

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: P201315

Luminaire Tested: **4LBLED-LD4-6-SYMF-UNV-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201315
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-L835-CD1-U
Description: 4 ft. Low Bay Linear, 6000 lm, Frst Sym lens, 3.5K
Light Source: (392) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
(OTI50W0960CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6372.3 lumens
Efficiency: N/A
Efficacy: 148.9 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

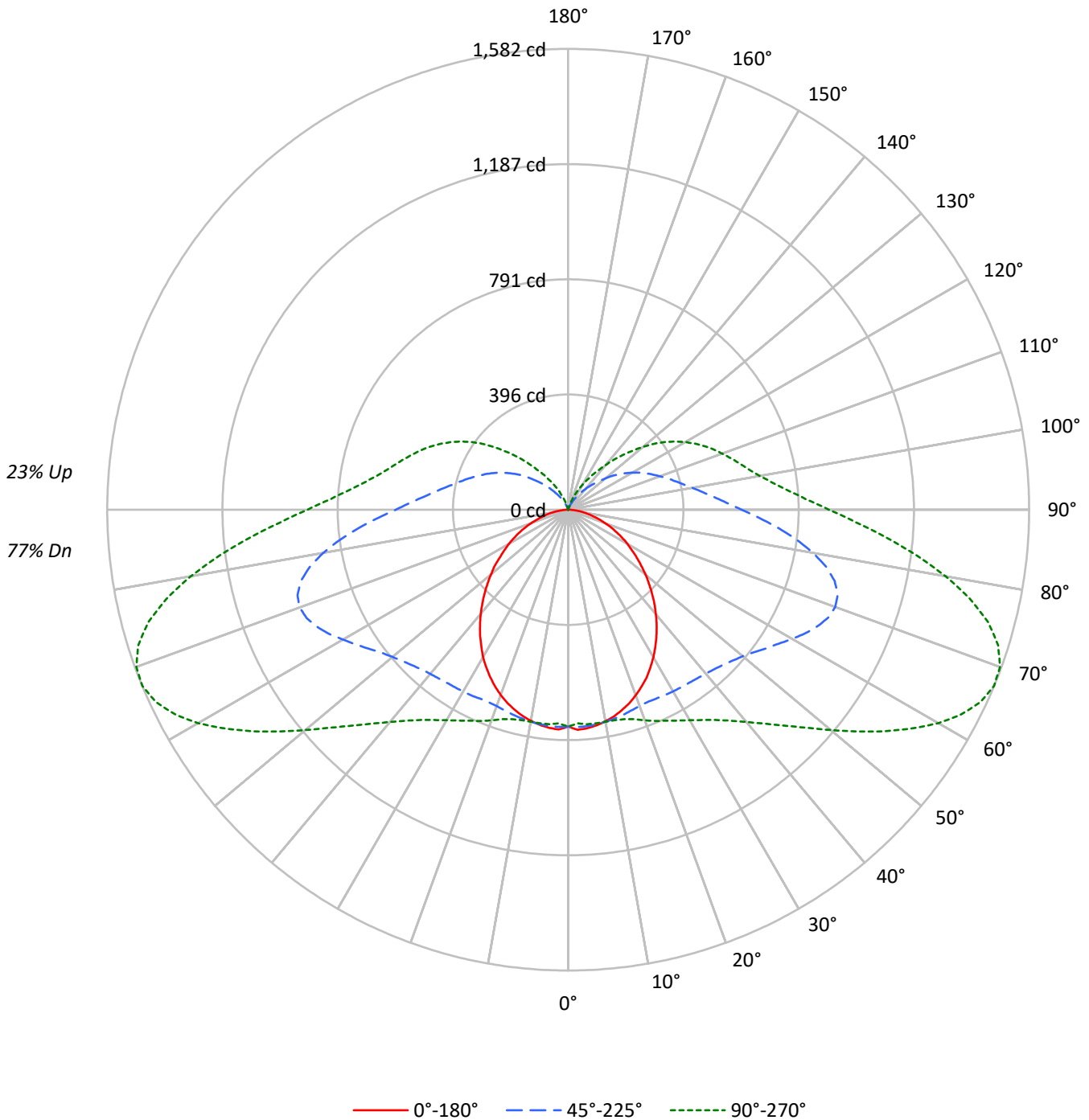
Input Watts (W): 42.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77
1	98	91	84	78	92	86	80	75	77	73	68	69	65	62	62	59	56	52
2	86	75	66	59	81	71	63	56	64	57	51	57	51	47	50	46	42	38
3	77	64	54	46	72	61	51	44	54	46	40	48	42	37	43	37	33	29
4	70	55	45	37	65	52	43	36	47	39	32	42	35	30	37	31	27	23
5	63	49	38	31	59	46	37	29	41	33	27	37	30	25	32	27	22	19
6	58	43	33	26	55	41	32	25	37	29	23	33	26	21	29	23	19	16
7	54	39	29	22	50	37	28	21	33	25	20	30	23	18	26	21	16	14
8	50	35	26	19	47	33	25	19	30	22	17	27	20	16	24	18	14	12
9	46	32	23	17	44	30	22	16	27	20	15	25	18	14	22	17	13	10
10	43	29	21	15	41	28	20	15	25	18	14	23	17	12	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11997	11997	11997
5°	12126	10780	12101
10°	11956	9916	11930
15°	11714	9312	11696
20°	11409	9078	11390
25°	11045	8988	10998
30°	10566	9035	10555
35°	10023	9255	10002
40°	9443	9783	9400
45°	8814	10630	8790
50°	8175	11869	8149
55°	7526	13401	7513
60°	6942	14961	6959
65°	6291	16217	6312
70°	5598	16803	5598
75°	4766	16441	4740
80°	3841	15129	3798
85°	2632	13288	2505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	1.1
10°-20°	205.6	3.2
20°-30°	330.4	5.2
30°-40°	447.4	7.0
40°-50°	574.8	9.0
50°-60°	739.5	11.6
60°-70°	904.7	14.2
70°-80°	914.7	14.4
80°-90°	707.3	11.1
90°-100°	491.4	7.7
100°-110°	367.0	5.8
110°-120°	275.1	4.3
120°-130°	185.2	2.9
130°-140°	101.6	1.6
140°-150°	43.3	0.7
150°-160°	12.4	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	606.7	9.5
0°-40°	1054.1	16.5
0°-60°	2368.4	37.2
0°-90°	4895.1	76.8
90°-120°	1133.6	17.8
90°-150°	1463.7	23.0
90°-180°	1477.0	23.2
0°-180°	6372.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	744	744	744	744	744	
5°	753	746	739	745	752	71
15°	712	729	744	729	711	201
25°	636	715	799	716	634	292
35°	528	725	881	726	527	330
45°	407	753	1048	756	406	314
55°	288	829	1326	833	287	258
65°	183	945	1561	951	184	182
75°	91	947	1492	950	91	98
85°	23	724	1095	722	22	25
90°	0	595	894	591	0	1
95°	0	502	756	499	0	0
105°	0	379	610	379	0	1
115°	0	295	516	295	0	0
