

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: P176128

Luminaire Tested: **2BCLED-LD4-24HL-F-UNV-L840-CD1-U**

Test Date: 04/06/15



**Test Information**

Test Method: LM-79-08  
Report Number: P176128  
Test Lab: INNOVATION CENTER-P3  
Test Date: 04/06/15  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2BCLED-LD4-24HL-F-UNV-L840-CD1-U  
Description: METALUX 2FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A WHITE  
Light Source: (112) COOPER LIGHTING 4000K LEDS  
Ballast/Driver: -

**Summary**

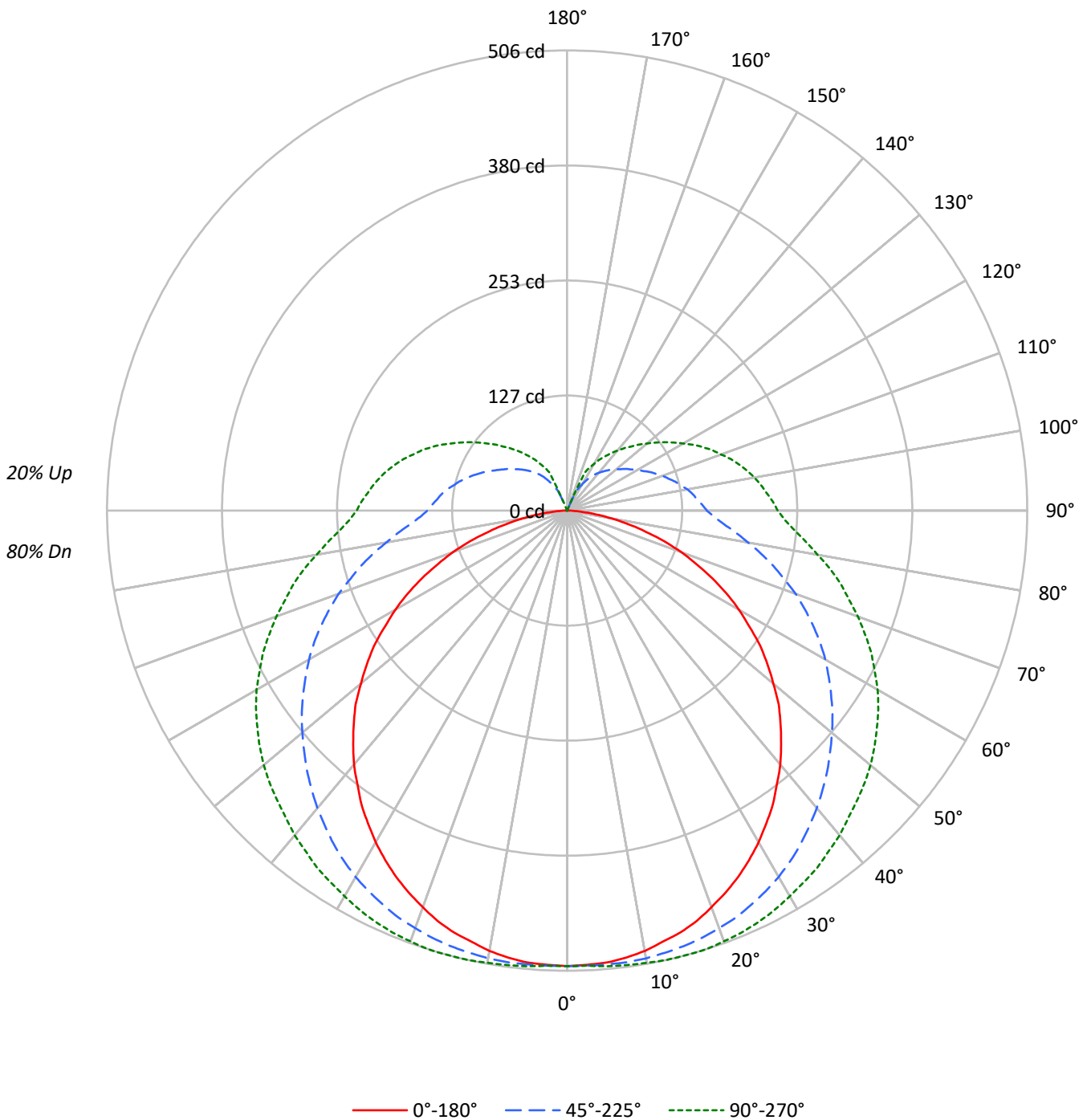
Lumens per Lamp: N/A  
Luminaire Lumens: 2489.7 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.46 / 1.53  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.21')  
CIE Type: Semi-Direct

