

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: P201300

Luminaire Tested: **4LBLED-LD4-10-SYMW-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201300
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-L850-CD1-U
Description: 4 ft. Low Bay Linear, 10000 lm, Wht Sym lens, 5K
Light Source: (392) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OTi85W01720CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10557.3 lumens
Efficiency: N/A
Efficacy: 135.0 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

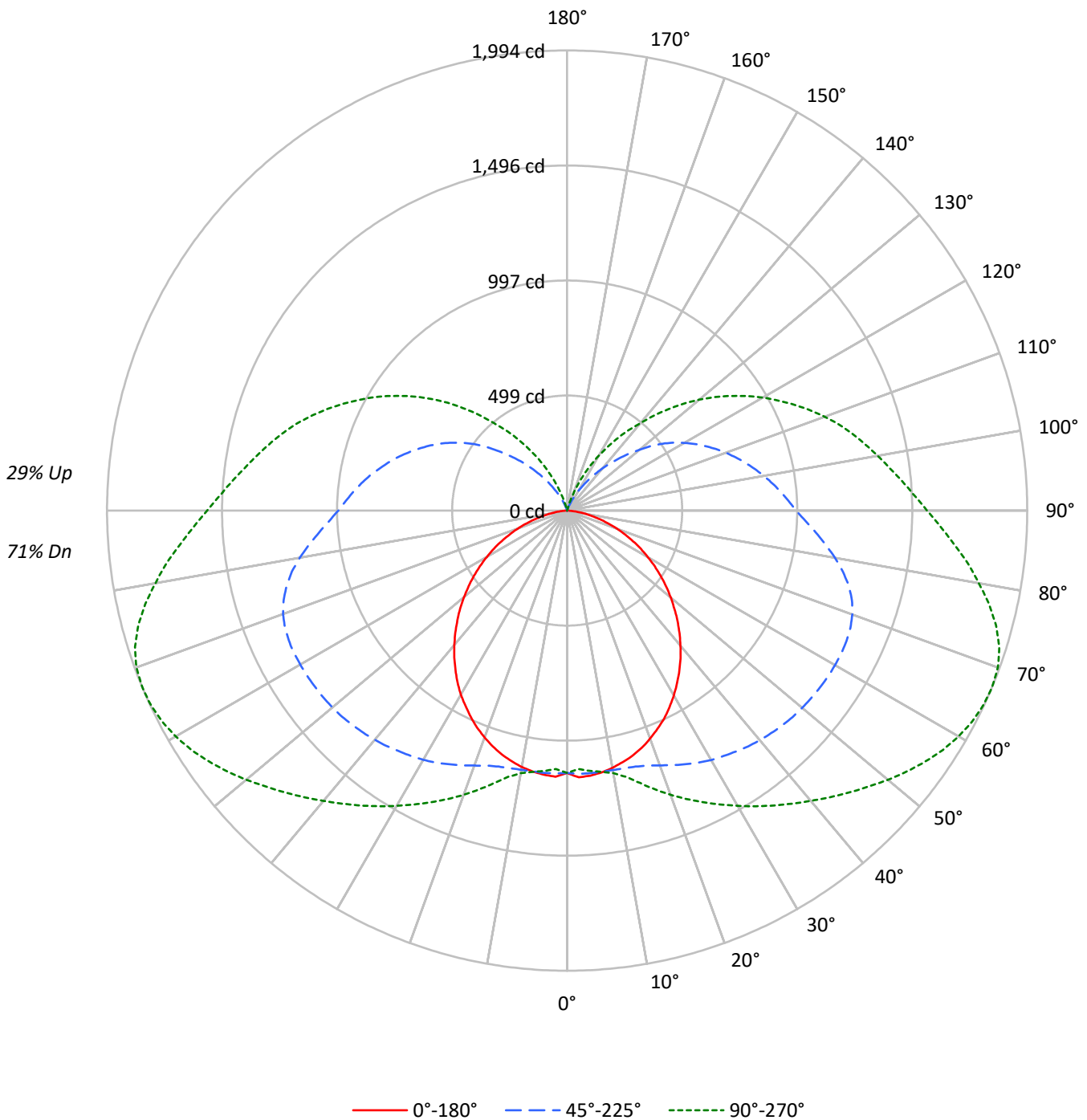
Input Watts (W): 78.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P201300

