

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: P176117

Luminaire Tested: **4BCLED-LD4-32SL-F-UNV-L830-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P176117
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-32SL-F-UNV-L830-CD1-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

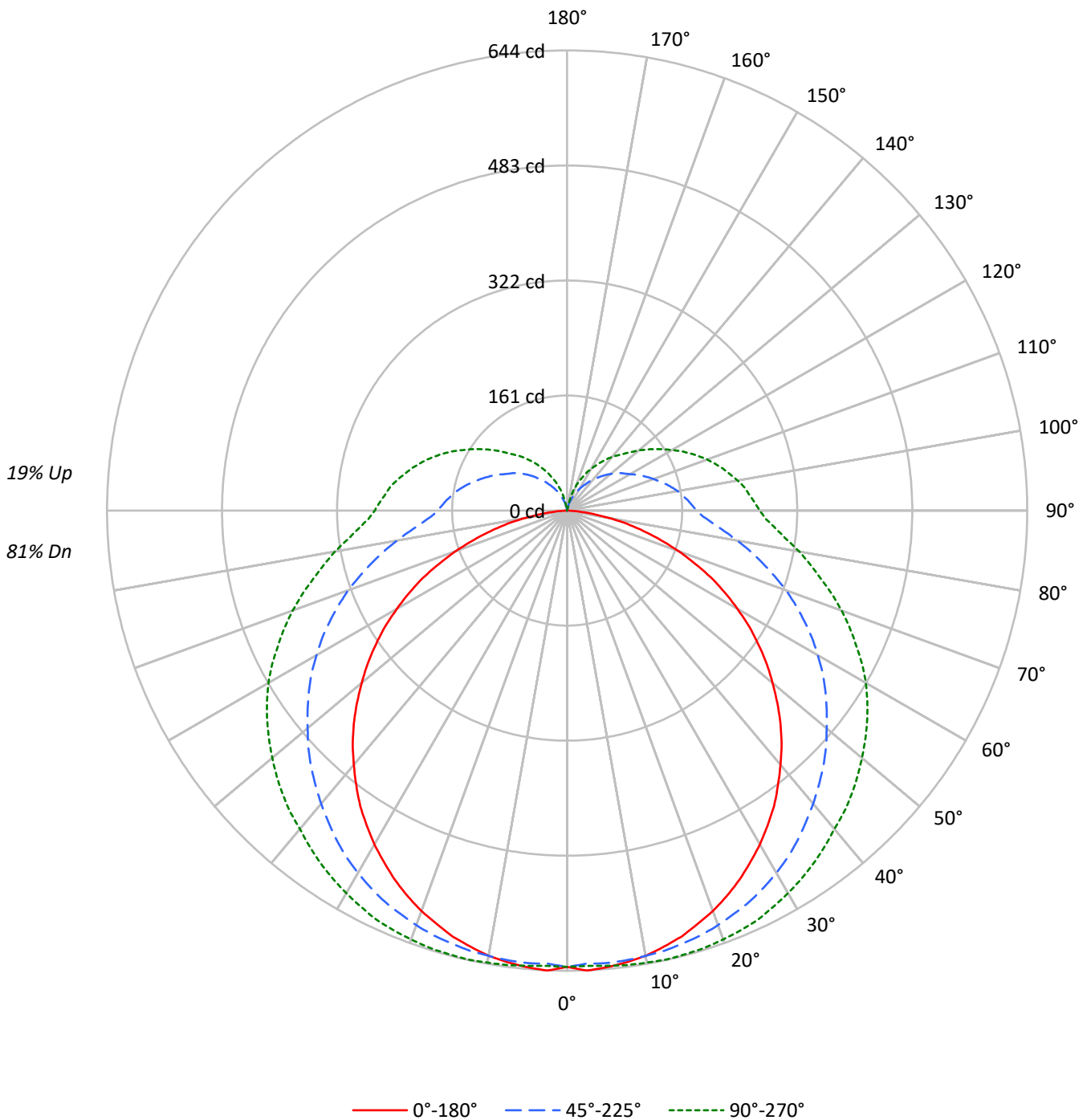
Lumens per Lamp: N/A
Luminaire Lumens: 3049.7 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 32.5
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	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	38	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°	4583	4583	4583
5°	4596	4382	4353
10°	4561	4227	4189
15°	4511	4093	4049
20°	4452	3970	3924
25°	4388	3855	3816
30°	4315	3740	3700
35°	4238	3621	3595
40°	4134	3503	3495
45°	4033	3393	3426
50°	3897	3278	3351
55°	3756	3180	3285
60°	3561	3070	3216
65°	3327	2955	3118
70°	2962	2830	3028
75°	2486	2680	2920
80°	1791	2542	2852
85°	831	2446	2801



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.9	2.0
10°-20°	178.1	5.8
20°-30°	278.5	9.1
30°-40°	350.1	11.5
40°-50°	386.8	12.7
50°-60°	386.7	12.7
60°-70°	348.8	11.4
70°-80°	279.7	9.2
80°-90°	204.1	6.7
90°-100°	164.9	5.4
100°-110°	136.9	4.5
110°-120°	106.1	3.5
120°-130°	75.9	2.5
130°-140°	49.2	1.6
140°-150°	28.0	0.9
150°-160°	12.3	0.4
160°-170°	2.6	0.1
170°-180°	0.0	0.0
0°-30°	517.5	17.0
0°-40°	867.6	28.5
0°-60°	1641.2	53.8
0°-90°	2473.8	81.1
90°-120°	408.0	13.4
90°-150°	561.1	18.4
90°-180°	576.0	18.9
0°-180°	3049.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	642	640	636	640	640	61
15°	617	622	627	640	642	174
25°	570	584	604	626	632	263
35°	505	528	563	592	602	315
45°	422	458	507	547	563	325
55°	327	374	441	494	513	292
65°	222	281	366	426	446	219
75°	111	188	283	346	367	117
85°	17	106	205	270	293	23
90°	0	83	181	246	269	1
95°	0	73	169	233	256	0
105°	0	57	143	204	226	0
115°	0	47	115	170	190	0
125°	0	38	91	133	150	0
135°	0	26	68	102	112	0
145°	1	17	45	74	83	0
155°	1	10	26	41	52	0
165°	1	3	11	15	22	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°	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6
