

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: P176121

Luminaire Tested: **4BCLED-LD4-40SL-F-UNV-L830-5LTD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P176121
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-40SL-F-UNV-L830-5LTD1-U
Description: METALUX 4FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A
Light Source: (112) COOPER LIGHTING 3000K LEDS
Ballast/Driver: (1) ELECTRONIC DRIVER

Summary

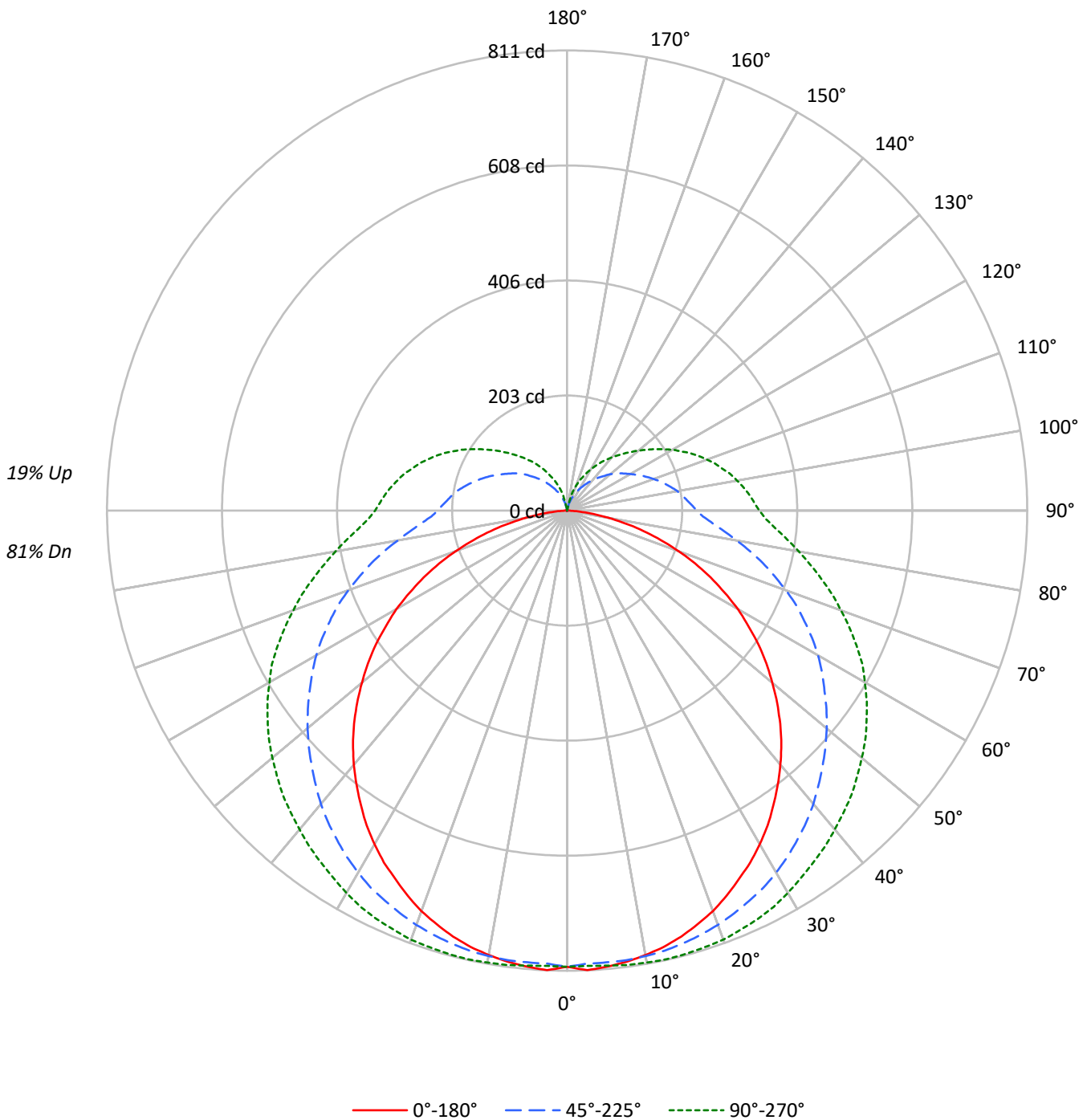
Lumens per Lamp: N/A
Luminaire Lumens: 3836.8 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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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	115	115	115	115	110	110	110	110	101	101	101	92	92	92	85	85	85	81
1	102	96	91	86	97	92	87	83	84	80	77	77	74	71	70	68	66	62
2	91	82	74	68	87	78	71	65	72	66	61	66	61	57	60	56	53	50
3	83	71	62	55	78	68	60	53	62	56	50	57	51	47	52	48	44	41
4	75	62	53	46	71	60	51	45	55	48	42	50	44	39	46	41	37	34
5	69	55	46	39	65	53	44	38	49	41	36	45	39	34	41	36	32	29
6	63	50	40	34	60	48	39	33	44	36	31	40	34	29	37	32	27	25
7	59	45	36	29	56	43	34	29	40	32	27	37	30	26	34	28	24	22
8	54	41	32	26	52	39	31	25	36	29	24	33	27	23	31	25	21	19
9	51	37	29	23	48	36	28	22	33	26	21	31	25	20	28	23	19	17
10	47	34	26	21	45	33	25	20	31	24	19	28	22	18	26	21	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5769	5769	5769
5°	5781	5508	5478
10°	5732	5325	5274
15°	5678	5154	5098
20°	5608	4997	4946
25°	5512	4843	4798
30°	5430	4704	4655
35°	5319	4556	4520
40°	5204	4414	4408
45°	5071	4263	4316
50°	4906	4130	4218
55°	4728	3991	4129
60°	4496	3872	4036
65°	4176	3722	3932
70°	3737	3557	3805
75°	3134	3383	3684
80°	2261	3190	3583
85°	1061	3078	3527



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	2.0
10°-20°	224.2	5.8
20°-30°	350.5	9.1
30°-40°	440.7	11.5
40°-50°	486.7	12.7
50°-60°	486.5	12.7
60°-70°	438.9	11.4
70°-80°	352.0	9.2
80°-90°	256.8	6.7
90°-100°	207.4	5.4
100°-110°	172.4	4.5
110°-120°	133.6	3.5
120°-130°	95.2	2.5
130°-140°	61.6	1.6
140°-150°	34.9	0.9
150°-160°	15.4	0.4
160°-170°	3.3	0.1
170°-180°	0.0	0.0
0°-30°	651.4	17.0
0°-40°	1092.1	28.5
0°-60°	2065.3	53.8
0°-90°	3113.0	81.1
90°-120°	513.4	13.4
90°-150°	705.1	18.4
90°-180°	724.0	18.9