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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°	18320	18320	18320
5°	18566	16513	18504
10°	18355	15507	18295
15°	18082	15287	18003
20°	17696	15461	17602
25°	17267	15676	17135
30°	16700	15989	16648
35°	16089	16390	16017
40°	15385	16892	15328
45°	14645	17532	14563
50°	13833	18312	13764
55°	12945	19162	12869
60°	11971	19986	11885
65°	10829	20681	10733
70°	9461	21165	9341
75°	7711	21206	7414
80°	5704	20852	5303
85°	2969	20434	2644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.6	1.0
10°-20°	327.0	3.1
20°-30°	553.6	5.2
30°-40°	774.1	7.3
40°-50°	975.3	9.2
50°-60°	1145.2	10.8
60°-70°	1252.2	11.9
70°-80°	1237.1	11.7
80°-90°	1086.8	10.3
90°-100°	925.1	8.8
100°-110°	771.5	7.3
110°-120°	597.6	5.7
120°-130°	415.9	3.9
130°-140°	242.8	2.3
140°-150°	110.7	1.0
150°-160°	31.6	0.3
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	989.1	9.4
0°-40°	1763.2	16.7
0°-60°	3883.6	36.8
0°-90°	7459.8	70.7
90°-120°	2294.2	21.7
90°-150°	3063.6	29.0
90°-180°	3098.0	29.3
0°-180°	10557.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1137	1137	1137	1137	1137	
5°	1153	1143	1132	1141	1149	109
15°	1099	1148	1222	1148	1094	310
25°	995	1213	1394	1213	987	457
35°	848	1274	1560	1272	844	530
45°	676	1317	1728	1315	672	521
55°	495	1337	1895	1333	492	443
65°	316	1336	1991	1331	313	313
75°	148	1264	1924	1258	142	159
85°	26	1081	1684	1078	23	32
90°	0	992	1560	992	0	1
95°	0	929	1457	930	0	0
105°	1	799	1281	802	0	1
115°	1	661	1086	663	1	1
125°	2	505	866	505	1	2
135°	2	320	621	320	1	1
145°	3	164	385	162	2	1
155°	3	46	171	44	2	1
165°	3	5	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°	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9
2.5°	1156.8	1155.9	1151.1	1143.5	1140.7	1138.8	1137.8	1135.0	1134.0	1135.9	1141.6
5°	1153.0	1151.1	1147.3	1140.7	1137.8	1136.9	1135.9	1133.1	1132.1	1135.0	1142.6
7.5°	1144.5	1143.5	1139.7	1133.1	1132.1	1130.2	1130.2	1128.4	1128.4	1133.1	1141.6
10°	1132.1	1131.2	1127.4	1122.7	1121.7	1121.7	1121.7	1121.7	1123.6	1131.2	1141.6
12.5°	1116.0	1116.0	1113.2	1109.4	1110.3	1110.3	1111.3	1113.2	1118.9	1130.2	1143.5
15°	1099.0	1098.0	1095.2	1094.2	1097.1	1098.0	1100.9	1105.6	1115.1	1131.2	1148.3
17.5°	1077.2	1077.2	1074.3	1075.3	1080.9	1083.8	1088.5	1097.1	1112.2	1134.0	1158.7
20°	1051.5	1052.5	1051.5	1054.4	1063.9	1069.6	1075.3	1089.5	1111.3	1141.6	1174.8
22.5°	1023.1	1025.0	1025.0	1032.6	1044.9	1053.4	1062.0	1081.9	1113.2	1154.9	1193.8
25°	994.7	994.7	997.5	1007.9	1025.0	1035.4	1048.7	1077.2	1119.8	1169.1	1212.7
27.5°	960.5	963.4	968.1	982.3	1006.0	1020.3	1036.4	1077.2	1127.4	1183.3	1231.7
30°	924.5	927.3	934.9	954.8	985.2	1003.2	1025.9	1077.2	1134.0	1194.7	1247.8
32.5°	886.6	891.3	901.7	927.3	964.3	989.0	1018.4	1076.2	1139.7	1204.2	1261.1
35°	847.7	852.4	868.5	898.9	947.2	975.7	1009.8	1073.4	1142.6	1212.7	1274.4
37.5°	806.9	815.4	833.5	871.4	930.2	964.3	1000.3	1070.5	1145.4	1219.4	1287.6
40°	763.3	771.8	797.4	842.9	913.1	949.1	989.0	1066.7	1147.3	1226.0	1299.0
42.5°	720.6	732.0	761.4	816.4	896.0	935.9	977.6	1061.0	1146.4	1230.8	1308.5
45°	676.1	689.3	725.4	790.8	877.1	919.7	964.3	1053.4	1144.5	1233.6	1317.0
47.5°	630.6	646.7	689.3	765.2	858.1	902.7	951.0	1045.9	1141.6	1235.5	1324.6
50°	586.0	604.9	653.3	739.6	837.3	884.7	934.9	1037.3	1136.9	1236.4	1329.4
52.5°	541.4	562.3	619.2	714.0	815.4	865.7	918.8	1026.9	1131.2	1235.5	1334.1
55°	495.0	517.7	585.0	686.5	792.7	844.8	900.8	1013.6	1122.7	1231.7	1337.0
57.5°	450.4	476.0	552.8	659.9	769.0	824.0	883.7	999.4	1113.2	1228.9	1339.8
60°	404.9	434.3	519.6	629.6	744.3	801.2	862.9	983.3	1101.8	1222.2	1339.8
62.5°	360.3	393.5	487.4	602.1	719.7	778.5	842.0	965.3	1089.5	1215.6	1339.8
65°	315.7	353.7	454.2	571.8	692.2	753.8	818.3	946.3	1074.3	1206.1	1336.0
67.5°	272.1	315.7	420.1	540.5	663.7	727.3	793.6	924.5	1057.2	1193.8	1328.4
70°	229.5	277.8	385.9	507.3	634.3	696.9	766.1	900.8	1037.3	1177.7	1315.1
72.5°	186.8	241.8	349.9	474.1	603.1	667.5	737.7	873.3	1012.7	1155.9	1294.3
75°	147.9	205.8	315.7	440.0	570.8	636.2	706.4	842.9	983.3	1127.4	1263.9
77.5°	112.8	172.6	282.6	406.8	536.7	604.9	674.2	809.8	949.1	1091.4	1224.1
80°	79.6	140.3	249.4	372.6	502.5	569.9	638.1	773.7	913.1	1048.7	1178.6
82.5°	49.3	110.9	216.2	339.5	469.4	535.7	603.1	737.7	872.3	1004.1	1129.3
85°	25.6	83.4	184.9	308.2	437.1	502.5	568.9	700.7	830.6	958.6	1080.9
87.5°	8.5	60.7	159.3	280.7	407.7	473.1	537.6	665.6	791.7	914.1	1033.5
90°	0.0	45.5	140.3	258.9	383.1	446.6	511.1	634.3	757.6	878.0	991.8
92.5°	0.0	38.9	128.0	243.7	366.0	428.6	491.2	613.5	732.0	848.6	959.6
95°	0.0	31.3	117.6	228.5	348.0	409.6	471.3	590.7	707.4	821.1	929.2
97.5°	0.0	24.7	106.2	214.3	330.0	389.7	449.4	568.0	681.8	793.6	897.9
100°	0.9	19.0	93.9	196.3	311.0	369.8	427.6	543.3	654.3	762.3	865.7
102.5°	0.9	13.3	82.5	181.1	291.1	348.0	404.9	517.7	626.8	733.9	832.5
105°	0.9	9.5	71.1	165.0	272.1	327.1	383.1	493.1	599.3	702.6	799.3
107.5°	0.9	6.6	60.7	149.8	253.2	305.3	359.4	466.5	570.8	671.3	766.1
110°	0.9	4.7	51.2	133.7	232.3	284.5	336.6	440.0	541.4	639.1	732.0