Input Watts (W): 24.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	109	109	109	109	100	100	100	92	92	92	84	84	84	80
1	101	95	90	85	96	91	86	82	83	79	76	76	73	70	69	67	64	61
2	91	82	74	67	86	78	71	65	71	65	60	65	60	56	59	55	52	48
3	82	71	62	55	78	68	59	53	62	55	49	56	51	46	51	47	43	39
4	75	62	53	45	71	59	51	44	54	47	41	49	43	38	45	40	36	33
5	69	55	45	38	65	53	44	37	48	41	35	44	38	33	40	35	31	28
6	63	49	40	33	60	47	38	32	43	36	30	40	33	28	36	31	27	24
7	58	44	35	29	55	42	34	28	39	32	26	36	30	25	33	28	23	21
8	54	40	31	25	51	39	30	25	36	28	23	33	27	22	30	25	21	19
9	50	37	28	23	48	35	27	22	33	26	21	30	24	20	28	23	19	17
10	47	34	26	20	45	32	25	20	30	23	19	28	22	18	26	21	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7189	7189	7189
5°	7123	6933	6911
10°	7036	6731	6703
15°	6944	6548	6545
20°	6829	6379	6403
25°	6714	6222	6275
30°	6581	6072	6145
35°	6440	5913	6047
40°	6283	5752	5956
45°	6101	5600	5881
50°	5881	5454	5849
55°	5646	5322	5803
60°	5306	5204	5769
65°	4891	5061	5715
70°	4346	4918	5649
75°	3558	4746	5618
80°	2556	4575	5569
85°	1233	4502	5623



