

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: P201331

Luminaire Tested: **4LBLED-LD4-10-SYMW-UNV-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201331
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28136)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4LBLED-LD4-10-SYMW-UNV-L835-CD1-U
Description: 4 ft. Low Bay Linear, 10000 lm, Wht Sym lens, 3.3.5K
Light Source: (392) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
(OTI85W01720CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10001.5 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 2.12 / 1.93
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

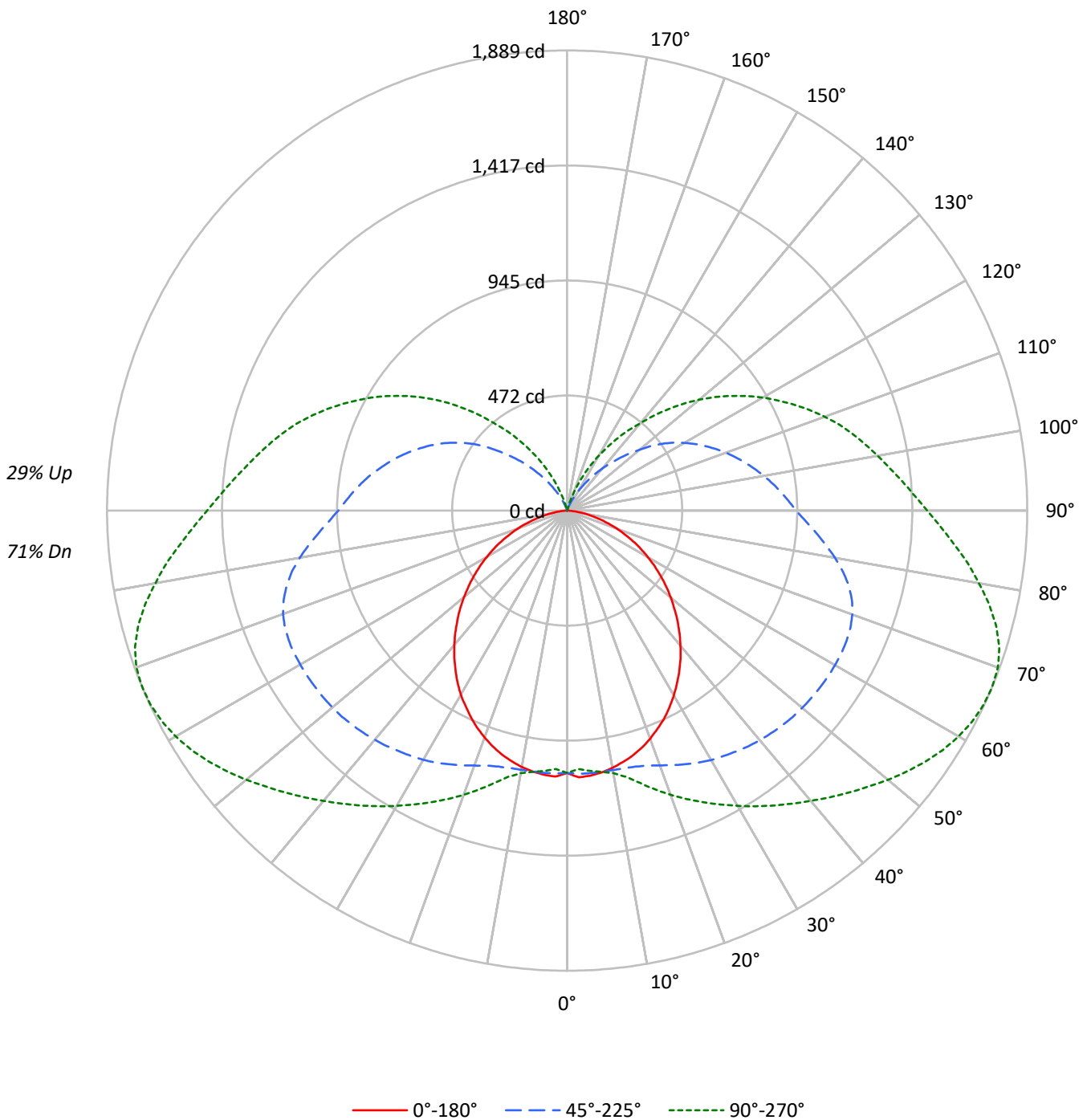
Input Watts (W): 78.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	97	90	84	79	91	85	80	75	75	71	67	66	63	60	58	55	53	49
2	86	76	67	60	81	71	64	57	63	57	51	55	50	46	48	44	40	36
3	77	65	55	48	72	61	52	45	54	47	41	47	41	36	41	36	32	28
4	70	56	46	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23
5	64	50	40	32	60	47	38	31	41	34	28	36	30	25	31	26	22	19
6	59	44	34	27	55	42	33	26	37	29	24	32	26	21	28	23	19	16
7	54	40	30	24	50	37	29	23	33	26	20	29	23	18	25	20	16	14
8	50	36	27	21	47	34	25	20	30	23	18	26	20	16	23	18	14	12
9	47	33	24	18	44	31	23	17	27	21	16	24	18	14	21	16	13	10
10	43	30	22	16	41	28	21	15	25	19	14	22	17	13	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17354	17354	17354
5°	17588	15643	17530
10°	17389	14690	17332
15°	17129	14483	17055
20°	16765	14647	16674
25°	16357	14852	16232
30°	15821	15147	15772
35°	15243	15527	15175
40°	14574	16002	14520
45°	13874	16610	13796
50°	13103	17349	13040
55°	12262	18154	12192
60°	11341	18933	11261
65°	10260	19593	10167
70°	8962	20050	8851
75°	7305	20090	7023
80°	5410	19754	5023
85°	2818	19358	2505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	1.0
10°-20°	309.8	3.1
20°-30°	524.4	5.2
30°-40°	733.3	7.3
40°-50°	923.9	9.2
50°-60°	1084.9	10.8
60°-70°	1186.3	11.9
70°-80°	1172.0	11.7
80°-90°	1029.6	10.3
90°-100°	876.4	8.8
100°-110°	730.9	7.3
110°-120°	566.1	5.7
120°-130°	394.0	3.9
130°-140°	230.0	2.3
140°-150°	104.9	1.0
150°-160°	30.0	0.3
160°-170°	2.1	0.0
170°-180°	0.0	0.0
0°-30°	937.1	9.4
0°-40°	1670.4	16.7
0°-60°	3679.2	36.8
0°-90°	7067.1	70.7
90°-120°	2173.4	21.7
90°-150°	2902.4	29.0
90°-180°	2934.0	29.3
0°-180°	10001.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1077	1077	1077	1077	1077	
5°	1092	1082	1072	1081	1089	104
15°	1041	1088	1158	1088	1037	293
25°	942	1149	1320	1149	935	433
35°	803	1207	1478	1206	800	502
45°	640	1248	1637	1246	637	494
55°	469	1267	1796	1263	466	420
65°	299	1266	1886	1261	296	296
75°	140	1197	1823	1192	135	150
85°	24	1024	1595	1021	22	31
90°	0	940	1478	940	0	1
95°	0	880	1381	881	0	0
105°	1	757	1214	760	0	1
