

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: P176119

Luminaire Tested: **4BCLED-LD4-36SL-F-UNV-L840-SD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P176119
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-36SL-F-UNV-L840-SD1-U
Description: METALUX 4FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A
Light Source: (112) COOPER LIGHTING 4000K LEDS
Ballast/Driver: (1) ELECTRONIC DRIVER

Summary

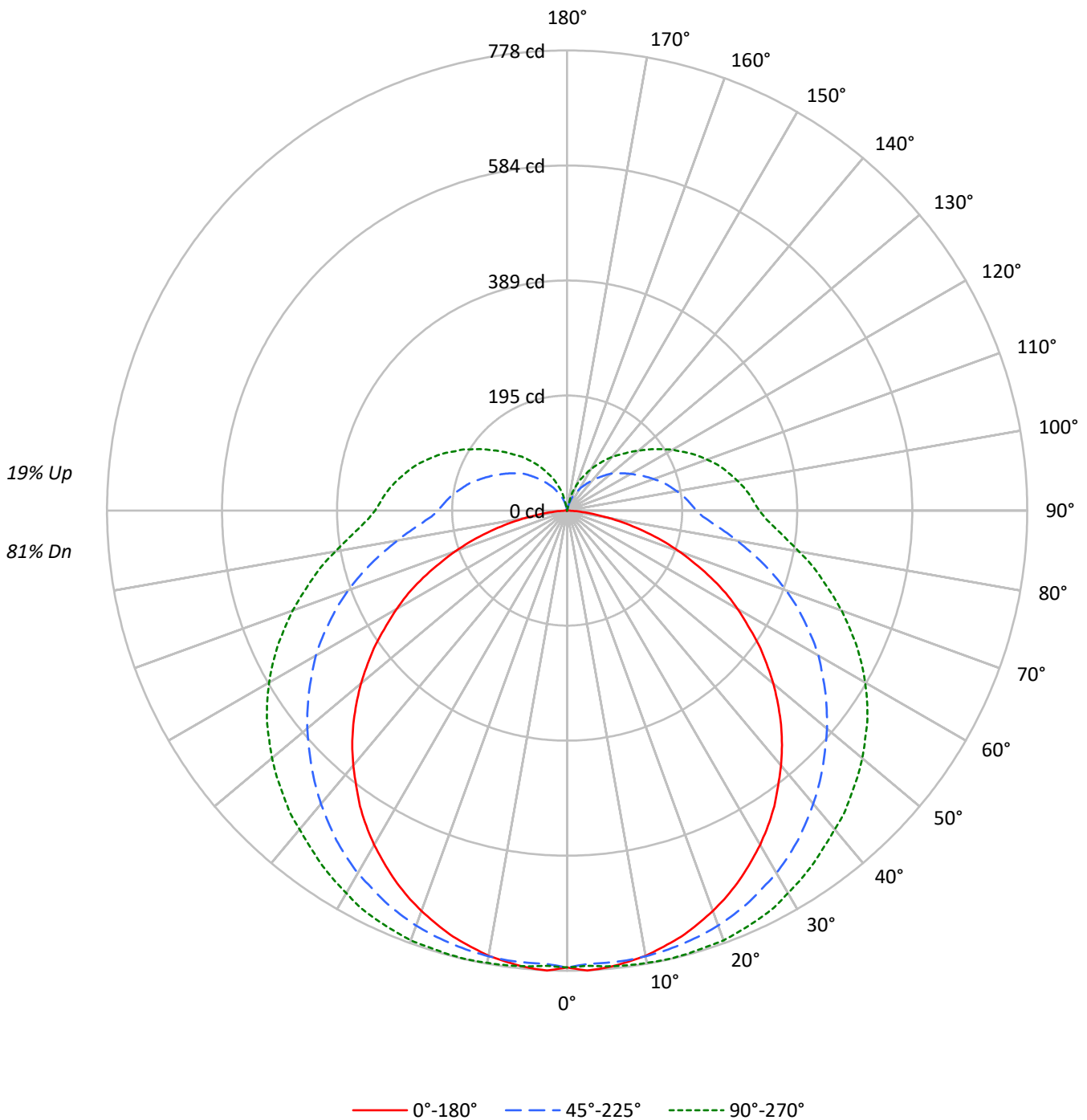
Lumens per Lamp: N/A
Luminaire Lumens: 3684.9 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 40.3
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°	5543	5543	5543
5°	5556	5289	5264
10°	5508	5111	5063
15°	5449	4948	4894
20°	5377	4802	4753
25°	5304	4656	4610
30°	5218	4520	4468
35°	5124	4378	4344
40°	5006	4233	4228
45°	4883	4095	4136
50°	4725	3967	4053
55°	4541	3838	3972
60°	4311	3720	3876
65°	4019	3568	3773
70°	3596	3416	3659
75°	2995	3244	3542
80°	2157	3063	3436
85°	1033	2949	3385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	2.0
10°-20°	215.2	5.8
20°-30°	336.6	9.1
30°-40°	423.2	11.5
40°-50°	467.5	12.7
50°-60°	467.3	12.7
60°-70°	421.4	11.4
70°-80°	338.0	9.2
80°-90°	246.6	6.7
90°-100°	199.2	5.4
100°-110°	165.6	4.5
110°-120°	128.3	3.5
120°-130°	91.6	2.5
130°-140°	59.3	1.6
140°-150°	33.5	0.9
150°-160°	14.7	0.4
160°-170°	3.1	0.1
170°-180°	0.0	0.0
0°-30°	625.5	17.0
0°-40°	1048.7	28.5
0°-60°	1983.5	53.8
0°-90°	2989.5	81.1
90°-120°	493.0	13.4
90°-150°	677.5	18.4
90°-180°	695.0	18.9
0°-180°	3684.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	776	772	767	774	773	74
15°	746	751	758	774	776	210
25°	689	706	729	756	763	318
35°	610	639	680	716	727	381
45°	511	554	612	661	679	394
55°	395	452	533	597	620	353
65°	268	340	442	514	540	265
75°	133	227	342	418	446	142
85°	22	128	247	326	354	28
90°	0	100	218	297	325	1
95°	0	89	204	282	309	0
105°	0	69	173	247	274	0
115°	1	57	139	205	230	1
125°	1	45	110	161	181	0
135°	1	32	81	123	136	0
145°	1	20	53	88	99	1
155°	1	11	32	49	62	0
