

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: P201260

Luminaire Tested: **8LBLED-LD4-12-SYMF-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P201260  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28138)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8LBLED-LD4-12-SYMF-UNV-L850-CD1-U  
Description: 8 ft. Low Bay Linear, 12000 lm, Frst Sym lens, 5K  
Light Source: (784) 5000K CCT, 80 CRI LEDS  
2UT217098A8504C  
Ballast/Driver: OSRAM  
(OTi85W01920CC)

**Summary**

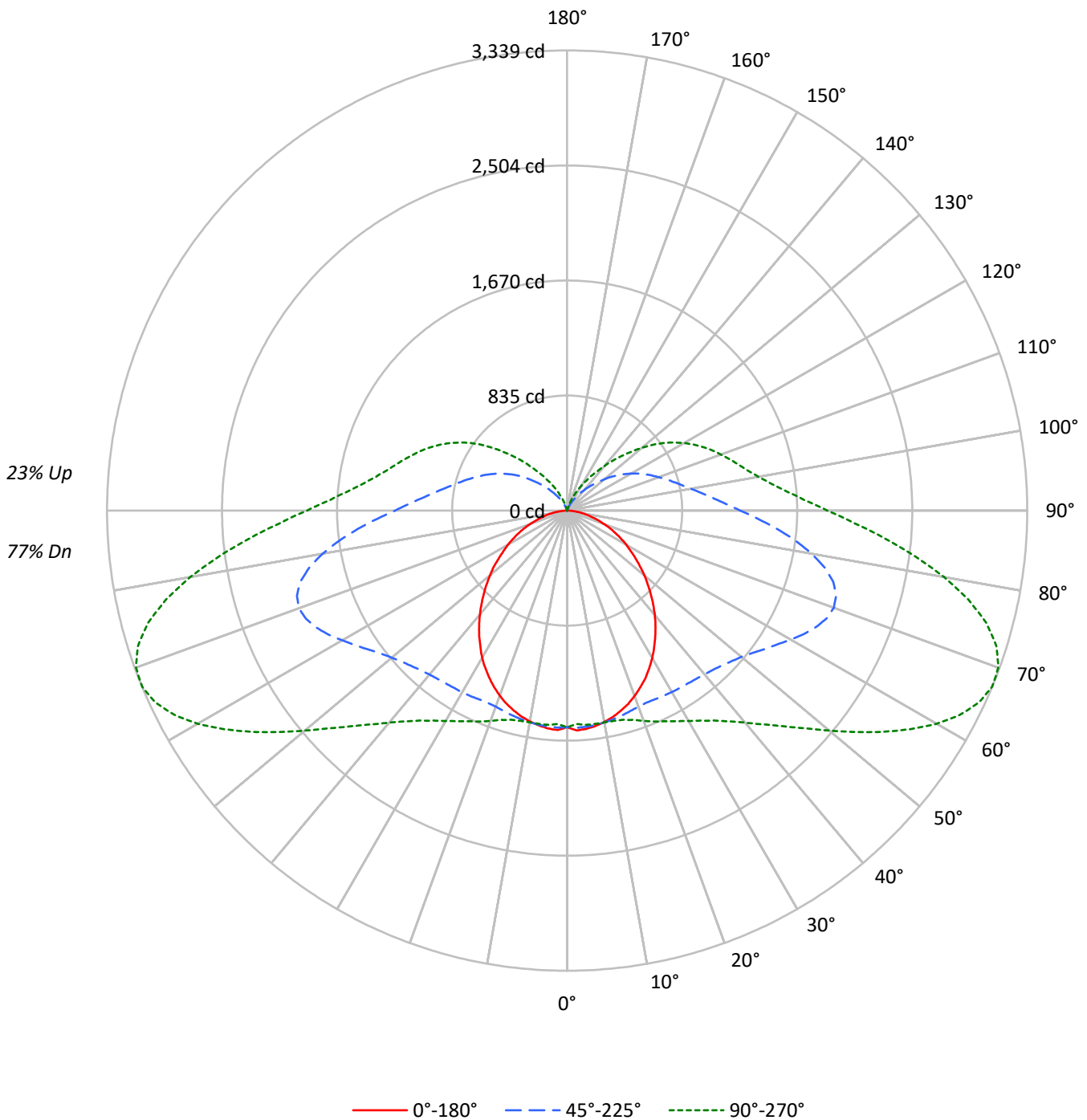
Lumens per Lamp: N/A  
Luminaire Lumens: 13452.8 lumens  
Efficiency: N/A  
Efficacy: 157.2 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 8' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 85.6  
Input Voltage (V): NR  
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	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77
1	98	91	84	78	92	86	80	75	77	73	68	69	65	62	62	59	56	52
2	86	75	66	59	81	71	63	56	64	57	51	57	51	47	50	46	42	38
3	77	64	54	46	72	61	51	44	54	46	40	48	42	37	43	37	33	29
4	70	55	45	37	65	52	43	36	47	39	32	42	35	30	37	31	27	23
5	63	49	38	31	59	46	37	29	41	33	27	37	30	25	32	27	22	19
6	58	43	33	26	55	41	32	25	37	29	23	33	26	21	29	23	19	16
7	54	39	29	22	50	37	28	21	33	25	20	30	23	18	26	21	16	14
8	50	35	26	19	47	33	25	19	30	22	17	27	20	16	24	18	14	12
9	46	32	23	17	44	30	22	16	27	20	15	25	18	14	22	17	13	10
10	43	29	21	15	41	28	20	15	25	18	14	23	17	12	20	15	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	12663	12663	12663
5°	12830	11379	12802
10°	12678	10466	12651
15°	12451	9829	12432
20°	12156	9582	12136
25°	11798	9487	11748
30°	11317	9538	11307
35°	10769	9769	10746
40°	10182	10327	10134
45°	9538	11220	9514
50°	8887	12528	8859
55°	8231	14146	8214
60°	7643	15792	7662
65°	6992	17119	7013
70°	6303	17737	6303
75°	5477	17355	5445
80°	4573	15971	4525
85°	3421	14026	3257



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.2	1.1
10°-20°	434.0	3.2
20°-30°	697.6	5.2
30°-40°	944.6	7.0
40°-50°	1213.5	9.0
50°-60°	1561.2	11.6
60°-70°	1910.0	14.2
70°-80°	1931.0	14.4
80°-90°	1493.3	11.1
90°-100°	1037.5	7.7
100°-110°	774.9	5.8
110°-120°	580.8	4.3
120°-130°	391.1	2.9
130°-140°	214.5	1.6
140°-150°	91.4	0.7
150°-160°	26.1	0.2
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	1280.8	9.5
0°-40°	2225.4	16.5
0°-60°	5000.1	37.2
0°-90°	10334.3	76.8
90°-120°	2393.1	17.8
90°-150°	3090.1	23.0
90°-180°	3118.0	23.2
0°-180°	13452.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1572	1572	1572	1572	1572	
5°	1590	1575	1560	1573	1586	151
15°	1503	1539	1572	1539	1501	424
25°	1343	1510	1687	1511	1338	617
35°	1115	1531	1860	1532	1112	697
45°	859	1589	2211	1596	857	663
55°	608	1751	2798	1759	606	544
65°	387	1995	3296	2008	388	385
75°	193	1999	3149	2006	192	206
85°	48	1528	2312	1524	46	53