115°	1	626	1028	628	1	1
125°	2	479	820	479	1	2
135°	2	304	588	304	1	1
145°	3	155	365	154	2	1
155°	3	44	162	41	2	1
165°	3	4	12	0	2	1
175°	0	0	0	0	0	0
180°	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°	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0
2.5°	1095.9	1095.0	1090.5	1083.3	1080.6	1078.8	1077.9	1075.2	1074.3	1076.1	1081.5
5°	1092.3	1090.5	1086.9	1080.6	1077.9	1077.0	1076.1	1073.4	1072.5	1075.2	1082.4
7.5°	1084.2	1083.3	1079.7	1073.4	1072.5	1070.7	1070.7	1069.0	1069.0	1073.4	1081.5
10°	1072.5	1071.6	1068.1	1063.6	1062.7	1062.7	1062.7	1062.7	1064.5	1071.6	1081.5
12.5°	1057.3	1057.3	1054.6	1051.0	1051.9	1051.9	1052.8	1054.6	1060.0	1070.7	1083.3
15°	1041.1	1040.2	1037.5	1036.6	1039.3	1040.2	1042.9	1047.4	1056.4	1071.6	1087.8
17.5°	1020.4	1020.4	1017.7	1018.6	1024.0	1026.7	1031.2	1039.3	1053.7	1074.3	1097.7
20°	996.2	997.1	996.2	998.9	1007.9	1013.3	1018.6	1032.1	1052.8	1081.5	1113.0
22.5°	969.2	971.0	971.0	978.2	989.9	998.0	1006.1	1024.9	1054.6	1094.1	1130.9
25°	942.3	942.3	945.0	954.9	971.0	980.9	993.5	1020.4	1060.9	1107.6	1148.9
27.5°	910.0	912.7	917.1	930.6	953.1	966.5	981.8	1020.4	1068.1	1121.1	1166.9
30°	875.8	878.5	885.7	904.6	933.3	950.4	971.9	1020.4	1074.3	1131.8	1182.1
32.5°	839.9	844.4	854.3	878.5	913.5	936.9	964.8	1019.5	1079.7	1140.8	1194.7
35°	803.1	807.6	822.8	851.6	897.4	924.3	956.7	1016.9	1082.4	1148.9	1207.3
37.5°	764.4	772.5	789.6	825.5	881.2	913.5	947.7	1014.2	1085.1	1155.2	1219.9
40°	723.1	731.2	755.5	798.6	865.0	899.2	936.9	1010.6	1086.9	1161.5	1230.6
42.5°	682.7	693.5	721.3	773.4	848.9	886.6	926.1	1005.2	1086.0	1166.0	1239.6
45°	640.5	653.0	687.2	749.2	830.9	871.3	913.5	998.0	1084.2	1168.7	1247.7
47.5°	597.4	612.6	653.0	724.9	812.9	855.2	901.0	990.8	1081.5	1170.5	1254.9
50°	555.1	573.1	618.9	700.7	793.2	838.1	885.7	982.7	1077.0	1171.4	1259.4
52.5°	512.9	532.7	586.6	676.4	772.5	820.1	870.4	972.8	1071.6	1170.5	1263.9
55°	468.9	490.5	554.2	650.4	751.0	800.4	853.4	960.3	1063.6	1166.9	1266.6
57.5°	426.7	450.9	523.7	625.2	728.5	780.6	837.2	946.8	1054.6	1164.2	1269.3
60°	383.6	411.4	492.3	596.5	705.1	759.0	817.4	931.5	1043.8	1157.9	1269.3
62.5°	341.3	372.8	461.7	570.4	681.8	737.5	797.7	914.4	1032.1	1151.6	1269.3
65°	299.1	335.1	430.3	541.7	655.7	714.1	775.2	896.5	1017.7	1142.6	1265.7
67.5°	257.8	299.1	397.9	512.0	628.8	689.0	751.9	875.8	1001.6	1130.9	1258.5
70°	217.4	263.2	365.6	480.6	600.9	660.2	725.8	853.4	982.7	1115.7	1245.9
72.5°	177.0	229.1	331.5	449.1	571.3	632.4	698.9	827.3	959.4	1095.0	1226.2
75°	140.1	194.9	299.1	416.8	540.8	602.7	669.2	798.6	931.5	1068.1	1197.4
77.5°	106.9	163.5	267.7	385.4	508.4	573.1	638.7	767.1	899.2	1033.9	1159.7
80°	75.5	132.9	236.2	353.0	476.1	539.9	604.5	733.0	865.0	993.5	1116.6
