

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: P130712

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130712
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
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
WIDE DISTRIBUTION.
Light Source: (160) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

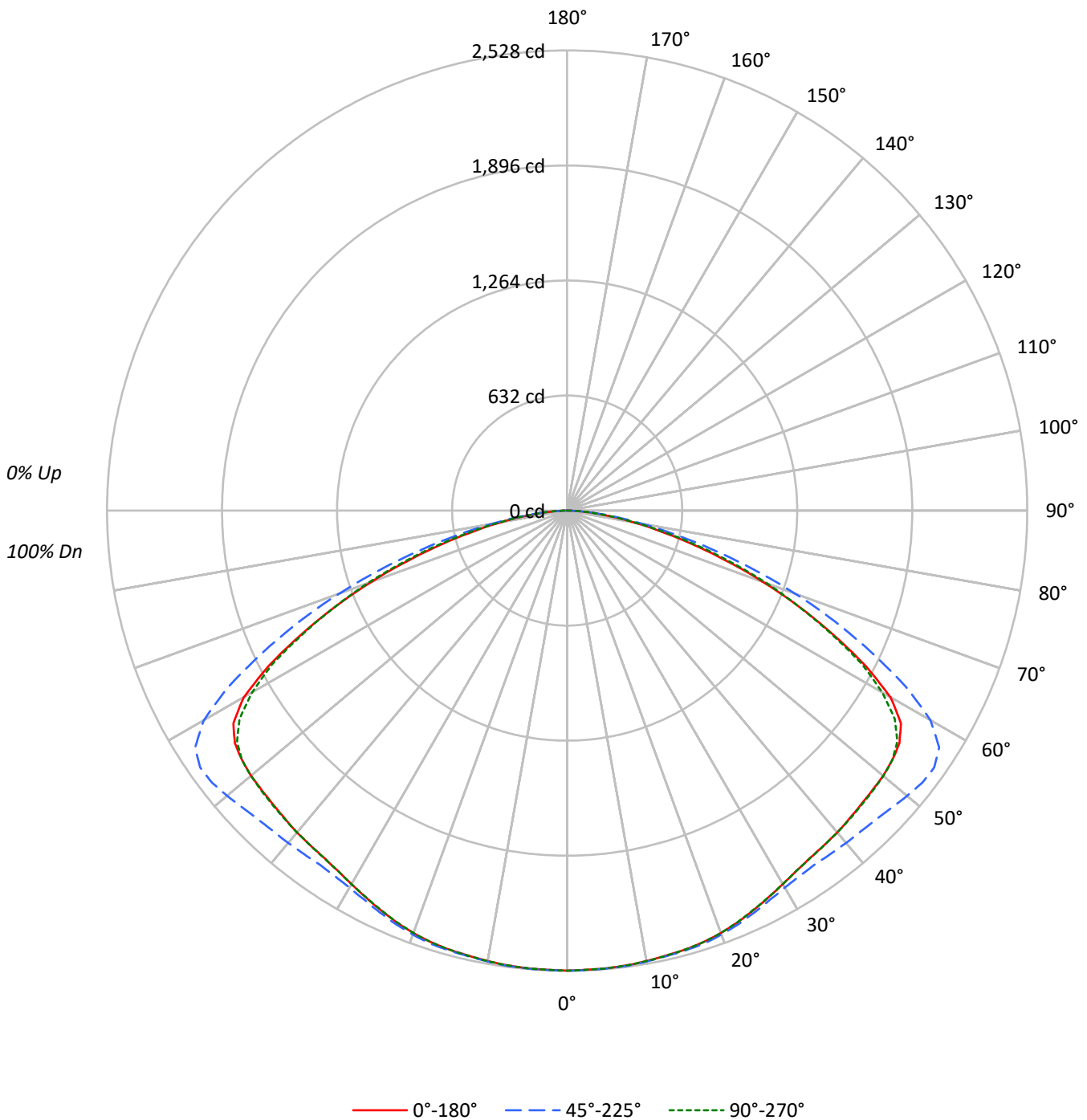
Lumens per Lamp: N/A
Luminaire Lumens: 10162.5 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.71
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27372	27372	27372
5°	27434	27448	27434
10°	27634	27663	27634
15°	27998	28056	27998
20°	28459	28566	28459
25°	28940	29097	28924
30°	29625	29907	29625
35°	30780	31374	30797
40°	32634	33697	32634
45°	34970	36749	35031
50°	38181	41072	38203
55°	42065	46475	41791
60°	44424	49942	43280
65°	41330	47315	40991
70°	36274	42166	36860
75°	29655	34463	30814
80°	23129	26260	23622
85°	16400	18202	16723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.7	2.4
10°-20°	707.6	7.0
20°-30°	1123.1	11.1
30°-40°	1480.3	14.6
40°-50°	1817.3	17.9
50°-60°	2074.4	20.4
60°-70°	1706.5	16.8
70°-80°	837.4	8.2
80°-90°	175.3	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°	2071.3	20.4
0°-40°	3551.6	34.9
0°-60°	7443.3	73.2
0°-90°	10162.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10162.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2528	2528	2528	2528	2528	
5°	2524	2525	2525	2525	2524	241
15°	2497	2499	2503	2501	2497	707
25°	2422	2430	2435	2430	2421	1119
35°	2328	2353	2373	2352	2330	1465
45°	2284	2342	2400	2347	2288	1769
55°	2228	2354	2462	2346	2214	1975
65°	1613	1741	1847	1738	1600	1592
75°	709	777	824	787	736	767
85°	132	143	146	142	135	163
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°	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7
2.5°	2525.1	2525.1	2525.1	2525.1	2526.4	2526.4	2526.4	2526.4	2526.4	2526.4	2525.1
5°	2523.8	2523.8	2523.8	2523.8	2525.1	2525.1	2525.1	2525.1	2525.1	2525.1	2525.1
7.5°	2519.8	2519.8	2521.1	2521.1	2521.1	2521.1	2521.1	2522.4	2522.4	2522.4	2522.4
10°	2513.2	2513.2	2513.2	2513.2	2514.5	2514.5	2515.8	2515.8	2515.8	2515.8	2515.8
12.5°	2504.0	2504.0	2505.3	2505.3	2505.3	2506.6	2507.9	2507.9	2507.9	2507.9	2507.9
15°	2497.4	2497.4	2497.4	2498.7	2498.7	2500.0	2501.3	2501.3	2502.6	2502.6	2502.6