125°	0	212	405	210	0	1
135°	1	128	266	126	0	1
145°	1	65	146	62	0	1
155°	1	21	61	20	0	1
165°	1	1	6	3	0	0
175°	0	0	0	0	0	0
180°	0	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°	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5
2.5°	756.4	755.8	752.6	747.7	745.6	745.0	744.5	742.3	741.8	742.8	747.2
5°	753.1	752.6	749.3	744.5	742.8	742.3	741.8	740.1	740.1	741.8	746.1
7.5°	746.6	746.1	742.8	739.1	737.4	736.9	736.9	735.8	735.8	738.5	743.4
10°	737.4	736.9	734.2	730.9	729.9	729.9	729.9	729.3	730.4	733.6	739.1
12.5°	726.6	725.5	723.4	720.7	720.7	720.7	721.2	721.2	722.8	728.2	734.7
15°	712.0	712.5	710.4	708.2	709.3	709.8	710.9	712.0	714.7	721.2	728.8
17.5°	696.9	696.9	695.2	694.2	696.3	697.4	699.0	700.6	705.5	713.6	722.3
20°	677.9	678.5	677.9	678.5	681.2	682.8	685.0	688.7	695.2	706.6	716.9
22.5°	657.4	658.4	658.4	660.6	664.9	667.6	670.3	675.8	685.0	699.6	714.2
25°	636.3	635.7	638.4	642.2	646.5	650.3	653.6	661.7	675.2	694.7	715.3
27.5°	610.8	611.9	615.7	621.1	627.6	632.5	637.3	648.7	668.2	694.2	718.0
30°	584.9	586.5	591.4	598.9	608.1	614.6	620.0	637.9	664.4	694.2	720.1
32.5°	556.7	559.4	565.9	575.7	588.6	596.2	604.9	628.7	661.1	693.1	722.3
35°	528.1	531.3	540.0	551.9	567.0	576.2	589.7	621.7	656.8	692.0	725.0
37.5°	498.8	502.6	512.4	527.5	547.0	561.1	577.3	614.1	653.6	692.0	728.8
40°	468.5	472.9	485.3	502.6	527.5	545.9	565.4	606.5	650.3	692.5	734.7
42.5°	437.7	442.6	457.7	478.3	510.7	532.4	554.0	600.0	648.2	695.2	742.3
45°	406.9	413.4	430.1	455.0	495.6	518.3	543.2	594.1	647.1	700.1	752.6
47.5°	376.0	383.6	403.1	432.8	479.9	507.0	532.9	589.2	648.2	706.6	766.1
50°	346.3	354.9	376.6	412.8	465.3	494.5	523.2	585.9	650.3	716.3	782.3
52.5°	316.0	327.3	351.1	395.0	452.3	483.1	515.1	583.8	654.7	729.3	803.4
55°	287.8	299.7	327.3	377.6	439.9	473.4	507.5	583.2	662.2	745.0	829.4
57.5°	259.2	273.8	304.1	360.9	426.9	463.7	501.5	584.3	671.4	761.8	855.9
60°	234.8	247.8	283.0	344.6	415.5	454.5	496.1	585.4	681.2	781.3	886.8
62.5°	208.8	222.9	264.6	329.0	404.2	446.4	490.7	587.0	691.4	801.3	918.1
65°	183.4	198.0	246.2	313.8	392.8	437.7	484.2	587.0	699.6	819.7	945.2
67.5°	159.1	174.8	227.8	297.6	379.8	426.9	476.1	584.3	704.4	832.7	966.3
70°	135.8	153.1	209.9	280.3	365.7	413.9	464.8	578.4	703.9	837.5	975.5
72.5°	112.5	132.6	190.4	262.9	350.6	399.3	451.2	567.0	696.3	831.6	969.5
75°	91.4	113.1	173.1	245.6	333.3	382.0	434.5	549.7	679.5	813.2	946.8
77.5°	72.0	95.8	154.7	226.7	313.8	362.0	413.4	527.5	653.0	780.7	906.8
80°	53.6	80.1	137.4	207.8	292.7	339.8	389.5	499.4	618.4	736.9	853.2
82.5°	37.3	65.5	120.7	188.8	271.1	316.0	363.6	465.8	578.4	686.0	791.5