90°	1	1255	1888	1248	0	3
95°	1	1059	1597	1054	0	1
105°	1	801	1287	801	0	1
115°	1	622	1090	622	0	1
125°	1	447	854	444	0	1
135°	2	270	561	266	0	2
145°	2	137	308	131	0	1
155°	2	43	128	41	0	1
165°	2	2	13	6	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7
2.5°	1596.8	1595.7	1588.8	1578.5	1574.0	1572.8	1571.7	1567.1	1566.0	1568.3	1577.4
5°	1590.0	1588.8	1582.0	1571.7	1568.3	1567.1	1566.0	1562.5	1562.5	1566.0	1575.1
7.5°	1576.2	1575.1	1568.3	1560.3	1556.8	1555.7	1555.7	1553.4	1553.4	1559.1	1569.4
10°	1556.8	1555.7	1550.0	1543.1	1540.8	1540.8	1540.8	1539.7	1542.0	1548.8	1560.3
12.5°	1534.0	1531.7	1527.1	1521.4	1521.4	1521.4	1522.6	1522.6	1526.0	1537.4	1551.1
15°	1503.1	1504.3	1499.7	1495.2	1497.4	1498.6	1500.9	1503.1	1508.9	1522.6	1538.6
17.5°	1471.2	1471.2	1467.7	1465.5	1470.0	1472.3	1475.7	1479.2	1489.4	1506.6	1524.8
20°	1431.2	1432.3	1431.2	1432.3	1438.0	1441.5	1446.0	1454.0	1467.7	1491.7	1513.4
22.5°	1387.8	1390.1	1390.1	1394.6	1403.8	1409.5	1415.2	1426.6	1446.0	1476.9	1507.7
25°	1343.2	1342.1	1347.8	1355.8	1364.9	1372.9	1379.8	1396.9	1425.5	1466.6	1510.0
27.5°	1289.6	1291.8	1299.8	1311.3	1325.0	1335.2	1345.5	1369.5	1410.6	1465.5	1515.7
30°	1234.7	1238.2	1248.4	1264.4	1283.8	1297.6	1309.0	1346.7	1402.6	1465.5	1520.3
32.5°	1175.3	1181.0	1194.8	1215.3	1242.7	1258.7	1277.0	1327.2	1395.8	1463.2	1524.8
35°	1114.8	1121.6	1139.9	1165.1	1197.0	1216.5	1245.0	1312.4	1386.6	1460.9	1530.6
37.5°	1053.1	1061.1	1081.7	1113.7	1154.8	1184.5	1218.7	1296.4	1379.8	1460.9	1538.6
40°	989.2	998.3	1024.6	1061.1	1113.7	1152.5	1193.6	1280.4	1372.9	1462.0	1551.1
42.5°	924.0	934.3	966.3	1009.7	1078.2	1123.9	1169.6	1266.7	1368.4	1467.7	1567.1
45°	858.9	872.6	908.1	960.6	1046.3	1094.2	1146.8	1254.1	1366.1	1478.0	1588.8
47.5°	793.8	809.8	850.9	913.8	1013.1	1070.3	1125.1	1243.9	1368.4	1491.7	1617.4
50°	731.0	749.3	795.0	871.5	982.3	1044.0	1104.5	1237.0	1372.9	1512.3	1651.6
52.5°	667.1	691.0	741.3	833.8	954.9	1020.0	1087.4	1232.4	1382.1	1539.7	1696.2
55°	607.7	632.8	691.0	797.3	928.6	999.4	1071.4	1231.3	1398.1	1572.8	1751.0
57.5°	547.1	578.0	641.9	761.9	901.2	978.9	1058.8	1233.6	1417.5	1608.2	1807.0
60°	495.7	523.1	597.4	727.6	877.2	959.5	1047.4	1235.9	1438.0	1649.4	1872.1
62.5°	440.9	470.6	558.5	694.5	853.2	942.3	1036.0	1239.3	1459.7	1691.6	1938.3
65°	387.2	418.0	519.7	662.5	829.2	924.0	1022.3	1239.3	1476.9	1730.4	1995.4
67.5°	335.8	368.9	480.9	628.2	801.8	901.2	1005.1	1233.6	1487.2	1757.9	2040.0
70°	286.7	323.2	443.2	591.7	772.1	873.8	981.2	1221.0	1486.0	1768.1	2059.4
72.5°	237.6	279.8	402.1	555.1	740.2	843.0	952.6	1197.0	1470.0	1755.6	2046.8
75°	193.0	238.7	365.5	518.6	703.6	806.4	917.2	1160.5	1434.6	1716.7	1998.9
77.5°	151.9	202.2	326.7	478.6	662.5	764.1	872.6	1113.7	1378.6	1648.2	1914.3
80°	113.1	169.0	290.1	438.6	617.9	717.3	822.4	1054.3	1305.5	1555.7	1801.3