TEST NUMBER: P201300

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	3.8	41.7	118.5	211.4	262.7	312.9	413.4	512.0	606.8	696.9
115°	0.9	3.8	33.2	104.3	190.6	239.9	288.3	386.9	480.7	573.7	660.9
117.5°	0.9	2.8	25.6	90.1	171.6	217.1	263.6	357.5	450.4	540.5	624.9
120°	0.9	2.8	19.0	75.9	151.7	194.4	239.9	329.0	418.2	505.4	586.0
122.5°	1.9	2.8	14.2	63.5	133.7	172.6	216.2	300.6	384.0	468.4	548.1
125°	1.9	1.9	11.4	51.2	114.7	150.8	189.6	271.2	347.0	427.6	505.4
127.5°	1.9	1.9	8.5	38.9	95.8	129.0	164.0	239.9	313.9	385.9	459.9
130°	1.9	1.9	7.6	28.4	77.8	107.1	139.4	207.7	276.9	343.2	410.6
132.5°	1.9	1.9	5.7	20.9	61.6	88.2	116.6	177.3	240.8	305.3	366.0
135°	1.9	1.9	4.7	15.2	46.5	70.2	94.8	148.9	206.7	267.4	320.5
137.5°	1.9	1.9	4.7	11.4	34.1	53.1	74.9	124.2	175.4	229.5	277.8
140°	1.9	1.9	3.8	9.5	23.7	38.9	56.9	99.6	143.2	193.4	239.9
142.5°	1.9	1.9	2.8	7.6	17.1	27.5	40.8	76.8	115.7	159.3	200.1
145°	2.8	1.9	2.8	6.6	12.3	19.0	28.4	57.8	89.1	128.0	164.0
147.5°	1.9	1.9	1.9	4.7	9.5	13.3	19.0	39.8	67.3	99.6	129.9
150°	2.8	1.9	1.9	3.8	7.6	9.5	13.3	26.5	46.5	73.0	99.6
152.5°	2.8	1.9	1.9	3.8	5.7	7.6	9.5	17.1	30.3	49.3	71.1
155°	2.8	1.9	1.9	2.8	4.7	5.7	7.6	11.4	18.0	30.3	46.5
157.5°	2.8	2.8	2.8	2.8	3.8	4.7	5.7	8.5	10.4	17.1	26.5
160°	2.8	2.8	1.9	1.9	2.8	2.8	3.8	5.7	7.6	9.5	13.3
162.5°	2.8	2.8	2.8	1.9	1.9	1.9	2.8	3.8	4.7	6.6	8.5
165°	2.8	2.8	1.9	1.9	1.9	1.9	1.9	1.9	2.8	3.8	4.7
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: P201300