0°-180°	3836.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	807	805	799	806	805	77
15°	777	783	790	807	809	219
25°	716	735	759	787	794	331
35°	634	665	708	745	757	397
45°	531	576	637	689	709	409
55°	412	471	554	620	644	367
65°	279	354	462	536	563	276
75°	139	237	357	436	464	148
85°	22	133	258	340	369	30
90°	0	105	228	310	338	1
95°	0	92	212	294	322	0
105°	1	72	180	257	284	0
115°	1	58	145	214	240	1
125°	1	47	114	168	188	1
135°	1	34	84	127	142	1
145°	1	22	57	91	104	1
155°	1	12	33	52	65	0
165°	1	4	14	19	28	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°	25°	30°	35°	40°	45°	50°
0°	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0
2.5°	810.7	809.8	806.9	805.9	806.9	806.9	805.9	804.0	802.1	799.2	799.2
5°	806.9	806.9	804.9	804.0	804.9	804.9	804.9	804.0	801.1	799.2	800.1
7.5°	802.1	802.1	800.1	800.1	801.1	802.1	802.1	802.1	800.1	799.2	800.1
10°	795.3	794.4	793.4	794.4	796.3	797.2	799.2	798.2	797.2	797.2	799.2
12.5°	787.6	785.7	785.7	786.7	789.6	791.5	793.4	793.4	793.4	794.4	797.2
15°	777.1	776.1	776.1	777.1	780.9	784.7	786.7	787.6	788.6	789.6	793.4
17.5°	764.6	764.6	764.6	766.5	771.3	775.1	778.0	780.9	781.9	783.8	789.6
20°	751.1	751.1	752.0	754.9	759.7	764.6	768.4	771.3	774.2	777.1	783.8
22.5°	734.7	735.7	736.7	740.5	746.3	752.0	756.9	760.7	764.6	768.4	775.1
25°	716.5	718.4	720.3	725.1	731.9	738.6	744.4	749.2	754.0	758.8	766.5
27.5°	699.2	699.2	703.0	708.8	715.5	724.2	730.9	736.7	742.4	749.2	756.9
30°	679.0	679.9	683.8	690.5	699.2	707.8	716.5	722.2	729.0	736.7	745.3
32.5°	657.8	658.8	663.6	670.3	679.9	690.5	699.2	705.9	714.5	723.2	731.9
35°	633.8	635.7	641.5	649.1	659.7	670.3	680.9	688.6	698.2	707.8	718.4
37.5°	609.7	612.6	618.4	626.1	638.6	651.1	660.7	670.3	680.9	692.4	703.0
40°	584.7	588.6	593.4	603.9	617.4	629.9	640.5	651.1	663.6	675.1	686.7
42.5°	558.7	561.6	568.4	579.9	593.4	606.8	618.4	630.9	643.4	655.9	668.4
45°	530.9	534.7	542.4	553.9	569.3	582.8	596.3	609.7	623.2	636.6	650.1
47.5°	502.0	506.8	514.5	528.0	543.4	558.7	572.2	587.6	602.0	617.4	631.8
50°	472.2	478.0	486.6	501.0	517.4	532.8	548.2	563.6	579.9	597.2	613.6
52.5°	442.4	447.2	457.8	473.2	490.5	506.8	523.2	540.5	558.7	576.1	593.4
55°	411.6	416.4	427.0	442.4	461.6	479.9	497.2	516.4	535.7	553.9	573.2