82.5°	78.8	138.2	254.7	398.6	572.2	667.1	767.6	983.4	1221.0	1448.3	1671.1
85°	48.0	110.8	219.3	359.8	525.4	614.5	709.3	909.2	1128.5	1331.8	1528.3
87.5°	20.6	85.7	188.5	322.1	478.6	563.1	649.9	838.4	1030.3	1210.7	1385.5
90°	1.1	64.0	161.1	286.7	434.0	512.9	593.9	763.0	940.0	1099.9	1255.3
92.5°	0.0	54.8	145.1	265.0	403.2	476.3	551.7	707.0	866.9	1009.7	1147.9
95°	1.1	45.7	131.4	241.0	372.4	442.0	511.7	656.8	800.7	932.0	1058.8
97.5°	1.1	37.7	116.5	219.3	343.8	407.8	472.9	607.7	737.9	862.4	980.0
100°	1.1	29.7	102.8	198.7	314.1	373.5	435.2	562.0	684.2	800.7	911.5
102.5°	1.1	21.7	91.4	179.3	286.7	342.7	399.8	519.7	635.1	747.0	852.1
105°	1.1	14.8	80.0	161.1	261.6	314.1	367.8	480.9	590.5	697.9	800.7
107.5°	1.1	10.3	69.7	143.9	234.2	286.7	337.0	444.3	549.4	653.3	753.9
110°	1.1	9.1	60.5	129.1	212.5	260.4	308.4	410.1	510.6	609.9	708.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.1	8.0	51.4	115.4	190.7	234.2	281.0	376.9	475.2	571.1	664.8
115°	1.1	8.0	42.3	102.8	172.5	211.3	254.7	344.9	438.6	531.1	622.5
117.5°	1.1	8.0	34.3	91.4	155.3	190.7	228.4	315.2	402.1	492.3	581.4
120°	1.1	6.9	27.4	80.0	140.5	172.5	207.9	286.7	366.6	451.2	536.8
122.5°	1.1	6.9	22.8	69.7	125.6	155.3	187.3	257.0	333.5	411.2	491.2
125°	1.1	5.7	19.4	58.3	110.8	139.3	167.9	230.7	301.5	373.5	446.6
127.5°	2.3	5.7	16.0	48.0	95.9	121.1	148.5	205.6	267.3	332.4	402.1
130°	2.3	5.7	13.7	36.6	81.1	103.9	127.9	180.5	237.6	293.5	354.1
132.5°	2.3	4.6	12.6	28.6	67.4	88.0	109.7	156.5	206.7	257.0	309.5
135°	2.3	4.6	10.3	22.8	53.7	72.0	92.5	133.6	178.2	225.0	269.6
137.5°	2.3	3.4	9.1	18.3	41.1	58.3	76.5	113.1	151.9	191.9	233.0
140°	2.3	3.4	8.0	14.8	30.8	43.4	60.5	92.5	126.8	162.2	197.6
142.5°	2.3	3.4	6.9	12.6	24.0	33.1	45.7	75.4	105.1	134.8	165.6
145°	2.3	3.4	5.7	10.3	18.3	25.1	33.1	58.3	84.5	110.8	137.1
147.5°	2.3	3.4	5.7	9.1	14.8	19.4	25.1	42.3	66.2	88.0	110.8
150°	2.3	3.4	4.6	8.0	12.6	14.8	18.3	29.7	48.0	67.4	86.8
152.5°	2.3	2.3	4.6	6.9	9.1	11.4	13.7	21.7	33.1	48.0	65.1
155°	2.3	2.3	3.4	5.7	8.0	9.1	10.3	14.8	21.7	30.8	43.4
157.5°	2.3	2.3	3.4	4.6	5.7	6.9	8.0	10.3	14.8	19.4	26.3
160°	2.3	2.3	3.4	4.6	4.6	5.7	5.7	6.9	9.1	11.4	14.8
162.5°	2.3	2.3	3.4	3.4	3.4	4.6	4.6	4.6	5.7	5.7	6.9
165°	2.3	2.3	2.3	3.4	2.3	3.4	2.3	3.4	3.4	2.3	2.3
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7
2.5°	1580.8	1572.8	1569.4	1564.8	1561.4	1559.1	1555.7	1553.4	1550.0	1550.0	1551.1
5°	1578.5	1570.5	1568.3	1563.7	1561.4	1560.3	1558.0	1559.1	1559.1	1560.3	1559.1
7.5°	1574.0	1567.1	1564.8	1562.5	1560.3	1559.1	1558.0	1560.3	1560.3	1561.4	1561.4
10°	1566.0	1561.4	1561.4	1559.1	1558.0	1556.8	1554.5	1558.0	1558.0	1560.3	1559.1
12.5°	1556.8	1555.7	1556.8	1558.0	1558.0	1556.8	1555.7	1560.3	1562.5	1562.5	1563.7
15°	1546.6	1548.8	1554.5	1558.0	1560.3	1560.3	1562.5	1567.1	1570.5	1571.7	1571.7
