

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: P201324

Luminaire Tested: **8LBLED-LD4-14-SYMF-UNV-L835-CD2-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201324
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-LD4-14-SYMF-UNV-L835-CD2-U
Description: 8 ft. Low Bay Linear, 14000 lm, Frst Sym lens, 3.5K
Light Source: (784) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
2x(OTi50W01120CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14711.8 lumens
Efficiency: N/A
Efficacy: 147.7 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

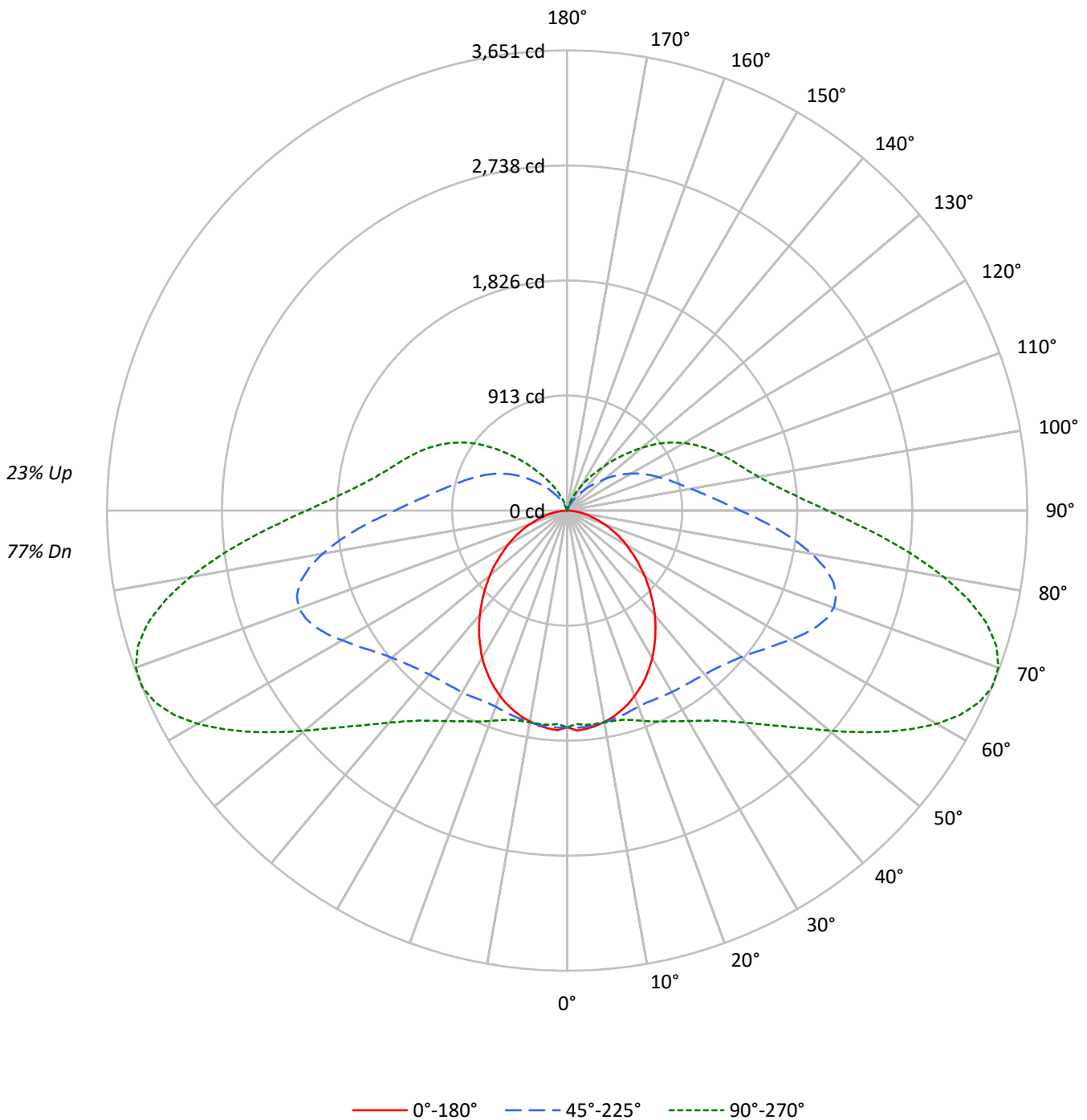
Input Watts (W): 99.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13848	13848	13848
5°	14031	12444	14000
10°	13865	11446	13835
15°	13616	10749	13595
20°	13293	10479	13272
25°	12903	10375	12847
30°	12376	10431	12364
35°	11776	10684	11752
40°	11134	11293	11082
45°	10431	12271	10403
50°	9719	13701	9688
55°	9000	15470	8984
60°	8359	17270	8379
65°	7645	18721	7669
70°	6893	19397	6893
75°	5990	18980	5956
80°	5002	17465	4949
85°	3741	15339	3563



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.2	1.1
10°-20°	474.7	3.2
20°-30°	762.9	5.2
30°-40°	1033.0	7.0
40°-50°	1327.0	9.0
50°-60°	1707.3	11.6
60°-70°	2088.7	14.2
70°-80°	2111.7	14.4
80°-90°	1633.0	11.1
90°-100°	1134.5	7.7
100°-110°	847.4	5.8
110°-120°	635.1	4.3
120°-130°	427.7	2.9
130°-140°	234.5	1.6
140°-150°	100.0	0.7
150°-160°	28.6	0.2
160°-170°	2.5	0.0
170°-180°	0.0	0.0
0°-30°	1400.7	9.5
0°-40°	2433.7	16.5
0°-60°	5468.1	37.2
0°-90°	11301.5	76.8
90°-120°	2617.1	17.8
90°-150°	3379.2	23.0
90°-180°	3410.0	23.2
0°-180°	14711.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1719	1719	1719	1719	1719	
5°	1739	1722	1706	1720	1735	165
15°	1644	1683	1719	1683	1641	463
25°	1469	1651	1845	1653	1463	675
35°	1219	1674	2034	1675	1217	762
45°	939	1738	2418	1745	937	725
55°	664	1915	3060	1924	663	595
65°	423	2182	3605	2196	425	421
75°	211	2186	3444	2193	210	226
85°	52	1671	2528	1666	50	58
90°	1	1373	2065	1365	0	3
95°	1	1158	1746	1153	0	1
105°	1	876	1408	876	0	1
115°	1	681	1192	681	0	1
125°	1	488	934	486	0	1
135°	2	295	613	291	0	2
145°	2	150	337	144	0	2
155°	2	48	140	45	0	1
165°	2	2	14	6	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P201324

CATALOG NUMBER: 8LBLELD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8
2.5°	1746.3	1745.0	1737.5	1726.3	1721.3	1720.0	1718.8	1713.8	1712.5	1715.0	1725.0
5°	1738.8	1737.5	1730.0	1718.8	1715.0	1713.8	1712.5	1708.8	1708.8	1712.5	1722.5
7.5°	1723.8	1722.5	1715.0	1706.3	1702.5	1701.3	1701.3	1698.8	1698.8	1705.0	1716.3
10°	1702.5	1701.3	1695.0	1687.5	1685.0	1685.0	1685.0	1683.8	1686.3	1693.8	1706.3
12.5°	1677.6	1675.1	1670.1	1663.8	1663.8	1663.8	1665.1	1665.1	1668.8	1681.3	1696.3
