

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: P201244

Luminaire Tested: **4LBLED-LD4-6-SYMF-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P201244  
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: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U  
Description: 4 ft. Low Bay Linear, 6000 lm, Frst Sym lens, 5K  
Light Source: (392) 5000K CCT, 80 CRI LEDS  
2UT217098A8504C  
Ballast/Driver: OSRAM  
(OTI50W0960CC)

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6726.4 lumens  
Efficiency: N/A  
Efficacy: 157.2 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')  
CIE Type: Semi-Direct

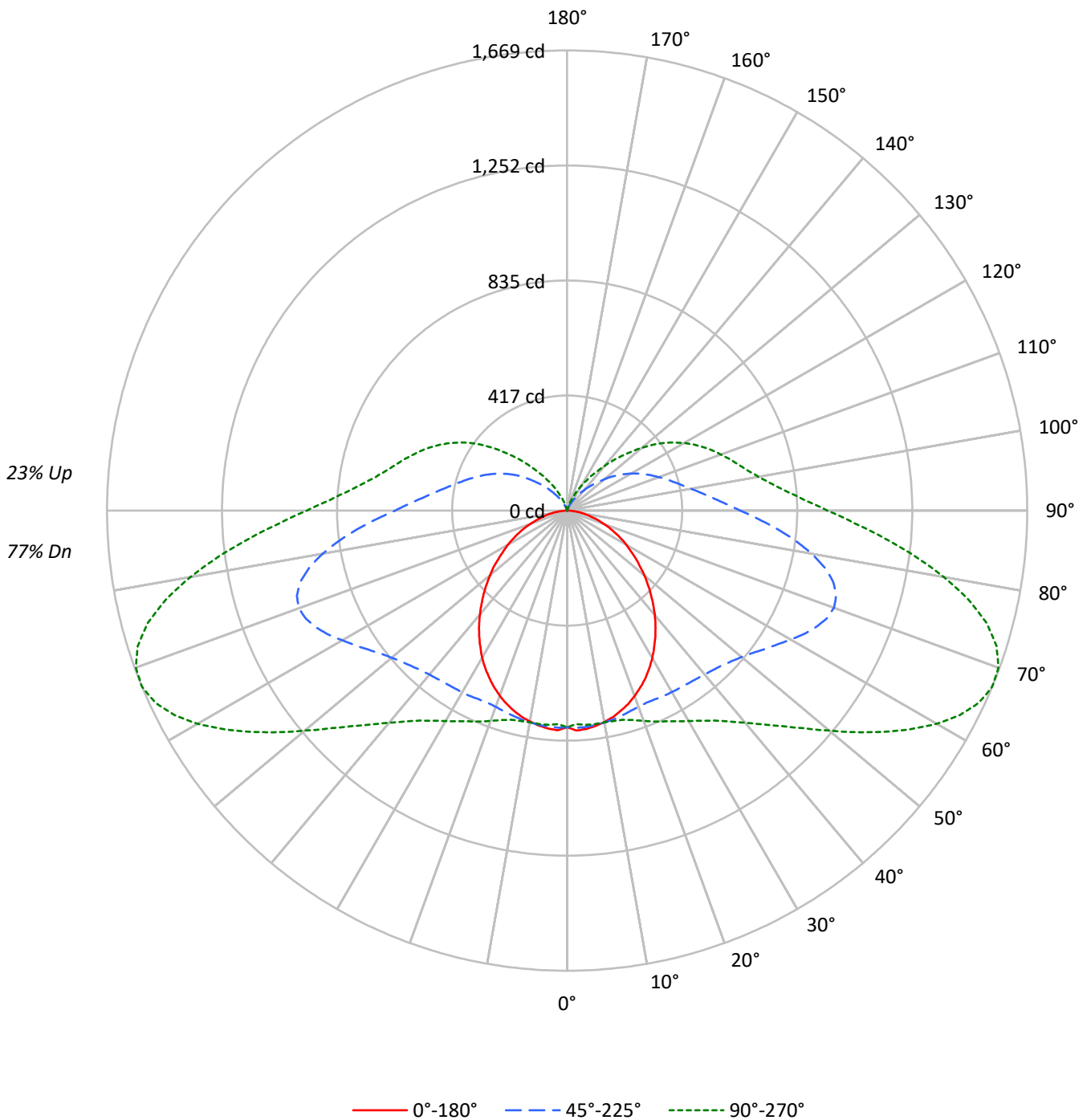
Input Watts (W): 42.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	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°	12662	12662	12662
5°	12801	11378	12774
10°	12621	10466	12593
15°	12366	9829	12346
20°	12043	9582	12025
25°	11658	9487	11609
30°	11153	9538	11142
35°	10579	9770	10559
40°	9969	10327	9923
45°	9304	11221	9278
50°	8628	12528	8602
55°	7945	14146	7932
60°	7329	15792	7344
65°	6641	17119	6662
70°	5907	17737	5907
75°	5031	17355	5000
80°	4049	15971	4013
85°	2783	14026	2644



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.6	1.1
10°-20°	217.0	3.2
20°-30°	348.8	5.2
30°-40°	472.3	7.0
40°-50°	606.7	9.0
50°-60°	780.6	11.6
60°-70°	955.0	14.2
70°-80°	965.5	14.4
80°-90°	746.6	11.1
90°-100°	518.7	7.7
100°-110°	387.4	5.8
110°-120°	290.4	4.3
120°-130°	195.5	2.9
130°-140°	107.2	1.6
140°-150°	45.7	0.7
150°-160°	13.1	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	640.4	9.5
0°-40°	1112.7	16.5
0°-60°	2500.1	37.2
0°-90°	5167.2	76.8
90°-120°	1196.5	17.8
90°-150°	1545.0	23.0
90°-180°	1559.0	23.2
0°-180°	6726.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	786	786	786	786	786	
5°	795	788	780	786	793	75
15°	752	769	786	769	750	212
25°	672	755	844	756	669	308
35°	557	765	930	766	556	348
45°	430	794	1106	798	428	331
55°	304	876	1399	880	303	272
65°	194	998	1648	1004	194	192
75°	96	999	1574	1003	96	103
85°	24	764	1156	762	23	26
90°	1	628	944	624	0	2
95°	1	529	798	527	0	0
105°	1	400	644	400	0	1
115°	1	311	545	311	0	1
125°	1	223	427	222	0	1
135°	1	135	280	133	0	1
145°	1	68	154	66	0	1
155°	1	22	64	21	0	1
165°	1	1	6	3	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLELD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8
2.5°	798.4	797.8	794.4	789.3	787.0	786.4	785.8	783.6	783.0	784.1	788.7
5°	795.0	794.4	791.0	785.8	784.1	783.6	783.0	781.3	781.3	783.0	787.6