17.5°	1538.6	1544.3	1554.5	1563.7	1568.3	1570.5	1576.2	1585.4	1591.1	1592.2	1592.2
20°	1532.8	1546.6	1564.8	1582.0	1587.7	1592.2	1603.7	1615.1	1623.1	1624.2	1624.2
22.5°	1537.4	1560.3	1585.4	1604.8	1612.8	1618.5	1631.1	1645.9	1655.1	1656.2	1656.2
25°	1548.8	1576.2	1604.8	1628.8	1637.9	1644.8	1658.5	1674.5	1683.6	1687.0	1685.9
27.5°	1559.1	1592.2	1625.4	1652.8	1663.1	1672.2	1689.3	1707.6	1719.0	1722.5	1720.2
30°	1568.3	1607.1	1644.8	1677.9	1691.6	1701.9	1722.5	1744.2	1759.0	1762.4	1759.0
32.5°	1577.4	1624.2	1668.8	1707.6	1721.3	1736.2	1762.4	1787.6	1802.4	1807.0	1804.7
35°	1590.0	1644.8	1697.3	1741.9	1760.1	1777.3	1808.1	1837.8	1856.1	1859.5	1856.1
37.5°	1607.1	1671.1	1729.3	1785.3	1804.7	1828.7	1865.2	1900.6	1922.3	1926.9	1922.3
40°	1628.8	1704.2	1772.7	1837.8	1864.1	1889.2	1933.8	1976.0	2000.0	2008.0	2004.6
42.5°	1657.3	1745.3	1825.3	1902.9	1932.6	1964.6	2017.1	2066.3	2093.7	2102.8	2093.7
45°	1692.8	1796.7	1889.2	1979.4	2013.7	2052.6	2115.4	2171.3	2203.3	2211.3	2203.3
47.5°	1739.6	1857.2	1964.6	2068.5	2109.7	2155.3	2229.6	2293.6	2327.8	2337.0	2329.0
50°	1789.8	1930.3	2053.7	2172.5	2223.9	2271.9	2358.7	2429.5	2466.0	2483.2	2468.3
52.5°	1852.7	2010.3	2155.3	2287.8	2349.5	2406.6	2502.6	2580.3	2624.8	2639.6	2619.1
55°	1928.0	2106.2	2268.4	2421.5	2483.2	2547.1	2653.4	2735.6	2782.4	2798.4	2783.6
57.5°	2011.4	2207.9	2387.2	2548.3	2620.2	2685.3	2804.1	2889.8	2930.9	2951.5	2933.2
60°	2098.2	2313.0	2507.2	2678.5	2757.3	2824.7	2945.8	3030.3	3073.7	3094.2	3077.1
62.5°	2182.8	2414.6	2619.1	2797.3	2872.7	2946.9	3068.0	3149.1	3193.6	3211.9	3195.9
65°	2255.9	2500.3	2710.5	2894.4	2972.0	3045.1	3159.4	3237.0	3283.9	3296.4	3285.0
67.5°	2310.7	2558.5	2771.0	2952.6	3028.0	3101.1	3209.6	3281.6	3327.3	3338.7	3328.4
70°	2335.8	2581.4	2791.6	2968.6	3042.8	3108.0	3210.8	3279.3	3322.7	3329.5	3321.5
72.5°	2319.8	2558.5	2761.9	2930.9	3001.7	3058.8	3153.6	3218.7	3259.9	3265.6	3259.9
75°	2260.4	2488.9	2680.8	2838.4	2904.6	2952.6	3042.8	3103.4	3144.5	3149.1	3142.2
77.5°	2159.9	2372.4	2548.3	2700.2	2755.0	2801.8	2887.5	2941.2	2974.3	2981.2	2973.2
80°	2025.1	2220.5	2378.1	2514.0	2566.5	2606.5	2689.9	2748.2	2766.4	2775.6	2764.1
82.5°	1870.9	2045.7	2186.2	2309.5	2356.4	2405.5	2459.2	2512.9	2539.1	2547.1	2538.0
85°	1705.3	1860.7	1985.2	2096.0	2137.1	2181.6	2228.5	2281.0	2303.8	2311.8	2302.7
87.5°	1539.7	1676.8	1786.4	1884.6	1922.3	1962.3	2018.3	2045.7	2076.5	2085.7	2075.4
90°	1391.2	1514.6	1612.8	1701.9	1737.3	1773.9	1817.3	1851.5	1880.1	1888.1	1878.9
92.5°	1271.3	1382.1	1472.3	1552.3	1583.1	1617.4	1659.6	1692.8	1717.9	1725.9	1716.7
95°	1171.9	1273.6	1358.1	1432.3	1462.0	1494.0	1540.8	1567.1	1590.0	1596.8	1590.0
97.5°	1087.4	1183.3	1263.3	1335.2	1363.8	1393.5	1439.2	1465.5	1487.2	1492.9	1487.2
100°	1013.1	1106.8	1185.6	1254.1	1282.7	1311.3	1355.8	1382.1	1402.6	1409.5	1402.6
