

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: P201334

Luminaire Tested: **8LBLED-LD4-10-SYMW-UNV-L835-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P201334  
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: 8LBLELD4-10-SYMW-UNV-L835-CD1-U  
Description: 8 ft. Low Bay Linear, 10000 lm, Wht Sym lens, 3.3.5K  
Light Source: (784) 3500K CCT, 80 CRI LEDS  
2UT217098A8354C  
Ballast/Driver: OSRAM  
(OTi85W01600CC)

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10110.9 lumens  
Efficiency: N/A  
Efficacy: 140.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 2.12 / 1.93  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 8' x H: 0.21')  
CIE Type: Semi-Direct

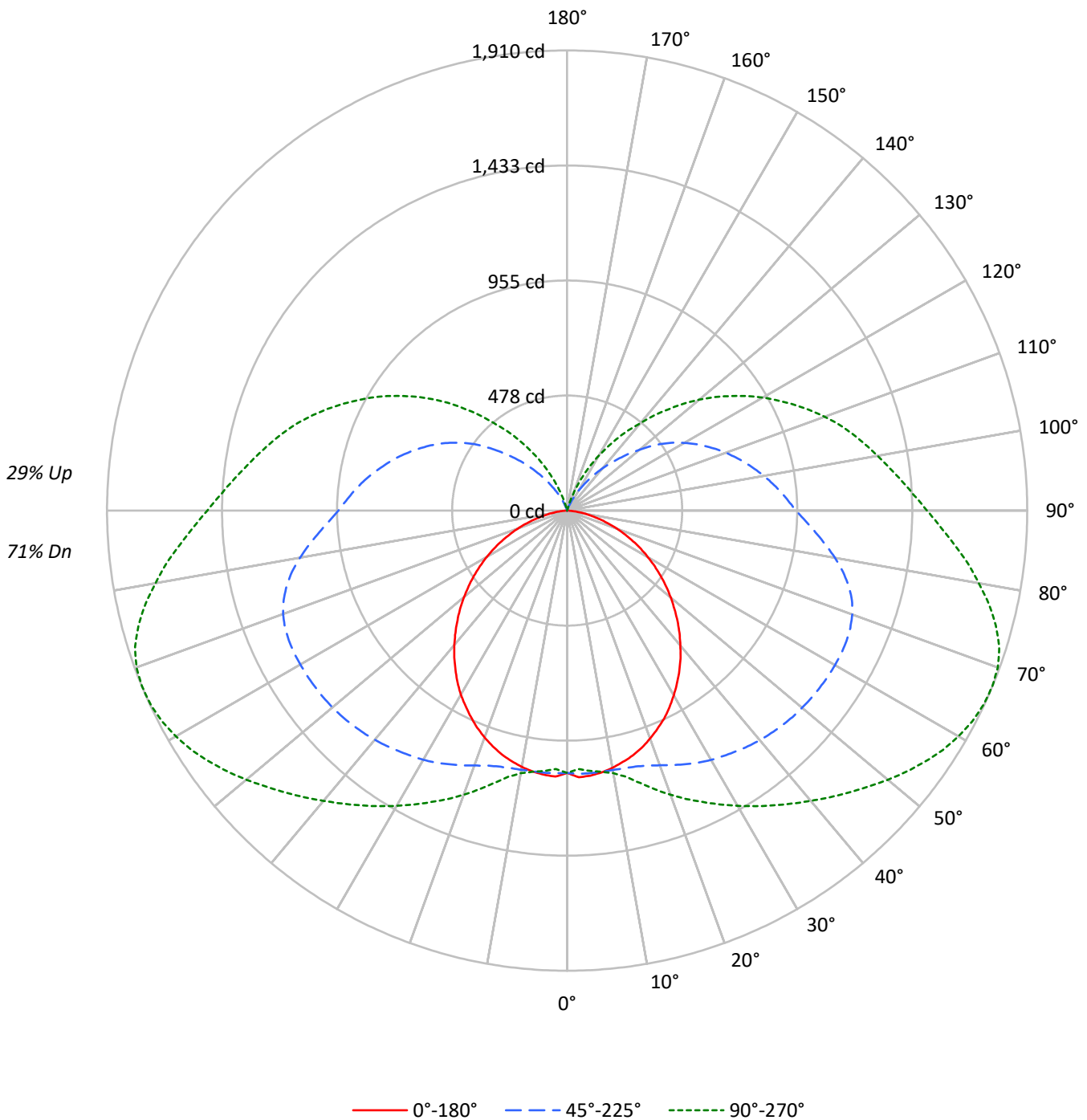
Input Watts (W): 71.96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	8772	8772	8772
5°	8911	7908	8881
10°	8830	7426	8800
15°	8718	7320	8681
20°	8554	7404	8507
25°	8367	7507	8303
30°	8115	7656	8091
35°	7842	7848	7807
40°	7524	8088	7496
45°	7191	8396	7150
50°	6823	8769	6790
55°	6420	9176	6383
60°	5980	9570	5936
65°	5461	9903	5412
70°	4833	10135	4771
75°	4021	10154	3865
80°	3085	9985	2863
85°	1746	9785	1554