85°	22.7	52.5	103.9	170.4	248.9	291.1	336.0	430.7	534.5	630.9	723.9
87.5°	9.7	40.6	89.3	152.6	226.7	266.7	307.9	397.1	488.0	573.5	656.3
90°	0.5	30.3	76.3	135.8	205.6	242.9	281.3	361.4	445.3	521.0	594.6
92.5°	0.0	26.0	68.7	125.5	191.0	225.6	261.3	334.9	410.6	478.3	543.7
95°	0.5	21.6	62.2	114.2	176.4	209.4	242.4	311.1	379.3	441.5	501.5
97.5°	0.5	17.9	55.2	103.9	162.9	193.2	224.0	287.8	349.5	408.5	464.2
100°	0.5	14.1	48.7	94.1	148.8	176.9	206.1	266.2	324.1	379.3	431.7
102.5°	0.5	10.3	43.3	84.9	135.8	162.3	189.4	246.2	300.8	353.8	403.6
105°	0.5	7.0	37.9	76.3	123.9	148.8	174.2	227.8	279.7	330.6	379.3
107.5°	0.5	4.9	33.0	68.2	110.9	135.8	159.6	210.5	260.2	309.5	357.1
110°	0.5	4.3	28.7	61.1	100.6	123.4	146.1	194.2	241.8	288.9	335.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.5	3.8	24.3	54.6	90.4	110.9	133.1	178.5	225.1	270.5	314.9
115°	0.5	3.8	20.0	48.7	81.7	100.1	120.7	163.4	207.8	251.6	294.9
117.5°	0.5	3.8	16.2	43.3	73.6	90.4	108.2	149.3	190.4	233.2	275.4
120°	0.5	3.2	13.0	37.9	66.5	81.7	98.5	135.8	173.7	213.7	254.3
122.5°	0.5	3.2	10.8	33.0	59.5	73.6	88.7	121.7	158.0	194.8	232.6
125°	0.5	2.7	9.2	27.6	52.5	66.0	79.5	109.3	142.8	176.9	211.5
127.5°	1.1	2.7	7.6	22.7	45.4	57.4	70.3	97.4	126.6	157.4	190.4
130°	1.1	2.7	6.5	17.3	38.4	49.2	60.6	85.5	112.5	139.0	167.7
132.5°	1.1	2.2	6.0	13.5	31.9	41.7	51.9	74.1	97.9	121.7	146.6
135°	1.1	2.2	4.9	10.8	25.4	34.1	43.8	63.3	84.4	106.6	127.7
137.5°	1.1	1.6	4.3	8.7	19.5	27.6	36.2	53.6	72.0	90.9	110.4
140°	1.1	1.6	3.8	7.0	14.6	20.6	28.7	43.8	60.1	76.8	93.6
142.5°	1.1	1.6	3.2	6.0	11.4	15.7	21.6	35.7	49.8	63.8	78.5
145°	1.1	1.6	2.7	4.9	8.7	11.9	15.7	27.6	40.0	52.5	64.9
147.5°	1.1	1.6	2.7	4.3	7.0	9.2	11.9	20.0	31.4	41.7	52.5
150°	1.1	1.6	2.2	3.8	6.0	7.0	8.7	14.1	22.7	31.9	41.1
152.5°	1.1	1.1	2.2	3.2	4.3	5.4	6.5	10.3	15.7	22.7	30.8
155°	1.1	1.1	1.6	2.7	3.8	4.3	4.9	7.0	10.3	14.6	20.6
157.5°	1.1	1.1	1.6	2.2	2.7	3.2	3.8	4.9	7.0	9.2	12.4
160°	1.1	1.1	1.6	2.2	2.2	2.7	2.7	3.2	4.3	5.4	7.0
162.5°	1.1	1.1	1.6	1.6	1.6	2.2	2.2	2.2	2.7	2.7	3.2
165°	1.1	1.1	1.1	1.6	1.1	1.6	1.1	1.6	1.6	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5
2.5°	748.8	745.0	743.4	741.2	739.6	738.5	736.9	735.8	734.2	734.2	734.7
5°	747.7	743.9	742.8	740.7	739.6	739.1	738.0	738.5	738.5	739.1	738.5
7.5°	745.6	742.3	741.2	740.1	739.1	738.5	738.0	739.1	739.1	739.6	739.6
10°	741.8	739.6	739.6	738.5	738.0	737.4	736.4	738.0	738.0	739.1	738.5
12.5°	737.4	736.9	737.4	738.0	738.0	737.4	736.9	739.1	740.1	740.1	740.7
15°	732.6	733.6	736.4	738.0	739.1	739.1	740.1	742.3	743.9	744.5	744.5
