

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: P176129

Luminaire Tested: **2BCLED-LD4-24HL-F-UNV-L830-CD1-U**

Test Date: 04/06/15



Test Information

Test Method: LM-79-08
Report Number: P176129
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-L830-CD1-U
Description: METALUX 2FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A WHITE
Light Source: (112) COOPER LIGHTING 3000K LEDS
Ballast/Driver: -

Summary

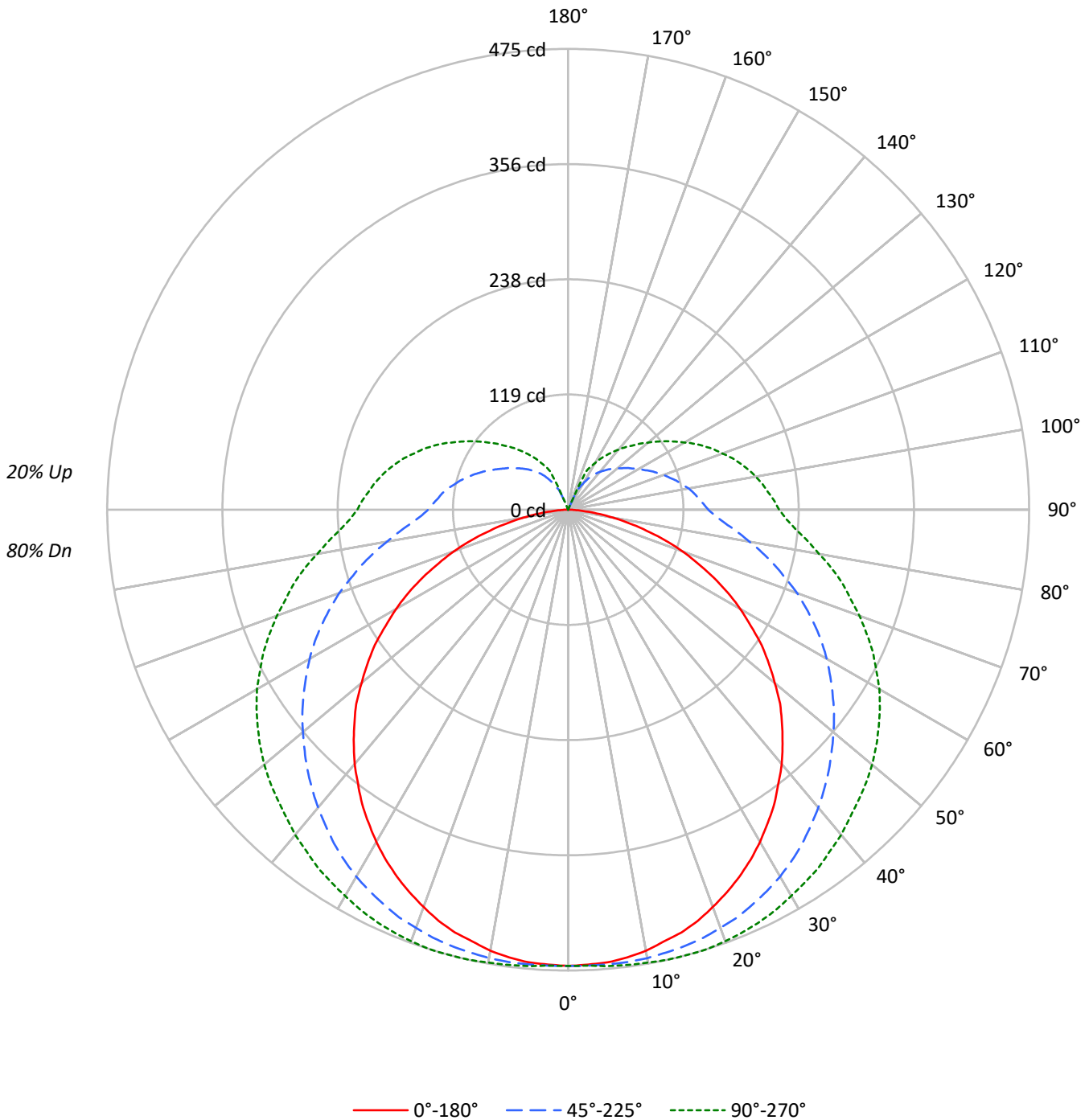
Lumens per Lamp: N/A
Luminaire Lumens: 2337.3 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.46 / 1.53
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 24.9
Input Voltage (V): NR
Input Current (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	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°	6750	6750	6750
5°	6686	6510	6488
10°	6606	6319	6293
15°	6519	6148	6144
20°	6411	5989	6012
25°	6304	5841	5890
30°	6179	5700	5768
35°	6047	5551	5677
40°	5899	5399	5592
45°	5728	5258	5521
50°	5520	5120	5490
55°	5299	4996	5448
60°	4980	4885	5417
65°	4591	4752	5365
70°	4078	4616	5303
75°	3342	4455	5276
80°	2400	4296	5227
85°	1158	4226	5278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	1.9
10°-20°	131.3	5.6
20°-30°	206.0	8.8
30°-40°	260.2	11.1
40°-50°	289.4	12.4
50°-60°	291.9	12.5
60°-70°	266.6	11.4
70°-80°	218.3	9.3
80°-90°	163.0	7.0
90°-100°	132.5	5.7
100°-110°	110.9	4.7
110°-120°	86.4	3.7
120°-130°	62.4	2.7
130°-140°	41.5	1.8
140°-150°	24.1	1.0
150°-160°	7.9	0.3
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	382.1	16.3
0°-40°	642.4	27.5
0°-60°	1223.6	52.4
0°-90°	1871.5	80.1
90°-120°	329.9	14.1
90°-150°	457.9	19.6
90°-180°	466.0	19.9
0°-180°	2337.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	468	469	470	472	472	44
15°	451	456	466	474	475	127
25°	417	429	449	464	468	192
35°	370	390	420	442	450	231
45°	312	339	380	412	423	240
55°	243	279	333	376	390	217
65°	165	212	280	329	346	163
75°	84	145	220	273	292	89