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.8	1.9
10°-20°	139.9	5.6
20°-30°	219.4	8.8
30°-40°	277.2	11.1
40°-50°	308.2	12.4
50°-60°	310.9	12.5
60°-70°	284.0	11.4
70°-80°	232.5	9.3
80°-90°	173.7	7.0
90°-100°	141.2	5.7
100°-110°	118.1	4.7
110°-120°	92.0	3.7
120°-130°	66.5	2.7
130°-140°	44.2	1.8
140°-150°	25.7	1.0
150°-160°	8.4	0.3
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	407.0	16.3
0°-40°	684.2	27.5
0°-60°	1303.4	52.4
0°-90°	1993.5	80.1
90°-120°	351.4	14.1
90°-150°	487.8	19.6
90°-180°	496.0	19.9
0°-180°	2489.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	499	499	501	503	503	47
15°	480	486	496	504	506	135
25°	445	457	478	494	499	205
35°	394	415	448	471	479	246
45°	332	361	405	438	451	256
55°	259	297	354	400	416	231
65°	176	225	298	350	369	174
75°	89	154	235	290	311	95
85°	16	89	173	231	251	21
90°	1	71	154	210	232	1
95°	1	62	143	200	220	1
105°	0	49	123	176	196	0
115°	0	40	100	148	165	0
125°	0	33	80	117	131	0
135°	0	25	62	90	99	0
145°	0	15	45	66	73	0
155°	0	7	24	41	46	0
165°	0	0	0	0	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°	25°	30°	35°	40°	45°	50°
0°	500.9	500.9	500.9	500.9	500.9	500.9	500.9	500.9	500.9	500.9	500.9
2.5°	499.9	499.9	499.9	499.9	499.9	500.9	500.9	502.0	502.0	500.9	500.9
5°	498.9	497.9	498.9	498.9	498.9	499.9	500.9	500.9	500.9	500.9	502.0
7.5°	495.8	494.8	495.8	495.8	496.8	497.9	498.9	499.9	500.9	500.9	502.0
10°	491.7	491.7	491.7	492.7	493.8	494.8	496.8	498.9	498.9	499.9	500.9
12.5°	485.6	485.6	486.6	487.6	489.7	490.7	492.7	494.8	496.8	497.9	499.9
15°	480.4	480.4	481.5	482.5	484.5	486.6	489.7	491.7	493.8	495.8	498.9
17.5°	473.3	473.3	474.3	476.3	478.4	481.5	484.5	487.6	490.7	492.7	495.8
20°	464.1	464.1	466.1	468.2	471.2	475.3	478.4	482.5	485.6	488.6	491.7
22.5°	454.8	454.8	457.9	460.0	464.1	468.2	472.2	476.3	480.4	484.5	487.6
25°	444.6	445.6	447.7	450.7	454.8	460.0	464.1	469.2	474.3	478.4	482.5
27.5°	433.3	434.3	436.4	440.5	445.6	450.7	455.9	462.0	467.1	472.2	477.4
30°	421.0	422.1	425.1	429.2	435.4	440.5	446.6	452.8	458.9	465.1	470.2
32.5°	407.7	408.7	412.8	418.0	424.1	430.2	437.4	443.6	450.7	456.9	463.0
35°	394.4	396.4	399.5	405.7	411.8	419.0	426.2	433.3	441.5	447.7	453.8
37.5°	379.0	381.1	385.2	391.3	398.5	405.7	413.9	422.1	430.2	437.4	444.6
40°	364.7	365.7	370.8	378.0	385.2	393.4	401.6	410.8	419.0	427.2	435.4
42.5°	348.3	350.3	355.5	362.6	370.8	380.1	389.3	398.5	406.7	415.9	424.1
45°	331.9	334.0	340.1	348.3	356.5	365.7	374.9	386.2	395.4	404.6	412.8
47.5°	315.5	316.5	322.7	331.9	341.1	351.4	361.6	371.9	382.1	392.3	402.6
50°	296.1	300.1	306.3	314.5	324.7	336.0	347.3	358.5	369.8	380.1	391.3
52.5°	277.6	281.7	288.9	298.1	308.3	319.6	330.9	343.2	355.5	367.8	379.0
55°	259.2	262.2	269.4	279.7	290.9	303.2	316.5	328.8	342.1	354.4	367.8
57.5°	237.7	242.8	251.0	261.2	273.5	286.8	300.1	313.5	327.8	341.1	354.4
60°	218.2	221.3	230.5	241.8	254.1	268.4	282.7	298.1	313.5	327.8	341.1
62.5°	197.7	201.8	211.0	222.3	235.6	251.0	267.4	282.7	298.1	313.5	326.8
