

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: P201327

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201327
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-LD4-6-SYMW-UNV-L835-CD1-U
Description: 4 ft. Low Bay Linear, 6000 lm, Wht Sym lens, 3.3.5K
Light Source: (392) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
(OTI50W0960CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6023.9 lumens
Efficiency: N/A
Efficacy: 140.7 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

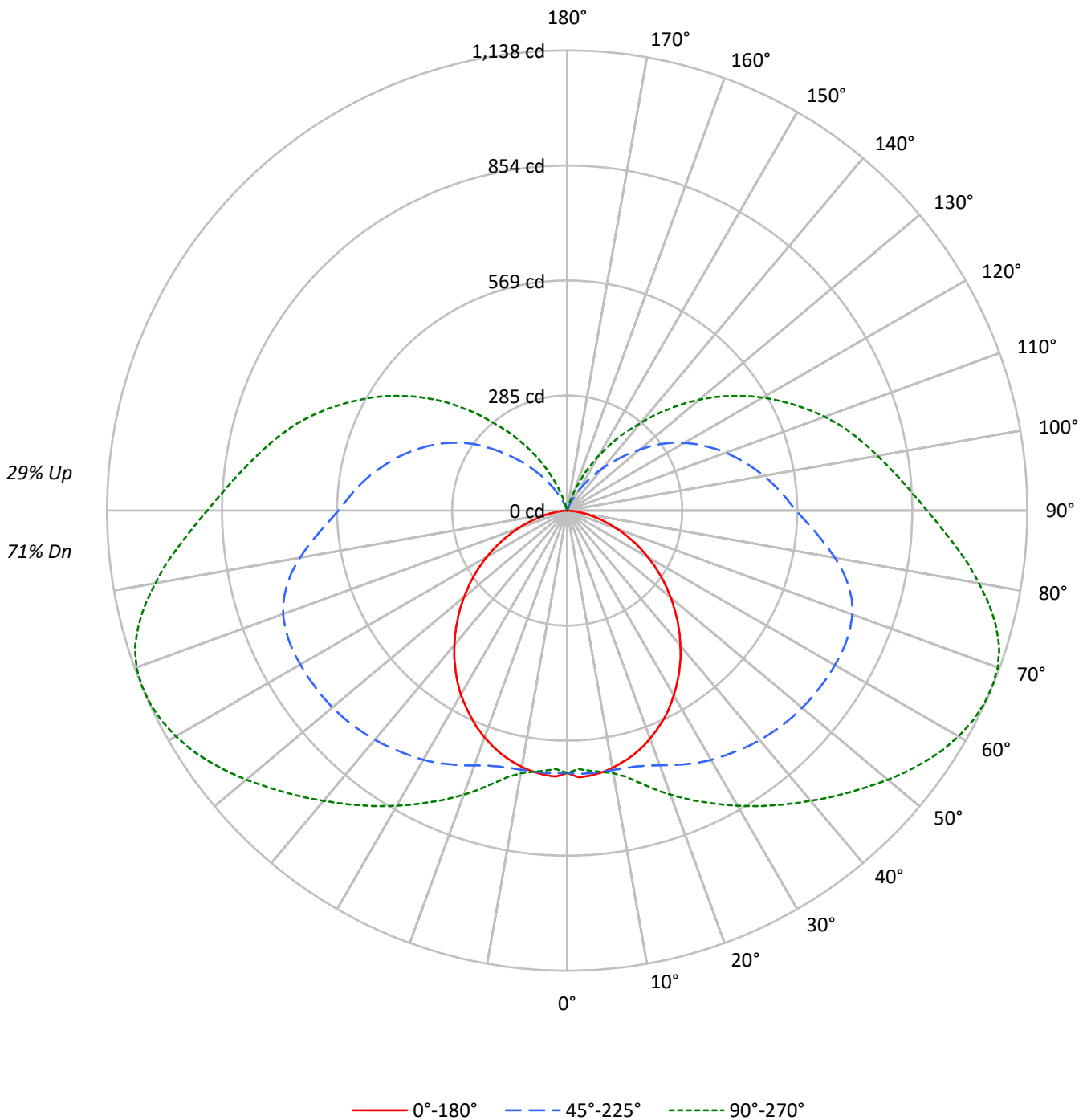
Input Watts (W): 42.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P201327

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

Luminous Intensity Polar Plot





TEST NUMBER: P201327

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

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°	10453	10453	10453
5°	10593	9422	10558
10°	10474	8848	10438
15°	10318	8723	10272
20°	10098	8822	10044
25°	9851	8945	9776
30°	9529	9123	9500
35°	9181	9352	9139
40°	8778	9639	8745
45°	8357	10004	8309
50°	7894	10449	7854
55°	7385	10934	7343
60°	6829	11404	6782
65°	6181	11801	6123
70°	5396	12077	5330
75°	4401	12099	4234
80°	3253	11898	3024
85°	1693	11660	1507