7.5°	788.1	787.6	784.1	780.1	778.4	777.8	777.8	776.7	776.7	779.6	784.7
10°	778.4	777.8	775.0	771.6	770.4	770.4	770.4	769.8	771.0	774.4	780.1
12.5°	767.0	765.9	763.6	760.7	760.7	760.7	761.3	761.3	763.0	768.7	775.6
15°	751.6	752.1	749.9	747.6	748.7	749.3	750.4	751.6	754.4	761.3	769.3
17.5°	735.6	735.6	733.9	732.7	735.0	736.2	737.9	739.6	744.7	753.3	762.4
20°	715.6	716.2	715.6	716.2	719.0	720.7	723.0	727.0	733.9	745.9	756.7
22.5°	693.9	695.0	695.0	697.3	701.9	704.7	707.6	713.3	723.0	738.4	753.9
25°	671.6	671.0	673.9	677.9	682.5	686.5	689.9	698.5	712.7	733.3	755.0
27.5°	644.8	645.9	649.9	655.6	662.5	667.6	672.8	684.8	705.3	732.7	757.9
30°	617.4	619.1	624.2	632.2	641.9	648.8	654.5	673.3	701.3	732.7	760.1
32.5°	587.7	590.5	597.4	607.7	621.4	629.4	638.5	663.6	697.9	731.6	762.4
35°	557.4	560.8	570.0	582.5	598.5	608.2	622.5	656.2	693.3	730.4	765.3
37.5°	526.6	530.6	540.8	556.8	577.4	592.2	609.4	648.2	689.9	730.4	769.3
40°	494.6	499.1	512.3	530.6	556.8	576.2	596.8	640.2	686.5	731.0	775.6
42.5°	462.0	467.2	483.2	504.9	539.1	562.0	584.8	633.4	684.2	733.9	783.6
45°	429.5	436.3	454.0	480.3	523.1	547.1	573.4	627.1	683.0	739.0	794.4
47.5°	396.9	404.9	425.5	456.9	506.6	535.1	562.5	621.9	684.2	745.9	808.7
50°	365.5	374.6	397.5	435.8	491.2	522.0	552.3	618.5	686.5	756.1	825.8
52.5°	333.5	345.5	370.6	416.9	477.4	510.0	543.7	616.2	691.0	769.8	848.1
55°	303.8	316.4	345.5	398.6	464.3	499.7	535.7	615.7	699.0	786.4	875.5
57.5°	273.6	289.0	321.0	380.9	450.6	489.4	529.4	616.8	708.7	804.1	903.5
60°	247.9	261.6	298.7	363.8	438.6	479.7	523.7	617.9	719.0	824.7	936.0
62.5°	220.4	235.3	279.3	347.2	426.6	471.2	518.0	619.6	729.9	845.8	969.2
65°	193.6	209.0	259.9	331.2	414.6	462.0	511.1	619.6	738.4	865.2	997.7
67.5°	167.9	184.5	240.4	314.1	400.9	450.6	502.6	616.8	743.6	878.9	1020.0
70°	143.3	161.6	221.6	295.8	386.1	436.9	490.6	610.5	743.0	884.1	1029.7
72.5°	118.8	139.9	201.0	277.6	370.1	421.5	476.3	598.5	735.0	877.8	1023.4
75°	96.5	119.4	182.8	259.3	351.8	403.2	458.6	580.2	717.3	858.4	999.4
77.5°	76.0	101.1	163.3	239.3	331.2	382.1	436.3	556.8	689.3	824.1	957.2
80°	56.5	84.5	145.1	219.3	309.0	358.7	411.2	527.1	652.8	777.8	900.6
82.5°	39.4	69.1	127.4	199.3	286.1	333.5	383.8	491.7	610.5	724.2	835.5
85°	24.0	55.4	109.7	179.9	262.7	307.3	354.7	454.6	564.3	665.9	764.1
87.5°	10.3	42.8	94.2	161.1	239.3	281.6	325.0	419.2	515.1	605.4	692.8
90°	0.6	32.0	80.5	143.3	217.0	256.4	297.0	381.5	470.0	550.0	627.6
92.5°	0.0	27.4	72.5	132.5	201.6	238.2	275.8	353.5	433.5	504.9	574.0
95°	0.6	22.8	65.7	120.5	186.2	221.0	255.9	328.4	400.3	466.0	529.4