165°	1	4	12	18	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°	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4
2.5°	778.5	777.5	775.5	774.4	774.4	774.4	773.4	772.4	769.3	767.3	767.3
5°	775.5	774.4	772.4	771.4	772.4	772.4	772.4	771.4	769.3	767.3	768.3
7.5°	770.3	770.3	768.3	768.3	769.3	770.3	770.3	770.3	768.3	767.3	769.3
10°	764.2	763.2	762.2	762.2	764.2	765.2	767.3	766.3	765.2	765.2	767.3
12.5°	755.0	755.0	755.0	755.0	758.1	760.1	762.2	762.2	762.2	762.2	765.2
15°	745.8	744.7	744.7	746.8	749.9	752.9	755.0	756.0	757.0	758.1	762.2
17.5°	733.5	733.5	734.5	735.5	740.6	743.7	746.8	748.8	750.9	752.9	758.1
20°	720.2	720.2	721.2	724.3	728.3	734.5	737.6	740.6	742.7	746.8	751.9
22.5°	705.8	705.8	707.9	712.0	716.1	722.2	727.3	730.4	734.5	738.6	744.7
25°	689.4	689.4	691.5	696.6	702.7	709.9	715.0	720.2	723.2	729.4	736.5
27.5°	671.0	672.0	674.1	680.2	687.4	694.5	701.7	707.9	713.0	718.1	726.3
30°	652.5	652.5	655.6	662.8	671.0	679.2	687.4	693.5	699.7	707.9	715.0
32.5°	632.1	633.1	637.2	643.3	652.5	662.8	671.0	678.2	686.3	694.5	703.8
35°	610.5	611.6	615.7	623.9	634.1	644.3	654.6	661.8	671.0	680.2	689.4
37.5°	586.0	589.0	593.1	602.3	613.6	624.9	634.1	643.3	653.6	663.8	674.1
40°	562.4	564.4	569.6	579.8	592.1	604.4	614.6	624.9	636.2	647.4	658.7
42.5°	537.8	539.9	547.0	557.3	570.6	582.9	594.2	606.4	618.7	630.0	642.3
45°	511.2	513.2	520.4	532.7	547.0	560.3	571.6	584.9	599.3	611.6	623.9
47.5°	483.5	485.6	493.8	508.1	522.4	536.8	550.1	564.4	578.8	592.1	606.4
50°	454.8	458.9	467.1	480.4	496.8	512.2	527.6	542.9	558.3	573.7	588.0
52.5°	425.1	429.2	439.5	454.8	470.2	486.6	503.0	519.4	536.8	553.2	569.6
55°	395.4	399.5	409.8	426.2	443.6	461.0	478.4	496.8	515.3	532.7	551.1
57.5°	362.6	369.8	381.1	396.4	416.9	435.4	452.8	472.2	492.7	511.2	529.6
60°	332.9	338.1	351.4	367.8	387.2	407.7	427.2	448.7	470.2	490.7	509.1
62.5°	302.2	306.3	318.6	337.0	357.5	379.0	401.6	424.1	446.6	467.1	485.6
65°	268.4	273.5	287.9	306.3	327.8	351.4	376.0	399.5	422.1	442.5	463.0
67.5°	233.6	239.7	256.1	275.6	299.1	323.7	349.3	373.9	396.4	419.0	438.4