65°	176.2	180.3	190.5	202.8	217.2	233.6	250.0	267.4	283.8	298.1	311.4
67.5°	153.7	158.8	170.1	183.4	198.7	216.1	233.6	251.0	267.4	282.7	297.1
70°	133.2	137.3	149.6	162.9	180.3	198.7	216.1	234.6	251.0	267.4	281.7
72.5°	111.7	116.8	128.0	143.4	161.9	181.3	199.8	217.2	234.6	250.0	265.3
75°	89.1	95.3	107.6	125.0	144.4	163.9	182.3	200.8	218.2	234.6	248.9
77.5°	68.6	75.8	89.1	106.5	126.0	146.5	166.0	184.4	201.8	218.2	233.6
80°	49.2	56.3	70.7	89.1	109.6	129.1	148.5	168.0	185.4	201.8	217.2
82.5°	31.8	38.9	54.3	73.8	93.2	113.7	133.2	151.6	170.1	187.5	202.8
85°	16.4	24.6	40.0	58.4	78.9	99.4	118.8	138.3	155.7	173.1	188.5
87.5°	7.2	13.3	29.7	48.1	67.6	88.1	107.6	127.0	144.4	161.9	177.2
90°	1.0	8.2	22.5	41.0	60.4	80.9	100.4	118.8	136.2	153.7	169.0
92.5°	1.0	6.1	19.5	36.9	56.3	75.8	95.3	113.7	131.1	148.5	163.9
95°	1.0	5.1	17.4	33.8	52.2	71.7	91.2	109.6	127.0	143.4	158.8
97.5°	1.0	5.1	16.4	31.8	49.2	67.6	87.1	105.5	122.9	139.3	153.7
100°	1.0	5.1	15.4	28.7	46.1	64.5	83.0	100.4	117.8	134.2	148.5
102.5°	0.0	4.1	14.3	27.7	43.0	60.4	77.9	95.3	112.7	128.0	142.4
105°	0.0	4.1	13.3	25.6	41.0	57.4	73.8	91.2	107.6	122.9	137.3
107.5°	0.0	4.1	13.3	24.6	38.9	54.3	69.7	86.0	102.4	116.8	131.1
110°	0.0	4.1	12.3	23.6	36.9	51.2	66.6	82.0	97.3	111.7	125.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	3.1	12.3	22.5	34.8	48.1	62.5	77.9	91.2	105.5	118.8
115°	0.0	3.1	11.3	22.5	33.8	46.1	59.4	72.7	87.1	100.4	112.7
117.5°	0.0	3.1	10.2	20.5	32.8	44.0	56.3	69.7	82.0	94.2	106.5
120°	0.0	2.0	10.2	19.5	30.7	43.0	54.3	65.6	77.9	89.1	100.4
122.5°	0.0	2.0	9.2	19.5	29.7	41.0	51.2	62.5	73.8	84.0	95.3
125°	0.0	2.0	9.2	17.4	27.7	38.9	49.2	59.4	69.7	79.9	89.1
127.5°	0.0	2.0	8.2	16.4	26.6	35.9	46.1	56.3	65.6	74.8	84.0
130°	0.0	1.0	7.2	15.4	24.6	33.8	44.0	53.3	62.5	70.7	78.9
132.5°	0.0	1.0	6.1	14.3	22.5	31.8	41.0	50.2	58.4	66.6	74.8
135°	0.0	1.0	5.1	13.3	20.5	29.7	37.9	47.1	55.3	62.5	69.7
137.5°	0.0	1.0	4.1	11.3	19.5	27.7	35.9	44.0	51.2	58.4	65.6
140°	0.0	1.0	4.1	9.2	16.4	24.6	31.8	40.0	47.1	54.3	60.4
142.5°	0.0	1.0	3.1	8.2	14.3	21.5	28.7	35.9	43.0	50.2	56.3
145°	0.0	1.0	3.1	7.2	12.3	18.4	25.6	31.8	37.9	45.1	51.2
147.5°	0.0	0.0	2.0	5.1	10.2	16.4	21.5	27.7	33.8	40.0	45.1
150°	0.0	0.0	1.0	4.1	8.2	13.3	18.4	23.6	28.7	33.8	40.0
152.5°	0.0	0.0	1.0	3.1	7.2	11.3	15.4	19.5	24.6	28.7	33.8
155°	0.0	0.0	1.0	2.0	5.1	8.2	12.3	16.4	20.5	23.6	27.7
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	500.9	500.9	500.9	500.9	500.9	500.9	500.9	500.9
2.5°	500.9	500.9	502.0	502.0	502.0	500.9	500.9	500.9
5°	502.0	502.0	503.0	503.0	503.0	503.0	502.0	503.0
7.5°	502.0	503.0	504.0	504.0	504.0	504.0	504.0	504.0
10°	502.0	503.0	504.0	505.0	505.0	505.0	505.0	505.0
12.5°	500.9	502.0	504.0	505.0	505.0	506.1	506.1	506.1
15°	499.9	502.0	504.0	505.0	505.0	506.1	506.1	506.1
17.5°	497.9	499.9	502.0	504.0	505.0	505.0	505.0	506.1
20°	494.8	497.9	499.9	502.0	503.0	504.0	504.0	504.0
22.5°	490.7	493.8	496.8	498.9	500.9	500.9	502.0	502.0