97.5°	0.6	18.8	58.3	109.7	171.9	203.9	236.4	303.8	368.9	431.2	490.0
100°	0.6	14.8	51.4	99.4	157.1	186.8	217.6	281.0	342.1	400.3	455.7
102.5°	0.6	10.9	45.7	89.7	143.3	171.3	199.9	259.9	317.5	373.5	426.0
105°	0.6	7.4	40.0	80.5	130.8	157.1	183.9	240.4	295.3	348.9	400.3
107.5°	0.6	5.1	34.8	72.0	117.1	143.3	168.5	222.2	274.7	326.7	376.9
110°	0.6	4.6	30.3	64.5	106.2	130.2	154.2	205.0	255.3	305.0	354.1



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	4.0	25.7	57.7	95.4	117.1	140.5	188.5	237.6	285.6	332.4
115°	0.6	4.0	21.1	51.4	86.2	105.7	127.4	172.5	219.3	265.6	311.3
117.5°	0.6	4.0	17.1	45.7	77.7	95.4	114.2	157.6	201.0	246.1	290.7
120°	0.6	3.4	13.7	40.0	70.2	86.2	103.9	143.3	183.3	225.6	268.4
122.5°	0.6	3.4	11.4	34.8	62.8	77.7	93.7	128.5	166.8	205.6	245.6
125°	0.6	2.9	9.7	29.1	55.4	69.7	84.0	115.4	150.8	186.8	223.3
127.5°	1.1	2.9	8.0	24.0	48.0	60.5	74.2	102.8	133.6	166.2	201.0
130°	1.1	2.9	6.9	18.3	40.5	52.0	64.0	90.2	118.8	146.8	177.0
132.5°	1.1	2.3	6.3	14.3	33.7	44.0	54.8	78.2	103.4	128.5	154.8
135°	1.1	2.3	5.1	11.4	26.8	36.0	46.3	66.8	89.1	112.5	134.8
137.5°	1.1	1.7	4.6	9.1	20.6	29.1	38.3	56.5	76.0	95.9	116.5
140°	1.1	1.7	4.0	7.4	15.4	21.7	30.3	46.3	63.4	81.1	98.8
142.5°	1.1	1.7	3.4	6.3	12.0	16.6	22.8	37.7	52.5	67.4	82.8
145°	1.1	1.7	2.9	5.1	9.1	12.6	16.6	29.1	42.3	55.4	68.5
147.5°	1.1	1.7	2.9	4.6	7.4	9.7	12.6	21.1	33.1	44.0	55.4
150°	1.1	1.7	2.3	4.0	6.3	7.4	9.1	14.8	24.0	33.7	43.4
152.5°	1.1	1.1	2.3	3.4	4.6	5.7	6.9	10.9	16.6	24.0	32.6
155°	1.1	1.1	1.7	2.9	4.0	4.6	5.1	7.4	10.9	15.4	21.7
157.5°	1.1	1.1	1.7	2.3	2.9	3.4	4.0	5.1	7.4	9.7	13.1
160°	1.1	1.1	1.7	2.3	2.3	2.9	2.9	3.4	4.6	5.7	7.4
162.5°	1.1	1.1	1.7	1.7	1.7	2.3	2.3	2.3	2.9	2.9	3.4
165°	1.1	1.1	1.1	1.7	1.1	1.7	1.1	1.7	1.7	1.1	1.1
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: P201244

CATALOG NUMBER: 4LBLEDD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8
2.5°	790.4	786.4	784.7	782.4	780.7	779.6	777.8	776.7	775.0	775.0	775.6
5°	789.3	785.3	784.1	781.8	780.7	780.1	779.0	779.6	779.6	780.1	779.6
7.5°	787.0	783.6	782.4	781.3	780.1	779.6	779.0	780.1	780.1	780.7	780.7
10°	783.0	780.7	780.7	779.6	779.0	778.4	777.3	779.0	779.0	780.1	779.6
12.5°	778.4	777.8	778.4	779.0	779.0	778.4	777.8	780.1	781.3	781.3	781.8
15°	773.3	774.4	777.3	779.0	780.1	780.1	781.3	783.6	785.3	785.8	785.8
17.5°	769.3	772.1	777.3	781.8	784.1	785.3	788.1	792.7	795.5	796.1	796.1
20°	766.4	773.3	782.4	791.0	793.8	796.1	801.8	807.5	811.5	812.1	812.1
22.5°	768.7	780.1	792.7	802.4	806.4	809.3	815.5	823.0	827.5	828.1	828.1