57.5°	378.9	383.7	397.2	413.5	432.8	452.0	471.2	493.4	513.5	532.8	552.0
60°	347.2	352.0	364.5	382.8	402.0	424.1	445.3	468.3	490.5	510.7	529.9
62.5°	312.6	319.3	333.7	351.0	374.1	395.3	418.3	442.4	464.5	486.6	506.8
65°	278.9	284.7	299.1	318.3	341.4	367.4	391.4	416.4	439.5	461.6	481.8
67.5°	244.3	251.0	266.4	286.6	312.6	338.5	363.5	388.5	414.5	437.6	455.8
70°	208.7	215.4	233.7	254.9	280.8	308.7	336.6	361.6	386.6	409.7	430.8
72.5°	173.1	180.8	198.1	223.1	252.0	279.9	307.7	335.6	359.7	382.8	403.9
75°	139.4	147.1	166.4	192.3	222.2	251.0	279.9	307.7	332.7	356.8	377.0
77.5°	105.8	115.4	133.7	162.5	194.3	223.1	252.0	279.9	305.8	329.9	352.0
80°	74.1	82.7	105.8	134.6	165.4	196.2	225.0	253.9	279.9	302.9	326.0
82.5°	46.2	55.8	79.8	109.6	139.4	170.2	200.0	228.9	254.9	278.9	302.0
85°	22.1	33.7	57.7	86.6	117.3	148.1	177.9	205.8	232.7	257.7	279.9
87.5°	6.7	17.3	41.4	70.2	100.0	130.8	159.6	188.5	214.5	239.5	261.6
90°	0.0	10.6	32.7	59.6	90.4	120.2	149.1	177.0	202.9	227.9	250.0
92.5°	0.0	7.7	27.9	54.8	83.7	113.5	142.3	169.3	195.2	220.2	242.3
95°	0.0	6.7	25.0	50.0	77.9	106.7	134.6	162.5	188.5	211.6	234.7
97.5°	0.0	6.7	23.1	46.2	73.1	101.0	128.9	155.8	180.8	204.8	227.0
100°	0.0	6.7	21.2	42.3	67.3	94.2	122.1	148.1	173.1	197.1	218.3
102.5°	0.0	6.7	20.2	39.4	63.5	89.4	114.4	140.4	165.4	188.5	209.7
105°	1.0	5.8	19.2	37.5	59.6	83.7	108.7	133.7	157.7	179.8	200.0
107.5°	0.0	5.8	19.2	36.5	56.7	78.9	101.9	126.0	149.1	171.2	191.4
110°	1.0	5.8	18.3	34.6	53.9	74.1	96.2	119.3	141.4	162.5	182.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	4.8	17.3	33.7	51.9	71.2	91.4	112.5	132.7	153.9	173.1
115°	1.0	4.8	17.3	32.7	49.0	67.3	86.6	105.8	126.0	145.2	163.5
117.5°	1.0	4.8	16.3	30.8	47.1	64.4	81.7	100.0	118.3	136.6	153.9
120°	1.0	3.8	14.4	28.9	45.2	61.5	77.9	95.2	111.6	128.9	145.2
122.5°	1.0	3.8	13.5	26.9	42.3	58.7	74.1	89.4	105.8	121.2	136.6
125°	1.0	2.9	12.5	25.0	39.4	53.9	69.2	84.6	99.1	114.4	127.9
127.5°	0.0	2.9	11.5	23.1	36.5	50.0	64.4	78.9	93.3	106.7	120.2
130°	1.0	1.9	9.6	21.2	33.7	47.1	59.6	72.1	85.6	100.0	112.5
132.5°	1.0	1.9	8.7	19.2	30.8	43.3	54.8	66.4	78.9	91.4	104.8
135°	1.0	1.9	7.7	16.3	27.9	39.4	50.0	61.5	73.1	83.7	95.2
137.5°	1.0	1.0	6.7	14.4	25.0	35.6	46.2	56.7	66.4	76.9	87.5