70°	200.8	208.0	222.3	243.8	270.4	297.1	323.7	348.3	371.9	393.4	414.9
72.5°	168.0	174.1	191.6	213.1	240.7	268.4	295.0	321.7	345.2	367.8	388.2
75°	133.2	141.4	159.8	185.4	214.1	240.7	269.4	295.0	319.6	342.1	363.7
77.5°	102.4	110.6	130.1	155.7	185.4	215.1	242.8	268.4	293.0	315.5	338.1
80°	70.7	79.9	101.4	129.1	158.8	187.5	216.1	242.8	268.4	290.9	312.4
82.5°	44.0	53.3	76.8	104.5	134.2	163.9	191.6	219.2	243.8	268.4	289.9
85°	21.5	31.8	55.3	84.0	112.7	142.4	171.1	197.7	223.3	246.9	268.4
87.5°	6.1	16.4	40.0	66.6	96.3	126.0	153.7	181.3	205.9	229.5	251.0
90°	0.0	10.2	31.8	57.4	86.0	114.7	143.4	170.1	194.6	218.2	239.7
92.5°	0.0	7.2	26.6	52.2	79.9	108.6	136.2	162.9	187.5	211.0	232.5
95°	0.0	7.2	23.6	48.1	74.8	102.4	130.1	155.7	180.3	203.9	225.4
97.5°	0.0	6.1	21.5	44.0	69.7	96.3	122.9	149.6	174.1	196.7	218.2
100°	0.0	6.1	20.5	41.0	65.6	91.2	116.8	142.4	166.0	188.5	209.0
102.5°	0.0	6.1	19.5	37.9	60.4	85.0	110.6	135.2	158.8	180.3	200.8
105°	0.0	6.1	19.5	36.9	57.4	79.9	104.5	128.0	151.6	173.1	192.6
107.5°	0.0	5.1	18.4	34.8	54.3	75.8	98.3	120.9	143.4	164.9	184.4
110°	0.0	5.1	17.4	33.8	52.2	71.7	92.2	114.7	136.2	155.7	175.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	5.1	16.4	32.8	50.2	68.6	88.1	107.6	128.0	147.5	166.0
115°	1.0	5.1	16.4	30.7	48.1	65.6	83.0	101.4	120.9	139.3	156.7
117.5°	0.0	4.1	15.4	29.7	46.1	62.5	78.9	96.3	113.7	131.1	147.5
120°	1.0	4.1	14.3	27.7	43.0	59.4	75.8	91.2	107.6	124.0	139.3
122.5°	0.0	3.1	13.3	25.6	41.0	56.3	71.7	87.1	101.4	116.8	130.1
125°	1.0	3.1	12.3	24.6	37.9	52.2	67.6	82.0	96.3	109.6	122.9
127.5°	0.0	2.0	10.2	22.5	34.8	48.1	62.5	76.8	90.1	103.5	115.8
130°	0.0	2.0	9.2	20.5	31.8	44.0	57.4	70.7	84.0	97.3	108.6
132.5°	1.0	2.0	8.2	18.4	29.7	41.0	52.2	64.5	76.8	89.1	101.4
135°	1.0	1.0	7.2	16.4	26.6	36.9	47.1	58.4	70.7	80.9	93.2
137.5°	0.0	1.0	6.1	14.3	24.6	33.8	44.0	53.3	63.5	73.8	84.0
140°	1.0	1.0	6.1	12.3	21.5	30.7	40.0	48.1	57.4	66.6	76.8
142.5°	1.0	1.0	5.1	11.3	18.4	27.7	35.9	44.0	52.2	60.4	68.6
145°	1.0	1.0	4.1	10.2	16.4	24.6	31.8	38.9	46.1	53.3	60.4