25°	774.4	788.1	802.4	814.4	819.0	822.4	829.2	837.2	841.8	843.5	843.0
27.5°	779.6	796.1	812.7	826.4	831.5	836.1	844.7	853.8	859.5	861.2	860.1
30°	784.1	803.5	822.4	839.0	845.8	850.9	861.2	872.1	879.5	881.2	879.5
32.5°	788.7	812.1	834.4	853.8	860.7	868.1	881.2	893.8	901.2	903.5	902.3
35°	795.0	822.4	848.7	870.9	880.1	888.6	904.1	918.9	928.0	929.8	928.0
37.5°	803.5	835.5	864.7	892.6	902.3	914.3	932.6	950.3	961.2	963.5	961.2
40°	814.4	852.1	886.4	918.9	932.0	944.6	966.9	988.0	1000.0	1004.0	1002.3
42.5°	828.7	872.6	912.6	951.5	966.3	982.3	1008.6	1033.1	1046.8	1051.4	1046.8
45°	846.4	898.3	944.6	989.7	1006.9	1026.3	1057.7	1085.7	1101.7	1105.7	1101.7
47.5°	869.8	928.6	982.3	1034.3	1054.8	1077.7	1114.8	1146.8	1163.9	1168.5	1164.5
50°	894.9	965.2	1026.8	1086.2	1111.9	1135.9	1179.3	1214.7	1233.0	1241.6	1234.2
52.5°	926.3	1005.1	1077.7	1143.9	1174.8	1203.3	1251.3	1290.1	1312.4	1319.8	1309.5
55°	964.0	1053.1	1134.2	1210.7	1241.6	1273.6	1326.7	1367.8	1391.2	1399.2	1391.8
57.5°	1005.7	1103.9	1193.6	1274.1	1310.1	1342.7	1402.1	1444.9	1465.5	1475.7	1466.6
60°	1049.1	1156.5	1253.6	1339.2	1378.6	1412.3	1472.9	1515.1	1536.8	1547.1	1538.6
62.5°	1091.4	1207.3	1309.5	1398.6	1436.3	1473.5	1534.0	1574.5	1596.8	1605.9	1598.0
65°	1127.9	1250.1	1355.2	1447.2	1486.0	1522.6	1579.7	1618.5	1641.9	1648.2	1642.5
67.5°	1155.3	1279.3	1385.5	1476.3	1514.0	1550.5	1604.8	1640.8	1663.6	1669.3	1664.2
70°	1167.9	1290.7	1395.8	1484.3	1521.4	1554.0	1605.4	1639.6	1661.3	1664.8	1660.8
72.5°	1159.9	1279.3	1380.9	1465.5	1500.9	1529.4	1576.8	1609.4	1629.9	1632.8	1629.9
75°	1130.2	1244.4	1340.4	1419.2	1452.3	1476.3	1521.4	1551.7	1572.3	1574.5	1571.1
77.5°	1080.0	1186.2	1274.1	1350.1	1377.5	1400.9	1443.8	1470.6	1487.2	1490.6	1486.6
80°	1012.6	1110.2	1189.0	1257.0	1283.3	1303.3	1345.0	1374.1	1383.2	1387.8	1382.1
82.5°	935.5	1022.8	1093.1	1154.8	1178.2	1202.7	1229.6	1256.4	1269.6	1273.6	1269.0
85°	852.7	930.3	992.6	1048.0	1068.5	1090.8	1114.2	1140.5	1151.9	1155.9	1151.3
87.5°	769.8	838.4	893.2	942.3	961.2	981.2	1009.1	1022.8	1038.3	1042.8	1037.7
90°	695.6	757.3	806.4	850.9	868.7	886.9	908.6	925.8	940.0	944.0	939.5
92.5°	635.6	691.0	736.2	776.1	791.6	808.7	829.8	846.4	858.9	862.9	858.4
95°	586.0	636.8	679.0	716.2	731.0	747.0	770.4	783.6	795.0	798.4	795.0
97.5°	543.7	591.7	631.6	667.6	681.9	696.7	719.6	732.7	743.6	746.4	743.6
100°	506.6	553.4	592.8	627.1	641.4	655.6	677.9	691.0	701.3	704.7	701.3
102.5°	475.7	520.8	559.7	594.5	608.2	622.5	643.6	659.1	667.1	671.0	667.6
105°	448.9	492.9	531.7	566.0	580.2	593.9	615.7	629.9	639.1	643.6	639.6