82.5°	46.7	105.1	204.8	321.6	444.6	507.5	571.3	698.9	826.4	951.3	1069.9
85°	24.3	79.0	175.2	291.9	414.1	476.1	539.0	663.8	786.9	908.2	1024.0
87.5°	8.1	57.5	150.9	265.9	386.3	448.2	509.3	630.6	750.1	865.9	979.1
90°	0.0	43.1	132.9	245.2	362.9	423.1	484.2	600.9	717.7	831.8	939.6
92.5°	0.0	36.8	121.3	230.9	346.7	406.0	465.3	581.2	693.5	804.0	909.1
95°	0.0	29.6	111.4	216.5	329.7	388.1	446.4	559.6	670.1	777.9	880.3
97.5°	0.0	23.4	100.6	203.0	312.6	369.2	425.8	538.1	645.9	751.9	850.7
100°	0.9	18.0	88.9	185.9	294.6	350.3	405.1	514.7	619.8	722.2	820.1
102.5°	0.9	12.6	78.2	171.6	275.8	329.7	383.6	490.5	593.8	695.3	788.7
105°	0.9	9.0	67.4	156.3	257.8	309.9	362.9	467.1	567.7	665.6	757.2
107.5°	0.9	6.3	57.5	141.9	239.8	289.2	340.4	442.0	540.8	636.0	725.8
110°	0.9	4.5	48.5	126.7	220.1	269.5	318.9	416.8	512.9	605.4	693.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	3.6	39.5	112.3	200.3	248.8	296.4	391.6	485.1	574.9	660.2
115°	0.9	3.6	31.4	98.8	180.6	227.3	273.1	366.5	455.4	543.5	626.1
117.5°	0.9	2.7	24.3	85.3	162.6	205.7	249.7	338.7	426.7	512.0	592.0
120°	0.9	2.7	18.0	71.9	143.7	184.1	227.3	311.7	396.1	478.8	555.1
122.5°	1.8	2.7	13.5	60.2	126.7	163.5	204.8	284.8	363.8	443.7	519.2
125°	1.8	1.8	10.8	48.5	108.7	142.8	179.7	256.9	328.8	405.1	478.8
127.5°	1.8	1.8	8.1	36.8	90.7	122.2	155.4	227.3	297.3	365.6	435.7
130°	1.8	1.8	7.2	26.9	73.7	101.5	132.0	196.7	262.3	325.2	389.0
132.5°	1.8	1.8	5.4	19.8	58.4	83.5	110.5	168.0	228.2	289.2	346.7
135°	1.8	1.8	4.5	14.4	44.0	66.5	89.8	141.0	195.8	253.3	303.6
137.5°	1.8	1.8	4.5	10.8	32.3	50.3	71.0	117.7	166.2	217.4	263.2
140°	1.8	1.8	3.6	9.0	22.5	36.8	53.9	94.3	135.6	183.2	227.3
142.5°	1.8	1.8	2.7	7.2	16.2	26.1	38.6	72.8	109.6	150.9	189.5
145°	2.7	1.8	2.7	6.3	11.7	18.0	26.9	54.8	84.4	121.3	155.4
147.5°	1.8	1.8	1.8	4.5	9.0	12.6	18.0	37.7	63.8	94.3	123.1
150°	2.7	1.8	1.8	3.6	7.2	9.0	12.6	25.2	44.0	69.2	94.3
152.5°	2.7	1.8	1.8	3.6	5.4	7.2	9.0	16.2	28.7	46.7	67.4
155°	2.7	1.8	1.8	2.7	4.5	5.4	7.2	10.8	17.1	28.7	44.0
157.5°	2.7	2.7	2.7	2.7	3.6	4.5	5.4	8.1	9.9	16.2	25.2
160°	2.7	2.7	1.8	1.8	2.7	2.7	3.6	5.4	7.2	9.0	12.6
162.5°	2.7	2.7	2.7	1.8	1.8	1.8	2.7	3.6	4.5	6.3	8.1
165°	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	2.7	3.6	4.5
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°	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0
2.5°	1083.3	1078.8	1077.0	1073.4	1070.7	1069.0	1066.3	1064.5	1062.7	1061.8	1061.8
5°	1084.2	1079.7	1077.9	1075.2	1074.3	1072.5	1070.7	1072.5	1071.6	1072.5	1071.6
7.5°	1085.1	1081.5	1081.5	1080.6	1079.7	1079.7	1077.9	1079.7	1080.6	1081.5	1080.6
10°	1087.8	1086.9	1088.7	1089.6	1089.6	1089.6	1089.6	1091.4	1095.0	1095.0	1094.1
12.5°	1092.3	1095.0	1100.4	1104.9	1106.7	1106.7	1110.3	1113.9	1118.4	1119.3	1118.4