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.0	1.0
10°-20°	313.2	3.1
20°-30°	530.2	5.2
30°-40°	741.3	7.3
40°-50°	934.0	9.2
50°-60°	1096.7	10.8
60°-70°	1199.2	11.9
70°-80°	1184.8	11.7
80°-90°	1040.9	10.3
90°-100°	886.0	8.8
100°-110°	738.9	7.3
110°-120°	572.3	5.7
120°-130°	398.3	3.9
130°-140°	232.5	2.3
140°-150°	106.1	1.0
150°-160°	30.3	0.3
160°-170°	2.2	0.0
170°-180°	0.0	0.0
0°-30°	947.3	9.4
0°-40°	1688.6	16.7
0°-60°	3719.4	36.8
0°-90°	7144.4	70.7
90°-120°	2197.2	21.7
90°-150°	2934.1	29.0
90°-180°	2967.0	29.3
0°-180°	10110.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1089	1089	1089	1089	1089	
5°	1104	1094	1084	1092	1101	105
15°	1052	1100	1170	1100	1048	296
25°	953	1162	1335	1162	945	438
35°	812	1220	1494	1219	808	507
45°	648	1261	1655	1260	644	499
55°	474	1280	1815	1277	471	424
65°	302	1280	1907	1275	300	300
75°	142	1210	1842	1205	136	152
85°	24	1035	1613	1032	22	31
90°	0	950	1494	950	0	1
95°	0	890	1396	891	0	0
105°	1	766	1227	768	0	1
115°	1	633	1040	635	1	1
125°	2	484	829	484	1	2
135°	2	307	595	307	1	1
145°	3	157	369	155	2	1
155°	3	44	164	42	2	1
165°	3	4	12	0	2	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P201334

CATALOG NUMBER: 8LBLELD4-10-SYMW-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1107.9	1107.0	1102.4	1095.2	1092.4	1090.6	1089.7	1087.0	1086.1	1087.9	1093.4
5°	1104.3	1102.4	1098.8	1092.4	1089.7	1088.8	1087.9	1085.2	1084.3	1087.0	1094.3
7.5°	1096.1	1095.2	1091.5	1085.2	1084.3	1082.5	1082.5	1080.6	1080.6	1085.2	1093.4
10°	1084.3	1083.4	1079.7	1075.2	1074.3	1074.3	1074.3	1074.3	1076.1	1083.4	1093.4
12.5°	1068.8	1068.8	1066.1	1062.5	1063.4	1063.4	1064.3	1066.1	1071.6	1082.5	1095.2
15°	1052.5	1051.6	1048.9	1048.0	1050.7	1051.6	1054.3	1058.8	1067.9	1083.4	1099.7
17.5°	1031.6	1031.6	1028.9	1029.8	1035.2	1038.0	1042.5	1050.7	1065.2	1086.1	1109.7
20°	1007.1	1008.0	1007.1	1009.8	1018.9	1024.3	1029.8	1043.4	1064.3	1093.4	1125.1
22.5°	979.8	981.7	981.7	988.9	1000.7	1008.9	1017.1	1036.1	1066.1	1106.1	1143.3
25°	952.6	952.6	955.3	965.3	981.7	991.6	1004.4	1031.6	1072.5	1119.7	1161.5
27.5°	919.9	922.6	927.2	940.8	963.5	977.1	992.6	1031.6	1079.7	1133.3	1179.6
30°	885.4	888.1	895.4	914.5	943.5	960.8	982.6	1031.6	1086.1	1144.2	1195.1
32.5°	849.1	853.6	863.6	888.1	923.5	947.2	975.3	1030.7	1091.5	1153.3	1207.8
35°	811.8	816.4	831.8	860.9	907.2	934.4	967.1	1028.0	1094.3	1161.5	1220.5
37.5°	772.8	781.0	798.2	834.5	890.8	923.5	958.0	1025.2	1097.0	1167.8	1233.2
40°	731.0	739.2	763.7	807.3	874.5	909.0	947.2	1021.6	1098.8	1174.2	1244.1
42.5°	690.2	701.1	729.2	781.9	858.2	896.3	936.3	1016.2	1097.9	1178.7	1253.2
45°	647.5	660.2	694.7	757.4	840.0	880.9	923.5	1008.9	1096.1	1181.4	1261.4
47.5°	603.9	619.3	660.2	732.8	821.8	864.5	910.8	1001.6	1093.4	1183.3	1268.6
50°	561.2	579.4	625.7	708.3	801.9	847.3	895.4	993.5	1088.8	1184.2	1273.2
52.5°	518.5	538.5	593.0	683.8	781.0	829.1	880.0	983.5	1083.4	1183.3	1277.7
55°	474.0	495.8	560.3	657.5	759.2	809.1	862.7	970.8	1075.2	1179.6	1280.4
57.5°	431.3	455.9	529.4	632.0	736.5	789.1	846.4	957.1	1066.1	1176.9	1283.2
60°	387.8	415.9	497.6	603.0	712.9	767.3	826.4	941.7	1055.2	1170.5	1283.2
62.5°	345.1	376.9	466.8	576.6	689.3	745.6	806.4	924.4	1043.4	1164.2	1283.2
65°	302.4	338.7	435.0	547.6	662.9	721.9	783.7	906.3	1028.9	1155.1	1279.5
67.5°	260.6	302.4	402.3	517.6	635.7	696.5	760.1	885.4	1012.5	1143.3	1272.3
70°	219.8	266.1	369.6	485.8	607.5	667.5	733.7	862.7	993.5	1127.9	1259.5
72.5°	178.9	231.6	335.1	454.1	577.6	639.3	706.5	836.4	969.9	1107.0	1239.6
75°	141.7	197.1	302.4	421.4	546.7	609.3	676.5	807.3	941.7	1079.7	1210.5
77.5°	108.1	165.3	270.6	389.6	514.0	579.4	645.7	775.5	909.0	1045.2	1172.4
80°	76.3	134.4	238.8	356.9	481.3	545.8	611.2	741.0	874.5	1004.4	1128.8
82.5°	47.2	106.2	207.0	325.1	449.5	513.1	577.6	706.5	835.5	961.7	1081.6
85°	24.5	79.9	177.1	295.1	418.6	481.3	544.9	671.1	795.5	918.1	1035.2
87.5°	8.2	58.1	152.6	268.8	390.5	453.1	514.9	637.5	758.3	875.4	989.8
90°	0.0	43.6	134.4	247.9	366.9	427.7	489.5	607.5	725.6	840.9	949.9
92.5°	0.0	37.2	122.6	233.4	350.5	410.5	470.4	587.5	701.1	812.8	919.0
95°	0.0	30.0	112.6	218.9	333.3	392.3	451.3	565.7	677.4	786.4	889.9
97.5°	0.0	23.6	101.7	205.2	316.0	373.2	430.4	544.0	652.9	760.1	860.0
100°	0.9	18.2	89.9	188.0	297.9	354.2	409.6	520.3	626.6	730.1	829.1
102.5°	0.9	12.7	79.0	173.4	278.8	333.3	387.8	495.8	600.3	702.9	797.3
105°	0.9	9.1	68.1	158.0	260.6	313.3	366.9	472.2	573.9	672.9	765.5
107.5°	0.9	6.4	58.1	143.5	242.5	292.4	344.2	446.8	546.7	642.9	733.7
110°	0.9	4.5	49.0	128.0	222.5	272.4	322.4	421.4	518.5	612.1	701.1