TEST NUMBER: P201327

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	1.0
10°-20°	186.6	3.1
20°-30°	315.9	5.2
30°-40°	441.7	7.3
40°-50°	556.5	9.2
50°-60°	653.4	10.8
60°-70°	714.5	11.9
70°-80°	705.9	11.7
80°-90°	620.1	10.3
90°-100°	527.9	8.8
100°-110°	440.2	7.3
110°-120°	341.0	5.7
120°-130°	237.3	3.9
130°-140°	138.5	2.3
140°-150°	63.2	1.0
150°-160°	18.0	0.3
160°-170°	1.3	0.0
170°-180°	0.0	0.0
0°-30°	564.4	9.4
0°-40°	1006.1	16.7
0°-60°	2216.0	36.8
0°-90°	4256.5	70.7
90°-120°	1309.0	21.7
90°-150°	1748.1	29.0
90°-180°	1767.0	29.3
0°-180°	6023.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	649	649	649	649	649	
5°	658	652	646	651	656	62
15°	627	655	697	655	624	177
25°	568	692	795	692	563	261
35°	484	727	890	726	482	302
45°	386	752	986	750	384	297
55°	282	763	1082	761	281	253
65°	180	762	1136	760	178	179
75°	84	721	1098	718	81	91
85°	15	617	961	615	13	18
90°	0	566	890	566	0	1
95°	0	530	832	531	0	0
105°	0	456	731	458	0	1
115°	0	377	620	378	0	0
125°	1	288	494	288	0	1
135°	1	183	354	183	0	1
145°	2	94	220	92	1	1
155°	2	26	97	25	1	1
165°	2	3	7	0	1	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P201327