85°	15	84	162	217	236	19
90°	1	66	144	198	217	1
95°	1	58	135	188	207	1
105°	0	46	115	165	184	0
115°	0	38	94	138	155	0
125°	0	31	75	110	123	0
135°	0	24	59	84	93	0
145°	0	14	42	62	68	0
155°	0	6	22	38	43	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°	470.3	470.3	470.3	470.3	470.3	470.3	470.3	470.3	470.3	470.3	470.3
2.5°	469.3	469.3	469.3	469.3	469.3	470.3	470.3	471.2	471.2	470.3	470.3
5°	468.3	467.4	468.3	468.3	468.3	469.3	470.3	470.3	470.3	470.3	471.2
7.5°	465.5	464.5	465.5	465.5	466.4	467.4	468.3	469.3	470.3	470.3	471.2
10°	461.6	461.6	461.6	462.6	463.5	464.5	466.4	468.3	468.3	469.3	470.3
12.5°	455.8	455.8	456.8	457.8	459.7	460.7	462.6	464.5	466.4	467.4	469.3
15°	451.0	451.0	452.0	453.0	454.9	456.8	459.7	461.6	463.5	465.5	468.3
17.5°	444.3	444.3	445.3	447.2	449.1	452.0	454.9	457.8	460.7	462.6	465.5
20°	435.7	435.7	437.6	439.5	442.4	446.2	449.1	453.0	455.8	458.7	461.6
22.5°	427.0	427.0	429.9	431.8	435.7	439.5	443.3	447.2	451.0	454.9	457.8
25°	417.4	418.3	420.3	423.1	427.0	431.8	435.7	440.5	445.3	449.1	453.0
27.5°	406.8	407.8	409.7	413.5	418.3	423.1	428.0	433.7	438.5	443.3	448.2
30°	395.3	396.2	399.1	403.0	408.7	413.5	419.3	425.1	430.8	436.6	441.4
32.5°	382.8	383.7	387.6	392.4	398.1	403.9	410.6	416.4	423.1	428.9	434.7
35°	370.3	372.2	375.1	380.8	386.6	393.3	400.1	406.8	414.5	420.3	426.0
37.5°	355.8	357.8	361.6	367.4	374.1	380.8	388.5	396.2	403.9	410.6	417.4
40°	342.4	343.3	348.1	354.9	361.6	369.3	377.0	385.6	393.3	401.0	408.7
42.5°	327.0	328.9	333.7	340.4	348.1	356.8	365.4	374.1	381.8	390.5	398.1
45°	311.6	313.5	319.3	327.0	334.7	343.3	352.0	362.6	371.2	379.9	387.6
47.5°	296.2	297.2	302.9	311.6	320.2	329.9	339.5	349.1	358.7	368.3	377.9
50°	277.9	281.8	287.5	295.2	304.9	315.4	326.0	336.6	347.2	356.8	367.4
52.5°	260.6	264.5	271.2	279.9	289.5	300.1	310.6	322.2	333.7	345.3	355.8
55°	243.3	246.2	252.9	262.5	273.1	284.7	297.2	308.7	321.2	332.7	345.3