107.5°	424.3	467.7	507.1	540.3	554.5	568.2	590.5	604.8	613.4	618.5	613.9
110°	400.9	443.7	481.4	515.7	530.0	544.3	566.5	580.8	589.4	593.9	590.0





TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	378.1	419.8	458.6	491.7	505.4	519.7	542.5	557.4	565.4	570.5	566.0
115°	355.2	396.3	434.0	466.0	479.7	494.6	516.8	532.3	540.8	544.8	540.3
117.5°	333.0	372.4	408.3	439.8	453.5	467.7	489.4	504.9	514.0	518.0	513.4
120°	310.1	347.8	383.2	411.8	426.0	439.2	461.5	476.3	485.4	489.4	484.9
122.5°	285.6	322.7	356.4	384.4	398.1	410.6	432.3	447.2	455.7	459.7	455.7
125°	260.4	295.3	327.8	355.8	367.2	379.2	400.3	414.6	423.8	427.2	423.8
127.5°	235.3	267.3	297.5	322.1	334.7	346.1	366.1	379.8	387.8	391.8	388.9
130°	210.2	240.4	267.8	290.1	301.0	311.8	330.1	342.7	350.7	354.1	351.2
132.5°	183.3	212.5	239.3	258.7	269.0	278.1	294.7	305.5	312.4	316.4	313.0
135°	159.3	183.3	208.5	228.4	238.7	246.7	261.6	270.7	277.0	280.4	277.0
137.5°	137.6	158.2	178.8	196.5	206.2	214.7	229.0	237.6	243.3	246.7	243.3
140°	117.6	135.4	153.6	167.9	176.5	183.3	196.5	203.9	209.0	211.9	208.5
142.5°	98.2	114.2	129.6	142.8	150.2	155.9	168.5	174.2	178.2	179.9	178.2
145°	81.7	94.8	107.9	119.9	125.6	130.2	142.8	149.1	152.5	154.2	152.5
147.5°	66.2	77.1	88.0	97.7	102.8	108.5	117.1	124.5	127.4	128.5	127.4
150°	52.0	61.7	70.2	78.2	82.2	86.2	93.7	101.1	103.9	105.7	103.9
152.5°	39.4	47.4	54.3	60.5	64.0	67.4	73.7	80.5	83.4	84.5	83.4
155°	28.6	34.3	40.5	45.1	48.0	50.3	54.8	59.4	64.0	64.0	64.0
157.5°	17.7	22.3	27.4	31.4	33.1	35.4	38.8	42.8	46.3	48.0	48.0
160°	9.1	12.0	15.4	18.3	20.0	21.7	24.0	27.4	29.7	31.4	30.3
162.5°	4.0	5.1	6.9	8.0	9.1	9.7	11.4	13.1	14.3	17.1	14.8
165°	1.1	1.1	1.7	2.3	2.3	2.3	2.9	3.4	4.0	6.3	4.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLELD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8
2.5°	776.7	778.4	780.7	781.8	783.6	784.7	787.6	791.0	788.1	784.1	784.7
5°	779.6	779.0	780.7	781.8	783.0	783.6	786.4	789.8	786.4	782.4	782.4
7.5°	780.7	780.1	780.7	781.3	781.8	781.8	784.7	787.6	784.1	779.0	777.8
10°	779.0	778.4	779.0	780.1	780.1	780.1	781.8	784.1	780.1	773.8	771.6
12.5°	780.1	778.4	778.4	779.0	779.0	777.8	778.4	780.1	775.0	768.1	764.7
15°	784.1	781.3	780.1	780.1	779.0	776.1	775.0	775.0	769.3	760.1	755.6
17.5°	793.8	789.3	785.8	784.1	781.8	776.7	772.7	770.4	763.0	752.7	745.3
20°	808.7	802.4	797.3	793.8	791.0	781.8	773.8	767.6	757.3	744.7	735.0
22.5°	823.5	816.7	809.3	805.8	801.8	791.6	780.7	769.8	754.4	737.3	724.2
25°	837.8	831.0	822.4	819.0	813.8	801.8	788.1	775.6	755.6	732.2	713.3