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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	40.0	113.5	202.5	251.5	299.7	395.9	490.4	581.2	667.5
115°	0.9	3.6	31.8	99.9	182.5	229.8	276.1	370.5	460.4	549.4	632.9
117.5°	0.9	2.7	24.5	86.3	164.4	208.0	252.5	342.4	431.3	517.6	598.4
120°	0.9	2.7	18.2	72.6	145.3	186.2	229.8	315.1	400.5	484.0	561.2
122.5°	1.8	2.7	13.6	60.8	128.0	165.3	207.0	287.9	367.8	448.6	524.9
125°	1.8	1.8	10.9	49.0	109.9	144.4	181.6	259.7	332.4	409.6	484.0
127.5°	1.8	1.8	8.2	37.2	91.7	123.5	157.1	229.8	300.6	369.6	440.4
130°	1.8	1.8	7.3	27.2	74.5	102.6	133.5	198.9	265.2	328.7	393.2
132.5°	1.8	1.8	5.4	20.0	59.0	84.5	111.7	169.8	230.7	292.4	350.5
135°	1.8	1.8	4.5	14.5	44.5	67.2	90.8	142.6	198.0	256.1	306.9
137.5°	1.8	1.8	4.5	10.9	32.7	50.9	71.7	119.0	168.0	219.8	266.1
140°	1.8	1.8	3.6	9.1	22.7	37.2	54.5	95.4	137.1	185.3	229.8
142.5°	1.8	1.8	2.7	7.3	16.3	26.3	39.0	73.6	110.8	152.6	191.6
145°	2.7	1.8	2.7	6.4	11.8	18.2	27.2	55.4	85.4	122.6	157.1
147.5°	1.8	1.8	1.8	4.5	9.1	12.7	18.2	38.1	64.5	95.4	124.4
150°	2.7	1.8	1.8	3.6	7.3	9.1	12.7	25.4	44.5	69.9	95.4
152.5°	2.7	1.8	1.8	3.6	5.4	7.3	9.1	16.3	29.1	47.2	68.1
155°	2.7	1.8	1.8	2.7	4.5	5.4	7.3	10.9	17.3	29.1	44.5
157.5°	2.7	2.7	2.7	2.7	3.6	4.5	5.4	8.2	10.0	16.3	25.4
160°	2.7	2.7	1.8	1.8	2.7	2.7	3.6	5.4	7.3	9.1	12.7
162.5°	2.7	2.7	2.7	1.8	1.8	1.8	2.7	3.6	4.5	6.4	8.2
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°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1095.2	1090.6	1088.8	1085.2	1082.5	1080.6	1077.9	1076.1	1074.3	1073.4	1073.4
5°	1096.1	1091.5	1089.7	1087.0	1086.1	1084.3	1082.5	1084.3	1083.4	1084.3	1083.4
7.5°	1097.0	1093.4	1093.4	1092.4	1091.5	1091.5	1089.7	1091.5	1092.4	1093.4	1092.4
10°	1099.7	1098.8	1100.6	1101.5	1101.5	1101.5	1101.5	1103.3	1107.0	1107.0	1106.1
12.5°	1104.3	1107.0	1112.4	1117.0	1118.8	1118.8	1122.4	1126.0	1130.6	1131.5	1130.6
15°	1113.3	1121.5	1133.3	1143.3	1147.8	1150.6	1157.8	1164.2	1168.7	1170.5	1168.7
17.5°	1129.7	1145.1	1163.3	1177.8	1183.3	1186.9	1196.9	1203.2	1208.7	1213.2	1211.4
20°	1151.5	1172.4	1194.2	1211.4	1218.7	1223.2	1234.1	1245.9	1251.4	1255.0	1254.1
22.5°	1175.1	1199.6	1224.1	1245.0	1253.2	1258.6	1272.3	1283.2	1291.3	1295.9	1295.0
25°	1197.8	1225.9	1255.9	1278.6	1288.6	1295.0	1309.5	1322.2	1331.3	1334.9	1334.0
27.5°	1220.5	1253.2	1285.9	1312.2	1322.2	1330.4	1347.6	1361.2	1372.1	1374.9	1374.9
30°	1238.7	1276.8	1312.2	1342.2	1353.1	1364.0	1383.0	1401.2	1411.2	1414.8	1413.9
32.5°	1255.9	1298.6	1338.5	1372.1	1385.8	1396.7	1419.4	1439.3	1451.1	1454.8	1451.1