57.5°	223.1	227.9	235.6	245.2	256.8	269.3	281.8	294.3	307.7	320.2	332.7
60°	204.8	207.7	216.4	227.0	238.5	252.0	265.4	279.9	294.3	307.7	320.2
62.5°	185.6	189.5	198.1	208.7	221.2	235.6	251.0	265.4	279.9	294.3	306.8
65°	165.4	169.3	178.9	190.4	203.9	219.3	234.7	251.0	266.4	279.9	292.4
67.5°	144.3	149.1	159.6	172.1	186.6	202.9	219.3	235.6	251.0	265.4	278.9
70°	125.0	128.9	140.4	152.9	169.3	186.6	202.9	220.2	235.6	251.0	264.5
72.5°	104.8	109.6	120.2	134.6	151.9	170.2	187.5	203.9	220.2	234.7	249.1
75°	83.7	89.4	101.0	117.3	135.6	153.9	171.2	188.5	204.8	220.2	233.7
77.5°	64.4	71.2	83.7	100.0	118.3	137.5	155.8	173.1	189.5	204.8	219.3
80°	46.2	52.9	66.4	83.7	102.9	121.2	139.4	157.7	174.1	189.5	203.9
82.5°	29.8	36.5	51.0	69.2	87.5	106.7	125.0	142.3	159.6	176.0	190.4
85°	15.4	23.1	37.5	54.8	74.1	93.3	111.6	129.8	146.2	162.5	177.0
87.5°	6.7	12.5	27.9	45.2	63.5	82.7	101.0	119.3	135.6	151.9	166.4
90°	1.0	7.7	21.2	38.5	56.7	76.0	94.2	111.6	127.9	144.3	158.7
92.5°	1.0	5.8	18.3	34.6	52.9	71.2	89.4	106.7	123.1	139.4	153.9
95°	1.0	4.8	16.3	31.7	49.0	67.3	85.6	102.9	119.3	134.6	149.1
97.5°	1.0	4.8	15.4	29.8	46.2	63.5	81.7	99.1	115.4	130.8	144.3
100°	1.0	4.8	14.4	26.9	43.3	60.6	77.9	94.2	110.6	126.0	139.4
102.5°	0.0	3.8	13.5	26.0	40.4	56.7	73.1	89.4	105.8	120.2	133.7
105°	0.0	3.8	12.5	24.0	38.5	53.9	69.2	85.6	101.0	115.4	128.9
107.5°	0.0	3.8	12.5	23.1	36.5	51.0	65.4	80.8	96.2	109.6	123.1
110°	0.0	3.8	11.5	22.1	34.6	48.1	62.5	76.9	91.4	104.8	117.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	2.9	11.5	21.2	32.7	45.2	58.7	73.1	85.6	99.1	111.6
115°	0.0	2.9	10.6	21.2	31.7	43.3	55.8	68.3	81.7	94.2	105.8
117.5°	0.0	2.9	9.6	19.2	30.8	41.4	52.9	65.4	76.9	88.5	100.0
120°	0.0	1.9	9.6	18.3	28.9	40.4	51.0	61.5	73.1	83.7	94.2
122.5°	0.0	1.9	8.7	18.3	27.9	38.5	48.1	58.7	69.2	78.9	89.4
125°	0.0	1.9	8.7	16.3	26.0	36.5	46.2	55.8	65.4	75.0	83.7
127.5°	0.0	1.9	7.7	15.4	25.0	33.7	43.3	52.9	61.5	70.2	78.9
130°	0.0	1.0	6.7	14.4	23.1	31.7	41.4	50.0	58.7	66.4	74.1