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7
2.5°	660.1	659.5	656.8	652.5	650.9	649.8	649.2	647.6	647.1	648.2	651.4
5°	657.9	656.8	654.6	650.9	649.2	648.7	648.2	646.5	646.0	647.6	651.9
7.5°	653.0	652.5	650.3	646.5	646.0	644.9	644.9	643.8	643.8	646.5	651.4
10°	646.0	645.4	643.3	640.6	640.0	640.0	640.0	640.0	641.1	645.4	651.4
12.5°	636.8	636.8	635.2	633.0	633.5	633.5	634.1	635.2	638.4	644.9	652.5
15°	627.1	626.5	624.9	624.3	626.0	626.5	628.1	630.8	636.2	645.4	655.2
17.5°	614.6	614.6	613.0	613.5	616.8	618.4	621.1	626.0	634.6	647.1	661.1
20°	600.0	600.5	600.0	601.6	607.0	610.3	613.5	621.6	634.1	651.4	670.3
22.5°	583.8	584.9	584.9	589.2	596.2	601.1	606.0	617.3	635.2	659.0	681.2
25°	567.5	567.5	569.2	575.1	584.9	590.8	598.4	614.6	639.0	667.1	692.0
27.5°	548.1	549.7	552.4	560.5	574.0	582.1	591.3	614.6	643.3	675.2	702.8
30°	527.5	529.1	533.5	544.8	562.1	572.4	585.4	614.6	647.1	681.7	712.0
32.5°	505.9	508.6	514.5	529.1	550.2	564.3	581.1	614.1	650.3	687.1	719.6
35°	483.7	486.4	495.6	512.9	540.5	556.7	576.2	612.4	651.9	692.0	727.1
37.5°	460.4	465.3	475.6	497.2	530.7	550.2	570.8	610.8	653.6	695.8	734.7
40°	435.5	440.4	455.0	481.0	521.0	541.6	564.3	608.7	654.6	699.5	741.2
42.5°	411.2	417.7	434.4	465.8	511.3	534.0	557.8	605.4	654.1	702.3	746.6
45°	385.8	393.3	413.9	451.2	500.5	524.8	550.2	601.1	653.0	703.9	751.5
47.5°	359.8	369.0	393.3	436.6	489.6	515.1	542.7	596.8	651.4	705.0	755.8
50°	334.4	345.2	372.8	422.0	477.7	504.8	533.5	591.9	648.7	705.5	758.5
52.5°	308.9	320.8	353.3	407.4	465.3	494.0	524.3	585.9	645.4	705.0	761.2
55°	282.4	295.4	333.8	391.7	452.3	482.1	514.0	578.4	640.6	702.8	762.8
57.5°	257.0	271.6	315.4	376.6	438.8	470.2	504.2	570.2	635.2	701.2	764.5
60°	231.0	247.8	296.5	359.2	424.7	457.2	492.3	561.0	628.7	697.4	764.5
62.5°	205.6	224.5	278.1	343.6	410.6	444.2	480.4	550.8	621.6	693.6	764.5
65°	180.2	201.8	259.2	326.2	395.0	430.1	466.9	539.9	613.0	688.2	762.3
67.5°	155.3	180.2	239.7	308.4	378.7	415.0	452.8	527.5	603.2	681.2	758.0
70°	130.9	158.5	220.2	289.5	361.9	397.7	437.2	514.0	591.9	672.0	750.4
72.5°	106.6	138.0	199.6	270.5	344.1	380.9	420.9	498.3	577.8	659.5	738.5
75°	84.4	117.4	180.2	251.0	325.7	363.0	403.1	481.0	561.0	643.3	721.2
77.5°	64.4	98.5	161.2	232.1	306.2	345.2	384.7	462.0	541.6	622.7	698.5
80°	45.4	80.1	142.3	212.6	286.7	325.2	364.1	441.5	521.0	598.4	672.5
82.5°	28.1	63.3	123.4	193.7	267.8	305.7	344.1	420.9	497.7	572.9	644.4
85°	14.6	47.6	105.5	175.8	249.4	286.7	324.6	399.8	473.9	547.0	616.8
87.5°	4.9	34.6	90.9	160.1	232.6	270.0	306.8	379.8	451.8	521.6	589.7
90°	0.0	26.0	80.1	147.7	218.6	254.8	291.6	361.9	432.3	501.0	565.9
92.5°	0.0	22.2	73.0	139.0	208.8	244.5	280.3	350.0	417.7	484.2	547.5
95°	0.0	17.9	67.1	130.4	198.6	233.7	268.9	337.1	403.6	468.5	530.2
97.5°	0.0	14.1	60.6	122.3	188.3	222.4	256.4	324.1	389.0	452.8	512.4
100°	0.5	10.8	53.6	112.0	177.5	211.0	244.0	310.0	373.3	435.0	494.0
102.5°	0.5	7.6	47.1	103.3	166.1	198.6	231.0	295.4	357.6	418.8	475.0
105°	0.5	5.4	40.6	94.1	155.3	186.7	218.6	281.3	341.9	400.9	456.1
107.5°	0.5	3.8	34.6	85.5	144.5	174.2	205.0	266.2	325.7	383.0	437.2
110°	0.5	2.7	29.2	76.3	132.6	162.3	192.1	251.0	308.9	364.7	417.7



TEST NUMBER: P201327

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.5	2.2	23.8	67.6	120.6	149.9	178.5	235.9	292.2	346.3	397.7
115°	0.5	2.2	18.9	59.5	108.7	136.9	164.5	220.7	274.3	327.3	377.1
117.5°	0.5	1.6	14.6	51.4	97.9	123.9	150.4	204.0	257.0	308.4	356.5
120°	0.5	1.6	10.8	43.3	86.6	110.9	136.9	187.7	238.6	288.4	334.4
122.5°	1.1	1.6	8.1	36.2	76.3	98.5	123.4	171.5	219.1	267.3	312.7
125°	1.1	1.1	6.5	29.2	65.5	86.0	108.2	154.7	198.0	244.0	288.4
127.5°	1.1	1.1	4.9	22.2	54.6	73.6	93.6	136.9	179.1	220.2	262.4
130°	1.1	1.1	4.3	16.2	44.4	61.1	79.5	118.5	158.0	195.9	234.3
132.5°	1.1	1.1	3.2	11.9	35.2	50.3	66.5	101.2	137.4	174.2	208.8
135°	1.1	1.1	2.7	8.7	26.5	40.0	54.1	84.9	117.9	152.6	182.9
137.5°	1.1	1.1	2.7	6.5	19.5	30.3	42.7	70.9	100.1	130.9	158.5
140°	1.1	1.1	2.2	5.4	13.5	22.2	32.5	56.8	81.7	110.4	136.9
142.5°	1.1	1.1	1.6	4.3	9.7	15.7	23.3	43.8	66.0	90.9	114.2
145°	1.6	1.1	1.6	3.8	7.0	10.8	16.2	33.0	50.9	73.0	93.6
147.5°	1.1	1.1	1.1	2.7	5.4	7.6	10.8	22.7	38.4	56.8	74.1
150°	1.6	1.1	1.1	2.2	4.3	5.4	7.6	15.1	26.5	41.7	56.8
152.5°	1.6	1.1	1.1	2.2	3.2	4.3	5.4	9.7	17.3	28.1	40.6
155°	1.6	1.1	1.1	1.6	2.7	3.2	4.3	6.5	10.3	17.3	26.5
157.5°	1.6	1.6	1.6	1.6	2.2	2.7	3.2	4.9	6.0	9.7	15.1
160°	1.6	1.6	1.1	1.1	1.6	1.6	2.2	3.2	4.3	5.4	7.6
162.5°	1.6	1.6	1.6	1.1	1.1	1.1	1.6	2.2	2.7	3.8	4.9
165°	1.6	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.6	2.2	2.7
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: P201327