15°	1101.3	1109.4	1121.1	1130.9	1135.4	1138.1	1145.3	1151.6	1156.1	1157.9	1156.1
17.5°	1117.5	1132.7	1150.7	1165.1	1170.5	1174.1	1183.9	1190.2	1195.6	1200.1	1198.3
20°	1139.0	1159.7	1181.2	1198.3	1205.5	1210.0	1220.8	1232.4	1237.8	1241.4	1240.5
22.5°	1162.4	1186.6	1210.9	1231.5	1239.6	1245.0	1258.5	1269.3	1277.4	1281.8	1280.9
25°	1184.8	1212.7	1242.3	1264.8	1274.7	1280.9	1295.3	1307.9	1316.9	1320.5	1319.6
27.5°	1207.3	1239.6	1272.0	1298.0	1307.9	1316.0	1333.0	1346.5	1357.3	1360.0	1360.0
30°	1225.3	1263.0	1298.0	1327.7	1338.4	1349.2	1368.1	1386.0	1395.9	1399.5	1398.6
32.5°	1242.3	1284.5	1324.1	1357.3	1370.8	1381.6	1404.0	1423.8	1435.4	1439.0	1435.4
35°	1259.4	1306.1	1350.1	1386.0	1400.4	1413.9	1439.0	1461.5	1474.1	1477.7	1475.9
37.5°	1275.6	1327.7	1375.3	1414.8	1431.9	1446.2	1472.3	1499.2	1512.7	1516.3	1512.7
40°	1290.8	1347.4	1399.5	1442.6	1461.5	1478.6	1509.1	1536.1	1551.3	1555.8	1554.0
42.5°	1305.2	1367.2	1423.8	1471.4	1492.9	1510.9	1545.0	1574.7	1590.9	1596.2	1591.7
45°	1317.8	1386.9	1448.0	1499.2	1522.6	1543.2	1581.9	1614.2	1630.4	1636.7	1631.3
47.5°	1330.4	1404.9	1470.5	1527.1	1554.0	1575.6	1618.7	1652.8	1671.7	1677.1	1671.7
50°	1342.0	1422.9	1494.7	1555.8	1584.6	1608.8	1655.5	1692.4	1711.2	1719.3	1712.1
52.5°	1352.8	1439.9	1517.2	1582.8	1614.2	1641.2	1691.5	1731.0	1753.4	1758.8	1751.6
55°	1363.6	1456.1	1537.0	1607.9	1642.1	1670.8	1725.6	1766.9	1789.4	1795.7	1788.5
57.5°	1372.6	1470.5	1555.8	1632.2	1667.2	1700.4	1755.2	1798.4	1821.7	1828.9	1821.7
60°	1378.9	1482.2	1572.9	1651.9	1688.8	1722.9	1781.3	1824.4	1847.8	1854.9	1847.8
62.5°	1383.3	1491.1	1584.6	1667.2	1706.7	1741.8	1801.0	1843.3	1867.5	1874.7	1867.5
65°	1384.2	1494.7	1590.9	1677.1	1717.5	1752.5	1812.7	1854.9	1880.1	1886.4	1879.2
67.5°	1378.9	1491.1	1590.9	1678.9	1719.3	1755.2	1815.4	1857.6	1881.9	1889.1	1881.9
70°	1368.1	1480.4	1581.9	1671.7	1712.1	1748.1	1807.3	1850.5	1874.7	1881.9	1873.8
72.5°	1347.4	1461.5	1563.0	1654.6	1693.3	1728.3	1786.7	1828.9	1852.3	1860.3	1851.4
75°	1317.8	1431.9	1533.4	1621.4	1661.8	1694.2	1752.5	1793.9	1815.4	1822.6	1814.5
77.5°	1279.1	1394.1	1492.0	1579.2	1619.6	1649.2	1705.8	1746.3	1767.8	1774.1	1766.0
80°	1234.2	1348.3	1442.6	1528.9	1566.6	1594.4	1651.0	1689.7	1710.3	1716.6	1712.1
82.5°	1184.8	1296.2	1387.8	1472.3	1508.2	1536.1	1591.7	1629.5	1650.1	1659.1	1651.9
85°	1134.5	1241.4	1331.2	1413.0	1448.9	1478.6	1529.8	1567.5	1588.2	1595.3	1590.9
87.5°	1084.2	1187.5	1274.7	1353.7	1386.9	1417.5	1468.7	1506.4	1527.1	1534.3	1528.9
90°	1042.0	1140.8	1224.4	1302.5	1336.6	1364.5	1413.9	1449.8	1470.5	1477.7	1473.2
92.5°	1007.9	1102.2	1183.0	1254.9	1287.2	1316.9	1364.5	1399.5	1420.2	1426.5	1422.0
95°	975.5	1067.2	1145.3	1215.4	1246.8	1275.6	1320.5	1354.6	1374.4	1380.7	1377.1
97.5°	945.0	1033.0	1108.5	1176.7	1209.1	1235.1	1278.3	1310.6	1330.4	1335.7	1330.4