2.5°	644.3	643.4	641.5	640.5	640.5	640.5	640.5	638.6	636.6	634.7	635.7
5°	641.5	640.5	638.6	638.6	639.5	639.5	639.5	638.6	636.6	635.7	635.7
7.5°	637.6	636.6	635.7	635.7	636.6	637.6	637.6	636.6	635.7	634.7	635.7
10°	632.8	630.9	629.9	629.9	631.8	633.8	633.8	634.7	633.8	632.8	634.7
12.5°	625.1	625.1	624.1	625.1	627.0	629.0	629.9	630.9	630.9	630.9	633.8
15°	617.4	616.4	616.4	618.4	620.3	623.2	625.1	626.1	626.1	627.0	630.9
17.5°	606.8	606.8	607.8	608.8	612.6	615.5	618.4	619.3	621.3	623.2	627.0
20°	596.3	596.3	597.2	599.1	603.0	607.8	610.7	612.6	614.5	617.4	622.2
22.5°	583.8	583.8	585.7	588.6	592.4	597.2	601.1	604.9	607.8	610.7	616.4
25°	570.3	571.2	573.2	576.1	581.8	586.6	591.4	595.3	599.1	603.9	609.7
27.5°	554.9	555.9	557.8	562.6	569.3	575.1	580.9	585.7	589.5	595.3	601.1
30°	539.5	540.5	542.4	548.2	555.9	562.6	569.3	574.1	578.9	585.7	592.4
32.5°	522.2	523.2	527.0	532.8	540.5	548.2	554.9	561.6	567.4	575.1	581.8
35°	504.9	504.9	509.7	515.5	524.1	532.8	540.5	547.2	553.9	562.6	570.3
37.5°	484.7	486.6	491.4	499.1	507.8	516.4	525.1	531.8	540.5	549.1	557.8
40°	464.5	466.4	471.2	479.9	490.5	500.1	508.7	517.4	526.0	535.7	544.3
42.5°	444.3	447.2	451.0	460.7	472.2	481.8	491.4	501.0	511.6	521.2	530.9
45°	422.2	425.1	430.8	441.4	453.0	463.5	473.2	483.7	495.3	506.8	517.4
47.5°	399.1	403.0	409.7	419.3	431.8	443.3	454.9	466.4	478.9	491.4	502.0
50°	375.1	377.9	385.6	398.1	411.6	424.1	435.7	448.2	461.6	474.1	486.6
52.5°	352.0	354.9	363.5	377.0	389.5	403.0	416.4	429.9	444.3	457.8	471.2
55°	327.0	330.8	340.4	352.9	366.4	381.8	395.3	410.6	426.0	441.4	454.9
57.5°	302.0	305.8	315.4	328.9	344.3	359.7	374.1	391.4	407.8	424.1	438.5
60°	275.0	279.9	289.5	303.9	320.2	337.6	352.9	371.2	388.5	404.9	421.2
62.5°	249.1	253.9	264.5	279.9	296.2	313.5	332.7	352.0	369.3	386.6	402.0
65°	222.2	227.0	238.5	253.9	271.2	291.4	310.6	330.8	349.1	366.4	382.8
67.5°	193.3	199.1	210.6	227.9	247.2	268.3	289.5	308.7	328.9	346.2	363.5
70°	165.4	172.1	184.6	202.0	223.1	246.2	266.4	287.5	306.8	326.0	341.4