27.5°	854.4	845.8	836.7	831.5	825.8	812.1	796.7	781.3	759.0	732.2	705.9
30°	873.2	862.9	850.9	845.2	838.4	822.4	803.5	785.3	761.3	732.2	701.9
32.5°	894.9	882.9	868.7	860.7	852.7	833.8	811.5	790.4	763.0	731.6	698.5
35°	920.0	906.3	889.2	880.1	870.4	848.1	821.8	796.1	765.9	731.0	693.9
37.5°	951.5	935.5	914.9	903.5	892.1	865.8	835.5	804.7	770.4	731.6	690.5
40°	989.2	970.3	946.3	932.0	918.3	888.1	852.1	815.5	776.7	732.7	687.0
42.5°	1033.7	1010.9	984.0	967.5	951.5	913.8	872.6	829.2	785.3	735.0	685.3
45°	1086.8	1062.8	1028.6	1008.0	990.3	946.3	898.9	847.5	797.8	740.7	684.8
47.5°	1147.9	1117.7	1080.5	1056.5	1035.4	984.6	929.8	870.4	812.1	748.1	685.9
50°	1216.5	1182.2	1139.4	1114.2	1088.0	1029.7	966.3	897.2	830.4	759.0	688.8
52.5°	1291.8	1254.1	1207.9	1178.2	1149.1	1081.7	1007.4	931.5	851.5	772.7	693.9
55°	1370.1	1329.5	1278.1	1245.6	1213.0	1138.8	1056.0	968.6	879.5	789.8	702.5
57.5°	1446.0	1404.3	1347.8	1314.7	1278.1	1199.3	1107.9	1009.1	909.8	809.8	712.2
60°	1516.3	1474.6	1417.5	1383.8	1343.8	1259.3	1161.1	1053.7	941.2	831.0	723.6
62.5°	1575.7	1535.7	1478.6	1444.3	1403.2	1315.8	1211.9	1097.1	975.4	853.2	734.4
65°	1619.7	1582.0	1526.6	1491.2	1451.7	1360.9	1254.7	1135.4	1004.0	872.6	744.1
67.5°	1641.9	1606.5	1552.8	1519.1	1480.3	1390.1	1283.8	1161.1	1025.7	886.4	750.4
70°	1639.6	1605.9	1555.7	1522.6	1485.4	1398.6	1294.1	1171.3	1035.4	891.5	749.3
72.5°	1609.9	1576.2	1531.1	1499.2	1463.7	1382.6	1279.8	1162.2	1028.0	883.5	740.2
75°	1551.1	1520.3	1474.6	1448.3	1416.3	1341.0	1242.7	1128.5	1002.9	862.4	721.3
77.5°	1466.6	1443.2	1398.6	1374.1	1342.7	1273.0	1180.5	1077.7	958.9	827.0	692.2
80°	1363.2	1343.8	1300.4	1278.7	1247.9	1187.3	1107.4	1008.0	900.6	779.0	654.5
82.5°	1250.1	1227.9	1193.6	1173.6	1144.5	1090.2	1014.3	933.2	833.2	724.2	610.5
85°	1133.1	1112.5	1081.1	1064.0	1038.3	989.7	921.8	850.4	761.9	663.6	563.1
87.5°	1021.7	1001.7	972.0	956.6	933.2	889.8	830.4	767.6	689.3	605.4	512.9
90°	925.2	906.3	878.4	864.1	843.0	803.5	749.9	693.3	624.2	547.1	467.7
92.5°	845.8	828.7	802.4	788.7	769.8	733.9	685.3	633.9	571.7	504.9	431.2
95°	783.0	766.4	743.0	729.9	712.2	675.0	632.2	584.2	527.1	466.0	398.1
97.5°	732.2	718.4	692.8	680.2	665.9	628.2	589.4	542.0	488.9	431.8	368.4
100°	691.0	675.6	652.2	640.2	625.4	590.0	550.5	506.0	454.6	400.3	341.5
102.5°	659.1	643.1	621.4	607.7	593.4	557.4	518.6	475.2	426.0	373.5	317.0
105°	630.5	615.1	593.4	579.7	565.4	530.0	492.9	448.9	400.3	349.5	294.7
107.5°	603.7	590.0	568.2	554.5	540.3	504.9	467.7	424.3	376.9	327.2	274.1