35°	1273.2	1320.4	1364.9	1401.2	1415.7	1429.4	1454.8	1477.5	1490.2	1493.8	1492.0
37.5°	1289.5	1342.2	1390.3	1430.3	1447.5	1462.0	1488.4	1515.6	1529.2	1532.9	1529.2
40°	1304.9	1362.2	1414.8	1458.4	1477.5	1494.7	1525.6	1552.9	1568.3	1572.8	1571.0
42.5°	1319.5	1382.1	1439.3	1487.5	1509.3	1527.4	1561.9	1591.9	1608.3	1613.7	1609.2
45°	1332.2	1402.1	1463.9	1515.6	1539.2	1560.1	1599.2	1631.9	1648.2	1654.6	1649.1
47.5°	1344.9	1420.3	1486.6	1543.8	1571.0	1592.8	1636.4	1670.9	1690.0	1695.4	1690.0
50°	1356.7	1438.4	1511.1	1572.8	1601.9	1626.4	1673.6	1710.9	1729.9	1738.1	1730.8
52.5°	1367.6	1455.7	1533.8	1600.1	1631.9	1659.1	1710.0	1749.9	1772.6	1778.1	1770.8
55°	1378.5	1472.0	1553.8	1625.5	1660.0	1689.1	1744.5	1786.2	1808.9	1815.3	1808.0
57.5°	1387.6	1486.6	1572.8	1650.0	1685.4	1719.0	1774.4	1818.0	1841.6	1848.9	1841.6
60°	1393.9	1498.4	1590.1	1670.0	1707.2	1741.7	1800.8	1844.4	1868.0	1875.2	1868.0
62.5°	1398.5	1507.5	1601.9	1685.4	1725.4	1760.8	1820.7	1863.4	1887.9	1895.2	1887.9
65°	1399.4	1511.1	1608.3	1695.4	1736.3	1771.7	1832.6	1875.2	1900.7	1907.0	1899.8
67.5°	1393.9	1507.5	1608.3	1697.2	1738.1	1774.4	1835.3	1878.0	1902.5	1909.7	1902.5
70°	1383.0	1496.6	1599.2	1690.0	1730.8	1767.2	1827.1	1870.7	1895.2	1902.5	1894.3
72.5°	1362.2	1477.5	1580.1	1672.7	1711.8	1747.2	1806.2	1848.9	1872.5	1880.7	1871.6
75°	1332.2	1447.5	1550.1	1639.1	1680.0	1712.7	1771.7	1813.5	1835.3	1842.5	1834.4
77.5°	1293.1	1409.4	1508.4	1596.4	1637.3	1667.3	1724.5	1765.4	1787.1	1793.5	1785.3
80°	1247.7	1363.1	1458.4	1545.6	1583.7	1611.9	1669.1	1708.1	1729.0	1735.4	1730.8
82.5°	1197.8	1310.4	1403.0	1488.4	1524.7	1552.9	1609.2	1647.3	1668.2	1677.3	1670.0
85°	1146.9	1255.0	1345.8	1428.4	1464.8	1494.7	1546.5	1584.6	1605.5	1612.8	1608.3
87.5°	1096.1	1200.5	1288.6	1368.5	1402.1	1433.0	1484.7	1522.9	1543.8	1551.0	1545.6
90°	1053.4	1153.3	1237.7	1316.8	1351.3	1379.4	1429.4	1465.7	1486.6	1493.8	1489.3
92.5°	1018.9	1114.2	1196.0	1268.6	1301.3	1331.3	1379.4	1414.8	1435.7	1442.1	1437.5
95°	986.2	1078.8	1157.8	1228.7	1260.4	1289.5	1334.9	1369.4	1389.4	1395.8	1392.1
97.5°	955.3	1044.3	1120.6	1189.6	1222.3	1248.6	1292.2	1324.9	1344.9	1350.3	1344.9
100°	920.8	1010.7	1085.2	1153.3	1181.4	1207.8	1251.4	1284.1	1301.3	1308.6	1304.0
102.5°	888.1	974.4	1048.0	1115.2	1145.1	1171.5	1211.4	1243.2	1263.2	1267.7	1263.2
105°	854.5	938.1	1009.8	1076.1	1106.1	1131.5	1171.5	1202.3	1221.4	1226.8	1222.3
107.5°	820.0	900.8	972.6	1035.2	1064.3	1087.9	1128.8	1158.7	1175.1	1185.1	1177.8
110°	782.8	862.7	931.7	992.6	1020.7	1043.4	1083.4	1113.3	1128.8	1137.9	1131.5