15°	1643.8	1645.1	1640.1	1635.1	1637.6	1638.8	1641.3	1643.8	1650.1	1665.1	1682.6
17.5°	1608.9	1608.9	1605.1	1602.6	1607.6	1610.1	1613.9	1617.6	1628.8	1647.6	1667.6
20°	1565.1	1566.4	1565.1	1566.4	1572.6	1576.4	1581.4	1590.1	1605.1	1631.3	1655.1
22.5°	1517.7	1520.2	1520.2	1525.2	1535.2	1541.4	1547.6	1560.1	1581.4	1615.1	1648.8
25°	1469.0	1467.7	1474.0	1482.7	1492.7	1501.4	1508.9	1527.7	1558.9	1603.9	1651.3
27.5°	1410.2	1412.7	1421.5	1434.0	1449.0	1460.2	1471.5	1497.7	1542.7	1602.6	1657.6
30°	1350.3	1354.0	1365.3	1382.8	1404.0	1419.0	1431.5	1472.7	1533.9	1602.6	1662.6
32.5°	1285.3	1291.6	1306.6	1329.1	1359.0	1376.5	1396.5	1451.5	1526.4	1600.1	1667.6
35°	1219.1	1226.6	1246.6	1274.1	1309.1	1330.3	1361.5	1435.2	1516.4	1597.6	1673.8
37.5°	1151.7	1160.4	1182.9	1217.9	1262.9	1295.3	1332.8	1417.7	1508.9	1597.6	1682.6
40°	1081.7	1091.7	1120.5	1160.4	1217.9	1260.4	1305.3	1400.3	1501.4	1598.9	1696.3
42.5°	1010.5	1021.8	1056.7	1104.2	1179.2	1229.1	1279.1	1385.3	1496.4	1605.1	1713.8
45°	939.3	954.3	993.0	1050.5	1144.2	1196.6	1254.1	1371.5	1493.9	1616.3	1737.5
47.5°	868.1	885.6	930.6	999.3	1108.0	1170.4	1230.4	1360.3	1496.4	1631.3	1768.7
50°	799.4	819.4	869.4	953.1	1074.2	1141.7	1207.9	1352.8	1501.4	1653.8	1806.2
52.5°	729.5	755.7	810.7	911.9	1044.3	1115.5	1189.2	1347.8	1511.4	1683.8	1854.9
55°	664.5	692.0	755.7	871.9	1015.5	1093.0	1171.7	1346.5	1528.9	1720.0	1914.9
57.5°	598.3	632.0	702.0	833.2	985.5	1070.5	1157.9	1349.0	1550.1	1758.7	1976.1
60°	542.1	572.1	653.3	795.7	959.3	1049.3	1145.4	1351.5	1572.6	1803.7	2047.3
62.5°	482.2	514.6	610.8	759.5	933.1	1030.5	1132.9	1355.3	1596.4	1849.9	2119.7
65°	423.4	457.2	568.3	724.5	906.9	1010.5	1118.0	1355.3	1615.1	1892.4	2182.2
67.5°	367.2	403.5	525.9	687.0	876.9	985.5	1099.2	1349.0	1626.3	1922.4	2230.9
70°	313.5	353.5	484.7	647.0	844.4	955.6	1073.0	1335.3	1625.1	1933.6	2252.1
72.5°	259.8	306.0	439.7	607.1	809.4	921.8	1041.8	1309.1	1607.6	1919.9	2238.4
75°	211.1	261.1	399.7	567.1	769.5	881.9	1003.0	1269.1	1568.9	1877.4	2185.9
77.5°	166.1	221.1	357.2	523.4	724.5	835.7	954.3	1217.9	1507.7	1802.5	2093.5
80°	123.7	184.9	317.3	479.7	675.8	784.4	899.4	1152.9	1427.7	1701.3	1969.8
82.5°	86.2	151.1	278.6	435.9	625.8	729.5	839.4	1075.5	1335.3	1583.9	1827.4
85°	52.5	121.2	239.8	393.5	574.6	672.0	775.7	994.3	1234.1	1456.5	1671.3
87.5°	22.5	93.7	206.1	352.2	523.4	615.8	710.7	916.8	1126.7	1324.1	1515.2
90°	1.2	70.0	176.1	313.5	474.7	560.9	649.5	834.4	1028.0	1202.9	1372.8
92.5°	0.0	60.0	158.6	289.8	440.9	520.9	603.3	773.2	948.1	1104.2	1255.4
95°	1.2	50.0	143.6	263.6	407.2	483.4	559.6	718.2	875.6	1019.3	1157.9
97.5°	1.2	41.2	127.4	239.8	376.0	445.9	517.1	664.5	806.9	943.1	1071.7
100°	1.2	32.5	112.4	217.3	343.5	408.5	475.9	614.6	748.2	875.6	996.8