CATALOG NUMBER: 4LBLEDD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9
2.5°	1143.5	1138.8	1136.9	1133.1	1130.2	1128.4	1125.5	1123.6	1121.7	1120.8	1120.8
5°	1144.5	1139.7	1137.8	1135.0	1134.0	1132.1	1130.2	1132.1	1131.2	1132.1	1131.2
7.5°	1145.4	1141.6	1141.6	1140.7	1139.7	1139.7	1137.8	1139.7	1140.7	1141.6	1140.7
10°	1148.3	1147.3	1149.2	1150.2	1150.2	1150.2	1150.2	1152.1	1155.9	1155.9	1154.9
12.5°	1153.0	1155.9	1161.5	1166.3	1168.2	1168.2	1172.0	1175.8	1180.5	1181.5	1180.5
15°	1162.5	1171.0	1183.3	1193.8	1198.5	1201.4	1208.9	1215.6	1220.3	1222.2	1220.3
17.5°	1179.6	1195.7	1214.6	1229.8	1235.5	1239.3	1249.7	1256.4	1262.0	1266.8	1264.9
20°	1202.3	1224.1	1246.9	1264.9	1272.5	1277.2	1288.6	1300.9	1306.6	1310.4	1309.5
22.5°	1227.0	1252.6	1278.2	1300.0	1308.5	1314.2	1328.4	1339.8	1348.3	1353.1	1352.1
25°	1250.7	1280.1	1311.4	1335.1	1345.5	1352.1	1367.3	1380.6	1390.1	1393.8	1392.9
27.5°	1274.4	1308.5	1342.6	1370.1	1380.6	1389.1	1407.1	1421.3	1432.7	1435.6	1435.6
30°	1293.3	1333.2	1370.1	1401.4	1412.8	1424.2	1444.1	1463.1	1473.5	1477.3	1476.3
32.5°	1311.4	1355.9	1397.6	1432.7	1446.9	1458.3	1482.0	1502.9	1515.2	1519.0	1515.2
35°	1329.4	1378.7	1425.1	1463.1	1478.2	1492.5	1519.0	1542.7	1556.0	1559.8	1557.9
37.5°	1346.4	1401.4	1451.7	1493.4	1511.4	1526.6	1554.1	1582.5	1596.8	1600.6	1596.8
40°	1362.6	1422.3	1477.3	1522.8	1542.7	1560.7	1593.0	1621.4	1637.5	1642.3	1640.4
42.5°	1377.7	1443.2	1502.9	1553.1	1575.9	1594.9	1630.9	1662.2	1679.3	1684.9	1680.2
45°	1391.0	1464.0	1528.5	1582.5	1607.2	1629.0	1669.8	1703.9	1721.0	1727.6	1721.9
47.5°	1404.3	1483.0	1552.2	1611.9	1640.4	1663.1	1708.6	1744.7	1764.6	1770.3	1764.6
50°	1416.6	1501.9	1577.8	1642.3	1672.6	1698.2	1747.5	1786.4	1806.3	1814.8	1807.3
52.5°	1428.0	1520.0	1601.5	1670.7	1703.9	1732.4	1785.5	1827.2	1850.9	1856.6	1849.0
55°	1439.4	1537.0	1622.4	1697.3	1733.3	1763.6	1821.5	1865.1	1888.8	1895.4	1887.9
57.5°	1448.8	1552.2	1642.3	1722.9	1759.9	1794.9	1852.8	1898.3	1922.9	1930.5	1922.9
60°	1455.5	1564.5	1660.3	1743.7	1782.6	1818.6	1880.3	1925.8	1950.4	1958.0	1950.4
62.5°	1460.2	1574.0	1672.6	1759.9	1801.6	1838.6	1901.1	1945.7	1971.3	1978.9	1971.3
65°	1461.2	1577.8	1679.3	1770.3	1812.9	1849.9	1913.5	1958.0	1984.6	1991.2	1983.6
67.5°	1455.5	1574.0	1679.3	1772.2	1814.8	1852.8	1916.3	1960.9	1986.5	1994.1	1986.5
70°	1444.1	1562.6	1669.8	1764.6	1807.3	1845.2	1907.8	1953.3	1978.9	1986.5	1977.9
72.5°	1422.3	1542.7	1649.9	1746.6	1787.3	1824.3	1886.0	1930.5	1955.2	1963.7	1954.2
75°	1391.0	1511.4	1618.6	1711.5	1754.2	1788.3	1849.9	1893.5	1916.3	1923.9	1915.4
77.5°	1350.2	1471.6	1575.0	1666.9	1709.6	1740.9	1800.6	1843.3	1866.0	1872.7	1864.2
80°	1302.8	1423.2	1522.8	1613.8	1653.7	1683.0	1742.8	1783.6	1805.4	1812.0	1807.3
82.5°	1250.7	1368.2	1465.0	1554.1	1592.0	1621.4	1680.2	1720.0	1741.8	1751.3	1743.7
85°	1197.6	1310.4	1405.2	1491.5	1529.4	1560.7	1614.8	1654.6	1676.4	1684.0	1679.3
87.5°	1144.5	1253.5	1345.5	1428.9	1464.0	1496.3	1550.3	1590.1	1611.9	1619.5	1613.8
90°	1099.9	1204.2	1292.4	1374.9	1410.9	1440.3	1492.5	1530.4	1552.2	1559.8	1555.0
92.5°	1063.9	1163.4	1248.8	1324.6	1358.8	1390.1	1440.3	1477.3	1499.1	1505.7	1501.0
95°	1029.7	1126.5	1208.9	1282.9	1316.1	1346.4	1393.8	1429.9	1450.7	1457.4	1453.6
97.5°	997.5	1090.4	1170.1	1242.1	1276.3	1303.8	1349.3	1383.4	1404.3	1410.0	1404.3
100°	961.5	1055.3	1133.1	1204.2	1233.6	1261.1	1306.6	1340.7	1358.8	1366.3	1361.6
102.5°	927.3	1017.4	1094.2	1164.4	1195.7	1223.2	1264.9	1298.1	1318.9	1323.7	1318.9
105°	892.3	979.5	1054.4	1123.6	1154.9	1181.5	1223.2	1255.4	1275.3	1281.0	1276.3
107.5°	856.2	940.6	1015.5	1080.9	1111.3	1135.9	1178.6	1209.9	1227.0	1237.4	1229.8
110°	817.3	900.8	972.8	1036.4	1065.8	1089.5	1131.2	1162.5	1178.6	1188.1	1181.5