17.5°	728.8	731.5	736.4	740.7	742.8	743.9	746.6	751.0	753.7	754.2	754.2
20°	726.1	732.6	741.2	749.3	752.0	754.2	759.6	765.0	768.8	769.4	769.4
22.5°	728.2	739.1	751.0	760.2	763.9	766.7	772.6	779.6	784.0	784.5	784.5
25°	733.6	746.6	760.2	771.5	775.8	779.1	785.6	793.2	797.5	799.1	798.6
27.5°	738.5	754.2	769.9	782.9	787.8	792.1	800.2	808.9	814.3	815.9	814.8
30°	742.8	761.2	779.1	794.8	801.3	806.1	815.9	826.2	833.2	834.8	833.2
32.5°	747.2	769.4	790.5	808.9	815.3	822.4	834.8	846.7	853.8	855.9	854.8
35°	753.1	779.1	804.0	825.1	833.7	841.9	856.5	870.5	879.2	880.8	879.2
37.5°	761.2	791.5	819.1	845.6	854.8	866.2	883.5	900.3	910.6	912.7	910.6
40°	771.5	807.2	839.7	870.5	883.0	894.9	916.0	936.0	947.4	951.1	949.5
42.5°	785.0	826.7	864.6	901.4	915.4	930.6	955.5	978.7	991.7	996.1	991.7
45°	801.8	851.1	894.9	937.6	953.9	972.2	1002.0	1028.5	1043.7	1047.5	1043.7
47.5°	824.0	879.7	930.6	979.8	999.3	1020.9	1056.1	1086.4	1102.6	1107.0	1103.2
50°	847.8	914.4	972.8	1029.1	1053.4	1076.1	1117.2	1150.8	1168.1	1176.2	1169.2
52.5°	877.6	952.2	1020.9	1083.7	1112.9	1140.0	1185.4	1222.2	1243.3	1250.3	1240.6
55°	913.3	997.7	1074.5	1147.0	1176.2	1206.5	1256.8	1295.8	1318.0	1325.5	1318.5
57.5°	952.8	1045.8	1130.8	1207.1	1241.1	1272.0	1328.2	1368.8	1388.3	1398.0	1389.4
60°	993.9	1095.6	1187.6	1268.7	1306.1	1338.0	1395.3	1435.4	1455.9	1465.7	1457.6
62.5°	1033.9	1143.8	1240.6	1325.0	1360.7	1395.9	1453.2	1491.6	1512.7	1521.4	1513.8
65°	1068.6	1184.3	1283.9	1371.0	1407.8	1442.4	1496.5	1533.3	1555.5	1561.4	1556.0
67.5°	1094.5	1211.9	1312.6	1398.6	1434.3	1468.9	1520.3	1554.4	1576.0	1581.5	1576.6
70°	1106.4	1222.7	1322.3	1406.2	1441.3	1472.2	1520.9	1553.3	1573.9	1577.1	1573.3
72.5°	1098.8	1211.9	1308.2	1388.3	1421.8	1448.9	1493.8	1524.6	1544.1	1546.8	1544.1
75°	1070.7	1178.9	1269.8	1344.5	1375.9	1398.6	1441.3	1470.0	1489.5	1491.6	1488.4
77.5°	1023.1	1123.7	1207.1	1279.0	1305.0	1327.2	1367.7	1393.2	1408.9	1412.1	1408.3
80°	959.3	1051.8	1126.4	1190.8	1215.7	1234.6	1274.1	1301.7	1310.4	1314.7	1309.3
82.5°	886.2	969.0	1035.5	1094.0	1116.2	1139.4	1164.9	1190.3	1202.7	1206.5	1202.2
85°	807.8	881.4	940.3	992.8	1012.3	1033.4	1055.6	1080.5	1091.3	1095.1	1090.7
87.5°	729.3	794.2	846.2	892.7	910.6	929.5	956.0	969.0	983.6	987.9	983.1
90°	659.0	717.4	763.9	806.1	822.9	840.2	860.8	877.0	890.5	894.3	890.0
92.5°	602.2	654.7	697.4	735.3	749.9	766.1	786.1	801.8	813.7	817.5	813.2
95°	555.1	603.3	643.3	678.5	692.5	707.7	729.9	742.3	753.1	756.4	753.1
97.5°	515.1	560.5	598.4	632.5	646.0	660.1	681.7	694.2	704.4	707.1	704.4
100°	479.9	524.3	561.6	594.1	607.6	621.1	642.2	654.7	664.4	667.6	664.4