102.5°	1.2	23.7	99.9	196.1	313.5	374.7	437.2	568.3	694.5	816.9	931.8
105°	1.2	16.2	87.4	176.1	286.0	343.5	402.2	525.9	645.8	763.2	875.6
107.5°	1.2	11.2	76.2	157.4	256.1	313.5	368.5	485.9	600.8	714.5	824.4
110°	1.2	10.0	66.2	141.1	232.3	284.8	337.3	448.4	558.4	667.0	774.4



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CATALOG NUMBER: 8LBLED-LD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.2	8.7	56.2	126.2	208.6	256.1	307.3	412.2	519.6	624.6	727.0
115°	1.2	8.7	46.2	112.4	188.6	231.1	278.6	377.2	479.7	580.8	680.8
117.5°	1.2	8.7	37.5	99.9	169.9	208.6	249.8	344.8	439.7	538.4	635.8
120°	1.2	7.5	30.0	87.4	153.6	188.6	227.3	313.5	401.0	493.4	587.1
122.5°	1.2	7.5	25.0	76.2	137.4	169.9	204.9	281.0	364.7	449.7	537.1
125°	1.2	6.2	21.2	63.7	121.2	152.4	183.6	252.3	329.8	408.5	488.4
127.5°	2.5	6.2	17.5	52.5	104.9	132.4	162.4	224.8	292.3	363.5	439.7
130°	2.5	6.2	15.0	40.0	88.7	113.7	139.9	197.4	259.8	321.0	387.2
132.5°	2.5	5.0	13.7	31.2	73.7	96.2	119.9	171.1	226.1	281.0	338.5
135°	2.5	5.0	11.2	25.0	58.7	78.7	101.2	146.1	194.9	246.1	294.8
137.5°	2.5	3.7	10.0	20.0	45.0	63.7	83.7	123.7	166.1	209.9	254.8
140°	2.5	3.7	8.7	16.2	33.7	47.5	66.2	101.2	138.7	177.4	216.1
142.5°	2.5	3.7	7.5	13.7	26.2	36.2	50.0	82.4	114.9	147.4	181.1
145°	2.5	3.7	6.2	11.2	20.0	27.5	36.2	63.7	92.4	121.2	149.9
147.5°	2.5	3.7	6.2	10.0	16.2	21.2	27.5	46.2	72.4	96.2	121.2
150°	2.5	3.7	5.0	8.7	13.7	16.2	20.0	32.5	52.5	73.7	94.9
152.5°	2.5	2.5	5.0	7.5	10.0	12.5	15.0	23.7	36.2	52.5	71.2
155°	2.5	2.5	3.7	6.2	8.7	10.0	11.2	16.2	23.7	33.7	47.5
157.5°	2.5	2.5	3.7	5.0	6.2	7.5	8.7	11.2	16.2	21.2	28.7
160°	2.5	2.5	3.7	5.0	5.0	6.2	6.2	7.5	10.0	12.5	16.2
162.5°	2.5	2.5	3.7	3.7	3.7	5.0	5.0	5.0	6.2	6.2	7.5
165°	2.5	2.5	2.5	3.7	2.5	3.7	2.5	3.7	3.7	2.5	2.5
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°	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8
2.5°	1728.8	1720.0	1716.3	1711.3	1707.5	1705.0	1701.3	1698.8	1695.0	1695.0	1696.3
5°	1726.3	1717.5	1715.0	1710.0	1707.5	1706.3	1703.8	1705.0	1705.0	1706.3	1705.0
7.5°	1721.3	1713.8	1711.3	1708.8	1706.3	1705.0	1703.8	1706.3	1706.3	1707.5	1707.5
10°	1712.5	1707.5	1707.5	1705.0	1703.8	1702.5	1700.0	1703.8	1703.8	1706.3	1705.0
12.5°	1702.5	1701.3	1702.5	1703.8	1703.8	1702.5	1701.3	1706.3	1708.8	1708.8	1710.0
15°	1691.3	1693.8	1700.0	1703.8	1706.3	1706.3	1708.8	1713.8	1717.5	1718.8	1718.8
17.5°	1682.6	1688.8	1700.0	1710.0	1715.0	1717.5	1723.8	1733.8	1740.0	1741.3	1741.3
20°	1676.3	1691.3	1711.3	1730.0	1736.3	1741.3	1753.8	1766.2	1775.0	1776.2	1776.2
22.5°	1681.3	1706.3	1733.8	1755.0	1763.7	1770.0	1783.7	1800.0	1810.0	1811.2	1811.2
25°	1693.8	1723.8	1755.0	1781.2	1791.2	1798.7	1813.7	1831.2	1841.2	1844.9	1843.7