72.5°	137.5	144.3	158.7	177.0	199.1	222.2	245.2	265.4	285.6	303.9	321.2
75°	110.6	117.3	132.7	152.9	176.0	200.0	222.2	244.3	264.5	282.7	300.1
77.5°	85.6	91.4	107.7	128.9	153.9	177.0	200.0	222.2	243.3	262.5	278.9
80°	58.7	66.4	84.6	107.7	131.8	155.8	178.9	201.0	222.2	241.4	258.7
82.5°	36.5	44.2	64.4	87.5	110.6	135.6	158.7	180.8	202.0	222.2	239.5
85°	17.3	26.9	45.2	69.2	93.3	118.3	141.4	163.5	184.6	204.8	222.2
87.5°	4.8	13.5	32.7	55.8	79.8	103.9	127.9	150.0	171.2	190.4	207.7
90°	0.0	7.7	26.0	48.1	71.2	95.2	118.3	140.4	161.6	180.8	198.1
92.5°	0.0	6.7	22.1	43.3	66.4	90.4	113.5	134.6	155.8	175.0	192.3
95°	0.0	5.8	20.2	39.4	61.5	84.6	107.7	128.9	150.0	169.3	186.6
97.5°	0.0	5.8	18.3	36.5	57.7	80.8	101.9	123.1	144.3	162.5	179.8
100°	0.0	4.8	17.3	33.7	53.9	75.0	97.1	117.3	137.5	156.8	173.1
102.5°	0.0	4.8	16.3	31.7	50.0	71.2	91.4	111.6	130.8	150.0	166.4
105°	0.0	4.8	15.4	29.8	47.1	66.4	86.6	105.8	125.0	143.3	159.6
107.5°	0.0	4.8	15.4	28.9	45.2	62.5	81.7	100.0	118.3	135.6	151.9
110°	0.0	3.8	14.4	27.9	43.3	59.6	76.9	94.2	112.5	128.9	145.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	3.8	14.4	26.9	41.4	56.7	72.1	89.4	105.8	122.1	137.5
115°	0.0	3.8	13.5	26.0	39.4	53.9	69.2	84.6	100.0	115.4	129.8
117.5°	0.0	3.8	12.5	25.0	37.5	51.9	65.4	79.8	94.2	108.7	122.1
120°	0.0	2.9	11.5	23.1	36.5	49.0	62.5	76.0	89.4	101.9	115.4
122.5°	0.0	2.9	10.6	22.1	33.7	47.1	59.6	72.1	83.7	96.2	108.7
125°	0.0	2.9	9.6	20.2	31.7	43.3	55.8	68.3	79.8	91.4	101.9
127.5°	0.0	1.9	8.7	18.3	28.9	40.4	51.9	63.5	75.0	85.6	95.2
130°	0.0	1.9	7.7	16.3	26.9	37.5	48.1	58.7	69.2	79.8	90.4
132.5°	0.0	1.0	6.7	15.4	24.0	34.6	44.2	53.9	63.5	74.1	83.7
135°	0.0	1.0	5.8	13.5	22.1	30.8	40.4	49.0	58.7	68.3	76.9
137.5°	0.0	1.0	5.8	11.5	20.2	28.9	36.5	45.2	53.9	61.5	70.2
140°	0.0	1.0	4.8	10.6	17.3	26.0	33.7	40.4	48.1	55.8	63.5
142.5°	0.0	1.0	3.8	9.6	15.4	23.1	29.8	36.5	43.3	51.0	57.7
145°	1.0	1.0	3.8	8.7	13.5	20.2	26.9	32.7	39.4	45.2	51.0
147.5°	1.0	1.0	2.9	7.7	11.5	17.3	24.0	28.9	34.6	40.4	45.2
150°	1.0	1.0	2.9	6.7	10.6	15.4	20.2	26.0	29.8	35.6	39.4