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7
2.5°	652.5	649.8	648.7	646.5	644.9	643.8	642.2	641.1	640.0	639.5	639.5
5°	653.0	650.3	649.2	647.6	647.1	646.0	644.9	646.0	645.4	646.0	645.4
7.5°	653.6	651.4	651.4	650.9	650.3	650.3	649.2	650.3	650.9	651.4	650.9
10°	655.2	654.6	655.7	656.3	656.3	656.3	656.3	657.3	659.5	659.5	659.0
12.5°	657.9	659.5	662.8	665.5	666.5	666.5	668.7	670.9	673.6	674.1	673.6
15°	663.3	668.2	675.2	681.2	683.9	685.5	689.8	693.6	696.3	697.4	696.3
17.5°	673.0	682.2	693.1	701.7	705.0	707.1	713.1	716.9	720.1	722.8	721.7
20°	686.0	698.5	711.5	721.7	726.1	728.8	735.3	742.3	745.5	747.7	747.2
22.5°	700.1	714.7	729.3	741.7	746.6	749.9	758.0	764.5	769.3	772.0	771.5
25°	713.6	730.4	748.2	761.8	767.7	771.5	780.2	787.7	793.1	795.3	794.8
27.5°	727.1	746.6	766.1	781.8	787.7	792.6	802.9	811.0	817.5	819.1	819.1
30°	738.0	760.7	781.8	799.6	806.1	812.6	824.0	834.8	840.8	842.9	842.4
32.5°	748.2	773.7	797.5	817.5	825.6	832.1	845.6	857.5	864.6	866.7	864.6
35°	758.5	786.7	813.2	834.8	843.5	851.6	866.7	880.3	887.8	890.0	888.9
37.5°	768.3	799.6	828.3	852.1	862.4	871.1	886.7	903.0	911.1	913.3	911.1
40°	777.5	811.5	842.9	868.9	880.3	890.5	908.9	925.2	934.4	937.1	936.0
42.5°	786.1	823.4	857.5	886.2	899.2	910.0	930.6	948.4	958.2	961.4	958.7
45°	793.7	835.3	872.1	903.0	917.0	929.5	952.8	972.2	982.0	985.8	982.5
47.5°	801.3	846.2	885.7	919.7	936.0	949.0	974.9	995.5	1006.9	1010.1	1006.9
50°	808.3	857.0	900.3	937.1	954.4	969.0	997.1	1019.3	1030.7	1035.5	1031.2
52.5°	814.8	867.3	913.8	953.3	972.2	988.5	1018.8	1042.6	1056.1	1059.3	1055.0
55°	821.3	877.0	925.7	968.4	989.0	1006.3	1039.3	1064.2	1077.7	1081.5	1077.2
57.5°	826.7	885.7	937.1	983.0	1004.1	1024.2	1057.2	1083.1	1097.2	1101.5	1097.2
60°	830.5	892.7	947.3	995.0	1017.1	1037.7	1072.9	1098.8	1112.9	1117.2	1112.9
62.5°	833.2	898.1	954.4	1004.1	1028.0	1049.1	1084.8	1110.2	1124.8	1129.1	1124.8
65°	833.7	900.3	958.2	1010.1	1034.4	1055.5	1091.8	1117.2	1132.4	1136.2	1131.8
67.5°	830.5	898.1	958.2	1011.2	1035.5	1057.2	1093.4	1118.8	1133.5	1137.8	1133.5
70°	824.0	891.6	952.8	1006.9	1031.2	1052.8	1088.5	1114.5	1129.1	1133.5	1128.6
72.5°	811.5	880.3	941.4	996.6	1019.8	1040.9	1076.1	1101.5	1115.6	1120.5	1115.1
75°	793.7	862.4	923.5	976.6	1000.9	1020.4	1055.5	1080.4	1093.4	1097.7	1092.9
77.5°	770.4	839.7	898.6	951.1	975.5	993.3	1027.4	1051.8	1064.7	1068.5	1063.7
80°	743.4	812.1	868.9	920.8	943.6	960.3	994.4	1017.7	1030.1	1033.9	1031.2
82.5°	713.6	780.7	835.9	886.7	908.4	925.2	958.7	981.4	993.9	999.3	995.0
85°	683.3	747.7	801.8	851.0	872.7	890.5	921.4	944.1	956.5	960.9	958.2
87.5°	653.0	715.2	767.7	815.3	835.3	853.7	884.6	907.3	919.7	924.1	920.8
90°	627.6	687.1	737.4	784.5	805.0	821.8	851.6	873.2	885.7	890.0	887.3
92.5°	607.0	663.8	712.5	755.8	775.3	793.1	821.8	842.9	855.4	859.2	856.4
95°	587.6	642.7	689.8	732.0	750.9	768.3	795.3	815.9	827.8	831.6	829.4
97.5°	569.2	622.2	667.6	708.7	728.2	743.9	769.9	789.4	801.3	804.5	801.3
100°	548.6	602.2	646.5	687.1	703.9	719.6	745.5	765.0	775.3	779.6	776.9
102.5°	529.1	580.5	624.3	664.4	682.2	697.9	721.7	740.7	752.6	755.3	752.6
105°	509.1	558.9	601.6	641.1	659.0	674.1	697.9	716.3	727.7	730.9	728.2
107.5°	488.5	536.7	579.4	616.8	634.1	648.2	672.5	690.4	700.1	706.0	701.7
110°	466.4	514.0	555.1	591.3	608.1	621.6	645.4	663.3	672.5	677.9	674.1