17.5°	2486.8	2488.1	2488.1	2488.1	2489.4	2490.8	2493.4	2493.4	2494.7	2494.7	2494.7
20°	2469.6	2469.6	2471.0	2472.3	2473.6	2474.9	2477.6	2478.9	2478.9	2478.9	2480.2
22.5°	2448.5	2448.5	2449.8	2451.2	2453.8	2455.1	2457.8	2459.1	2459.1	2459.1	2459.1
25°	2422.1	2423.4	2424.8	2426.1	2428.7	2431.4	2434.0	2436.6	2436.6	2435.3	2436.6
27.5°	2395.7	2397.0	2398.4	2401.0	2403.6	2406.3	2408.9	2411.6	2411.6	2411.6	2412.9
30°	2369.3	2370.6	2373.3	2375.9	2379.9	2382.5	2386.5	2390.4	2391.8	2391.8	2390.4
32.5°	2345.6	2346.9	2350.8	2354.8	2360.1	2365.4	2370.6	2374.6	2378.6	2378.6	2375.9
35°	2328.4	2329.7	2335.0	2341.6	2349.5	2356.1	2362.7	2368.0	2373.3	2373.3	2372.0
37.5°	2317.8	2319.2	2325.8	2333.7	2345.6	2354.8	2364.0	2370.6	2375.9	2377.2	2375.9
40°	2308.6	2309.9	2317.8	2328.4	2341.6	2354.8	2366.7	2375.9	2381.2	2383.8	2383.8
42.5°	2295.4	2298.0	2306.0	2320.5	2336.3	2352.2	2366.7	2379.9	2386.5	2389.1	2387.8
45°	2283.5	2286.2	2296.7	2313.9	2332.4	2352.2	2370.6	2386.5	2395.7	2399.7	2397.0
47.5°	2274.3	2278.2	2291.4	2311.2	2333.7	2358.8	2381.2	2399.7	2411.6	2416.8	2412.9
50°	2266.4	2271.6	2286.2	2309.9	2339.0	2370.6	2397.0	2418.2	2432.7	2438.0	2434.0
52.5°	2251.8	2261.1	2278.2	2307.3	2342.9	2378.6	2410.2	2435.3	2452.5	2457.8	2452.5
55°	2228.1	2237.3	2257.1	2290.1	2333.7	2373.3	2411.6	2439.3	2455.1	2461.7	2453.8
57.5°	2174.0	2183.2	2203.0	2241.3	2284.8	2329.7	2369.3	2399.7	2419.5	2423.4	2407.6
60°	2051.2	2057.8	2088.2	2126.5	2168.7	2212.3	2253.2	2287.5	2304.6	2306.0	2283.5
62.5°	1847.9	1858.5	1888.9	1929.8	1969.4	2005.0	2043.3	2078.9	2092.1	2097.4	2080.3
65°	1613.0	1627.5	1649.9	1686.9	1726.5	1755.5	1797.8	1828.1	1841.3	1846.6	1840.0
67.5°	1379.4	1392.6	1404.4	1440.1	1475.7	1503.4	1544.4	1572.1	1582.6	1590.5	1586.6
70°	1145.7	1157.6	1168.2	1197.2	1224.9	1260.6	1284.3	1310.7	1317.3	1331.8	1325.2
72.5°	918.7	927.9	938.5	966.2	983.4	1021.6	1032.2	1054.6	1066.5	1070.5	1063.9
75°	708.8	715.4	727.3	749.7	762.9	792.0	795.9	815.7	823.7	823.7	821.0
77.5°	525.3	530.6	543.8	557.0	570.2	590.0	586.1	599.3	604.5	607.2	604.5
80°	370.9	377.5	380.1	390.7	402.6	410.5	407.9	414.5	415.8	421.1	419.7
82.5°	237.6	244.2	240.2	246.8	254.8	260.0	261.4	261.4	261.4	265.3	264.0
85°	132.0	137.3	134.6	137.3	141.2	145.2	142.6	143.9	145.2	146.5	145.2
87.5°	43.6	48.8	44.9	46.2	48.8	51.5	52.8	48.8	51.5	51.5	51.5