TEST NUMBER: P201334

CATALOG NUMBER: 8LBLED-LD4-10-SYMW-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	748.3	823.6	889.9	949.0	975.3	998.0	1037.1	1066.1	1080.6	1089.7	1083.4
115°	712.0	781.9	847.3	903.6	929.9	950.8	989.8	1017.1	1031.6	1039.8	1034.3
117.5°	672.9	741.0	802.8	858.2	882.7	903.6	940.8	968.0	981.7	988.0	982.6
120°	634.8	701.1	759.2	811.8	836.4	856.3	892.7	918.1	930.8	938.1	932.6
122.5°	594.8	659.3	712.0	764.6	787.3	806.4	839.1	866.3	878.1	884.5	880.9
125°	552.1	615.7	666.5	714.7	736.5	754.6	786.4	809.1	822.7	829.1	825.5
127.5°	507.6	568.5	620.2	664.7	685.6	705.6	731.9	757.4	766.4	773.7	770.1
130°	457.7	518.5	566.7	612.1	632.0	648.4	677.4	698.3	710.1	716.5	713.8
132.5°	408.6	464.9	515.8	556.7	575.7	593.0	619.3	639.3	655.7	656.6	652.9
135°	361.4	410.5	456.8	500.4	519.4	536.7	560.3	578.5	593.9	594.8	590.3
137.5°	316.0	361.4	401.4	442.2	462.2	480.4	502.2	519.4	534.0	536.7	530.3
140°	272.4	314.2	350.5	386.9	405.9	423.2	446.8	461.3	473.1	474.0	470.4
142.5°	230.7	268.8	300.6	334.2	351.4	366.9	393.2	407.7	418.6	421.4	415.9
145°	191.6	225.2	255.2	284.2	298.8	313.3	339.6	356.9	366.0	368.7	363.2
147.5°	154.4	182.5	208.9	235.2	247.9	261.5	283.3	305.1	313.3	315.1	310.6
150°	119.9	143.5	167.1	188.9	199.8	211.6	230.7	250.6	261.5	263.4	259.7
152.5°	88.1	108.1	127.1	145.3	154.4	163.5	179.8	198.9	212.5	213.4	209.8
155°	59.9	76.3	91.7	105.3	113.5	120.8	133.5	148.0	162.6	163.5	160.7
157.5°	36.3	47.2	59.9	70.8	76.3	82.6	91.7	102.6	115.3	118.1	115.3
160°	18.2	24.5	31.8	39.0	43.6	48.1	52.7	61.8	69.0	75.4	71.7
162.5°	9.1	10.9	12.7	16.3	18.2	20.9	24.5	28.2	31.8	38.1	33.6
165°	5.4	6.4	7.3	7.3	8.2	8.2	8.2	8.2	8.2	11.8	8.2
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: P201334