TEST NUMBER: P201300

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	781.3	860.0	929.2	990.9	1018.4	1042.1	1082.8	1113.2	1128.4	1137.8	1131.2
115°	743.4	816.4	884.7	943.5	971.0	992.8	1033.5	1062.0	1077.2	1085.7	1080.0
117.5°	702.6	773.7	838.2	896.0	921.6	943.5	982.3	1010.8	1025.0	1031.6	1025.9
120°	662.8	732.0	792.7	847.7	873.3	894.1	932.1	958.6	971.9	979.5	973.8
122.5°	621.1	688.4	743.4	798.4	822.1	842.0	876.1	904.6	916.9	923.5	919.7
125°	576.5	642.9	696.0	746.2	769.0	788.0	821.1	844.8	859.1	865.7	861.9
127.5°	530.0	593.6	647.6	694.1	715.9	736.7	764.2	790.8	800.3	807.9	804.1
130°	477.9	541.4	591.7	639.1	659.9	677.0	707.4	729.2	741.5	748.1	745.3
132.5°	426.7	485.5	538.6	581.2	601.2	619.2	646.7	667.5	684.6	685.5	681.8
135°	377.4	428.6	476.9	522.5	542.4	560.4	585.0	604.0	620.1	621.1	616.3
137.5°	330.0	377.4	419.1	461.8	482.6	501.6	524.4	542.4	557.5	560.4	553.7
140°	284.5	328.1	366.0	403.9	423.8	441.9	466.5	481.7	494.0	495.0	491.2
142.5°	240.8	280.7	313.9	348.9	367.0	383.1	410.6	425.7	437.1	440.0	434.3
145°	200.1	235.2	266.4	296.8	312.0	327.1	354.6	372.6	382.1	385.0	379.3
147.5°	161.2	190.6	218.1	245.6	258.9	273.1	295.8	318.6	327.1	329.0	324.3
150°	125.2	149.8	174.5	197.2	208.6	220.9	240.8	261.7	273.1	275.0	271.2
152.5°	92.0	112.8	132.7	151.7	161.2	170.7	187.7	207.7	221.9	222.8	219.0
155°	62.6	79.6	95.8	110.0	118.5	126.1	139.4	154.6	169.7	170.7	167.8
157.5°	37.9	49.3	62.6	74.0	79.6	86.3	95.8	107.1	120.4	123.3	120.4
160°	19.0	25.6	33.2	40.8	45.5	50.3	55.0	64.5	72.1	78.7	74.9
162.5°	9.5	11.4	13.3	17.1	19.0	21.8	25.6	29.4	33.2	39.8	35.1
165°	5.7	6.6	7.6	7.6	8.5	8.5	8.5	8.5	8.5	12.3	8.5
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