152.5°	1.0	1.0	1.9	4.8	8.7	13.5	17.3	22.1	26.9	30.8	34.6
155°	1.0	1.0	1.9	3.8	7.7	11.5	14.4	19.2	22.1	26.0	28.9
157.5°	1.0	1.0	1.0	2.9	5.8	9.6	12.5	15.4	18.3	21.2	24.0
160°	1.0	1.0	1.0	1.9	4.8	7.7	9.6	12.5	15.4	17.3	19.2
162.5°	1.0	1.0	1.0	1.9	2.9	5.8	7.7	9.6	11.5	13.5	15.4
165°	1.0	1.0	1.0	1.0	1.9	3.8	5.8	7.7	8.7	10.6	11.5
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	638.6	638.6	638.6	638.6	638.6	638.6	638.6	638.6
2.5°	636.6	638.6	639.5	639.5	638.6	638.6	638.6	637.6
5°	637.6	639.5	640.5	640.5	641.5	640.5	640.5	639.5
7.5°	637.6	640.5	641.5	641.5	642.4	642.4	641.5	641.5
10°	637.6	640.5	641.5	642.4	643.4	643.4	643.4	642.4
12.5°	636.6	639.5	641.5	642.4	643.4	643.4	643.4	643.4
15°	634.7	637.6	639.5	641.5	642.4	643.4	643.4	642.4
17.5°	630.9	634.7	636.6	638.6	640.5	641.5	641.5	641.5
20°	627.0	630.9	633.8	636.6	637.6	638.6	639.5	638.6
22.5°	621.3	626.1	629.0	631.8	633.8	634.7	635.7	635.7
25°	614.5	620.3	624.1	627.0	629.0	630.9	631.8	631.8
27.5°	606.8	612.6	617.4	621.3	623.2	625.1	625.1	625.1
30°	598.2	604.9	609.7	612.6	615.5	618.4	618.4	618.4
32.5°	588.6	594.3	600.1	603.9	606.8	608.8	610.7	610.7
35°	578.0	583.8	590.5	594.3	597.2	600.1	601.1	602.0
37.5°	566.4	573.2	578.9	583.8	587.6	590.5	592.4	592.4
40°	553.0	561.6	567.4	573.2	578.0	580.9	581.8	581.8
42.5°	540.5	549.1	555.9	561.6	566.4	570.3	572.2	573.2
45°	526.0	536.6	543.4	551.1	555.9	559.7	561.6	562.6
47.5°	512.6	523.2	530.9	538.6	543.4	548.2	550.1	551.1
50°	498.2	508.7	518.4	525.1	531.8	535.7	538.6	538.6
52.5°	484.7	495.3	503.9	511.6	519.3	523.2	525.1	526.0
55°	468.3	479.9	489.5	498.2	504.9	508.7	511.6	512.6
57.5°	453.0	463.5	474.1	482.8	489.5	494.3	497.2	498.2
60°	434.7	447.2	457.8	466.4	473.2	478.0	480.8	482.8
62.5°	416.4	428.0	440.5	449.1	455.8	460.7	463.5	465.5
65°	397.2	410.6	421.2	430.8	437.6	442.4	445.3	446.2
67.5°	377.0	390.5	402.0	411.6	419.3	424.1	427.0	428.0
70°	357.8	370.3	382.8	392.4	399.1	403.9	407.8	408.7
72.5°	336.6	349.1	361.6	371.2	378.9	384.7	386.6	388.5
75°	315.4	329.9	341.4	351.0	358.7	364.5	367.4	367.4