CATALOG NUMBER: 8LBLED-LD4-10-SYMW-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1076.1	1077.9	1081.6	1083.4	1085.2	1087.0	1090.6	1096.1	1091.5	1087.0	1087.9
5°	1083.4	1083.4	1084.3	1087.0	1087.0	1087.9	1091.5	1097.0	1092.4	1086.1	1086.1
7.5°	1092.4	1091.5	1092.4	1093.4	1092.4	1092.4	1094.3	1097.0	1091.5	1084.3	1082.5
10°	1105.2	1102.4	1101.5	1102.4	1101.5	1098.8	1099.7	1099.7	1092.4	1081.6	1077.0
12.5°	1127.9	1123.3	1119.7	1118.8	1116.1	1111.5	1108.8	1105.2	1094.3	1081.6	1072.5
15°	1165.1	1157.8	1150.6	1147.8	1143.3	1132.4	1123.3	1115.2	1099.7	1081.6	1068.8
17.5°	1206.9	1197.8	1187.8	1184.2	1177.8	1162.4	1146.9	1131.5	1109.7	1084.3	1066.1
20°	1246.8	1235.9	1224.1	1217.8	1211.4	1192.3	1174.2	1154.2	1126.0	1092.4	1065.2
22.5°	1286.8	1274.1	1257.7	1252.3	1244.1	1222.3	1200.5	1177.8	1144.2	1104.3	1067.0
25°	1325.8	1311.3	1295.9	1286.8	1277.7	1253.2	1226.8	1199.6	1161.5	1117.9	1073.4
27.5°	1364.9	1348.5	1329.5	1319.5	1310.4	1283.2	1253.2	1222.3	1179.6	1130.6	1081.6
30°	1403.0	1384.9	1362.2	1351.3	1340.4	1309.5	1275.0	1240.5	1194.2	1141.5	1087.0
32.5°	1441.2	1421.2	1395.8	1383.0	1370.3	1334.9	1296.8	1257.7	1206.9	1151.5	1091.5
35°	1478.4	1456.6	1428.4	1413.0	1399.4	1361.2	1318.6	1275.0	1218.7	1159.6	1094.3
37.5°	1516.5	1492.0	1461.1	1443.9	1428.4	1386.7	1339.5	1290.4	1231.4	1166.0	1097.0
40°	1554.7	1528.3	1493.8	1475.7	1456.6	1411.2	1360.3	1305.9	1242.3	1172.4	1097.9
42.5°	1593.7	1564.7	1526.5	1506.5	1486.6	1435.7	1379.4	1319.5	1251.4	1176.9	1097.0
45°	1632.8	1600.1	1559.2	1536.5	1514.7	1459.3	1398.5	1331.3	1259.5	1179.6	1095.2
47.5°	1671.8	1637.3	1592.8	1568.3	1542.0	1482.9	1416.6	1344.0	1266.8	1180.5	1093.4
50°	1711.8	1674.5	1626.4	1599.2	1571.9	1505.6	1434.8	1354.9	1271.3	1181.4	1088.8
52.5°	1750.8	1710.9	1659.1	1630.0	1598.3	1528.3	1452.1	1365.8	1275.0	1180.5	1082.5
55°	1786.2	1744.5	1690.0	1659.1	1623.7	1549.2	1467.5	1374.9	1276.8	1177.8	1074.3
57.5°	1818.9	1776.3	1719.0	1684.5	1650.0	1569.2	1482.0	1384.9	1278.6	1173.3	1065.2
60°	1844.4	1801.7	1741.7	1707.2	1670.0	1585.5	1493.8	1390.3	1278.6	1166.9	1053.4
62.5°	1863.4	1820.7	1760.8	1724.5	1685.4	1599.2	1502.9	1395.8	1278.6	1160.6	1041.6
65°	1875.2	1833.5	1771.7	1735.4	1695.4	1605.5	1507.5	1396.7	1275.0	1151.5	1027.1
67.5°	1877.1	1835.3	1773.5	1738.1	1697.2	1605.5	1504.7	1392.1	1267.7	1139.7	1010.7
70°	1868.9	1827.1	1766.3	1729.9	1690.0	1597.4	1494.7	1381.2	1255.0	1124.2	991.6
72.5°	1848.0	1805.3	1746.3	1709.1	1670.0	1578.3	1473.9	1361.2	1234.1	1102.4	968.9
75°	1811.7	1769.9	1711.8	1677.3	1637.3	1547.4	1442.1	1332.2	1205.1	1075.2	940.8
77.5°	1763.5	1722.7	1665.5	1631.0	1593.7	1505.6	1402.1	1293.1	1169.6	1041.6	908.1
80°	1706.3	1667.3	1611.0	1577.4	1541.1	1455.7	1354.0	1247.7	1126.0	1001.6	871.8
82.5°	1645.5	1607.3	1552.9	1518.3	1483.8	1401.2	1304.0	1198.7	1079.7	959.0	832.7
85°	1586.5	1545.6	1491.1	1459.3	1424.8	1344.0	1252.3	1147.8	1032.5	915.4	794.6
87.5°	1524.7	1484.7	1431.2	1401.2	1368.5	1286.8	1199.6	1097.9	988.0	876.3	757.4
90°	1468.4	1429.4	1377.6	1347.6	1316.8	1237.7	1152.4	1056.1	949.9	841.8	726.5
92.5°	1416.6	1380.3	1331.3	1302.2	1272.3	1196.9	1115.2	1021.6	919.0	814.6	702.0
95°	1372.1	1336.7	1291.3	1263.2	1232.3	1160.6	1080.6	988.9	890.8	789.1	679.3
97.5°	1327.6	1294.0	1249.6	1222.3	1193.2	1123.3	1046.1	958.0	861.8	761.0	654.7
100°	1286.8	1254.1	1208.7	1184.2	1156.0	1088.8	1012.5	926.3	831.8	732.8	628.4
102.5°	1246.8	1214.1	1170.5	1146.0	1118.8	1051.6	977.1	891.8	800.0	704.7	603.0
105°	1206.0	1174.2	1130.6	1106.1	1078.8	1013.4	940.8	858.2	768.3	675.6	576.6
107.5°	1161.5	1130.6	1088.8	1064.3	1038.9	973.5	903.6	822.7	736.5	645.7	549.4
110°	1116.1	1085.2	1047.0	1020.7	996.2	932.6	864.5	787.3	702.9	614.8	521.3