147.5°	1.0	1.0	4.1	9.2	14.3	21.5	28.7	34.8	42.0	48.1	54.3
150°	1.0	1.0	3.1	7.2	12.3	18.4	24.6	30.7	36.9	42.0	48.1
152.5°	1.0	1.0	2.0	6.1	11.3	15.4	21.5	26.6	31.8	35.9	41.0
155°	1.0	1.0	2.0	5.1	9.2	13.3	17.4	22.5	27.7	31.8	34.8
157.5°	1.0	1.0	1.0	4.1	7.2	11.3	15.4	18.4	22.5	26.6	29.7
160°	1.0	1.0	1.0	3.1	6.1	9.2	12.3	15.4	18.4	21.5	23.6
162.5°	1.0	1.0	1.0	2.0	4.1	7.2	9.2	12.3	14.3	16.4	18.4
165°	1.0	1.0	1.0	1.0	3.1	5.1	7.2	9.2	11.3	12.3	14.3
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4
2.5°	770.3	772.4	772.4	772.4	772.4	772.4	771.4	770.3
5°	771.4	773.4	774.4	774.4	774.4	774.4	773.4	773.4
7.5°	771.4	774.4	775.5	776.5	776.5	776.5	776.5	775.5
10°	771.4	773.4	775.5	776.5	777.5	777.5	777.5	776.5
12.5°	769.3	772.4	775.5	776.5	777.5	777.5	777.5	777.5
15°	766.3	770.3	773.4	774.4	776.5	776.5	776.5	776.5
17.5°	763.2	767.3	770.3	772.4	774.4	775.5	775.5	774.4
20°	758.1	763.2	766.3	769.3	771.4	772.4	772.4	773.4
22.5°	750.9	757.0	761.1	764.2	766.3	768.3	768.3	768.3
25°	743.7	749.9	754.0	757.0	761.1	762.2	763.2	763.2
27.5°	733.5	740.6	745.8	749.9	752.9	755.0	756.0	757.0
30°	724.3	730.4	736.5	740.6	743.7	745.8	746.8	746.8
32.5°	712.0	719.1	725.3	730.4	733.5	736.5	737.6	737.6
35°	699.7	706.8	713.0	718.1	722.2	725.3	727.3	727.3
37.5°	684.3	692.5	699.7	705.8	709.9	714.0	716.1	715.0
40°	668.9	677.1	686.3	692.5	697.6	700.7	703.8	703.8
42.5°	653.6	663.8	671.0	679.2	685.3	689.4	691.5	693.5
45°	636.2	647.4	656.6	664.8	671.0	675.1	678.2	679.2
47.5°	619.8	632.1	642.3	650.5	657.7	661.8	664.8	665.9
50°	603.4	615.7	625.9	635.1	643.3	647.4	650.5	651.5
52.5°	584.9	597.2	609.5	619.8	625.9	631.0	635.1	635.1
55°	565.5	579.8	592.1	602.3	610.5	614.6	618.7	619.8
57.5°	546.0	559.3	572.6	582.9	591.1	597.2	600.3	601.3
60°	526.5	540.9	553.2	563.4	571.6	576.7	580.8	581.9
62.5°	503.0	519.4	531.7	542.9	550.1	557.3	561.4	561.4
65°	480.4	494.8	508.1	519.4	529.6	534.7	538.8	539.9
67.5°	455.9	471.2	485.6	496.8	506.1	512.2	516.3	516.3
70°	432.3	447.7	462.0	473.3	482.5	487.6	492.7	493.8
72.5°	406.7	423.1	437.4	448.7	457.9	464.1	468.2	469.2
