48		58	52	47	45
5	72	58	49	42	70	57	48	41	55	47	41		53	46	40		51	45	40	38
6	66	52	42	36	64	51	42	35	49	41	35		47	40	35		46	39	34	32
7	61	47	37	31	59	46	37	31	44	36	30		43	36	30		41	35	30	28
8	57	42	33	27	55	42	33	27	40	32	27		39	32	27		38	31	26	24
9	53	39	30	24	51	38	30	24	37	29	24		36	29	24		35	28	23	22
10	49	35	27	22	48	35	27	21	34	26	21		33	26	21		32	26	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26113	26113	26113
5°	26172	26186	26172
10°	26364	26392	26364
15°	26711	26767	26711
20°	27151	27252	27151
25°	27610	27760	27594
30°	28264	28531	28264
35°	29366	29931	29381
40°	31134	32149	31134
45°	33363	35060	33420
50°	36425	39183	36446
55°	40132	44340	39869
60°	42381	47646	41292
65°	39428	45140	39108
70°	34609	40228	35166
75°	28291	32877	29400
80°	22069	25050	22537
85°	15642	17369	15953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.6	2.4
10°-20°	675.1	7.0
20°-30°	1071.5	11.1
30°-40°	1412.2	14.6
40°-50°	1733.7	17.9
50°-60°	1979.0	20.4
60°-70°	1628.1	16.8
70°-80°	798.9	8.2
80°-90°	167.2	1.7
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°	1976.1	20.4
0°-40°	3388.3	34.9
0°-60°	7101.1	73.2
0°-90°	9695.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9695.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2412	2412	2412	2412	2412	
5°	2408	2409	2409	2409	2408	230
15°	2383	2384	2388	2386	2383	674
25°	2311	2318	2323	2318	2310	1068
35°	2221	2245	2264	2244	2223	1397
45°	2179	2235	2289	2239	2182	1688
55°	2126	2245	2349	2238	2112	1884
65°	1539	1661	1762	1658	1526	1519
75°	676	742	786	750	703	732
85°	126	137	140	135	128	155
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°	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5
2.5°	2409.0	2409.0	2409.0	2409.0	2410.3	2410.3	2410.3	2410.3	2410.3	2410.3	2409.0
5°	2407.7	2407.7	2407.7	2407.7	2409.0	2409.0	2409.0	2409.0	2409.0	2409.0	2409.0
7.5°	2404.0	2404.0	2405.2	2405.2	2405.2	2405.2	2405.2	2406.5	2406.5	2406.5	2406.5
10°	2397.7	2397.7	2397.7	2397.7	2398.9	2398.9	2400.2	2400.2	2400.2	2400.2	2400.2
12.5°	2388.9	2388.9	2390.1	2390.1	2390.1	2391.4	2392.6	2392.6	2392.6	2392.6	2392.6
15°	2382.6	2382.6	2382.6	2383.8	2383.8	2385.1	2386.3	2386.3	2387.6	2387.6	2387.6
17.5°	2372.5	2373.7	2373.7	2373.7	2375.0	2376.3	2378.8	2378.8	2380.0	2380.0	2380.0
20°	2356.1	2356.1	2357.4	2358.6	2359.9	2361.2	2363.7	2364.9	2364.9	2364.9	2366.2
22.5°	2336.0	2336.0	2337.2	2338.5	2341.0	2342.3	2344.8	2346.0	2346.0	2346.0	2346.0
25°	2310.8	2312.0	2313.3	2314.6	2317.1	2319.6	2322.1	2324.6	2324.6	2323.4	2324.6
27.5°	2285.6	2286.9	2288.1	2290.6	2293.2	2295.7	2298.2	2300.7	2300.7	2300.7	2302.0
30°	2260.4	2261.7	2264.2	2266.7	2270.5	2273.0	2276.8	2280.6	2281.8	2281.8	2280.6
32.5°	2237.7	2239.0	2242.8	2246.6	2251.6	2256.6	2261.7	2265.4	2269.2	2269.2	2266.7
35°	2221.4	2222.6	2227.7	2234.0	2241.5	2247.8	2254.1	2259.2	2264.2	2264.2	2262.9
37.5°	2211.3	2212.6	2218.9	2226.4	2237.7	2246.6	2255.4	2261.7	2266.7	2268.0	2266.7
40°	2202.5	2203.7	2211.3	2221.4	2234.0	2246.6	2257.9	2266.7	2271.7	2274.3	2274.3
42.5°	2189.9	2192.4	2200.0	2213.8	2228.9	2244.0	2257.9	2270.5	2276.8	2279.3	2278.0
45°	2178.6	2181.1	2191.2	2207.5	2225.2	2244.0	2261.7	2276.8	2285.6	2289.4	2286.9
47.5°	2169.7	2173.5	2186.1	2205.0	2226.4	2250.3	2271.7	2289.4	2300.7	2305.7	2302.0
50°	2162.2	2167.2	2181.1	2203.7	2231.4	2261.7	2286.9	2307.0	2320.9	2325.9	2322.1