100°	910.9	999.8	1073.4	1140.8	1168.7	1194.7	1237.8	1270.2	1287.2	1294.4	1289.9
102.5°	878.5	963.9	1036.6	1103.1	1132.7	1158.8	1198.3	1229.7	1249.5	1254.0	1249.5
105°	845.3	927.9	998.9	1064.5	1094.1	1119.3	1158.8	1189.3	1208.2	1213.6	1209.1
107.5°	811.1	891.1	962.1	1024.0	1052.8	1076.1	1116.6	1146.2	1162.4	1172.3	1165.1
110°	774.3	853.4	921.6	981.8	1009.7	1032.1	1071.6	1101.3	1116.6	1125.5	1119.3



TEST NUMBER: P201331

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	740.2	814.7	880.3	938.7	964.8	987.2	1025.8	1054.6	1069.0	1077.9	1071.6
115°	704.3	773.4	838.1	893.8	919.8	940.5	979.1	1006.1	1020.4	1028.5	1023.1
117.5°	665.6	733.0	794.1	848.9	873.1	893.8	930.6	957.6	971.0	977.3	971.9
120°	627.9	693.5	751.0	803.1	827.3	847.1	883.0	908.2	920.7	927.9	922.5
122.5°	588.4	652.2	704.3	756.4	778.8	797.7	830.0	857.0	868.6	874.9	871.3
125°	546.2	609.0	659.3	706.9	728.5	746.5	777.9	800.4	813.8	820.1	816.5
127.5°	502.1	562.3	613.5	657.5	678.2	698.0	724.0	749.2	758.1	765.3	761.7
130°	452.7	512.9	560.5	605.4	625.2	641.4	670.1	690.8	702.5	708.7	706.0
132.5°	404.2	459.9	510.2	550.6	569.5	586.6	612.6	632.4	648.6	649.5	645.9
135°	357.5	406.0	451.8	495.0	513.8	530.9	554.2	572.2	587.5	588.4	583.9
137.5°	312.6	357.5	397.0	437.5	457.2	475.2	496.7	513.8	528.2	530.9	524.6
140°	269.5	310.8	346.7	382.7	401.5	418.6	442.0	456.3	468.0	468.9	465.3
142.5°	228.2	265.9	297.3	330.6	347.6	362.9	389.0	403.3	414.1	416.8	411.4
145°	189.5	222.8	252.4	281.2	295.5	309.9	336.0	353.0	362.0	364.7	359.3
147.5°	152.7	180.6	206.6	232.7	245.2	258.7	280.3	301.8	309.9	311.7	307.2
150°	118.6	141.9	165.3	186.8	197.6	209.3	228.2	247.9	258.7	260.5	256.9
152.5°	87.1	106.9	125.8	143.7	152.7	161.7	177.9	196.7	210.2	211.1	207.5
155°	59.3	75.5	90.7	104.2	112.3	119.5	132.0	146.4	160.8	161.7	159.0
157.5°	35.9	46.7	59.3	70.1	75.5	81.7	90.7	101.5	114.1	116.8	114.1
160°	18.0	24.3	31.4	38.6	43.1	47.6	52.1	61.1	68.3	74.6	71.0
162.5°	9.0	10.8	12.6	16.2	18.0	20.7	24.3	27.8	31.4	37.7	33.2
165°	5.4	6.3	7.2	7.2	8.1	8.1	8.1	8.1	8.1	11.7	8.1
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: P201331

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0
2.5°	1064.5	1066.3	1069.9	1071.6	1073.4	1075.2	1078.8	1084.2	1079.7	1075.2	1076.1
5°	1071.6	1071.6	1072.5	1075.2	1075.2	1076.1	1079.7	1085.1	1080.6	1074.3	1074.3
7.5°	1080.6	1079.7	1080.6	1081.5	1080.6	1080.6	1082.4	1085.1	1079.7	1072.5	1070.7
10°	1093.2	1090.5	1089.6	1090.5	1089.6	1086.9	1087.8	1087.8	1080.6	1069.9	1065.4
12.5°	1115.7	1111.2	1107.6	1106.7	1104.0	1099.5	1096.8	1093.2	1082.4	1069.9	1060.9
15°	1152.5	1145.3	1138.1	1135.4	1130.9	1120.2	1111.2	1103.1	1087.8	1069.9	1057.3
17.5°	1193.8	1184.8	1174.9	1171.4	1165.1	1149.8	1134.5	1119.3	1097.7	1072.5	1054.6