27.5°	1705.0	1741.3	1777.5	1807.5	1818.7	1828.7	1847.4	1867.4	1879.9	1883.7	1881.2
30°	1715.0	1757.5	1798.7	1834.9	1849.9	1861.2	1883.7	1907.4	1923.6	1927.4	1923.6
32.5°	1725.0	1776.2	1825.0	1867.4	1882.4	1898.6	1927.4	1954.9	1971.1	1976.1	1973.6
35°	1738.8	1798.7	1856.2	1904.9	1924.9	1943.6	1977.3	2009.8	2029.8	2033.6	2029.8
37.5°	1757.5	1827.4	1891.2	1952.4	1973.6	1999.8	2039.8	2078.5	2102.3	2107.2	2102.3
40°	1781.2	1863.7	1938.6	2009.8	2038.5	2066.0	2114.7	2161.0	2187.2	2195.9	2192.2
42.5°	1812.5	1908.6	1996.1	2081.0	2113.5	2148.5	2205.9	2259.6	2289.6	2299.6	2289.6
45°	1851.2	1964.9	2066.0	2164.7	2202.2	2244.7	2313.4	2374.6	2409.5	2418.3	2409.5
47.5°	1902.4	2031.1	2148.5	2262.1	2307.1	2357.1	2438.3	2508.2	2545.7	2555.7	2546.9
50°	1957.4	2111.0	2245.9	2375.8	2432.0	2484.5	2579.4	2656.9	2696.8	2715.6	2699.3
52.5°	2026.1	2198.4	2357.1	2502.0	2569.4	2631.9	2736.8	2821.7	2870.5	2886.7	2864.2
55°	2108.5	2303.4	2480.7	2648.1	2715.6	2785.5	2901.7	2991.6	3042.8	3060.3	3044.1
57.5°	2199.7	2414.5	2610.6	2786.8	2865.5	2936.7	3066.6	3160.2	3205.2	3227.7	3207.7
60°	2294.6	2529.4	2741.8	2929.2	3015.4	3089.0	3221.5	3313.9	3361.4	3383.8	3365.1
62.5°	2387.0	2640.6	2864.2	3059.1	3141.5	3222.7	3355.1	3443.8	3492.5	3512.5	3495.0
65°	2467.0	2734.3	2964.1	3165.2	3250.2	3330.1	3455.0	3540.0	3591.2	3604.9	3592.4
67.5°	2526.9	2798.0	3030.3	3228.9	3311.4	3391.3	3510.0	3588.7	3638.7	3651.1	3639.9
70°	2554.4	2823.0	3052.8	3246.4	3327.6	3398.8	3511.2	3586.2	3633.7	3641.2	3632.4
72.5°	2536.9	2798.0	3020.3	3205.2	3282.7	3345.1	3448.8	3520.0	3565.0	3571.2	3565.0
75°	2472.0	2721.8	2931.7	3104.0	3176.5	3228.9	3327.6	3393.8	3438.8	3443.8	3436.3
77.5°	2362.1	2594.4	2786.8	2952.9	3012.9	3064.1	3157.8	3216.5	3252.7	3260.2	3251.4
80°	2214.7	2428.3	2600.6	2749.3	2806.8	2850.5	2941.7	3005.4	3025.3	3035.3	3022.8
82.5°	2046.0	2237.2	2390.8	2525.7	2576.9	2630.6	2689.3	2748.0	2776.8	2785.5	2775.5
85°	1864.9	2034.8	2171.0	2292.1	2337.1	2385.8	2437.0	2494.5	2519.5	2528.2	2518.2
87.5°	1683.8	1833.7	1953.6	2061.0	2102.3	2146.0	2207.2	2237.2	2270.9	2280.9	2269.6
90°	1521.4	1656.3	1763.7	1861.2	1899.9	1939.9	1987.3	2024.8	2056.0	2064.8	2054.8
92.5°	1390.3	1511.4	1610.1	1697.5	1731.3	1768.7	1815.0	1851.2	1878.7	1887.4	1877.4
95°	1281.6	1392.8	1485.2	1566.4	1598.9	1633.8	1685.0	1713.8	1738.8	1746.3	1738.8
97.5°	1189.2	1294.1	1381.5	1460.2	1491.4	1523.9	1573.9	1602.6	1626.3	1632.6	1626.3
100°	1108.0	1210.4	1296.6	1371.5	1402.8	1434.0	1482.7	1511.4	1533.9	1541.4	1533.9
102.5°	1040.5	1139.2	1224.1	1300.3	1330.3	1361.5	1407.7	1441.5	1459.0	1467.7	1460.2
105°	981.8	1078.0	1162.9	1237.9	1269.1	1299.1	1346.5	1377.8	1397.8	1407.7	1399.0
107.5°	928.1	1023.0	1109.2	1181.7	1212.9	1242.9	1291.6	1322.8	1341.5	1352.8	1342.8