75°	381.1	397.5	412.8	423.1	434.3	440.5	444.6	445.6
77.5°	356.5	373.9	388.2	399.5	409.8	415.9	420.0	423.1
80°	332.9	350.3	363.7	376.0	385.2	392.3	395.4	397.5
82.5°	309.4	325.8	342.1	353.4	362.6	369.8	373.9	374.9
85°	288.9	305.3	319.6	332.9	343.2	349.3	353.4	354.4
87.5°	270.4	287.9	303.2	314.5	324.7	331.9	336.0	337.0
90°	259.2	276.6	290.9	303.2	313.5	319.6	323.7	324.7
92.5°	252.0	269.4	283.8	296.1	305.3	311.4	315.5	316.5
95°	243.8	261.2	275.6	287.9	297.1	304.2	308.3	309.4
97.5°	236.6	254.1	268.4	280.7	288.9	296.1	300.1	301.2
100°	228.4	244.8	259.2	271.5	280.7	286.8	290.9	292.0
102.5°	219.2	235.6	250.0	262.2	271.5	277.6	281.7	282.7
105°	211.0	226.4	240.7	253.0	262.2	267.4	272.5	273.5
107.5°	201.8	217.2	231.5	241.8	251.0	258.1	261.2	263.3
110°	191.6	208.0	221.3	231.5	240.7	246.9	251.0	252.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	182.3	197.7	211.0	221.3	229.5	235.6	239.7	240.7
115°	173.1	187.5	199.8	210.0	218.2	224.3	227.4	229.5
117.5°	162.9	177.2	188.5	198.7	206.9	213.1	216.1	216.1
120°	153.7	167.0	178.2	187.5	195.7	200.8	204.9	205.9
122.5°	144.4	156.7	167.0	176.2	183.4	188.5	192.6	192.6
125°	135.2	146.5	156.7	164.9	172.1	177.2	180.3	181.3
127.5°	127.0	137.3	146.5	154.7	160.8	164.9	169.0	169.0
130°	118.8	129.1	137.3	144.4	149.6	154.7	156.7	157.8
132.5°	111.7	120.9	128.0	134.2	139.3	143.4	146.5	147.5
135°	103.5	112.7	119.9	126.0	130.1	133.2	136.2	136.2
137.5°	95.3	105.5	111.7	117.8	120.9	125.0	127.0	127.0
140°	86.0	95.3	104.5	109.6	112.7	115.8	117.8	118.8
142.5°	76.8	86.0	95.3	100.4	104.5	106.5	108.6	108.6
145°	68.6	76.8	84.0	91.2	95.3	97.3	99.4	99.4
147.5°	60.4	66.6	73.8	82.0	86.0	88.1	90.1	90.1
150°	53.3	58.4	64.5	70.7	76.8	78.9	79.9	80.9
152.5°	46.1	51.2	55.3	61.5	67.6	69.7	71.7	71.7
155°	38.9	43.0	47.1	51.2	57.4	61.5	62.5	62.5
157.5°	32.8	35.9	40.0	43.0	47.1	52.2	53.3	54.3
160°	25.6	29.7	31.8	34.8	37.9	43.0	45.1	45.1
162.5°	20.5	22.5	24.6	26.6	28.7	31.8	35.9	36.9
165°	15.4	16.4	17.4	18.4	20.5	22.5	26.6	27.7
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)