102.5°	951.5	1041.7	1119.4	1189.0	1216.5	1245.0	1287.3	1318.1	1334.1	1342.1	1335.2
105°	897.8	985.7	1063.4	1131.9	1160.5	1187.9	1231.3	1259.9	1278.1	1287.3	1279.3
107.5°	848.7	935.5	1014.3	1080.5	1109.1	1136.5	1181.0	1209.6	1226.7	1237.0	1227.9
110°	801.8	887.5	962.9	1031.4	1060.0	1088.5	1133.1	1161.6	1178.8	1187.9	1179.9





TEST NUMBER: P201260

CATALOG NUMBER: 8LBLED-LD4-12-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	756.1	839.5	917.2	983.4	1010.9	1039.4	1085.1	1114.8	1130.8	1141.1	1131.9
115°	710.5	792.7	868.1	932.0	959.5	989.2	1033.7	1064.5	1081.7	1089.7	1080.5
117.5°	665.9	744.7	816.7	879.5	906.9	935.5	978.9	1009.7	1028.0	1036.0	1026.8
120°	620.2	695.6	766.4	823.5	852.1	878.4	922.9	952.6	970.9	978.9	969.7
122.5°	571.1	645.3	712.7	768.7	796.1	821.2	864.7	894.4	911.5	919.5	911.5
125°	520.8	590.5	655.6	711.6	734.4	758.4	800.7	829.2	847.5	854.4	847.5
127.5°	470.6	534.6	595.1	644.2	669.3	692.2	732.2	759.6	775.6	783.6	777.8
130°	420.3	480.9	535.7	580.2	601.9	623.6	660.2	685.3	701.3	708.2	702.5
132.5°	366.6	424.9	478.6	517.4	538.0	556.3	589.4	611.1	624.8	632.8	625.9
135°	318.7	366.6	416.9	456.9	477.4	493.4	523.1	541.4	554.0	560.8	554.0
137.5°	275.3	316.4	357.5	392.9	412.3	429.5	458.0	475.2	486.6	493.4	486.6
140°	235.3	270.7	307.3	335.8	352.9	366.6	392.9	407.8	418.0	423.8	416.9
142.5°	196.5	228.4	259.3	285.6	300.4	311.8	337.0	348.4	356.4	359.8	356.4
145°	163.3	189.6	215.9	239.9	251.3	260.4	285.6	298.1	305.0	308.4	305.0
147.5°	132.5	154.2	175.9	195.3	205.6	217.0	234.2	249.0	254.7	257.0	254.7
150°	103.9	123.4	140.5	156.5	164.5	172.5	187.3	202.2	207.9	211.3	207.9
152.5°	78.8	94.8	108.5	121.1	127.9	134.8	147.3	161.1	166.8	169.0	166.8
155°	57.1	68.5	81.1	90.2	95.9	100.5	109.7	118.8	127.9	127.9	127.9
157.5°	35.4	44.5	54.8	62.8	66.2	70.8	77.7	85.7	92.5	95.9	95.9
160°	18.3	24.0	30.8	36.6	40.0	43.4	48.0	54.8	59.4	62.8	60.5
162.5°	8.0	10.3	13.7	16.0	18.3	19.4	22.8	26.3	28.6	34.3	29.7
165°	2.3	2.3	3.4	4.6	4.6	4.6	5.7	6.9	8.0	12.6	9.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201260

CATALOG NUMBER: 8LBLELD4-12-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7
2.5°	1553.4	1556.8	1561.4	1563.7	1567.1	1569.4	1575.1	1582.0	1576.2	1568.3	1569.4
5°	1559.1	1558.0	1561.4	1563.7	1566.0	1567.1	1572.8	1579.7	1572.8	1564.8	1564.8
7.5°	1561.4	1560.3	1561.4	1562.5	1563.7	1563.7	1569.4	1575.1	1568.3	1558.0	1555.7
10°	1558.0	1556.8	1558.0	1560.3	1560.3	1560.3	1563.7	1568.3	1560.3	1547.7	1543.1
12.5°	1560.3	1556.8	1556.8	1558.0	1558.0	1555.7	1556.8	1560.3	1550.0	1536.3	1529.4
15°	1568.3	1562.5	1560.3	1560.3	1558.0	1552.3	1550.0	1550.0	1538.6	1520.3	1511.1
17.5°	1587.7	1578.5	1571.7	1568.3	1563.7	1553.4	1545.4	1540.8	1526.0	1505.4	1490.6
20°	1617.4	1604.8	1594.5	1587.7	1582.0	1563.7	1547.7	1535.1	1514.6	1489.4	1470.0