20°	1233.3	1222.6	1210.9	1204.6	1198.3	1179.4	1161.5	1141.7	1113.9	1080.6	1053.7
22.5°	1272.9	1260.3	1244.1	1238.7	1230.6	1209.1	1187.5	1165.1	1131.8	1092.3	1055.5
25°	1311.5	1297.1	1281.8	1272.9	1263.9	1239.6	1213.6	1186.6	1148.9	1105.8	1061.8
27.5°	1350.1	1333.9	1315.1	1305.2	1296.2	1269.3	1239.6	1209.1	1166.9	1118.4	1069.9
30°	1387.8	1369.9	1347.4	1336.6	1325.9	1295.3	1261.2	1227.0	1181.2	1129.1	1075.2
32.5°	1425.6	1405.8	1380.7	1368.1	1355.5	1320.5	1282.7	1244.1	1193.8	1139.0	1079.7
35°	1462.4	1440.8	1413.0	1397.7	1384.2	1346.5	1304.3	1261.2	1205.5	1147.1	1082.4
37.5°	1500.1	1475.9	1445.3	1428.3	1413.0	1371.7	1325.0	1276.5	1218.1	1153.4	1085.1
40°	1537.9	1511.8	1477.7	1459.7	1440.8	1395.9	1345.6	1291.7	1228.8	1159.7	1086.0
42.5°	1576.5	1547.7	1510.0	1490.2	1470.5	1420.2	1364.5	1305.2	1237.8	1164.2	1085.1
45°	1615.1	1582.8	1542.3	1519.9	1498.3	1443.5	1383.3	1316.9	1245.9	1166.9	1083.3
47.5°	1653.7	1619.6	1575.6	1551.3	1525.3	1466.9	1401.3	1329.5	1253.1	1167.8	1081.5
50°	1693.3	1656.4	1608.8	1581.9	1554.9	1489.3	1419.3	1340.2	1257.6	1168.7	1077.0
52.5°	1731.9	1692.4	1641.2	1612.4	1581.0	1511.8	1436.3	1351.0	1261.2	1167.8	1070.7
55°	1766.9	1725.6	1671.7	1641.2	1606.1	1532.5	1451.6	1360.0	1263.0	1165.1	1062.7
57.5°	1799.3	1757.0	1700.4	1666.3	1632.2	1552.2	1466.0	1369.9	1264.8	1160.6	1053.7
60°	1824.4	1782.2	1722.9	1688.8	1651.9	1568.4	1477.7	1375.3	1264.8	1154.3	1042.0
62.5°	1843.3	1801.0	1741.8	1705.8	1667.2	1581.9	1486.7	1380.7	1264.8	1148.0	1030.3
65°	1854.9	1813.6	1752.5	1716.6	1677.1	1588.2	1491.1	1381.6	1261.2	1139.0	1016.0
67.5°	1856.7	1815.4	1754.3	1719.3	1678.9	1588.2	1488.4	1377.1	1254.0	1127.3	999.8
70°	1848.7	1807.3	1747.2	1711.2	1671.7	1580.1	1478.6	1366.3	1241.4	1112.1	980.9
72.5°	1828.0	1785.8	1727.4	1690.6	1651.9	1561.2	1457.9	1346.5	1220.8	1090.5	958.5
75°	1792.1	1750.7	1693.3	1659.1	1619.6	1530.7	1426.5	1317.8	1192.0	1063.6	930.6
77.5°	1744.5	1704.0	1647.4	1613.3	1576.5	1489.3	1386.9	1279.1	1157.0	1030.3	898.3
80°	1687.9	1649.2	1593.5	1560.3	1524.4	1439.9	1339.3	1234.2	1113.9	990.8	862.3
82.5°	1627.7	1590.0	1536.1	1501.9	1467.8	1386.0	1289.9	1185.7	1068.1	948.6	823.7
85°	1569.3	1528.9	1475.0	1443.5	1409.4	1329.5	1238.7	1135.4	1021.3	905.5	786.0
87.5°	1508.2	1468.7	1415.7	1386.0	1353.7	1272.9	1186.6	1086.0	977.3	866.8	749.2
90°	1452.5	1413.9	1362.7	1333.0	1302.5	1224.4	1139.9	1044.7	939.6	832.7	718.6
92.5°	1401.3	1365.4	1316.9	1288.1	1258.5	1183.9	1103.1	1010.6	909.1	805.8	694.4
95°	1357.3	1322.3	1277.4	1249.5	1219.0	1148.0	1069.0	978.2	881.2	780.6	671.9
97.5°	1313.3	1280.0	1236.0	1209.1	1180.3	1111.2	1034.8	947.7	852.5	752.8	647.7
100°	1272.9	1240.5	1195.6	1171.4	1143.5	1077.0	1001.6	916.2	822.8	724.9	621.6