TEST NUMBER: P201334

CATALOG NUMBER: 8LBLED-LD4-10-SYMW-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1068.8	1038.9	1001.6	977.1	951.7	890.8	825.5	751.0	669.3	583.0	492.2
115°	1020.7	990.7	953.5	929.0	906.3	848.2	784.6	713.8	634.8	551.2	463.1
117.5°	968.0	941.7	906.3	884.5	860.9	802.8	743.7	675.6	600.3	517.6	433.2
120°	919.0	893.6	859.1	835.5	814.6	759.2	702.9	636.6	562.1	484.9	402.3
122.5°	867.2	840.0	808.2	788.2	765.5	714.7	660.2	596.6	524.0	447.7	368.7
125°	812.8	787.3	756.5	737.4	716.5	668.4	616.6	553.0	484.0	410.5	334.2
127.5°	757.4	733.7	703.8	686.5	666.5	619.3	569.4	507.6	438.6	369.6	298.8
130°	701.1	677.4	650.2	632.0	613.0	568.5	519.4	458.6	393.2	328.7	264.3
132.5°	642.0	619.3	592.1	575.7	558.5	515.8	465.9	406.8	348.7	290.6	230.7
135°	581.2	560.3	535.8	520.3	503.1	459.5	412.3	358.7	306.9	253.4	198.0
137.5°	522.2	503.1	479.5	464.0	445.0	404.1	362.3	314.2	267.0	217.0	165.3
140°	464.0	446.8	424.1	406.8	390.5	352.3	314.2	270.6	227.9	182.5	136.2
142.5°	409.6	394.1	368.7	352.3	336.9	303.3	269.7	228.8	190.7	149.8	109.9
145°	356.0	342.4	314.2	299.7	287.0	257.0	223.4	189.8	155.3	119.9	85.4
147.5°	304.2	287.9	261.5	248.8	237.0	210.7	182.5	151.7	123.5	92.6	62.7
150°	254.3	234.3	211.6	200.7	190.7	168.0	143.5	118.1	93.5	67.2	43.6
152.5°	202.5	181.6	166.2	155.3	146.2	128.0	108.1	86.3	66.3	45.4	27.2
155°	149.8	135.3	120.8	115.3	107.2	91.7	75.4	58.1	41.8	27.2	15.4
157.5°	103.5	92.6	83.5	78.1	71.7	59.9	46.3	33.6	23.6	14.5	7.3
160°	62.7	55.4	49.0	44.5	40.0	31.8	22.7	15.4	10.0	4.5	2.7
162.5°	28.2	23.6	20.9	18.2	15.4	11.8	7.3	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: P201334