110°	580.8	566.0	543.1	530.0	514.6	480.9	443.7	401.5	354.1	305.5	254.7



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	558.0	542.0	519.1	506.0	490.6	456.9	420.3	378.6	332.4	285.6	236.4
115°	532.8	517.4	493.4	480.3	464.9	431.8	396.3	355.8	311.3	265.6	218.2
117.5°	506.0	490.6	466.6	454.0	439.2	406.6	372.9	333.5	290.1	246.1	199.9
120°	476.9	462.0	439.2	426.6	412.3	380.9	348.4	309.0	267.8	225.6	182.8
122.5°	447.2	432.9	410.6	398.1	384.4	354.7	322.7	284.4	245.0	205.6	166.2
125°	415.2	400.9	379.8	367.8	354.1	325.5	294.7	258.7	222.2	186.8	149.1
127.5°	378.1	366.6	346.1	334.1	321.5	296.4	266.7	234.2	200.5	166.2	132.5
130°	342.7	330.7	311.3	300.4	289.6	266.7	240.4	209.0	175.9	146.2	115.9
132.5°	305.5	294.7	278.1	269.0	259.3	238.7	211.9	181.0	153.1	127.4	100.5
135°	270.7	261.6	246.7	238.7	229.0	207.3	182.2	156.5	133.1	110.2	86.2
137.5°	238.2	229.0	215.3	206.7	196.5	177.0	156.5	135.4	113.6	94.2	73.1
140°	203.9	196.5	183.9	176.5	167.3	150.8	133.6	113.6	96.5	78.8	60.5
142.5°	174.8	168.5	155.9	149.1	141.1	127.4	111.4	95.9	80.5	65.1	49.7
145°	149.6	143.3	129.6	124.5	117.1	105.1	91.9	78.2	65.7	52.5	40.0
147.5°	125.1	117.6	105.7	101.1	95.4	85.1	74.8	64.0	53.1	41.7	30.8
150°	102.2	93.7	84.0	81.1	75.4	67.4	58.8	49.7	41.1	32.0	22.3
152.5°	80.5	73.1	65.1	62.3	57.7	52.5	45.1	37.7	30.8	22.3	15.4
155°	60.0	54.3	48.0	46.3	42.8	38.8	32.6	26.8	20.6	14.8	10.9
157.5°	42.3	37.7	33.1	32.0	29.7	26.3	21.1	16.6	13.1	9.7	7.4
160°	26.3	23.4	20.0	18.8	17.1	14.8	11.4	9.7	8.0	6.3	4.6
162.5°	12.6	10.9	9.7	9.1	8.0	6.9	6.3	5.1	4.6	4.0	3.4
165°	4.6	4.6	4.6	4.0	4.0	4.0	4.0	3.4	2.9	2.9	2.3
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	785.8	785.8	785.8	785.8	785.8	785.8	785.8	785.8
2.5°	785.3	786.4	786.4	787.0	788.7	792.1	796.7	797.3
5°	783.0	783.6	783.6	783.6	785.3	788.1	792.7	793.3
7.5°	777.8	777.8	777.8	777.8	779.6	781.8	785.8	786.4
10°	771.0	770.4	770.4	769.8	771.0	772.7	777.3	776.7
12.5°	762.4	761.3	760.7	760.7	760.1	761.9	764.7	765.3
15°	752.7	750.4	749.3	748.1	747.6	747.6	751.0	750.4
17.5°	741.3	737.9	736.2	734.4	732.2	732.2	734.4	733.9
20°	728.2	723.6	720.7	718.4	715.0	713.9	715.0	714.5
22.5°	715.0	707.6	704.7	701.3	696.2	693.9	693.3	692.8
25°	699.6	690.5	686.5	683.0	675.6	672.8	669.9	668.8
27.5°	685.9	672.8	667.6	661.9	653.3	649.3	644.8	643.6
30°	673.9	654.5	646.5	640.8	629.9	623.6	617.9	616.8
32.5°	664.8	637.9	627.1	620.2	605.4	596.8	589.4	586.0
35°	656.8	622.5	608.2	597.4	579.7	569.4	559.1	556.3
37.5°	649.3	609.4	590.5	575.7	555.7	540.8	529.4	524.8
40°	641.9	597.4	574.5	555.7	529.4	512.3	498.0	492.3