110°	876.9	970.6	1053.0	1127.9	1159.2	1190.4	1239.1	1270.3	1289.1	1299.1	1290.3



TEST NUMBER: P201324

CATALOG NUMBER: 8LBLED-LD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	826.9	918.1	1003.0	1075.5	1105.5	1136.7	1186.7	1219.1	1236.6	1247.9	1237.9
115°	776.9	866.9	949.3	1019.3	1049.3	1081.7	1130.4	1164.2	1182.9	1191.7	1181.7
117.5°	728.2	814.4	893.1	961.8	991.8	1023.0	1070.5	1104.2	1124.2	1132.9	1123.0
120°	678.3	760.7	838.2	900.6	931.8	960.6	1009.3	1041.8	1061.7	1070.5	1060.5
122.5°	624.6	705.7	779.4	840.7	870.6	898.1	945.6	978.1	996.8	1005.5	996.8
125°	569.6	645.8	717.0	778.2	803.2	829.4	875.6	906.9	926.8	934.3	926.8
127.5°	514.6	584.6	650.8	704.5	732.0	757.0	800.7	830.7	848.1	856.9	850.6
130°	459.7	525.9	585.8	634.5	658.3	682.0	722.0	749.5	767.0	774.4	768.2
132.5°	401.0	464.7	523.4	565.8	588.3	608.3	644.5	668.3	683.3	692.0	684.5
135°	348.5	401.0	455.9	499.6	522.1	539.6	572.1	592.1	605.8	613.3	605.8
137.5°	301.0	346.0	391.0	429.7	450.9	469.7	500.9	519.6	532.1	539.6	532.1
140°	257.3	296.0	336.0	367.2	386.0	401.0	429.7	445.9	457.2	463.4	455.9
142.5°	214.8	249.8	283.5	312.3	328.5	341.0	368.5	381.0	389.7	393.5	389.7
145°	178.6	207.4	236.1	262.3	274.8	284.8	312.3	326.0	333.5	337.3	333.5
147.5°	144.9	168.6	192.4	213.6	224.8	237.3	256.1	272.3	278.6	281.0	278.6
150°	113.7	134.9	153.6	171.1	179.9	188.6	204.9	221.1	227.3	231.1	227.3
152.5°	86.2	103.7	118.7	132.4	139.9	147.4	161.1	176.1	182.4	184.9	182.4
155°	62.5	74.9	88.7	98.7	104.9	109.9	119.9	129.9	139.9	139.9	139.9
157.5°	38.7	48.7	60.0	68.7	72.4	77.4	84.9	93.7	101.2	104.9	104.9
160°	20.0	26.2	33.7	40.0	43.7	47.5	52.5	60.0	65.0	68.7	66.2
162.5°	8.7	11.2	15.0	17.5	20.0	21.2	25.0	28.7	31.2	37.5	32.5
165°	2.5	2.5	3.7	5.0	5.0	5.0	6.2	7.5	8.7	13.7	10.0
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: P201324

CATALOG NUMBER: 8LBLELD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8
2.5°	1698.8	1702.5	1707.5	1710.0	1713.8	1716.3	1722.5	1730.0	1723.8	1715.0	1716.3
5°	1705.0	1703.8	1707.5	1710.0	1712.5	1713.8	1720.0	1727.5	1720.0	1711.3	1711.3
7.5°	1707.5	1706.3	1707.5	1708.8	1710.0	1710.0	1716.3	1722.5	1715.0	1703.8	1701.3
10°	1703.8	1702.5	1703.8	1706.3	1706.3	1706.3	1710.0	1715.0	1706.3	1692.5	1687.5
12.5°	1706.3	1702.5	1702.5	1703.8	1703.8	1701.3	1702.5	1706.3	1695.0	1680.1	1672.6
15°	1715.0	1708.8	1706.3	1706.3	1703.8	1697.5	1695.0	1695.0	1682.6	1662.6	1652.6
17.5°	1736.3	1726.3	1718.8	1715.0	1710.0	1698.8	1690.0	1685.0	1668.8	1646.3	1630.1
20°	1768.7	1755.0	1743.8	1736.3	1730.0	1710.0	1692.5	1678.8	1656.3	1628.8	1607.6
22.5°	1801.2	1786.2	1770.0	1762.5	1753.8	1731.3	1707.5	1683.8	1650.1	1612.6	1583.9
25°	1832.4	1817.5	1798.7	1791.2	1780.0	1753.8	1723.8	1696.3	1652.6	1601.4	1560.1