22.5°	1647.1	1633.4	1618.5	1611.7	1603.7	1583.1	1561.4	1539.7	1508.9	1474.6	1448.3
25°	1675.6	1661.9	1644.8	1637.9	1627.6	1603.7	1576.2	1551.1	1511.1	1464.3	1426.6
27.5°	1708.7	1691.6	1673.3	1663.1	1651.6	1624.2	1593.4	1562.5	1518.0	1464.3	1411.8
30°	1746.4	1725.9	1701.9	1690.5	1676.8	1644.8	1607.1	1570.5	1522.6	1464.3	1403.8
32.5°	1789.8	1765.9	1737.3	1721.3	1705.3	1667.6	1623.1	1580.8	1526.0	1463.2	1396.9
35°	1840.1	1812.7	1778.4	1760.1	1740.7	1696.2	1643.6	1592.2	1531.7	1462.0	1387.8
37.5°	1902.9	1870.9	1829.8	1807.0	1784.1	1731.6	1671.1	1609.4	1540.8	1463.2	1380.9
40°	1978.3	1940.6	1892.6	1864.1	1836.7	1776.1	1704.2	1631.1	1553.4	1465.5	1374.1
42.5°	2067.4	2021.7	1968.0	1934.9	1902.9	1827.5	1745.3	1658.5	1570.5	1470.0	1370.7
45°	2173.6	2125.7	2057.1	2016.0	1980.6	1892.6	1797.8	1695.0	1595.7	1481.4	1369.5
47.5°	2295.8	2235.3	2161.1	2113.1	2070.8	1969.2	1859.5	1740.7	1624.2	1496.3	1371.8
50°	2432.9	2364.4	2278.7	2228.5	2175.9	2059.4	1932.6	1794.4	1660.8	1518.0	1377.5
52.5°	2583.7	2508.3	2415.8	2356.4	2298.1	2163.3	2014.9	1862.9	1703.0	1545.4	1387.8
55°	2740.2	2659.1	2556.3	2491.2	2426.1	2277.6	2111.9	1937.2	1759.0	1579.7	1404.9
57.5°	2892.1	2808.7	2695.6	2629.4	2556.3	2398.6	2215.9	2018.3	1819.5	1619.7	1424.3
60°	3032.6	2949.2	2835.0	2767.6	2687.6	2518.6	2322.1	2107.4	1882.4	1661.9	1447.2
62.5°	3151.4	3071.4	2957.2	2888.6	2806.4	2631.7	2423.8	2194.2	1950.9	1706.5	1468.9
65°	3239.3	3163.9	3053.1	2982.3	2903.5	2721.9	2509.4	2270.7	2008.0	1745.3	1488.3
67.5°	3283.9	3213.0	3105.7	3038.3	2960.6	2780.1	2567.7	2322.1	2051.4	1772.7	1500.9
70°	3279.3	3211.9	3111.4	3045.1	2970.9	2797.3	2588.2	2342.7	2070.8	1783.0	1498.6
72.5°	3219.9	3152.5	3062.3	2998.3	2927.5	2765.3	2559.7	2324.4	2056.0	1767.0	1480.3
75°	3102.2	3040.6	2949.2	2896.6	2832.7	2681.9	2485.4	2257.0	2005.7	1724.7	1442.6
77.5°	2933.2	2886.4	2797.3	2748.2	2685.3	2546.0	2360.9	2155.3	1917.8	1653.9	1384.4
80°	2726.5	2687.6	2600.8	2557.4	2495.7	2374.7	2214.7	2016.0	1801.3	1558.0	1309.0
82.5°	2500.3	2455.8	2387.2	2347.2	2289.0	2180.5	2028.6	1866.4	1666.5	1448.3	1221.0
85°	2266.1	2225.0	2162.2	2127.9	2076.5	1979.4	1843.5	1700.8	1523.7	1327.2	1126.2
87.5°	2043.4	2003.4	1944.0	1913.2	1866.4	1779.6	1660.8	1535.1	1378.6	1210.7	1025.7
90°	1850.4	1812.7	1756.7	1728.2	1685.9	1607.1	1499.7	1386.6	1248.4	1094.2	935.5
92.5°	1691.6	1657.3	1604.8	1577.4	1539.7	1467.7	1370.7	1267.9	1143.4	1009.7	862.4
95°	1566.0	1532.8	1486.0	1459.7	1424.3	1350.1	1264.4	1168.5	1054.3	932.0	796.1
97.5°	1464.3	1436.9	1385.5	1360.4	1331.8	1256.4	1178.8	1084.0	977.7	863.5	736.7
100°	1382.1	1351.2	1304.4	1280.4	1250.7	1179.9	1101.1	1012.0	909.2	800.7	683.0
102.5°	1318.1	1286.1	1242.7	1215.3	1186.8	1114.8	1037.1	950.3	852.1	747.0	633.9
105°	1261.0	1230.2	1186.8	1159.3	1130.8	1060.0	985.7	897.8	800.7	699.0	589.4