102.5°	450.7	493.4	530.2	563.2	576.2	589.7	609.8	624.4	631.9	635.7	632.5
105°	425.3	466.9	503.7	536.2	549.7	562.7	583.2	596.8	605.4	609.8	606.0
107.5°	402.0	443.1	480.4	511.8	525.3	538.3	559.4	573.0	581.1	585.9	581.6
110°	379.8	420.4	456.1	488.6	502.1	515.6	536.7	550.2	558.4	562.7	558.9



TEST NUMBER: P201315

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	358.2	397.7	434.5	465.8	478.8	492.3	514.0	528.1	535.6	540.5	536.2
115°	336.5	375.5	411.2	441.5	454.5	468.5	489.6	504.2	512.4	516.2	511.8
117.5°	315.4	352.8	386.8	416.6	429.6	443.1	463.7	478.3	486.9	490.7	486.4
120°	293.8	329.5	363.0	390.1	403.6	416.1	437.2	451.2	459.9	463.7	459.3
122.5°	270.5	305.7	337.6	364.1	377.1	389.0	409.6	423.6	431.7	435.5	431.7
125°	246.7	279.7	310.6	337.1	347.9	359.2	379.3	392.8	401.5	404.7	401.5
127.5°	222.9	253.2	281.9	305.1	317.0	327.9	346.8	359.8	367.4	371.2	368.4
130°	199.1	227.8	253.7	274.8	285.1	295.4	312.7	324.6	332.2	335.4	332.7
132.5°	173.7	201.3	226.7	245.1	254.8	263.5	279.2	289.5	295.9	299.7	296.5
135°	150.9	173.7	197.5	216.4	226.2	233.7	247.8	256.5	262.4	265.6	262.4
137.5°	130.4	149.9	169.3	186.1	195.3	203.4	217.0	225.1	230.5	233.7	230.5
140°	111.5	128.2	145.5	159.1	167.2	173.7	186.1	193.2	198.0	200.7	197.5
142.5°	93.1	108.2	122.8	135.3	142.3	147.7	159.6	165.0	168.8	170.4	168.8
145°	77.4	89.8	102.3	113.6	119.0	123.4	135.3	141.2	144.5	146.1	144.5
147.5°	62.8	73.0	83.3	92.5	97.4	102.8	110.9	117.9	120.7	121.7	120.7
150°	49.2	58.4	66.5	74.1	77.9	81.7	88.7	95.8	98.5	100.1	98.5
152.5°	37.3	44.9	51.4	57.4	60.6	63.8	69.8	76.3	79.0	80.1	79.0
155°	27.1	32.5	38.4	42.7	45.4	47.6	51.9	56.3	60.6	60.6	60.6
157.5°	16.8	21.1	26.0	29.8	31.4	33.5	36.8	40.6	43.8	45.4	45.4
160°	8.7	11.4	14.6	17.3	18.9	20.6	22.7	26.0	28.1	29.8	28.7
162.5°	3.8	4.9	6.5	7.6	8.7	9.2	10.8	12.4	13.5	16.2	14.1
165°	1.1	1.1	1.6	2.2	2.2	2.2	2.7	3.2	3.8	6.0	4.3
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: P201315

CATALOG NUMBER: 4LBLELD4-6-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5
2.5°	735.8	737.4	739.6	740.7	742.3	743.4	746.1	749.3	746.6	742.8	743.4
5°	738.5	738.0	739.6	740.7	741.8	742.3	745.0	748.3	745.0	741.2	741.2
7.5°	739.6	739.1	739.6	740.1	740.7	740.7	743.4	746.1	742.8	738.0	736.9
10°	738.0	737.4	738.0	739.1	739.1	739.1	740.7	742.8	739.1	733.1	730.9
12.5°	739.1	737.4	737.4	738.0	738.0	736.9	737.4	739.1	734.2	727.7	724.5
15°	742.8	740.1	739.1	739.1	738.0	735.3	734.2	734.2	728.8	720.1	715.8
17.5°	752.0	747.7	744.5	742.8	740.7	735.8	732.0	729.9	722.8	713.1	706.1
20°	766.1	760.2	755.3	752.0	749.3	740.7	733.1	727.2	717.4	705.5	696.3