TEST NUMBER: P201327

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	445.8	490.7	530.2	565.4	581.1	594.6	617.9	635.2	643.8	649.2	645.4
115°	424.2	465.8	504.8	538.3	554.0	566.5	589.7	606.0	614.6	619.5	616.2
117.5°	400.9	441.5	478.3	511.3	525.9	538.3	560.5	576.7	584.9	588.6	585.4
120°	378.2	417.7	452.3	483.7	498.3	510.2	531.8	547.0	554.6	558.9	555.6
122.5°	354.4	392.8	424.2	455.5	469.1	480.4	499.9	516.1	523.2	527.0	524.8
125°	328.9	366.8	397.1	425.8	438.8	449.6	468.5	482.1	490.2	494.0	491.8
127.5°	302.4	338.7	369.5	396.0	408.5	420.4	436.1	451.2	456.6	461.0	458.8
130°	272.7	308.9	337.6	364.7	376.6	386.3	403.6	416.1	423.1	426.9	425.2
132.5°	243.5	277.0	307.3	331.7	343.0	353.3	369.0	380.9	390.6	391.2	389.0
135°	215.3	244.5	272.1	298.1	309.5	319.7	333.8	344.6	353.8	354.4	351.7
137.5°	188.3	215.3	239.1	263.5	275.4	286.2	299.2	309.5	318.1	319.7	316.0
140°	162.3	187.2	208.8	230.5	241.8	252.1	266.2	274.8	281.9	282.4	280.3
142.5°	137.4	160.1	179.1	199.1	209.4	218.6	234.3	242.9	249.4	251.0	247.8
145°	114.2	134.2	152.0	169.3	178.0	186.7	202.3	212.6	218.0	219.7	216.4
147.5°	92.0	108.7	124.4	140.1	147.7	155.8	168.8	181.8	186.7	187.7	185.0
150°	71.4	85.5	99.5	112.5	119.0	126.1	137.4	149.3	155.8	156.9	154.7
152.5°	52.5	64.4	75.7	86.6	92.0	97.4	107.1	118.5	126.6	127.1	125.0
155°	35.7	45.4	54.6	62.8	67.6	72.0	79.5	88.2	96.8	97.4	95.8
157.5°	21.6	28.1	35.7	42.2	45.4	49.2	54.6	61.1	68.7	70.3	68.7
160°	10.8	14.6	18.9	23.3	26.0	28.7	31.4	36.8	41.1	44.9	42.7
162.5°	5.4	6.5	7.6	9.7	10.8	12.4	14.6	16.8	18.9	22.7	20.0
165°	3.2	3.8	4.3	4.3	4.9	4.9	4.9	4.9	4.9	7.0	4.9
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: P201327