107.5°	1207.3	1179.9	1136.5	1109.1	1080.5	1009.7	935.5	848.7	753.9	654.5	548.3
110°	1161.6	1131.9	1086.2	1060.0	1029.1	961.7	887.5	803.0	708.2	611.1	509.4



TEST NUMBER: P201260

CATALOG NUMBER: 8LBLED-LD4-12-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1115.9	1084.0	1038.3	1012.0	981.2	913.8	840.7	757.3	664.8	571.1	472.9
115°	1065.7	1034.8	986.9	960.6	929.8	863.5	792.7	711.6	622.5	531.1	436.3
117.5°	1012.0	981.2	933.2	908.1	878.4	813.3	745.9	667.1	580.2	492.3	399.8
120°	953.7	924.0	878.4	853.2	824.7	761.9	696.7	617.9	535.7	451.2	365.5
122.5°	894.4	865.8	821.2	796.1	768.7	709.3	645.3	568.8	490.0	411.2	332.4
125°	830.4	801.8	759.6	735.6	708.2	651.1	589.4	517.4	444.3	373.5	298.1
127.5°	756.1	733.3	692.2	668.2	643.1	592.8	533.4	468.3	400.9	332.4	265.0
130°	685.3	661.3	622.5	600.8	579.1	533.4	480.9	418.0	351.8	292.4	231.9
132.5°	611.1	589.4	556.3	538.0	518.6	477.4	423.8	362.1	306.1	254.7	201.0
135°	541.4	523.1	493.4	477.4	458.0	414.6	364.4	313.0	266.1	220.4	172.5
137.5°	476.3	458.0	430.6	413.5	392.9	354.1	313.0	270.7	227.3	188.5	146.2
140°	407.8	392.9	367.8	352.9	334.7	301.5	267.3	227.3	193.0	157.6	121.1
142.5°	349.5	337.0	311.8	298.1	282.1	254.7	222.7	191.9	161.1	130.2	99.4
145°	299.3	286.7	259.3	249.0	234.2	210.2	183.9	156.5	131.4	105.1	80.0
147.5°	250.1	235.3	211.3	202.2	190.7	170.2	149.6	127.9	106.2	83.4	61.7
150°	204.5	187.3	167.9	162.2	150.8	134.8	117.6	99.4	82.2	64.0	44.5
152.5°	161.1	146.2	130.2	124.5	115.4	105.1	90.2	75.4	61.7	44.5	30.8
155°	119.9	108.5	95.9	92.5	85.7	77.7	65.1	53.7	41.1	29.7	21.7
157.5°	84.5	75.4	66.2	64.0	59.4	52.5	42.3	33.1	26.3	19.4	14.8
160°	52.5	46.8	40.0	37.7	34.3	29.7	22.8	19.4	16.0	12.6	9.1
162.5°	25.1	21.7	19.4	18.3	16.0	13.7	12.6	10.3	9.1	8.0	6.9
165°	9.1	9.1	9.1	8.0	8.0	8.0	8.0	6.9	5.7	5.7	4.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201260

CATALOG NUMBER: 8LBLED-LD4-12-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7	1571.7
2.5°	1570.5	1572.8	1572.8	1574.0	1577.4	1584.2	1593.4	1594.5
5°	1566.0	1567.1	1567.1	1567.1	1570.5	1576.2	1585.4	1586.5
7.5°	1555.7	1555.7	1555.7	1555.7	1559.1	1563.7	1571.7	1572.8
10°	1542.0	1540.8	1540.8	1539.7	1542.0	1545.4	1554.5	1553.4
12.5°	1524.8	1522.6	1521.4	1521.4	1520.3	1523.7	1529.4	1530.6
15°	1505.4	1500.9	1498.6	1496.3	1495.2	1495.2	1502.0	1500.9
17.5°	1482.6	1475.7	1472.3	1468.9	1464.3	1464.3	1468.9	1467.7
20°	1456.3	1447.2	1441.5	1436.9	1430.0	1427.8	1430.0	1428.9
22.5°	1430.0	1415.2	1409.5	1402.6	1392.4	1387.8	1386.6	1385.5
25°	1399.2	1380.9	1372.9	1366.1	1351.2	1345.5	1339.8	1337.5
27.5°	1371.8	1345.5	1335.2	1323.8	1306.7	1298.7	1289.6	1287.3
30°	1347.8	1309.0	1293.0	1281.6	1259.9	1247.3	1235.9	1233.6
32.5°	1329.5	1275.8	1254.1	1240.4	1210.7	1193.6	1178.8	1171.9