TEST NUMBER: P201300

CATALOG NUMBER: 4LBLEDD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9
2.5°	1123.6	1125.5	1129.3	1131.2	1133.1	1135.0	1138.8	1144.5	1139.7	1135.0	1135.9
5°	1131.2	1131.2	1132.1	1135.0	1135.0	1135.9	1139.7	1145.4	1140.7	1134.0	1134.0
7.5°	1140.7	1139.7	1140.7	1141.6	1140.7	1140.7	1142.6	1145.4	1139.7	1132.1	1130.2
10°	1154.0	1151.1	1150.2	1151.1	1150.2	1147.3	1148.3	1148.3	1140.7	1129.3	1124.6
12.5°	1177.7	1172.9	1169.1	1168.2	1165.3	1160.6	1157.7	1154.0	1142.6	1129.3	1119.8
15°	1216.5	1208.9	1201.4	1198.5	1193.8	1182.4	1172.9	1164.4	1148.3	1129.3	1116.0
17.5°	1260.2	1250.7	1240.2	1236.4	1229.8	1213.7	1197.6	1181.5	1158.7	1132.1	1113.2
20°	1301.9	1290.5	1278.2	1271.5	1264.9	1245.0	1226.0	1205.2	1175.8	1140.7	1112.2
22.5°	1343.6	1330.3	1313.3	1307.6	1299.0	1276.3	1253.5	1229.8	1194.7	1153.0	1114.1
25°	1384.4	1369.2	1353.1	1343.6	1334.1	1308.5	1281.0	1252.6	1212.7	1167.2	1120.8
27.5°	1425.1	1408.1	1388.2	1377.7	1368.2	1339.8	1308.5	1276.3	1231.7	1180.5	1129.3
30°	1465.0	1446.0	1422.3	1410.9	1399.5	1367.3	1331.3	1295.2	1246.9	1191.9	1135.0
32.5°	1504.8	1483.9	1457.4	1444.1	1430.8	1393.8	1354.0	1313.3	1260.2	1202.3	1139.7
35°	1543.7	1520.9	1491.5	1475.4	1461.2	1421.3	1376.8	1331.3	1272.5	1210.8	1142.6
37.5°	1583.5	1557.9	1525.6	1507.6	1491.5	1447.9	1398.6	1347.4	1285.8	1217.5	1145.4
40°	1623.3	1595.8	1559.8	1540.8	1520.9	1473.5	1420.4	1363.5	1297.1	1224.1	1146.4
42.5°	1664.1	1633.7	1593.9	1573.1	1552.2	1499.1	1440.3	1377.7	1306.6	1228.9	1145.4
45°	1704.9	1670.7	1628.1	1604.3	1581.6	1523.8	1460.2	1390.1	1315.1	1231.7	1143.5
47.5°	1745.6	1709.6	1663.1	1637.5	1610.0	1548.4	1479.2	1403.3	1322.7	1232.7	1141.6
50°	1787.3	1748.5	1698.2	1669.8	1641.3	1572.1	1498.1	1414.7	1327.5	1233.6	1136.9
52.5°	1828.1	1786.4	1732.4	1702.0	1668.8	1595.8	1516.2	1426.1	1331.3	1232.7	1130.2
55°	1865.1	1821.5	1764.6	1732.4	1695.4	1617.6	1532.3	1435.6	1333.2	1229.8	1121.7
57.5°	1899.2	1854.7	1794.9	1758.9	1722.9	1638.5	1547.5	1446.0	1335.1	1225.1	1112.2
60°	1925.8	1881.2	1818.6	1782.6	1743.7	1655.5	1559.8	1451.7	1335.1	1218.4	1099.9
62.5°	1945.7	1901.1	1838.6	1800.6	1759.9	1669.8	1569.3	1457.4	1335.1	1211.8	1087.6
65°	1958.0	1914.4	1849.9	1812.0	1770.3	1676.4	1574.0	1458.3	1331.3	1202.3	1072.4
67.5°	1959.9	1916.3	1851.8	1814.8	1772.2	1676.4	1571.2	1453.6	1323.7	1190.0	1055.3
70°	1951.4	1907.8	1844.2	1806.3	1764.6	1667.9	1560.7	1442.2	1310.4	1173.9	1035.4
72.5°	1929.6	1885.0	1823.4	1784.5	1743.7	1648.0	1538.9	1421.3	1288.6	1151.1	1011.7
75°	1891.7	1848.0	1787.3	1751.3	1709.6	1615.7	1505.7	1391.0	1258.3	1122.7	982.3
77.5°	1841.4	1798.7	1739.0	1703.0	1664.1	1572.1	1464.0	1350.2	1221.3	1087.6	948.2
80°	1781.7	1740.9	1682.1	1647.0	1609.1	1520.0	1413.8	1302.8	1175.8	1045.9	910.3
82.5°	1718.1	1678.3	1621.4	1585.4	1549.4	1463.1	1361.6	1251.6	1127.4	1001.3	869.5
85°	1656.5	1613.8	1556.9	1523.8	1487.7	1403.3	1307.6	1198.5	1078.1	955.8	829.7
87.5°	1592.0	1550.3	1494.4	1463.1	1428.9	1343.6	1252.6	1146.4	1031.6	915.0	790.8
90°	1533.2	1492.5	1438.4	1407.1	1374.9	1292.4	1203.3	1102.8	991.8	879.0	758.6
92.5°	1479.2	1441.3	1390.1	1359.7	1328.4	1249.7	1164.4	1066.7	959.6	850.5	733.0
95°	1432.7	1395.7	1348.3	1318.9	1286.7	1211.8	1128.4	1032.6	930.2	824.0	709.3
97.5°	1386.3	1351.2	1304.7	1276.3	1245.9	1172.9	1092.3	1000.3	899.8	794.6	683.6
100°	1343.6	1309.5	1262.0	1236.4	1207.1	1136.9	1057.2	967.2	868.5	765.2	656.2
102.5°	1301.9	1267.7	1222.2	1196.6	1168.2	1098.0	1020.3	931.1	835.4	735.8	629.6
105°	1259.2	1226.0	1180.5	1154.9	1126.5	1058.2	982.3	896.0	802.2	705.5	602.1
107.5°	1212.7	1180.5	1136.9	1111.3	1084.7	1016.5	943.5	859.1	769.0	674.2	573.7
110°	1165.3	1133.1	1093.3	1065.8	1040.2	973.8	902.7	822.1	733.9	641.9	544.3