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7
2.5°	641.1	642.2	644.4	645.4	646.5	647.6	649.8	653.0	650.3	647.6	648.2
5°	645.4	645.4	646.0	647.6	647.6	648.2	650.3	653.6	650.9	647.1	647.1
7.5°	650.9	650.3	650.9	651.4	650.9	650.9	651.9	653.6	650.3	646.0	644.9
10°	658.4	656.8	656.3	656.8	656.3	654.6	655.2	655.2	650.9	644.4	641.7
12.5°	672.0	669.3	667.1	666.5	664.9	662.2	660.6	658.4	651.9	644.4	639.0
15°	694.1	689.8	685.5	683.9	681.2	674.7	669.3	664.4	655.2	644.4	636.8
17.5°	719.0	713.6	707.7	705.5	701.7	692.5	683.3	674.1	661.1	646.0	635.2
20°	742.8	736.3	729.3	725.5	721.7	710.4	699.5	687.6	670.9	650.9	634.6
22.5°	766.6	759.1	749.3	746.1	741.2	728.2	715.2	701.7	681.7	657.9	635.7
25°	789.9	781.2	772.0	766.6	761.2	746.6	730.9	714.7	692.0	666.0	639.5
27.5°	813.2	803.4	792.1	786.1	780.7	764.5	746.6	728.2	702.8	673.6	644.4
30°	835.9	825.1	811.5	805.0	798.6	780.2	759.6	739.0	711.5	680.1	647.6
32.5°	858.6	846.7	831.6	824.0	816.4	795.3	772.6	749.3	719.0	686.0	650.3
35°	880.8	867.8	851.0	841.8	833.7	811.0	785.6	759.6	726.1	690.9	651.9
37.5°	903.5	888.9	870.5	860.2	851.0	826.1	798.0	768.8	733.6	694.7	653.6
40°	926.2	910.6	890.0	879.2	867.8	840.8	810.5	778.0	740.1	698.5	654.1
42.5°	949.5	932.2	909.5	897.6	885.7	855.4	821.8	786.1	745.5	701.2	653.6
45°	972.8	953.3	928.9	915.4	902.4	869.4	833.2	793.1	750.4	702.8	652.5
47.5°	996.0	975.5	949.0	934.4	918.7	883.5	844.0	800.7	754.7	703.3	651.4
50°	1019.8	997.7	969.0	952.8	936.5	897.0	854.8	807.2	757.4	703.9	648.7
52.5°	1043.1	1019.3	988.5	971.1	952.2	910.6	865.1	813.7	759.6	703.3	644.9
55°	1064.2	1039.3	1006.9	988.5	967.4	923.0	874.3	819.1	760.7	701.7	640.0
57.5°	1083.7	1058.3	1024.2	1003.6	983.0	934.9	883.0	825.1	761.8	699.0	634.6
60°	1098.8	1073.4	1037.7	1017.1	995.0	944.6	890.0	828.3	761.8	695.2	627.6
62.5°	1110.2	1084.8	1049.1	1027.4	1004.1	952.8	895.4	831.6	761.8	691.4	620.6
65°	1117.2	1092.3	1055.5	1033.9	1010.1	956.5	898.1	832.1	759.6	686.0	611.9
67.5°	1118.3	1093.4	1056.6	1035.5	1011.2	956.5	896.5	829.4	755.3	679.0	602.2
70°	1113.4	1088.5	1052.3	1030.7	1006.9	951.7	890.5	822.9	747.7	669.8	590.8
72.5°	1101.0	1075.6	1040.4	1018.2	995.0	940.3	878.1	811.0	735.3	656.8	577.3
75°	1079.4	1054.5	1019.8	999.3	975.5	921.9	859.2	793.7	717.9	640.6	560.5
77.5°	1050.7	1026.3	992.2	971.7	949.5	897.0	835.3	770.4	696.8	620.6	541.0
80°	1016.6	993.3	959.8	939.8	918.1	867.3	806.7	743.4	670.9	596.8	519.4
82.5°	980.3	957.6	925.2	904.6	884.0	834.8	776.9	714.2	643.3	571.3	496.1
85°	945.2	920.8	888.4	869.4	848.9	800.7	746.1	683.9	615.1	545.4	473.4
87.5°	908.4	884.6	852.7	834.8	815.3	766.6	714.7	654.1	588.6	522.1	451.2
90°	874.8	851.6	820.7	802.9	784.5	737.4	686.6	629.2	565.9	501.5	432.8
92.5°	844.0	822.4	793.1	775.8	758.0	713.1	664.4	608.7	547.5	485.3	418.2
95°	817.5	796.4	769.3	752.6	734.2	691.4	643.8	589.2	530.7	470.2	404.7
97.5°	791.0	771.0	744.5	728.2	710.9	669.3	623.3	570.8	513.4	453.4	390.1
100°	766.6	747.2	720.1	705.5	688.7	648.7	603.2	551.8	495.6	436.6	374.4
102.5°	742.8	723.4	697.4	682.8	666.5	626.5	582.1	531.3	476.6	419.8	359.2
105°	718.5	699.5	673.6	659.0	642.7	603.8	560.5	511.3	457.7	402.5	343.6
107.5°	692.0	673.6	648.7	634.1	618.9	580.0	538.3	490.2	438.8	384.7	327.3
110°	664.9	646.5	623.8	608.1	593.5	555.6	515.1	469.1	418.8	366.3	310.6