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°	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7	2527.7
2.5°	2525.1	2525.1	2525.1	2525.1	2525.1	2525.1	2525.1	2525.1
5°	2525.1	2525.1	2525.1	2525.1	2523.8	2523.8	2523.8	2523.8
7.5°	2521.1	2521.1	2521.1	2521.1	2519.8	2519.8	2519.8	2519.8
10°	2514.5	2514.5	2514.5	2513.2	2513.2	2513.2	2513.2	2513.2
12.5°	2507.9	2506.6	2506.6	2506.6	2506.6	2505.3	2505.3	2505.3
15°	2502.6	2501.3	2501.3	2500.0	2498.7	2498.7	2497.4	2497.4
17.5°	2493.4	2493.4	2492.1	2490.8	2489.4	2488.1	2488.1	2486.8
20°	2478.9	2477.6	2474.9	2473.6	2473.6	2472.3	2471.0	2469.6
22.5°	2457.8	2456.4	2455.1	2452.5	2451.2	2449.8	2448.5	2447.2
25°	2434.0	2432.7	2431.4	2428.7	2427.4	2424.8	2423.4	2420.8
27.5°	2410.2	2410.2	2406.3	2403.6	2401.0	2398.4	2397.0	2394.4
30°	2389.1	2387.8	2385.2	2379.9	2377.2	2373.3	2370.6	2369.3
32.5°	2373.3	2372.0	2366.7	2360.1	2354.8	2349.5	2348.2	2345.6
35°	2369.3	2364.0	2356.1	2348.2	2341.6	2335.0	2331.0	2329.7
37.5°	2373.3	2364.0	2354.8	2344.2	2335.0	2325.8	2320.5	2317.8
40°	2377.2	2368.0	2357.4	2342.9	2329.7	2319.2	2312.6	2308.6
42.5°	2379.9	2369.3	2356.1	2339.0	2323.1	2309.9	2302.0	2298.0
45°	2386.5	2374.6	2357.4	2336.3	2316.5	2302.0	2292.8	2287.5
47.5°	2401.0	2383.8	2362.7	2337.6	2313.9	2294.1	2283.5	2278.2
50°	2419.5	2398.4	2372.0	2341.6	2312.6	2287.5	2274.3	2267.7
52.5°	2436.6	2411.6	2379.9	2344.2	2307.3	2278.2	2258.4	2251.8
55°	2436.6	2406.3	2366.7	2325.8	2283.5	2249.2	2222.8	2213.6
57.5°	2385.2	2352.2	2303.3	2258.4	2212.3	2171.3	2143.6	2134.4
60°	2253.2	2224.1	2167.4	2123.8	2072.3	2027.5	2006.3	1998.4
62.5°	2051.2	2030.1	1978.6	1940.3	1884.9	1849.3	1824.2	1825.5
65°	1816.3	1797.8	1755.5	1721.2	1671.1	1643.3	1618.3	1599.8
67.5°	1569.4	1548.3	1514.0	1483.6	1442.7	1422.9	1395.2	1378.0
70°	1310.7	1294.9	1263.2	1242.1	1207.8	1190.6	1164.2	1164.2
72.5°	1052.0	1044.1	1021.6	1003.2	976.8	960.9	939.8	943.8
75°	811.8	815.7	793.3	780.1	759.0	745.8	729.9	736.5
77.5°	608.5	603.2	587.4	579.5	561.0	555.7	539.9	545.1
80°	421.1	419.7	406.5	401.3	390.7	388.1	374.9	378.8
82.5°	265.3	265.3	260.0	254.8	250.8	248.2	238.9	241.6
85°	146.5	145.2	143.9	139.9	137.3	138.6	132.0	134.6
87.5°	51.5	50.2	50.2	47.5	44.9	48.8	43.6	44.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)