42.5°	635.1	585.4	560.8	538.0	503.7	483.2	467.7	459.7
45°	628.8	574.5	547.7	522.6	478.6	454.6	435.8	428.3
47.5°	624.2	564.3	534.6	507.1	455.2	425.5	406.1	396.3
50°	620.8	554.5	522.0	491.7	434.6	397.5	375.8	364.4
52.5°	619.1	546.0	510.6	478.0	415.8	370.6	344.9	336.4
55°	619.6	539.1	500.9	465.5	398.1	344.9	316.4	303.3
57.5°	620.8	532.8	491.2	452.9	380.4	319.8	287.8	274.1
60°	623.1	527.7	482.6	440.9	363.8	298.1	261.6	248.4
62.5°	625.4	523.1	474.0	429.5	347.8	278.1	235.3	220.4
65°	625.9	516.3	464.9	418.0	331.8	258.1	208.5	194.2
67.5°	623.6	507.7	453.5	404.9	315.2	238.7	183.3	168.5
70°	616.8	496.3	440.3	390.1	297.0	219.9	159.3	143.3
72.5°	604.2	481.4	424.9	373.5	279.3	199.9	137.6	118.2
75°	586.5	463.2	406.6	354.7	260.4	181.0	117.6	95.9
77.5°	562.5	439.8	384.9	333.5	239.9	161.6	100.5	75.4
80°	531.7	415.2	360.9	310.7	219.9	143.9	84.0	56.0
82.5°	495.1	387.2	335.2	287.3	201.0	125.6	68.5	38.8
85°	457.5	356.9	308.4	262.7	181.0	108.5	55.4	22.8
87.5°	420.3	326.7	282.7	240.4	160.5	93.1	42.8	9.1
90°	383.8	297.5	255.9	216.4	142.8	78.8	32.0	0.0
92.5°	353.5	275.8	238.2	200.5	131.4	71.4	27.4	0.0
95°	326.7	255.3	219.3	184.5	119.4	64.5	22.8	0.0
97.5°	302.1	235.9	202.7	169.6	108.5	57.1	18.8	0.0
100°	278.7	216.4	185.6	155.9	98.2	50.8	14.3	0.0
102.5°	258.1	199.3	170.2	141.1	88.0	44.5	10.3	0.0
105°	238.2	182.8	155.9	127.9	78.8	38.8	6.3	0.0
107.5°	220.4	167.3	141.6	115.9	70.2	33.7	4.0	0.0
110°	203.3	153.1	127.9	104.5	62.8	29.1	3.4	0.0



TEST NUMBER: P201244

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	187.3	139.3	115.9	93.7	56.5	24.6	3.4	0.0
115°	170.8	126.2	104.5	84.5	50.3	20.0	2.9	0.0
117.5°	156.5	113.6	94.2	77.1	44.0	16.0	2.9	0.0
120°	142.2	102.8	85.7	69.1	38.3	12.0	2.9	0.0
122.5°	127.9	93.1	76.5	61.7	33.1	9.7	2.3	0.0
125°	114.8	82.8	68.0	53.7	27.4	8.6	2.3	0.0
127.5°	101.7	72.5	58.8	46.3	21.7	7.4	1.7	0.0
130°	88.5	62.3	50.3	38.8	16.6	6.3	1.7	0.0
132.5°	76.5	52.5	42.3	32.0	13.1	5.1	1.1	0.0
135°	64.5	44.0	34.8	25.1	10.3	4.6	1.1	0.0
137.5°	54.3	36.0	27.4	18.8	8.6	3.4	1.1	0.0
140°	44.5	28.6	20.6	14.3	6.9	2.9	0.6	0.0
142.5°	35.4	21.1	15.4	10.9	5.7	2.3	0.6	0.0
145°	27.4	15.4	11.4	8.6	5.1	1.7	0.6	0.0
147.5°	20.0	12.0	9.1	7.4	4.0	1.7	0.6	0.0
150°	14.3	9.1	7.4	5.7	2.9	1.1	0.6	0.0
152.5°	10.9	6.9	5.7	4.6	2.3	1.1	0.6	0.0
155°	8.0	5.1	4.6	3.4	1.7	1.1	0.6	0.0
157.5°	5.7	4.0	3.4	2.3	1.7	1.1	0.6	0.0
160°	3.4	2.9	2.3	1.7	1.1	0.6	0.6	0.0
162.5°	2.9	1.7	1.7	1.7	1.1	0.6	0.6	0.0
165°	1.7	1.1	1.1	1.1	0.6	0.6	0.6	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)