27.5°	1868.7	1849.9	1829.9	1818.7	1806.2	1776.2	1742.5	1708.8	1660.1	1601.4	1543.9
30°	1909.9	1887.4	1861.2	1848.7	1833.7	1798.7	1757.5	1717.5	1665.1	1601.4	1535.2
32.5°	1957.4	1931.1	1899.9	1882.4	1864.9	1823.7	1775.0	1728.8	1668.8	1600.1	1527.7
35°	2012.3	1982.3	1944.9	1924.9	1903.6	1854.9	1797.5	1741.3	1675.1	1598.9	1517.7
37.5°	2081.0	2046.0	2001.1	1976.1	1951.1	1893.7	1827.4	1760.0	1685.0	1600.1	1510.2
40°	2163.5	2122.2	2069.8	2038.5	2008.6	1942.4	1863.7	1783.7	1698.8	1602.6	1502.7
42.5°	2260.9	2210.9	2152.2	2116.0	2081.0	1998.6	1908.6	1813.7	1717.5	1607.6	1498.9
45°	2377.1	2324.6	2249.6	2204.7	2166.0	2069.8	1966.1	1853.7	1745.0	1620.1	1497.7
47.5°	2510.7	2444.5	2363.3	2310.9	2264.6	2153.5	2033.6	1903.6	1776.2	1636.3	1500.2
50°	2660.6	2585.7	2492.0	2437.0	2379.6	2252.1	2113.5	1962.4	1816.2	1660.1	1506.4
52.5°	2825.5	2743.0	2641.9	2576.9	2513.2	2365.8	2203.4	2037.3	1862.4	1690.0	1517.7
55°	2996.6	2907.9	2795.5	2724.3	2653.1	2490.7	2309.6	2118.5	1923.6	1727.5	1536.4
57.5°	3162.7	3071.6	2947.9	2875.5	2795.5	2623.1	2423.3	2207.2	1989.8	1771.2	1557.6
60°	3316.4	3225.2	3100.3	3026.6	2939.2	2754.3	2539.4	2304.6	2058.5	1817.5	1582.6
62.5°	3446.3	3358.9	3233.9	3159.0	3069.1	2877.9	2650.6	2399.5	2133.5	1866.2	1606.4
65°	3542.5	3460.0	3338.9	3261.4	3175.2	2976.6	2744.3	2483.2	2195.9	1908.6	1627.6
67.5°	3591.2	3513.7	3396.3	3322.6	3237.7	3040.3	2808.0	2539.4	2243.4	1938.6	1641.3
70°	3586.2	3512.5	3402.6	3330.1	3248.9	3059.1	2830.5	2561.9	2264.6	1949.9	1638.8
72.5°	3521.2	3447.5	3348.9	3278.9	3201.5	3024.1	2799.3	2541.9	2248.4	1932.4	1618.8
75°	3392.6	3325.1	3225.2	3167.7	3097.8	2932.9	2718.1	2468.2	2193.4	1886.2	1577.6
77.5°	3207.7	3156.5	3059.1	3005.4	2936.7	2784.3	2581.9	2357.1	2097.3	1808.7	1513.9
80°	2981.6	2939.2	2844.2	2796.8	2729.3	2596.9	2422.0	2204.7	1969.8	1703.8	1431.5
82.5°	2734.3	2685.6	2610.6	2566.9	2503.2	2384.6	2218.4	2041.0	1822.5	1583.9	1335.3
85°	2478.2	2433.3	2364.6	2327.1	2270.9	2164.7	2016.1	1859.9	1666.3	1451.5	1231.6
87.5°	2234.7	2190.9	2126.0	2092.3	2041.0	1946.1	1816.2	1678.8	1507.7	1324.1	1121.7
90°	2023.6	1982.3	1921.1	1889.9	1843.7	1757.5	1640.1	1516.4	1365.3	1196.6	1023.0
92.5°	1849.9	1812.5	1755.0	1725.0	1683.8	1605.1	1498.9	1386.5	1250.4	1104.2	943.1
95°	1712.5	1676.3	1625.1	1596.4	1557.6	1476.4	1382.8	1277.8	1152.9	1019.3	870.6
97.5°	1601.4	1571.4	1515.2	1487.7	1456.5	1374.0	1289.1	1185.4	1069.2	944.3	805.7
100°	1511.4	1477.7	1426.5	1400.3	1367.8	1290.3	1204.1	1106.7	994.3	875.6	747.0
102.5°	1441.5	1406.5	1359.0	1329.1	1297.8	1219.1	1134.2	1039.3	931.8	816.9	693.3
105°	1379.0	1345.3	1297.8	1267.8	1236.6	1159.2	1078.0	981.8	875.6	764.5	644.5
107.5°	1320.3	1290.3	1242.9	1212.9	1181.7	1104.2	1023.0	928.1	824.4	715.7	599.6
110°	1270.3	1237.9	1187.9	1159.2	1125.4	1051.8	970.6	878.1	774.4	668.3	557.1