TEST NUMBER: P201300

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1116.0	1084.7	1045.9	1020.3	993.7	930.2	861.9	784.2	698.8	608.7	513.9
115°	1065.8	1034.5	995.6	970.0	946.3	885.6	819.2	745.3	662.8	575.6	483.6
117.5°	1010.8	983.3	946.3	923.5	898.9	838.2	776.6	705.5	626.8	540.5	452.3
120°	959.6	933.0	897.0	872.3	850.5	792.7	733.9	664.7	586.9	506.3	420.1
122.5°	905.5	877.1	843.9	823.0	799.3	746.2	689.3	623.0	547.1	467.5	385.0
125°	848.6	822.1	789.8	769.9	748.1	697.9	643.8	577.5	505.4	428.6	348.9
127.5°	790.8	766.1	734.9	716.8	696.0	646.7	594.5	530.0	458.0	385.9	312.0
130°	732.0	707.4	678.9	659.9	640.0	593.6	542.4	478.8	410.6	343.2	275.9
132.5°	670.4	646.7	618.2	601.2	583.1	538.6	486.4	424.8	364.1	303.4	240.8
135°	606.8	585.0	559.4	543.3	525.3	479.8	430.5	374.5	320.5	264.5	206.7
137.5°	545.2	525.3	500.6	484.5	464.6	421.9	378.3	328.1	278.8	226.6	172.6
140°	484.5	466.5	442.8	424.8	407.7	367.9	328.1	282.6	238.0	190.6	142.2
142.5°	427.6	411.5	385.0	367.9	351.8	316.7	281.6	238.9	199.1	156.5	114.7
145°	371.7	357.5	328.1	312.9	299.6	268.3	233.3	198.2	162.1	125.2	89.1
147.5°	317.6	300.6	273.1	259.8	247.5	220.0	190.6	158.3	129.0	96.7	65.4
150°	265.5	244.6	220.9	209.6	199.1	175.4	149.8	123.3	97.7	70.2	45.5
152.5°	211.4	189.6	173.5	162.1	152.7	133.7	112.8	90.1	69.2	47.4	28.4
155°	156.5	141.3	126.1	120.4	111.9	95.8	78.7	60.7	43.6	28.4	16.1
157.5°	108.1	96.7	87.2	81.5	74.9	62.6	48.4	35.1	24.7	15.2	7.6
160°	65.4	57.8	51.2	46.5	41.7	33.2	23.7	16.1	10.4	4.7	2.8
162.5°	29.4	24.7	21.8	19.0	16.1	12.3	7.6	3.8	1.9	0.9	0.9
165°	5.7	3.8	2.8	1.9	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: P201300