25°	486.6	489.7	492.7	495.8	496.8	497.9	498.9	498.9
27.5°	481.5	484.5	488.6	490.7	492.7	493.8	494.8	494.8
30°	474.3	478.4	482.5	485.6	487.6	488.6	489.7	489.7
32.5°	467.1	472.2	476.3	479.4	481.5	483.5	484.5	484.5
35°	460.0	465.1	469.2	473.3	475.3	477.4	478.4	479.4
37.5°	450.7	455.9	461.0	465.1	468.2	470.2	472.2	472.2
40°	441.5	447.7	453.8	457.9	461.0	464.1	465.1	466.1
42.5°	431.3	438.4	444.6	448.7	452.8	455.9	457.9	457.9
45°	421.0	429.2	435.4	441.5	445.6	448.7	450.7	450.7
47.5°	410.8	420.0	427.2	433.3	437.4	441.5	442.5	443.6
50°	400.5	409.8	416.9	424.1	429.2	432.3	434.3	435.4
52.5°	389.3	398.5	407.7	413.9	419.0	423.1	425.1	426.2
55°	378.0	388.2	396.4	403.6	408.7	412.8	414.9	415.9
57.5°	365.7	377.0	385.2	392.3	397.5	402.6	404.6	405.7
60°	353.4	363.7	372.9	381.1	386.2	390.3	393.4	394.4
62.5°	339.1	350.3	359.6	367.8	373.9	378.0	381.1	381.1
65°	324.7	336.0	346.2	354.4	360.6	364.7	367.8	368.8
67.5°	310.4	320.6	331.9	340.1	346.2	351.4	354.4	354.4
70°	295.0	306.3	316.5	325.8	331.9	336.0	340.1	340.1
72.5°	278.6	290.9	302.2	309.4	316.5	321.7	324.7	324.7
75°	263.3	275.6	285.8	295.0	302.2	306.3	309.4	311.4
77.5°	246.9	260.2	270.4	279.7	286.8	290.9	295.0	296.1
80°	231.5	243.8	255.1	264.3	271.5	275.6	278.6	279.7
82.5°	216.1	229.5	239.7	248.9	256.1	261.2	264.3	265.3
85°	202.8	215.1	226.4	235.6	241.8	246.9	251.0	251.0
87.5°	191.6	203.9	215.1	224.3	230.5	235.6	238.7	239.7
90°	183.4	195.7	205.9	215.1	222.3	227.4	229.5	231.5
92.5°	177.2	190.5	200.8	210.0	216.1	221.3	224.3	226.4
95°	173.1	185.4	195.7	204.9	212.1	216.1	219.2	220.2
97.5°	168.0	180.3	190.5	199.8	205.9	211.0	214.1	215.1
100°	161.9	174.1	184.4	193.6	199.8	204.9	208.0	209.0
102.5°	156.7	168.0	178.2	186.4	193.6	198.7	201.8	202.8
105°	150.6	161.9	172.1	180.3	187.5	191.6	194.6	195.7
107.5°	144.4	155.7	164.9	173.1	180.3	184.4	187.5	188.5
110°	137.3	148.5	158.8	167.0	172.1	177.2	180.3	180.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	131.1	141.4	151.6	158.8	164.9	169.0	172.1	173.1
115°	124.0	134.2	143.4	151.6	156.7	160.8	163.9	164.9
117.5°	117.8	127.0	136.2	143.4	149.6	153.7	155.7	156.7
120°	110.6	119.9	129.1	135.2	141.4	144.4	147.5	147.5
122.5°	104.5	113.7	120.9	128.0	133.2	136.2	139.3	139.3
125°	98.3	106.5	113.7	119.9	125.0	129.1	130.1	131.1
127.5°	92.2	99.4	106.5	112.7	116.8	119.9	121.9	122.9
130°	86.0	93.2	100.4	105.5	109.6	112.7	114.7	114.7
132.5°	82.0	88.1	93.2	98.3	102.4	104.5	106.5	107.6
135°	76.8	82.0	87.1	92.2	95.3	97.3	99.4	99.4
137.5°	71.7	76.8	82.0	85.0	89.1	91.2	92.2	93.2
140°	66.6	71.7	75.8	79.9	82.0	84.0	86.0	86.0
142.5°	61.5	65.6	69.7	73.8	75.8	77.9	78.9	79.9
145°	56.3	60.4	64.5	67.6	69.7	71.7	72.7	72.7
147.5°	51.2	55.3	58.4	61.5	63.5	65.6	66.6	66.6
150°	45.1	49.2	52.2	55.3	57.4	58.4	59.4	59.4
152.5°	37.9	43.0	46.1	49.2	50.2	52.2	52.2	53.3
155°	31.8	35.9	40.0	42.0	44.0	45.1	46.1	46.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	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
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)