22.5°	780.2	773.7	766.7	763.4	759.6	749.9	739.6	729.3	714.7	698.5	686.0
25°	793.7	787.2	779.1	775.8	771.0	759.6	746.6	734.7	715.8	693.6	675.8
27.5°	809.4	801.3	792.6	787.8	782.3	769.4	754.7	740.1	719.0	693.6	668.7
30°	827.2	817.5	806.1	800.7	794.2	779.1	761.2	743.9	721.2	693.6	664.9
32.5°	847.8	836.4	822.9	815.3	807.8	789.9	768.8	748.8	722.8	693.1	661.7
35°	871.6	858.6	842.4	833.7	824.5	803.4	778.6	754.2	725.5	692.5	657.4
37.5°	901.4	886.2	866.7	855.9	845.1	820.2	791.5	762.3	729.9	693.1	654.1
40°	937.1	919.2	896.5	883.0	870.0	841.3	807.2	772.6	735.8	694.2	650.9
42.5°	979.3	957.6	932.2	916.5	901.4	865.7	826.7	785.6	743.9	696.3	649.2
45°	1029.6	1006.9	974.4	954.9	938.2	896.5	851.6	802.9	755.8	701.7	648.7
47.5°	1087.5	1058.8	1023.6	1000.9	980.9	932.8	880.8	824.5	769.4	708.8	649.8
50°	1152.4	1119.9	1079.4	1055.6	1030.7	975.5	915.4	850.0	786.7	719.0	652.5
52.5°	1223.8	1188.1	1144.3	1116.2	1088.6	1024.7	954.4	882.4	806.7	732.0	657.4
55°	1298.0	1259.5	1210.8	1180.0	1149.2	1078.8	1000.4	917.6	833.2	748.3	665.5
57.5°	1369.9	1330.4	1276.9	1245.5	1210.8	1136.2	1049.6	956.0	861.9	767.2	674.7
60°	1436.5	1397.0	1342.9	1310.9	1273.1	1193.0	1099.9	998.2	891.6	787.2	685.5
62.5°	1492.7	1454.9	1400.7	1368.3	1329.3	1246.6	1148.1	1039.3	924.1	808.3	695.8
65°	1534.4	1498.7	1446.2	1412.7	1375.3	1289.3	1188.7	1075.6	951.1	826.7	705.0
67.5°	1555.5	1521.9	1471.1	1439.2	1402.4	1316.9	1216.3	1099.9	971.7	839.7	710.9
70°	1553.3	1521.4	1473.8	1442.4	1407.2	1325.0	1226.0	1109.7	980.9	844.6	709.8
72.5°	1525.2	1493.3	1450.5	1420.2	1386.7	1309.9	1212.5	1101.0	973.9	837.0	701.2
75°	1469.5	1440.2	1397.0	1372.1	1341.8	1270.4	1177.3	1069.1	950.1	817.0	683.3
77.5°	1389.4	1367.2	1325.0	1301.7	1272.0	1206.0	1118.3	1020.9	908.4	783.4	655.7
80°	1291.5	1273.1	1231.9	1211.4	1182.2	1124.8	1049.1	954.9	853.2	738.0	620.0
82.5°	1184.3	1163.2	1130.8	1111.8	1084.2	1032.8	960.9	884.1	789.4	686.0	578.4
85°	1073.4	1053.9	1024.2	1008.0	983.6	937.6	873.2	805.6	721.7	628.7	533.5
87.5°	967.9	949.0	920.8	906.2	884.1	842.9	786.7	727.2	653.0	573.5	485.9
90°	876.5	858.6	832.1	818.6	798.6	761.2	710.4	656.8	591.4	518.3	443.1
92.5°	801.3	785.0	760.2	747.2	729.3	695.2	649.2	600.6	541.6	478.3	408.5
95°	741.8	726.1	703.9	691.4	674.7	639.5	598.9	553.5	499.4	441.5	377.1
97.5°	693.6	680.6	656.3	644.4	630.9	595.1	558.4	513.4	463.1	409.0	349.0
100°	654.7	640.0	617.9	606.5	592.4	558.9	521.6	479.4	430.7	379.3	323.5
102.5°	624.4	609.2	588.6	575.7	562.1	528.1	491.3	450.1	403.6	353.8	300.3
105°	597.3	582.7	562.1	549.2	535.6	502.1	466.9	425.3	379.3	331.1	279.2