TEST NUMBER: P201327

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	636.8	618.9	596.8	582.1	567.0	530.7	491.8	447.4	398.7	347.3	293.2
115°	608.1	590.3	568.1	553.5	539.9	505.3	467.4	425.2	378.2	328.4	275.9
117.5°	576.7	561.0	539.9	527.0	512.9	478.3	443.1	402.5	357.6	308.4	258.1
120°	547.5	532.4	511.8	497.7	485.3	452.3	418.8	379.3	334.9	288.9	239.7
122.5°	516.7	500.5	481.5	469.6	456.1	425.8	393.3	355.5	312.2	266.7	219.7
125°	484.2	469.1	450.7	439.3	426.9	398.2	367.4	329.5	288.4	244.5	199.1
127.5°	451.2	437.2	419.3	409.0	397.1	369.0	339.2	302.4	261.3	220.2	178.0
130°	417.7	403.6	387.4	376.6	365.2	338.7	309.5	273.2	234.3	195.9	157.4
132.5°	382.5	369.0	352.8	343.0	332.7	307.3	277.5	242.4	207.8	173.1	137.4
135°	346.3	333.8	319.2	310.0	299.7	273.8	245.6	213.7	182.9	150.9	117.9
137.5°	311.1	299.7	285.7	276.5	265.1	240.8	215.9	187.2	159.1	129.3	98.5
140°	276.5	266.2	252.7	242.4	232.6	209.9	187.2	161.2	135.8	108.7	81.2
142.5°	244.0	234.8	219.7	209.9	200.7	180.7	160.7	136.3	113.6	89.3	65.5
145°	212.1	204.0	187.2	178.5	171.0	153.1	133.1	113.1	92.5	71.4	50.9
147.5°	181.2	171.5	155.8	148.2	141.2	125.5	108.7	90.4	73.6	55.2	37.3
150°	151.5	139.6	126.1	119.6	113.6	100.1	85.5	70.3	55.7	40.0	26.0
152.5°	120.6	108.2	99.0	92.5	87.1	76.3	64.4	51.4	39.5	27.1	16.2
155°	89.3	80.6	72.0	68.7	63.8	54.6	44.9	34.6	24.9	16.2	9.2
157.5°	61.7	55.2	49.8	46.5	42.7	35.7	27.6	20.0	14.1	8.7	4.3
160°	37.3	33.0	29.2	26.5	23.8	18.9	13.5	9.2	6.0	2.7	1.6
162.5°	16.8	14.1	12.4	10.8	9.2	7.0	4.3	2.2	1.1	0.5	0.5
165°	3.2	2.2	1.6	1.1	0.5	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: P201327