140°	1.0	1.0	5.8	13.5	22.1	31.7	41.4	51.0	60.6	70.2	78.9
142.5°	1.0	1.0	5.8	11.5	19.2	28.9	37.5	46.2	54.8	63.5	71.2
145°	1.0	1.0	4.8	10.6	17.3	26.0	33.7	41.4	49.0	56.7	64.4
147.5°	1.0	1.0	3.8	9.6	15.4	22.1	29.8	36.5	43.3	50.0	56.7
150°	1.0	1.0	2.9	7.7	13.5	19.2	26.0	31.7	37.5	44.2	50.0
152.5°	1.0	1.0	2.9	6.7	11.5	16.3	22.1	27.9	33.7	38.5	43.3
155°	1.0	1.0	1.9	5.8	9.6	14.4	19.2	24.0	27.9	32.7	36.5
157.5°	1.0	1.0	1.0	3.8	7.7	11.5	15.4	19.2	23.1	26.9	30.8
160°	1.0	1.0	1.0	2.9	5.8	9.6	12.5	16.3	19.2	22.1	25.0
162.5°	1.0	1.0	1.0	1.9	4.8	6.7	9.6	12.5	15.4	17.3	19.2
165°	1.0	1.0	1.0	1.0	2.9	4.8	6.7	9.6	11.5	13.5	14.4
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: P176121

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L830-5LTD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0
2.5°	802.1	804.0	804.9	804.9	804.0	804.0	803.0	803.0
5°	803.0	805.9	805.9	806.9	806.9	806.9	805.9	804.9
7.5°	804.0	805.9	807.8	807.8	808.8	808.8	807.8	807.8
10°	803.0	805.9	807.8	808.8	809.8	809.8	809.8	808.8
12.5°	801.1	804.9	806.9	808.8	809.8	810.7	809.8	809.8
15°	798.2	803.0	805.9	807.8	808.8	809.8	808.8	808.8
17.5°	794.4	799.2	802.1	804.9	806.9	807.8	806.9	806.9
20°	789.6	794.4	798.2	801.1	803.0	804.9	804.9	804.9
22.5°	781.9	787.6	792.4	795.3	798.2	799.2	799.2	799.2
25°	774.2	779.9	784.7	788.6	791.5	793.4	794.4	794.4
27.5°	764.6	771.3	777.1	779.9	783.8	785.7	786.7	787.6
30°	754.0	760.7	766.5	770.3	774.2	777.1	778.0	778.0
32.5°	741.5	748.2	754.9	759.7	763.6	766.5	768.4	767.4
35°	728.0	735.7	742.4	748.2	752.0	754.9	756.9	756.9
37.5°	712.6	721.3	729.9	735.7	739.5	743.4	745.3	746.3
40°	697.2	705.9	714.5	721.3	727.0	729.9	732.8	733.8
42.5°	679.9	690.5	700.1	706.8	712.6	716.5	720.3	721.3
45°	662.6	674.2	684.7	692.4	699.2	704.0	706.8	708.8
47.5°	645.3	657.8	668.4	678.0	684.7	689.5	692.4	693.4
50°	627.0	640.5	652.0	662.6	669.3	674.2	677.0	678.0
52.5°	608.8	623.2	633.8	644.3	652.0	657.8	661.6	662.6
55°	589.5	603.0	615.5	625.1	633.8	639.5	644.3	644.3
57.5°	569.3	583.8	596.3	606.8	615.5	622.2	624.1	626.1
60°	547.2	561.6	575.1	586.6	595.3	601.1	604.9	605.9
62.5°	523.2	539.5	553.0	565.5	573.2	580.9	584.7	586.6
65°	500.1	515.5	529.9	541.4	551.1	556.8	560.7	562.6
67.5°	475.1	491.4	506.8	517.4	526.0	532.8	537.6	538.6