107.5°	571.9	558.9	538.3	525.3	511.8	478.3	443.1	402.0	357.1	310.0	259.7
110°	550.2	536.2	514.5	502.1	487.5	455.6	420.4	380.4	335.4	289.5	241.3



TEST NUMBER: P201315

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	528.6	513.4	491.8	479.4	464.8	432.8	398.2	358.7	314.9	270.5	224.0
115°	504.8	490.2	467.5	455.0	440.4	409.0	375.5	337.1	294.9	251.6	206.7
117.5°	479.4	464.8	442.0	430.1	416.1	385.2	353.3	316.0	274.8	233.2	189.4
120°	451.8	437.7	416.1	404.2	390.6	360.9	330.0	292.7	253.7	213.7	173.1
122.5°	423.6	410.1	389.0	377.1	364.1	336.0	305.7	269.4	232.1	194.8	157.4
125°	393.3	379.8	359.8	348.4	335.4	308.4	279.2	245.1	210.5	176.9	141.2
127.5°	358.2	347.3	327.9	316.5	304.6	280.8	252.7	221.8	189.9	157.4	125.5
130°	324.6	313.3	294.9	284.6	274.3	252.7	227.8	198.0	166.6	138.5	109.8
132.5°	289.5	279.2	263.5	254.8	245.6	226.2	200.7	171.5	145.0	120.7	95.2
135°	256.5	247.8	233.7	226.2	217.0	196.4	172.6	148.2	126.1	104.4	81.7
137.5°	225.6	217.0	204.0	195.9	186.1	167.7	148.2	128.2	107.7	89.3	69.3
140°	193.2	186.1	174.2	167.2	158.5	142.8	126.6	107.7	91.4	74.7	57.4
142.5°	165.6	159.6	147.7	141.2	133.6	120.7	105.5	90.9	76.3	61.7	47.1
145°	141.8	135.8	122.8	117.9	110.9	99.6	87.1	74.1	62.2	49.8	37.9
147.5°	118.5	111.5	100.1	95.8	90.4	80.6	70.9	60.6	50.3	39.5	29.2
150°	96.8	88.7	79.5	76.8	71.4	63.8	55.7	47.1	39.0	30.3	21.1
152.5°	76.3	69.3	61.7	59.0	54.6	49.8	42.7	35.7	29.2	21.1	14.6
155°	56.8	51.4	45.4	43.8	40.6	36.8	30.8	25.4	19.5	14.1	10.3
157.5°	40.0	35.7	31.4	30.3	28.1	24.9	20.0	15.7	12.4	9.2	7.0
160°	24.9	22.2	18.9	17.9	16.2	14.1	10.8	9.2	7.6	6.0	4.3
162.5°	11.9	10.3	9.2	8.7	7.6	6.5	6.0	4.9	4.3	3.8	3.2
165°	4.3	4.3	4.3	3.8	3.8	3.8	3.8	3.2	2.7	2.7	2.2
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: P201315

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	744.5	744.5	744.5	744.5	744.5	744.5	744.5	744.5
2.5°	743.9	745.0	745.0	745.6	747.2	750.4	754.7	755.3
5°	741.8	742.3	742.3	742.3	743.9	746.6	751.0	751.5
7.5°	736.9	736.9	736.9	736.9	738.5	740.7	744.5	745.0
10°	730.4	729.9	729.9	729.3	730.4	732.0	736.4	735.8
12.5°	722.3	721.2	720.7	720.7	720.1	721.7	724.5	725.0
15°	713.1	710.9	709.8	708.8	708.2	708.2	711.5	710.9
17.5°	702.3	699.0	697.4	695.8	693.6	693.6	695.8	695.2
20°	689.8	685.5	682.8	680.6	677.4	676.3	677.4	676.8
22.5°	677.4	670.3	667.6	664.4	659.5	657.4	656.8	656.3
25°	662.8	654.1	650.3	647.1	640.0	637.3	634.6	633.6
27.5°	649.8	637.3	632.5	627.1	618.9	615.2	610.8	609.8
30°	638.4	620.0	612.5	607.0	596.8	590.8	585.4	584.3
32.5°	629.8	604.3	594.1	587.6	573.5	565.4	558.4	555.1
35°	622.2	589.7	576.2	565.9	549.2	539.4	529.7	527.0