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	648.7	648.7	648.7	648.7	648.7	648.7	648.7	648.7
2.5°	648.7	649.2	649.8	649.8	651.4	654.1	657.9	658.4
5°	647.1	647.6	647.6	648.2	649.8	651.9	655.2	655.7
7.5°	644.4	644.4	644.4	644.4	645.4	647.6	650.3	650.9
10°	640.6	639.5	639.0	638.4	639.0	641.1	643.3	643.8
12.5°	636.2	633.5	632.5	631.9	631.9	632.5	634.6	634.6
15°	631.4	627.1	625.4	624.3	622.2	622.2	624.3	624.3
17.5°	626.5	620.6	617.3	615.1	611.9	611.4	612.4	611.4
20°	622.2	613.0	608.7	604.9	600.0	598.4	598.4	596.8
22.5°	617.9	605.4	599.5	594.0	586.5	583.8	582.1	581.1
25°	615.1	597.3	589.7	583.2	572.9	567.0	565.4	563.2
27.5°	614.6	590.8	580.5	572.4	558.3	551.3	547.0	544.3
30°	614.6	584.3	570.8	559.4	542.1	531.3	527.0	525.9
32.5°	614.1	579.4	563.2	548.6	526.4	512.4	505.9	504.2
35°	612.4	574.6	555.6	537.8	510.7	492.9	483.7	481.5
37.5°	610.3	568.6	548.6	528.0	494.5	472.9	461.5	458.3
40°	608.1	562.7	539.9	517.8	478.3	452.3	437.7	433.9
42.5°	604.3	556.2	532.4	508.0	463.1	431.7	415.0	409.0
45°	600.5	548.6	523.2	497.2	448.0	410.6	389.5	383.6
47.5°	595.7	540.5	514.0	485.3	433.9	390.1	366.3	358.7
50°	590.3	532.4	503.7	473.9	418.8	370.1	340.8	332.7
52.5°	584.3	523.2	493.4	462.0	403.6	351.1	317.0	306.8
55°	576.7	512.9	481.5	448.5	387.9	331.7	292.7	280.8
57.5°	568.6	502.6	470.2	436.1	372.2	313.3	268.9	255.4
60°	558.9	490.7	456.1	422.0	356.0	294.3	245.1	229.4
62.5°	548.6	478.8	443.6	407.4	339.8	275.9	221.8	204.0
65°	537.8	465.3	429.6	392.2	322.5	256.4	199.1	178.5
67.5°	524.8	450.7	413.9	376.0	304.6	237.0	176.9	153.7
70°	511.8	435.0	396.6	358.7	286.2	217.5	155.8	129.3
72.5°	496.1	418.2	379.3	340.8	267.3	198.6	135.3	105.0
75°	478.8	400.9	361.4	322.5	247.8	178.5	114.7	81.2
77.5°	460.4	382.0	343.0	303.5	229.4	159.6	95.8	61.1
80°	440.9	361.9	323.5	284.0	209.9	140.7	77.4	42.2
82.5°	419.3	342.5	304.1	264.6	191.5	122.3	60.6	26.0
85°	398.7	323.0	285.7	246.7	173.7	103.9	45.4	13.0
87.5°	378.7	305.1	268.9	230.5	158.5	89.8	33.0	3.8
90°	362.5	290.5	254.8	217.5	146.6	79.5	24.9	0.0
92.5°	349.5	279.2	244.0	207.8	138.0	72.5	21.1	0.0
95°	337.1	267.3	233.7	197.5	129.3	66.5	16.8	0.0
97.5°	323.5	255.9	222.4	187.2	120.6	60.1	13.5	0.0
100°	310.0	243.5	211.0	176.9	110.9	53.6	9.7	0.0
102.5°	295.4	230.5	198.6	165.6	102.3	46.5	6.5	0.0
105°	281.3	217.5	186.7	154.2	93.1	40.6	4.3	0.0
107.5°	266.2	204.5	174.2	143.4	83.9	34.1	2.7	0.0
110°	251.0	191.5	161.8	132.0	75.2	28.1	2.2	0.0



TEST NUMBER: P201327

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	235.9	178.0	149.3	120.1	66.5	22.7	1.6	0.5
115°	219.7	163.9	136.3	108.2	57.9	17.9	1.6	0.5
117.5°	203.4	149.3	123.9	96.8	49.8	13.5	1.1	0.5
120°	186.7	136.3	110.4	86.0	42.2	9.7	1.1	0.5
122.5°	170.4	122.8	97.9	74.7	34.6	7.6	1.1	0.5
125°	153.7	107.1	85.5	64.4	27.6	6.0	1.1	0.5
127.5°	135.8	92.5	72.5	53.0	21.1	4.3	1.1	0.5
130°	117.4	77.9	60.1	43.3	15.1	3.2	1.1	0.5
132.5°	100.1	65.5	48.7	34.1	10.8	2.7	1.1	0.5
135°	84.4	53.0	38.4	25.4	7.6	2.2	0.5	0.5
137.5°	69.3	42.2	29.2	18.4	5.4	1.6	1.1	0.5
140°	55.7	31.9	21.1	13.0	3.8	1.1	1.1	0.5
142.5°	43.3	22.7	14.6	8.7	2.7	1.1	0.5	0.5
145°	31.9	15.1	9.7	5.4	2.2	1.1	1.1	1.1
147.5°	21.6	10.3	6.0	3.8	1.6	1.1	1.1	0.5
150°	14.1	6.5	3.8	2.7	1.1	1.1	1.1	0.5
152.5°	8.7	3.8	2.2	1.6	1.1	1.1	1.1	0.5
155°	4.3	2.2	1.6	1.1	1.1	1.1	1.1	1.1
157.5°	2.2	1.6	1.1	1.1	1.1	1.1	1.1	1.1
160°	1.1	1.1	0.5	0.5	1.1	1.1	1.1	1.1
162.5°	0.5	0.5	0.5	0.5	1.1	1.1	1.1	1.1
165°	0.0	0.5	0.5	0.5	1.1	1.1	1.1	1.1
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)