TEST NUMBER: P201324

CATALOG NUMBER: 8LBLED-LD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1220.4	1185.4	1135.4	1106.7	1073.0	999.3	919.3	828.2	727.0	624.6	517.1
115°	1165.4	1131.7	1079.2	1050.5	1016.8	944.3	866.9	778.2	680.8	580.8	477.2
117.5°	1106.7	1073.0	1020.5	993.0	960.6	889.4	815.7	729.5	634.5	538.4	437.2
120°	1043.0	1010.5	960.6	933.1	901.9	833.2	762.0	675.8	585.8	493.4	399.7
122.5°	978.1	946.8	898.1	870.6	840.7	775.7	705.7	622.1	535.9	449.7	363.5
125°	908.1	876.9	830.7	804.4	774.4	712.0	644.5	565.8	485.9	408.5	326.0
127.5°	826.9	801.9	757.0	730.7	703.2	648.3	583.3	512.1	438.4	363.5	289.8
130°	749.5	723.2	680.8	657.0	633.3	583.3	525.9	457.2	384.7	319.8	253.6
132.5°	668.3	644.5	608.3	588.3	567.1	522.1	463.4	396.0	334.8	278.6	219.8
135°	592.1	572.1	539.6	522.1	500.9	453.4	398.5	342.3	291.0	241.1	188.6
137.5°	520.9	500.9	470.9	452.2	429.7	387.2	342.3	296.0	248.6	206.1	159.9
140°	445.9	429.7	402.2	386.0	366.0	329.8	292.3	248.6	211.1	172.4	132.4
142.5°	382.2	368.5	341.0	326.0	308.5	278.6	243.6	209.9	176.1	142.4	108.7
145°	327.3	313.5	283.5	272.3	256.1	229.8	201.1	171.1	143.6	114.9	87.4
147.5°	273.6	257.3	231.1	221.1	208.6	186.1	163.6	139.9	116.2	91.2	67.5
150°	223.6	204.9	183.6	177.4	164.9	147.4	128.7	108.7	89.9	70.0	48.7
152.5°	176.1	159.9	142.4	136.2	126.2	114.9	98.7	82.4	67.5	48.7	33.7
155°	131.2	118.7	104.9	101.2	93.7	84.9	71.2	58.7	45.0	32.5	23.7
157.5°	92.4	82.4	72.4	70.0	65.0	57.5	46.2	36.2	28.7	21.2	16.2
160°	57.5	51.2	43.7	41.2	37.5	32.5	25.0	21.2	17.5	13.7	10.0
162.5°	27.5	23.7	21.2	20.0	17.5	15.0	13.7	11.2	10.0	8.7	7.5
165°	10.0	10.0	10.0	8.7	8.7	8.7	8.7	7.5	6.2	6.2	5.0
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: P201324

CATALOG NUMBER: 8LBLELD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8	1718.8
2.5°	1717.5	1720.0	1720.0	1721.3	1725.0	1732.5	1742.5	1743.8
5°	1712.5	1713.8	1713.8	1713.8	1717.5	1723.8	1733.8	1735.0
7.5°	1701.3	1701.3	1701.3	1701.3	1705.0	1710.0	1718.8	1720.0
10°	1686.3	1685.0	1685.0	1683.8	1686.3	1690.0	1700.0	1698.8
12.5°	1667.6	1665.1	1663.8	1663.8	1662.6	1666.3	1672.6	1673.8
15°	1646.3	1641.3	1638.8	1636.3	1635.1	1635.1	1642.6	1641.3
17.5°	1621.3	1613.9	1610.1	1606.4	1601.4	1601.4	1606.4	1605.1
20°	1592.6	1582.6	1576.4	1571.4	1563.9	1561.4	1563.9	1562.6
22.5°	1563.9	1547.6	1541.4	1533.9	1522.7	1517.7	1516.4	1515.2
25°	1530.2	1510.2	1501.4	1493.9	1477.7	1471.5	1465.2	1462.7
27.5°	1500.2	1471.5	1460.2	1447.7	1429.0	1420.2	1410.2	1407.7
30°	1474.0	1431.5	1414.0	1401.5	1377.8	1364.0	1351.5	1349.0
32.5°	1454.0	1395.3	1371.5	1356.5	1324.1	1305.3	1289.1	1281.6
35°	1436.5	1361.5	1330.3	1306.6	1267.8	1245.4	1222.9	1216.6
37.5°	1420.2	1332.8	1291.6	1259.1	1215.4	1182.9	1157.9	1147.9