35°	1313.5	1245.0	1216.5	1194.8	1159.3	1138.8	1118.2	1112.5
37.5°	1298.7	1218.7	1181.0	1151.3	1111.4	1081.7	1058.8	1049.7
40°	1283.8	1194.8	1149.1	1111.4	1058.8	1024.6	996.0	984.6
42.5°	1270.1	1170.8	1121.6	1076.0	1007.4	966.3	935.5	919.5
45°	1257.6	1149.1	1095.4	1045.1	957.2	909.2	871.5	856.7
47.5°	1248.4	1128.5	1069.1	1014.3	910.3	850.9	812.1	792.7
50°	1241.6	1109.1	1044.0	983.4	869.2	795.0	751.6	728.7
52.5°	1238.2	1092.0	1021.1	956.0	831.5	741.3	689.9	672.8
55°	1239.3	1078.2	1001.7	930.9	796.1	689.9	632.8	606.5
57.5°	1241.6	1065.7	982.3	905.8	760.7	639.6	575.7	548.3
60°	1246.2	1055.4	965.2	881.8	727.6	596.2	523.1	496.9
62.5°	1250.7	1046.3	948.0	858.9	695.6	556.3	470.6	440.9
65°	1251.9	1032.6	929.8	836.1	663.6	516.3	416.9	388.4
67.5°	1247.3	1015.4	906.9	809.8	630.5	477.4	366.6	337.0
70°	1233.6	992.6	880.6	780.1	593.9	439.8	318.7	286.7
72.5°	1208.5	962.9	849.8	747.0	558.5	399.8	275.3	236.4
75°	1173.0	926.3	813.3	709.3	520.8	362.1	235.3	191.9
77.5°	1125.1	879.5	769.8	667.1	479.7	323.2	201.0	150.8
80°	1063.4	830.4	721.9	621.4	439.8	287.8	167.9	111.9
82.5°	990.3	774.4	670.5	574.5	402.1	251.3	137.1	77.7
85°	914.9	713.9	616.8	525.4	362.1	217.0	110.8	45.7
87.5°	840.7	653.3	565.4	480.9	321.0	186.2	85.7	18.3
90°	767.6	595.1	511.7	432.9	285.6	157.6	64.0	0.0
92.5°	707.0	551.7	476.3	400.9	262.7	142.8	54.8	0.0
95°	653.3	510.6	438.6	368.9	238.7	129.1	45.7	0.0
97.5°	604.2	471.7	405.5	339.2	217.0	114.2	37.7	0.0
100°	557.4	432.9	371.2	311.8	196.5	101.7	28.6	0.0
102.5°	516.3	398.6	340.4	282.1	175.9	89.1	20.6	0.0
105°	476.3	365.5	311.8	255.9	157.6	77.7	12.6	0.0
107.5°	440.9	334.7	283.3	231.9	140.5	67.4	8.0	0.0
110°	406.6	306.1	255.9	209.0	125.6	58.3	6.9	0.0



TEST NUMBER: P201260

CATALOG NUMBER: 8LBLED-LD4-12-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	374.6	278.7	231.9	187.3	113.1	49.1	6.9	0.0
115°	341.5	252.4	209.0	169.0	100.5	40.0	5.7	0.0
117.5°	313.0	227.3	188.5	154.2	88.0	32.0	5.7	0.0
120°	284.4	205.6	171.3	138.2	76.5	24.0	5.7	0.0
122.5°	255.9	186.2	153.1	123.4	66.2	19.4	4.6	0.0
125°	229.6	165.6	135.9	107.4	54.8	17.1	4.6	0.0
127.5°	203.3	145.1	117.6	92.5	43.4	14.8	3.4	0.0
130°	177.0	124.5	100.5	77.7	33.1	12.6	3.4	0.0
132.5°	153.1	105.1	84.5	64.0	26.3	10.3	2.3	0.0
135°	129.1	88.0	69.7	50.3	20.6	9.1	2.3	0.0
137.5°	108.5	72.0	54.8	37.7	17.1	6.9	2.3	0.0
140°	89.1	57.1	41.1	28.6	13.7	5.7	1.1	0.0
142.5°	70.8	42.3	30.8	21.7	11.4	4.6	1.1	0.0
145°	54.8	30.8	22.8	17.1	10.3	3.4	1.1	0.0
147.5°	40.0	24.0	18.3	14.8	8.0	3.4	1.1	0.0
150°	28.6	18.3	14.8	11.4	5.7	2.3	1.1	0.0
152.5°	21.7	13.7	11.4	9.1	4.6	2.3	1.1	0.0
155°	16.0	10.3	9.1	6.9	3.4	2.3	1.1	0.0
157.5°	11.4	8.0	6.9	4.6	3.4	2.3	1.1	0.0
160°	6.9	5.7	4.6	3.4	2.3	1.1	1.1	0.0
162.5°	5.7	3.4	3.4	3.4	2.3	1.1	1.1	0.0
165°	3.4	2.3	2.3	2.3	1.1	1.1	1.1	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)