70°	449.1	466.4	479.9	493.4	502.0	508.7	512.6	513.5
72.5°	424.1	440.5	455.8	467.4	476.0	483.7	487.6	489.5
75°	397.2	414.5	429.9	442.4	451.0	457.8	461.6	463.5
77.5°	372.2	388.5	404.9	416.4	426.0	432.8	437.6	438.5
80°	346.2	363.5	378.9	391.4	401.0	408.7	412.6	414.5
82.5°	322.2	339.5	354.9	367.4	377.0	383.7	389.5	391.4
85°	300.1	317.4	333.7	346.2	355.8	363.5	367.4	369.3
87.5°	281.8	300.1	315.4	328.9	338.5	345.3	349.1	351.0
90°	270.2	287.5	302.9	316.4	326.0	332.7	337.6	338.5
92.5°	262.5	279.9	295.2	307.7	317.4	325.1	328.9	329.9
95°	254.9	271.2	287.5	300.1	309.7	316.4	320.2	322.2
97.5°	246.2	263.5	278.9	291.4	301.0	307.7	312.6	313.5
100°	237.5	254.9	270.2	281.8	292.4	298.1	302.9	303.9
102.5°	228.9	246.2	260.6	273.1	282.7	289.5	293.3	295.2
105°	219.3	235.6	251.0	262.5	272.2	278.9	282.7	283.7
107.5°	210.6	226.0	241.4	252.9	262.5	268.3	272.2	274.1
110°	201.0	216.4	229.8	241.4	251.0	257.7	261.6	262.5



TEST NUMBER: P176121

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L830-5LTD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	190.4	205.8	219.3	230.8	239.5	246.2	250.0	251.0
115°	179.8	195.2	208.7	219.3	227.9	233.7	238.5	239.5
117.5°	170.2	184.6	197.1	206.8	215.4	221.2	225.0	226.0
120°	159.6	173.1	185.6	195.2	203.9	209.7	212.5	214.5
122.5°	150.0	162.5	174.1	183.7	191.4	196.2	200.0	201.0
125°	141.4	152.9	163.5	172.1	178.9	184.6	187.5	188.5
127.5°	131.8	143.3	152.9	160.6	167.3	172.1	175.0	176.0
130°	123.1	133.7	142.3	150.0	155.8	160.6	163.5	164.5
132.5°	115.4	125.0	133.7	140.4	145.2	149.1	151.9	152.9
135°	106.7	116.4	124.1	130.8	135.6	138.5	141.4	142.3
137.5°	97.1	108.7	115.4	121.2	126.0	128.9	130.8	131.8
140°	88.5	98.1	106.7	112.5	116.4	119.3	121.2	122.1
142.5°	79.8	88.5	98.1	103.9	106.7	110.6	111.6	112.5
145°	72.1	79.8	87.5	95.2	99.1	101.0	101.9	103.9
147.5°	63.5	70.2	77.9	85.6	89.4	92.3	93.3	93.3
150°	55.8	61.5	68.3	75.0	80.8	82.7	83.7	84.6
152.5°	48.1	53.9	58.7	64.4	71.2	74.1	75.0	75.0
155°	41.4	45.2	50.0	53.9	60.6	64.4	65.4	65.4
157.5°	33.7	37.5	41.4	45.2	49.0	54.8	55.8	56.7
160°	26.9	30.8	32.7	36.5	39.4	44.2	47.1	47.1
162.5°	21.2	23.1	25.0	27.9	29.8	33.7	37.5	38.5
165°	15.4	16.3	18.3	20.2	21.2	23.1	27.9	27.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)