102.5°	1233.3	1201.0	1157.9	1133.6	1106.7	1040.2	966.5	882.1	791.4	697.1	596.5
105°	1192.9	1161.5	1118.4	1094.1	1067.2	1002.5	930.6	848.9	759.9	668.3	570.4
107.5°	1148.9	1118.4	1077.0	1052.8	1027.6	963.0	893.8	813.8	728.5	638.7	543.5
110°	1104.0	1073.4	1035.7	1009.7	985.4	922.5	855.2	778.8	695.3	608.1	515.6



TEST NUMBER: P201331

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1057.3	1027.6	990.8	966.5	941.4	881.2	816.5	742.9	662.0	576.7	486.9
115°	1009.7	980.0	943.2	918.9	896.5	839.0	776.1	706.0	627.9	545.3	458.1
117.5°	957.6	931.5	896.5	874.9	851.6	794.1	735.7	668.3	593.8	512.0	428.5
120°	909.1	883.9	849.8	826.4	805.8	751.0	695.3	629.7	556.0	479.7	397.9
122.5°	857.9	830.9	799.5	779.7	757.2	706.9	653.0	590.2	518.3	442.9	364.7
125°	804.0	778.8	748.3	729.4	708.7	661.1	609.9	547.1	478.8	406.0	330.6
127.5°	749.2	725.8	696.2	679.1	659.3	612.6	563.2	502.1	433.9	365.6	295.5
130°	693.5	670.1	643.2	625.2	606.3	562.3	513.8	453.6	389.0	325.2	261.4
132.5°	635.1	612.6	585.7	569.5	552.4	510.2	460.8	402.4	344.9	287.4	228.2
135°	574.9	554.2	530.0	514.7	497.6	454.5	407.8	354.8	303.6	250.6	195.8
137.5°	516.5	497.6	474.3	459.0	440.2	399.7	358.4	310.8	264.1	214.7	163.5
140°	459.0	442.0	419.5	402.4	386.3	348.5	310.8	267.7	225.5	180.6	134.7
142.5°	405.1	389.9	364.7	348.5	333.3	300.0	266.8	226.4	188.6	148.2	108.7
145°	352.1	338.7	310.8	296.4	283.9	254.2	221.0	187.7	153.6	118.6	84.4
147.5°	300.9	284.8	258.7	246.1	234.5	208.4	180.6	150.0	122.2	91.6	62.0
150°	251.5	231.8	209.3	198.5	188.6	166.2	141.9	116.8	92.5	66.5	43.1
152.5°	200.3	179.7	164.4	153.6	144.6	126.7	106.9	85.3	65.6	44.9	26.9
155°	148.2	133.8	119.5	114.1	106.0	90.7	74.6	57.5	41.3	26.9	15.3
157.5°	102.4	91.6	82.6	77.3	71.0	59.3	45.8	33.2	23.4	14.4	7.2
160°	62.0	54.8	48.5	44.0	39.5	31.4	22.5	15.3	9.9	4.5	2.7
162.5°	27.8	23.4	20.7	18.0	15.3	11.7	7.2	3.6	1.8	0.9	0.9
165°	5.4	3.6	2.7	1.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0
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: P201331

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0	1077.0
2.5°	1077.0	1077.9	1078.8	1078.8	1081.5	1086.0	1092.3	1093.2
5°	1074.3	1075.2	1075.2	1076.1	1078.8	1082.4	1087.8	1088.7
7.5°	1069.9	1069.9	1069.9	1069.9	1071.6	1075.2	1079.7	1080.6
10°	1063.6	1061.8	1060.9	1060.0	1060.9	1064.5	1068.1	1069.0
12.5°	1056.4	1051.9	1050.1	1049.2	1049.2	1050.1	1053.7	1053.7
15°	1048.3	1041.1	1038.4	1036.6	1033.0	1033.0	1036.6	1036.6
17.5°	1040.2	1030.3	1024.9	1021.3	1016.0	1015.1	1016.9	1015.1
20°	1033.0	1017.7	1010.6	1004.3	996.2	993.5	993.5	990.8
22.5°	1025.8	1005.2	995.3	986.3	973.7	969.2	966.5	964.8
25°	1021.3	991.7	979.1	968.3	951.3	941.4	938.7	935.1
27.5°	1020.4	980.9	963.9	950.4	927.0	915.3	908.2	903.7
30°	1020.4	970.1	947.7	928.8	900.1	882.1	874.9	873.1