40°	1404.0	1306.6	1256.6	1215.4	1157.9	1120.5	1089.2	1076.7
42.5°	1389.0	1280.3	1226.6	1176.7	1101.7	1056.7	1023.0	1005.5
45°	1375.3	1256.6	1197.9	1142.9	1046.8	994.3	953.1	936.8
47.5°	1365.3	1234.1	1169.2	1109.2	995.5	930.6	888.1	866.9
50°	1357.8	1212.9	1141.7	1075.5	950.6	869.4	821.9	796.9
52.5°	1354.0	1194.1	1116.7	1045.5	909.4	810.7	754.5	735.7
55°	1355.3	1179.2	1095.5	1018.0	870.6	754.5	692.0	663.3
57.5°	1357.8	1165.4	1074.2	990.5	831.9	699.5	629.6	599.6
60°	1362.8	1154.2	1055.5	964.3	795.7	652.0	572.1	543.4
62.5°	1367.8	1144.2	1036.8	939.3	760.7	608.3	514.6	482.2
65°	1369.0	1129.2	1016.8	914.3	725.7	564.6	455.9	424.7
67.5°	1364.0	1110.5	991.8	885.6	689.5	522.1	401.0	368.5
70°	1349.0	1085.5	963.1	853.1	649.5	480.9	348.5	313.5
72.5°	1321.6	1053.0	929.3	816.9	610.8	437.2	301.0	258.6
75°	1282.8	1013.0	889.4	775.7	569.6	396.0	257.3	209.9
77.5°	1230.4	961.8	841.9	729.5	524.6	353.5	219.8	164.9
80°	1162.9	908.1	789.4	679.5	480.9	314.8	183.6	122.4
82.5°	1083.0	846.9	733.2	628.3	439.7	274.8	149.9	84.9
85°	1000.5	780.7	674.5	574.6	396.0	237.3	121.2	50.0
87.5°	919.3	714.5	618.3	525.9	351.0	203.6	93.7	20.0
90°	839.4	650.8	559.6	473.4	312.3	172.4	70.0	0.0
92.5°	773.2	603.3	520.9	438.4	287.3	156.1	60.0	0.0
95°	714.5	558.4	479.7	403.5	261.1	141.1	50.0	0.0
97.5°	660.8	515.9	443.4	371.0	237.3	124.9	41.2	0.0
100°	609.6	473.4	406.0	341.0	214.8	111.2	31.2	0.0
102.5°	564.6	435.9	372.2	308.5	192.4	97.4	22.5	0.0
105°	520.9	399.7	341.0	279.8	172.4	84.9	13.7	0.0
107.5°	482.2	366.0	309.8	253.6	153.6	73.7	8.7	0.0
110°	444.7	334.8	279.8	228.6	137.4	63.7	7.5	0.0



TEST NUMBER: P201324

CATALOG NUMBER: 8LBLED-LD4-14-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	409.7	304.8	253.6	204.9	123.7	53.7	7.5	0.0
115°	373.5	276.1	228.6	184.9	109.9	43.7	6.2	0.0
117.5°	342.3	248.6	206.1	168.6	96.2	35.0	6.2	0.0
120°	311.0	224.8	187.4	151.1	83.7	26.2	6.2	0.0
122.5°	279.8	203.6	167.4	134.9	72.4	21.2	5.0	0.0
125°	251.1	181.1	148.6	117.4	60.0	18.7	5.0	0.0
127.5°	222.3	158.6	128.7	101.2	47.5	16.2	3.7	0.0
130°	193.6	136.2	109.9	84.9	36.2	13.7	3.7	0.0
132.5°	167.4	114.9	92.4	70.0	28.7	11.2	2.5	0.0
135°	141.1	96.2	76.2	55.0	22.5	10.0	2.5	0.0
137.5°	118.7	78.7	60.0	41.2	18.7	7.5	2.5	0.0
140°	97.4	62.5	45.0	31.2	15.0	6.2	1.2	0.0
142.5°	77.4	46.2	33.7	23.7	12.5	5.0	1.2	0.0
145°	60.0	33.7	25.0	18.7	11.2	3.7	1.2	0.0
147.5°	43.7	26.2	20.0	16.2	8.7	3.7	1.2	0.0
150°	31.2	20.0	16.2	12.5	6.2	2.5	1.2	0.0
152.5°	23.7	15.0	12.5	10.0	5.0	2.5	1.2	0.0
155°	17.5	11.2	10.0	7.5	3.7	2.5	1.2	0.0
157.5°	12.5	8.7	7.5	5.0	3.7	2.5	1.2	0.0
160°	7.5	6.2	5.0	3.7	2.5	1.2	1.2	0.0
162.5°	6.2	3.7	3.7	3.7	2.5	1.2	1.2	0.0
165°	3.7	2.5	2.5	2.5	1.2	1.2	1.2	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)