37.5°	615.2	577.3	559.4	545.4	526.4	512.4	501.5	497.2
40°	608.1	565.9	544.3	526.4	501.5	485.3	471.8	466.4
42.5°	601.6	554.6	531.3	509.7	477.2	457.7	443.1	435.5
45°	595.7	544.3	518.9	495.1	453.4	430.7	412.8	405.8
47.5°	591.4	534.5	506.4	480.4	431.2	403.1	384.7	375.5
50°	588.1	525.3	494.5	465.8	411.7	376.6	356.0	345.2
52.5°	586.5	517.2	483.7	452.8	393.9	351.1	326.8	318.7
55°	587.0	510.7	474.5	440.9	377.1	326.8	299.7	287.3
57.5°	588.1	504.8	465.3	429.0	360.3	303.0	272.7	259.7
60°	590.3	499.9	457.2	417.7	344.6	282.4	247.8	235.4
62.5°	592.4	495.6	449.1	406.9	329.5	263.5	222.9	208.8
65°	593.0	489.1	440.4	396.0	314.3	244.5	197.5	184.0
67.5°	590.8	481.0	429.6	383.6	298.7	226.2	173.7	159.6
70°	584.3	470.2	417.1	369.5	281.3	208.3	150.9	135.8
72.5°	572.4	456.1	402.5	353.8	264.6	189.4	130.4	112.0
75°	555.6	438.8	385.2	336.0	246.7	171.5	111.5	90.9
77.5°	532.9	416.6	364.7	316.0	227.2	153.1	95.2	71.4
80°	503.7	393.3	341.9	294.3	208.3	136.3	79.5	53.0
82.5°	469.1	366.8	317.6	272.1	190.4	119.0	64.9	36.8
85°	433.4	338.1	292.2	248.9	171.5	102.8	52.5	21.6
87.5°	398.2	309.5	267.8	227.8	152.0	88.2	40.6	8.7
90°	363.6	281.9	242.4	205.1	135.3	74.7	30.3	0.0
92.5°	334.9	261.3	225.6	189.9	124.4	67.6	26.0	0.0
95°	309.5	241.8	207.8	174.8	113.1	61.1	21.6	0.0
97.5°	286.2	223.4	192.1	160.7	102.8	54.1	17.9	0.0
100°	264.0	205.1	175.8	147.7	93.1	48.2	13.5	0.0
102.5°	244.5	188.8	161.2	133.6	83.3	42.2	9.7	0.0
105°	225.6	173.1	147.7	121.2	74.7	36.8	6.0	0.0
107.5°	208.8	158.5	134.2	109.8	66.5	31.9	3.8	0.0
110°	192.6	145.0	121.2	99.0	59.5	27.6	3.2	0.0



TEST NUMBER: P201315

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	177.5	132.0	109.8	88.7	53.6	23.3	3.2	0.0
115°	161.8	119.6	99.0	80.1	47.6	18.9	2.7	0.0
117.5°	148.2	107.7	89.3	73.0	41.7	15.1	2.7	0.0
120°	134.7	97.4	81.2	65.5	36.2	11.4	2.7	0.0
122.5°	121.2	88.2	72.5	58.4	31.4	9.2	2.2	0.0
125°	108.7	78.5	64.4	50.9	26.0	8.1	2.2	0.0
127.5°	96.3	68.7	55.7	43.8	20.6	7.0	1.6	0.0
130°	83.9	59.0	47.6	36.8	15.7	6.0	1.6	0.0
132.5°	72.5	49.8	40.0	30.3	12.4	4.9	1.1	0.0
135°	61.1	41.7	33.0	23.8	9.7	4.3	1.1	0.0
137.5°	51.4	34.1	26.0	17.9	8.1	3.2	1.1	0.0
140°	42.2	27.1	19.5	13.5	6.5	2.7	0.5	0.0
142.5°	33.5	20.0	14.6	10.3	5.4	2.2	0.5	0.0
145°	26.0	14.6	10.8	8.1	4.9	1.6	0.5	0.0
147.5°	18.9	11.4	8.7	7.0	3.8	1.6	0.5	0.0
150°	13.5	8.7	7.0	5.4	2.7	1.1	0.5	0.0
152.5°	10.3	6.5	5.4	4.3	2.2	1.1	0.5	0.0
155°	7.6	4.9	4.3	3.2	1.6	1.1	0.5	0.0
157.5°	5.4	3.8	3.2	2.2	1.6	1.1	0.5	0.0
160°	3.2	2.7	2.2	1.6	1.1	0.5	0.5	0.0
162.5°	2.7	1.6	1.6	1.6	1.1	0.5	0.5	0.0
165°	1.6	1.1	1.1	1.1	0.5	0.5	0.5	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)