32.5°	1019.5	962.1	935.1	910.9	874.0	850.7	839.9	837.2
35°	1016.9	954.0	922.5	892.9	848.0	818.3	803.1	799.5
37.5°	1013.3	944.1	910.9	876.7	821.0	785.1	766.2	760.8
40°	1009.7	934.2	896.5	859.7	794.1	751.0	726.7	720.4
42.5°	1003.4	923.4	883.9	843.5	768.9	716.8	689.0	679.1
45°	997.1	910.9	868.6	825.5	743.8	681.8	646.8	636.9
47.5°	989.0	897.4	853.4	805.8	720.4	647.7	608.1	595.6
50°	980.0	883.9	836.3	786.9	695.3	614.4	565.9	552.4
52.5°	970.1	868.6	819.2	767.1	670.1	583.0	526.4	509.3
55°	957.6	851.6	799.5	744.7	644.1	550.6	486.0	466.2
57.5°	944.1	834.5	780.6	724.0	618.0	520.1	446.4	424.0
60°	927.9	814.7	757.2	700.7	591.1	488.7	406.9	380.9
62.5°	910.9	795.0	736.6	676.4	564.1	458.1	368.3	338.7
65°	892.9	772.5	713.2	651.3	535.4	425.8	330.6	296.4
67.5°	871.3	748.3	687.2	624.3	505.7	393.4	293.7	255.1
70°	849.8	722.2	658.4	595.6	475.2	361.1	258.7	214.7
72.5°	823.7	694.4	629.7	565.9	443.7	329.7	224.6	174.3
75°	795.0	665.6	600.1	535.4	411.4	296.4	190.4	134.7
77.5°	764.4	634.2	569.5	503.9	380.9	265.0	159.0	101.5
80°	732.1	600.9	537.2	471.6	348.5	233.6	128.5	70.1
82.5°	696.2	568.6	504.8	439.3	318.0	203.0	100.6	43.1
85°	662.0	536.3	474.3	409.6	288.3	172.5	75.5	21.6
87.5°	628.8	506.6	446.4	382.7	263.2	149.1	54.8	6.3
90°	601.8	482.4	423.1	361.1	243.4	132.0	41.3	0.0
92.5°	580.3	463.5	405.1	344.9	229.1	120.4	35.0	0.0
95°	559.6	443.7	388.1	327.9	214.7	110.5	27.8	0.0
97.5°	537.2	424.9	369.2	310.8	200.3	99.7	22.5	0.0
100°	514.7	404.2	350.3	293.7	184.1	88.9	16.2	0.0
102.5°	490.5	382.7	329.7	274.9	169.8	77.3	10.8	0.0
105°	467.1	361.1	309.9	256.0	154.5	67.4	7.2	0.0
107.5°	442.0	339.5	289.2	238.0	139.2	56.6	4.5	0.0
110°	416.8	318.0	268.6	219.2	124.9	46.7	3.6	0.0



TEST NUMBER: P201331

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	391.6	295.5	247.9	199.4	110.5	37.7	2.7	0.9
115°	364.7	272.2	226.4	179.7	96.1	29.6	2.7	0.9
117.5°	337.8	247.9	205.7	160.8	82.6	22.5	1.8	0.9
120°	309.9	226.4	183.2	142.8	70.1	16.2	1.8	0.9
122.5°	283.0	203.9	162.6	124.0	57.5	12.6	1.8	0.9
125°	255.1	177.9	141.9	106.9	45.8	9.9	1.8	0.9
127.5°	225.5	153.6	120.4	88.0	35.0	7.2	1.8	0.9
130°	194.9	129.4	99.7	71.9	25.2	5.4	1.8	0.9
132.5°	166.2	108.7	80.8	56.6	18.0	4.5	1.8	0.9
135°	140.1	88.0	63.8	42.2	12.6	3.6	0.9	0.9
137.5°	115.0	70.1	48.5	30.5	9.0	2.7	1.8	0.9
140°	92.5	53.0	35.0	21.6	6.3	1.8	1.8	0.9
142.5°	71.9	37.7	24.3	14.4	4.5	1.8	0.9	0.9
145°	53.0	25.2	16.2	9.0	3.6	1.8	1.8	1.8
147.5°	35.9	17.1	9.9	6.3	2.7	1.8	1.8	0.9
150°	23.4	10.8	6.3	4.5	1.8	1.8	1.8	0.9
152.5°	14.4	6.3	3.6	2.7	1.8	1.8	1.8	0.9
155°	7.2	3.6	2.7	1.8	1.8	1.8	1.8	1.8
157.5°	3.6	2.7	1.8	1.8	1.8	1.8	1.8	1.8
160°	1.8	1.8	0.9	0.9	1.8	1.8	1.8	1.8
162.5°	0.9	0.9	0.9	0.9	1.8	1.8	1.8	1.8
165°	0.0	0.9	0.9	0.9	1.8	1.8	1.8	1.8
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)