77.5°	295.2	309.7	321.2	331.8	339.5	345.3	348.1	348.1
80°	275.0	288.5	301.0	310.6	319.3	325.1	327.9	329.9
82.5°	255.8	270.2	282.7	292.4	300.1	305.8	308.7	309.7
85°	238.5	252.9	265.4	275.0	282.7	289.5	291.4	293.3
87.5°	224.1	238.5	251.0	260.6	268.3	274.1	277.9	278.9
90°	214.5	228.9	241.4	251.0	259.7	265.4	268.3	269.3
92.5°	208.7	222.2	234.7	245.2	252.9	257.7	261.6	262.5
95°	202.0	216.4	227.9	238.5	246.2	252.0	254.9	255.8
97.5°	196.2	209.7	221.2	231.8	239.5	245.2	248.1	250.0
100°	189.5	202.9	214.5	224.1	231.8	237.5	240.4	242.3
102.5°	181.8	195.2	206.8	216.4	224.1	229.8	232.7	233.7
105°	174.1	187.5	199.1	208.7	216.4	221.2	225.0	226.0
107.5°	167.3	179.8	191.4	201.0	207.7	213.5	216.4	217.3
110°	158.7	172.1	182.7	192.3	199.1	203.9	207.7	208.7



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CATALOG NUMBER: 4BCLED-LD4-32SL-F-UNV-L830-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	151.0	163.5	174.1	182.7	190.4	195.2	198.1	199.1
115°	143.3	154.8	165.4	174.1	180.8	185.6	188.5	189.5
117.5°	134.6	146.2	156.8	164.5	171.2	176.0	178.9	179.8
120°	126.9	138.5	147.1	154.8	161.6	166.4	169.3	169.3
122.5°	119.3	129.8	138.5	146.2	151.9	156.8	158.7	159.6
125°	111.6	121.2	129.8	136.6	142.3	147.1	149.1	150.0
127.5°	104.8	113.5	121.2	127.9	132.7	137.5	139.4	140.4
130°	99.1	106.7	113.5	120.2	124.1	127.9	129.8	130.8
132.5°	92.3	100.0	105.8	111.6	115.4	119.3	121.2	121.2
135°	86.6	93.3	99.1	103.9	107.7	110.6	112.5	112.5
137.5°	78.9	86.6	93.3	97.1	101.0	102.9	104.8	104.8
140°	71.2	79.8	85.6	90.4	93.3	96.2	97.1	98.1
142.5°	64.4	71.2	78.9	83.7	86.6	88.5	90.4	90.4
145°	57.7	63.5	70.2	76.9	78.9	80.8	82.7	82.7
147.5°	51.0	56.7	62.5	68.3	72.1	73.1	75.0	75.0
150°	44.2	49.0	54.8	59.6	64.4	66.4	67.3	67.3
152.5°	38.5	42.3	47.1	51.0	56.7	58.7	59.6	60.6
155°	32.7	36.5	39.4	43.3	48.1	51.9	51.9	51.9
157.5°	26.9	29.8	32.7	35.6	39.4	43.3	44.2	45.2
160°	22.1	24.0	26.0	28.9	30.8	35.6	37.5	37.5
162.5°	16.3	18.3	20.2	22.1	24.0	26.0	29.8	29.8
165°	12.5	13.5	14.4	15.4	17.3	18.3	22.1	22.1
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)