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9	1136.9
2.5°	1136.9	1137.8	1138.8	1138.8	1141.6	1146.4	1153.0	1154.0
5°	1134.0	1135.0	1135.0	1135.9	1138.8	1142.6	1148.3	1149.2
7.5°	1129.3	1129.3	1129.3	1129.3	1131.2	1135.0	1139.7	1140.7
10°	1122.7	1120.8	1119.8	1118.9	1119.8	1123.6	1127.4	1128.4
12.5°	1115.1	1110.3	1108.4	1107.5	1107.5	1108.4	1112.2	1112.2
15°	1106.5	1099.0	1096.1	1094.2	1090.4	1090.4	1094.2	1094.2
17.5°	1098.0	1087.6	1081.9	1078.1	1072.4	1071.5	1073.4	1071.5
20°	1090.4	1074.3	1066.7	1060.1	1051.5	1048.7	1048.7	1045.9
22.5°	1082.8	1061.0	1050.6	1041.1	1027.8	1023.1	1020.3	1018.4
25°	1078.1	1046.8	1033.5	1022.2	1004.1	993.7	990.9	987.1
27.5°	1077.2	1035.4	1017.4	1003.2	978.5	966.2	958.6	953.9
30°	1077.2	1024.1	1000.3	980.4	950.1	931.1	923.5	921.6
32.5°	1076.2	1015.5	987.1	961.5	922.6	897.9	886.6	883.7
35°	1073.4	1007.0	973.8	942.5	895.1	863.8	847.7	843.9
37.5°	1069.6	996.6	961.5	925.4	866.7	828.7	808.8	803.1
40°	1065.8	986.1	946.3	907.4	838.2	792.7	767.1	760.5
42.5°	1059.1	974.7	933.0	890.4	811.7	756.7	727.3	716.8
45°	1052.5	961.5	916.9	871.4	785.1	719.7	682.7	672.3
47.5°	1044.0	947.2	900.8	850.5	760.5	683.6	641.9	628.7
50°	1034.5	933.0	882.8	830.6	733.9	648.6	597.4	583.1
52.5°	1024.1	916.9	864.8	809.8	707.4	615.4	555.6	537.6
55°	1010.8	898.9	843.9	786.1	679.9	581.2	513.0	492.1
57.5°	996.6	880.9	824.0	764.2	652.4	549.0	471.3	447.5
60°	979.5	860.0	799.3	739.6	623.9	515.8	429.5	402.0
62.5°	961.5	839.2	777.5	714.0	595.5	483.6	388.8	357.5
65°	942.5	815.4	752.9	687.4	565.1	449.4	348.9	312.9
67.5°	919.7	789.8	725.4	659.0	533.8	415.3	310.1	269.3
70°	897.0	762.3	695.0	628.7	501.6	381.2	273.1	226.6
72.5°	869.5	733.0	664.7	597.4	468.4	348.0	237.0	183.9
75°	839.2	702.6	633.4	565.1	434.3	312.9	201.0	142.2
77.5°	806.9	669.4	601.2	531.9	402.0	279.7	167.8	107.1
80°	772.8	634.3	567.0	497.8	367.9	246.5	135.6	74.0
82.5°	734.9	600.2	532.9	463.7	335.7	214.3	106.2	45.5
85°	698.8	566.1	500.6	432.4	304.4	182.1	79.6	22.8
87.5°	663.7	534.8	471.3	403.9	277.8	157.4	57.8	6.6
90°	635.3	509.2	446.6	381.2	257.0	139.4	43.6	0.0
92.5°	612.5	489.3	427.6	364.1	241.8	127.1	37.0	0.0
95°	590.7	468.4	409.6	346.1	226.6	116.6	29.4	0.0
97.5°	567.0	448.5	389.7	328.1	211.4	105.2	23.7	0.0
100°	543.3	426.7	369.8	310.1	194.4	93.9	17.1	0.0
102.5°	517.7	403.9	348.0	290.1	179.2	81.5	11.4	0.0
105°	493.1	381.2	327.1	270.2	163.1	71.1	7.6	0.0
107.5°	466.5	358.4	305.3	251.3	147.0	59.7	4.7	0.0
110°	440.0	335.7	283.5	231.4	131.8	49.3	3.8	0.0



TEST NUMBER: P201300

CATALOG NUMBER: 4LBLED-LD4-10-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	413.4	312.0	261.7	210.5	116.6	39.8	2.8	0.9
115°	385.0	287.3	238.9	189.6	101.5	31.3	2.8	0.9
117.5°	356.5	261.7	217.1	169.7	87.2	23.7	1.9	0.9
120°	327.1	238.9	193.4	150.8	74.0	17.1	1.9	0.9
122.5°	298.7	215.2	171.6	130.9	60.7	13.3	1.9	0.9
125°	269.3	187.7	149.8	112.8	48.4	10.4	1.9	0.9
127.5°	238.0	162.1	127.1	92.9	37.0	7.6	1.9	0.9
130°	205.8	136.5	105.2	75.9	26.5	5.7	1.9	0.9
132.5°	175.4	114.7	85.3	59.7	19.0	4.7	1.9	0.9
135°	147.9	92.9	67.3	44.6	13.3	3.8	0.9	0.9
137.5°	121.4	74.0	51.2	32.2	9.5	2.8	1.9	0.9
140°	97.7	55.9	37.0	22.8	6.6	1.9	1.9	0.9
142.5°	75.9	39.8	25.6	15.2	4.7	1.9	0.9	0.9
145°	55.9	26.5	17.1	9.5	3.8	1.9	1.9	1.9
147.5°	37.9	18.0	10.4	6.6	2.8	1.9	1.9	0.9
150°	24.7	11.4	6.6	4.7	1.9	1.9	1.9	0.9
152.5°	15.2	6.6	3.8	2.8	1.9	1.9	1.9	0.9
155°	7.6	3.8	2.8	1.9	1.9	1.9	1.9	1.9
157.5°	3.8	2.8	1.9	1.9	1.9	1.9	1.9	1.9
160°	1.9	1.9	0.9	0.9	1.9	1.9	1.9	1.9
162.5°	0.9	0.9	0.9	0.9	1.9	1.9	1.9	1.9
165°	0.0	0.9	0.9	0.9	1.9	1.9	1.9	1.9
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)