CATALOG NUMBER: 8LBLELD4-10-SYMW-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8
2.5°	1088.8	1089.7	1090.6	1090.6	1093.4	1097.9	1104.3	1105.2
5°	1086.1	1087.0	1087.0	1087.9	1090.6	1094.3	1099.7	1100.6
7.5°	1081.6	1081.6	1081.6	1081.6	1083.4	1087.0	1091.5	1092.4
10°	1075.2	1073.4	1072.5	1071.6	1072.5	1076.1	1079.7	1080.6
12.5°	1067.9	1063.4	1061.6	1060.7	1060.7	1061.6	1065.2	1065.2
15°	1059.8	1052.5	1049.8	1048.0	1044.3	1044.3	1048.0	1048.0
17.5°	1051.6	1041.6	1036.1	1032.5	1027.1	1026.2	1028.0	1026.2
20°	1044.3	1028.9	1021.6	1015.3	1007.1	1004.4	1004.4	1001.6
22.5°	1037.1	1016.2	1006.2	997.1	984.4	979.8	977.1	975.3
25°	1032.5	1002.5	989.8	978.9	961.7	951.7	949.0	945.3
27.5°	1031.6	991.6	974.4	960.8	937.2	925.4	918.1	913.6
30°	1031.6	980.8	958.0	939.0	909.9	891.8	884.5	882.7
32.5°	1030.7	972.6	945.3	920.8	883.6	860.0	849.1	846.4
35°	1028.0	964.4	932.6	902.7	857.2	827.3	811.8	808.2
37.5°	1024.3	954.4	920.8	886.3	830.0	793.7	774.6	769.2
40°	1020.7	944.4	906.3	869.1	802.8	759.2	734.7	728.3
42.5°	1014.4	933.5	893.6	852.7	777.3	724.7	696.5	686.5
45°	1008.0	920.8	878.1	834.5	751.9	689.3	653.8	643.8
47.5°	999.8	907.2	862.7	814.6	728.3	654.7	614.8	602.1
50°	990.7	893.6	845.4	795.5	702.9	621.1	572.1	558.5
52.5°	980.8	878.1	828.2	775.5	677.4	589.4	532.1	514.9
55°	968.0	860.9	808.2	752.8	651.1	556.7	491.3	471.3
57.5°	954.4	843.6	789.1	731.9	624.8	525.8	451.3	428.6
60°	938.1	823.6	765.5	708.3	597.5	494.0	411.4	385.0
62.5°	920.8	803.7	744.6	683.8	570.3	463.1	372.3	342.4
65°	902.7	781.0	721.0	658.4	541.2	430.4	334.2	299.7
67.5°	880.9	756.5	694.7	631.1	511.3	397.7	296.9	257.9
70°	859.1	730.1	665.6	602.1	480.4	365.1	261.5	217.0
72.5°	832.7	702.0	636.6	572.1	448.6	333.3	227.0	176.2
75°	803.7	672.9	606.6	541.2	415.9	299.7	192.5	136.2
77.5°	772.8	641.1	575.7	509.4	385.0	267.9	160.7	102.6
80°	740.1	607.5	543.0	476.8	352.3	236.1	129.9	70.8
82.5°	703.8	574.8	510.4	444.1	321.5	205.2	101.7	43.6
85°	669.3	542.1	479.5	414.1	291.5	174.4	76.3	21.8
87.5°	635.7	512.2	451.3	386.9	266.1	150.7	55.4	6.4
90°	608.4	487.7	427.7	365.1	246.1	133.5	41.8	0.0
92.5°	586.6	468.6	409.6	348.7	231.6	121.7	35.4	0.0
95°	565.7	448.6	392.3	331.5	217.0	111.7	28.2	0.0
97.5°	543.0	429.5	373.2	314.2	202.5	100.8	22.7	0.0
100°	520.3	408.6	354.2	296.9	186.2	89.9	16.3	0.0
102.5°	495.8	386.9	333.3	277.9	171.6	78.1	10.9	0.0
105°	472.2	365.1	313.3	258.8	156.2	68.1	7.3	0.0
107.5°	446.8	343.3	292.4	240.6	140.8	57.2	4.5	0.0
110°	421.4	321.5	271.5	221.6	126.2	47.2	3.6	0.0



TEST NUMBER: P201334

CATALOG NUMBER: 8LBLED-LD4-10-SYMW-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	395.9	298.8	250.6	201.6	111.7	38.1	2.7	0.9
115°	368.7	275.2	228.8	181.6	97.2	30.0	2.7	0.9
117.5°	341.4	250.6	208.0	162.6	83.5	22.7	1.8	0.9
120°	313.3	228.8	185.3	144.4	70.8	16.3	1.8	0.9
122.5°	286.1	206.1	164.4	125.3	58.1	12.7	1.8	0.9
125°	257.9	179.8	143.5	108.1	46.3	10.0	1.8	0.9
127.5°	227.9	155.3	121.7	89.0	35.4	7.3	1.8	0.9
130°	197.1	130.8	100.8	72.6	25.4	5.4	1.8	0.9
132.5°	168.0	109.9	81.7	57.2	18.2	4.5	1.8	0.9
135°	141.7	89.0	64.5	42.7	12.7	3.6	0.9	0.9
137.5°	116.2	70.8	49.0	30.9	9.1	2.7	1.8	0.9
140°	93.5	53.6	35.4	21.8	6.4	1.8	1.8	0.9
142.5°	72.6	38.1	24.5	14.5	4.5	1.8	0.9	0.9
145°	53.6	25.4	16.3	9.1	3.6	1.8	1.8	1.8
147.5°	36.3	17.3	10.0	6.4	2.7	1.8	1.8	0.9
150°	23.6	10.9	6.4	4.5	1.8	1.8	1.8	0.9
152.5°	14.5	6.4	3.6	2.7	1.8	1.8	1.8	0.9
155°	7.3	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)