52.5°	2148.3	2157.2	2173.5	2201.2	2235.2	2269.2	2299.4	2323.4	2339.7	2344.8	2339.7
55°	2125.7	2134.5	2153.4	2184.9	2226.4	2264.2	2300.7	2327.2	2342.3	2348.6	2341.0
57.5°	2074.0	2082.9	2101.7	2138.3	2179.8	2222.6	2260.4	2289.4	2308.3	2312.0	2296.9
60°	1956.9	1963.2	1992.2	2028.7	2069.0	2110.6	2149.6	2182.3	2198.7	2200.0	2178.6
62.5°	1763.0	1773.1	1802.0	1841.1	1878.8	1912.8	1949.4	1983.4	1996.0	2001.0	1984.6
65°	1538.8	1552.7	1574.1	1609.4	1647.1	1674.8	1715.1	1744.1	1756.7	1761.7	1755.4
67.5°	1316.0	1328.5	1339.9	1373.9	1407.9	1434.3	1473.4	1499.8	1509.9	1517.4	1513.7
70°	1093.1	1104.4	1114.5	1142.2	1168.6	1202.6	1225.3	1250.5	1256.8	1270.6	1264.3
72.5°	876.5	885.3	895.3	921.8	938.2	974.7	984.8	1006.2	1017.5	1021.3	1015.0
75°	676.2	682.5	693.9	715.3	727.9	755.6	759.3	778.2	785.8	785.8	783.3
77.5°	501.2	506.2	518.8	531.4	544.0	562.9	559.1	571.7	576.8	579.3	576.8
80°	353.9	360.2	362.7	372.7	384.1	391.6	389.1	395.4	396.7	401.7	400.5
82.5°	226.7	233.0	229.2	235.5	243.0	248.1	249.3	249.3	249.3	253.1	251.9
85°	125.9	131.0	128.4	131.0	134.7	138.5	136.0	137.3	138.5	139.8	138.5
87.5°	41.6	46.6	42.8	44.1	46.6	49.1	50.4	46.6	49.1	49.1	49.1
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°	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5	2411.5
2.5°	2409.0	2409.0	2409.0	2409.0	2409.0	2409.0	2409.0	2409.0
5°	2409.0	2409.0	2409.0	2409.0	2407.7	2407.7	2407.7	2407.7
7.5°	2405.2	2405.2	2405.2	2405.2	2404.0	2404.0	2404.0	2404.0
10°	2398.9	2398.9	2398.9	2397.7	2397.7	2397.7	2397.7	2397.7
12.5°	2392.6	2391.4	2391.4	2391.4	2391.4	2390.1	2390.1	2390.1
15°	2387.6	2386.3	2386.3	2385.1	2383.8	2383.8	2382.6	2382.6
17.5°	2378.8	2378.8	2377.5	2376.3	2375.0	2373.7	2373.7	2372.5
20°	2364.9	2363.7	2361.2	2359.9	2359.9	2358.6	2357.4	2356.1
22.5°	2344.8	2343.5	2342.3	2339.7	2338.5	2337.2	2336.0	2334.7
25°	2322.1	2320.9	2319.6	2317.1	2315.8	2313.3	2312.0	2309.5
27.5°	2299.4	2299.4	2295.7	2293.2	2290.6	2288.1	2286.9	2284.3
30°	2279.3	2278.0	2275.5	2270.5	2268.0	2264.2	2261.7	2260.4
32.5°	2264.2	2262.9	2257.9	2251.6	2246.6	2241.5	2240.3	2237.7
35°	2260.4	2255.4	2247.8	2240.3	2234.0	2227.7	2223.9	2222.6
37.5°	2264.2	2255.4	2246.6	2236.5	2227.7	2218.9	2213.8	2211.3
40°	2268.0	2259.2	2249.1	2235.2	2222.6	2212.6	2206.3	2202.5
42.5°	2270.5	2260.4	2247.8	2231.4	2216.3	2203.7	2196.2	2192.4
45°	2276.8	2265.4	2249.1	2228.9	2210.0	2196.2	2187.4	2182.3
47.5°	2290.6	2274.3	2254.1	2230.2	2207.5	2188.6	2178.6	2173.5
50°	2308.3	2288.1	2262.9	2234.0	2206.3	2182.3	2169.7	2163.4
52.5°	2324.6	2300.7	2270.5	2236.5	2201.2	2173.5	2154.6	2148.3
55°	2324.6	2295.7	2257.9	2218.9	2178.6	2145.8	2120.6	2111.8
57.5°	2275.5	2244.0	2197.4	2154.6	2110.6	2071.5	2045.1	2036.3
60°	2149.6	2121.9	2067.7	2026.2	1977.1	1934.3	1914.1	1906.6
62.5°	1956.9	1936.8	1887.7	1851.1	1798.3	1764.3	1740.3	1741.6
65°	1732.8	1715.1	1674.8	1642.1	1594.3	1567.8	1543.9	1526.3
67.5°	1497.3	1477.1	1444.4	1415.4	1376.4	1357.5	1331.1	1314.7
70°	1250.5	1235.4	1205.1	1185.0	1152.2	1135.9	1110.7	1110.7
72.5°	1003.6	996.1	974.7	957.1	931.9	916.8	896.6	900.4
75°	774.5	778.2	756.8	744.2	724.1	711.5	696.4	702.7
77.5°	580.5	575.5	560.4	552.8	535.2	530.2	515.0	520.1
80°	401.7	400.5	387.9	382.8	372.7	370.2	357.6	361.4
82.5°	253.1	253.1	248.1	243.0	239.3	236.7	227.9	230.4
85°	139.8	138.5	137.3	133.5	131.0	132.2	125.9	128.4
87.5°	49.1	47.9	47.9	45.3	42.8	46.6	41.6	42.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)