132.5°	0.0	1.0	5.8	13.5	21.2	29.8	38.5	47.1	54.8	62.5	70.2
135°	0.0	1.0	4.8	12.5	19.2	27.9	35.6	44.2	51.9	58.7	65.4
137.5°	0.0	1.0	3.8	10.6	18.3	26.0	33.7	41.4	48.1	54.8	61.5
140°	0.0	1.0	3.8	8.7	15.4	23.1	29.8	37.5	44.2	51.0	56.7
142.5°	0.0	1.0	2.9	7.7	13.5	20.2	26.9	33.7	40.4	47.1	52.9
145°	0.0	1.0	2.9	6.7	11.5	17.3	24.0	29.8	35.6	42.3	48.1
147.5°	0.0	0.0	1.9	4.8	9.6	15.4	20.2	26.0	31.7	37.5	42.3
150°	0.0	0.0	1.0	3.8	7.7	12.5	17.3	22.1	26.9	31.7	37.5
152.5°	0.0	0.0	1.0	2.9	6.7	10.6	14.4	18.3	23.1	26.9	31.7
155°	0.0	0.0	1.0	1.9	4.8	7.7	11.5	15.4	19.2	22.1	26.0
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°	470.3	470.3	470.3	470.3	470.3	470.3	470.3	470.3
2.5°	470.3	470.3	471.2	471.2	471.2	470.3	470.3	470.3
5°	471.2	471.2	472.2	472.2	472.2	472.2	471.2	472.2
7.5°	471.2	472.2	473.2	473.2	473.2	473.2	473.2	473.2
10°	471.2	472.2	473.2	474.1	474.1	474.1	474.1	474.1
12.5°	470.3	471.2	473.2	474.1	474.1	475.1	475.1	475.1
15°	469.3	471.2	473.2	474.1	474.1	475.1	475.1	475.1
17.5°	467.4	469.3	471.2	473.2	474.1	474.1	474.1	475.1
20°	464.5	467.4	469.3	471.2	472.2	473.2	473.2	473.2
22.5°	460.7	463.5	466.4	468.3	470.3	470.3	471.2	471.2
25°	456.8	459.7	462.6	465.5	466.4	467.4	468.3	468.3
27.5°	452.0	454.9	458.7	460.7	462.6	463.5	464.5	464.5
30°	445.3	449.1	453.0	455.8	457.8	458.7	459.7	459.7
32.5°	438.5	443.3	447.2	450.1	452.0	453.9	454.9	454.9
35°	431.8	436.6	440.5	444.3	446.2	448.2	449.1	450.1
37.5°	423.1	428.0	432.8	436.6	439.5	441.4	443.3	443.3
40°	414.5	420.3	426.0	429.9	432.8	435.7	436.6	437.6
42.5°	404.9	411.6	417.4	421.2	425.1	428.0	429.9	429.9
45°	395.3	403.0	408.7	414.5	418.3	421.2	423.1	423.1
47.5°	385.6	394.3	401.0	406.8	410.6	414.5	415.5	416.4
50°	376.0	384.7	391.4	398.1	403.0	405.8	407.8	408.7
52.5°	365.4	374.1	382.8	388.5	393.3	397.2	399.1	400.1
55°	354.9	364.5	372.2	378.9	383.7	387.6	389.5	390.5
57.5°	343.3	353.9	361.6	368.3	373.1	377.9	379.9	380.8
60°	331.8	341.4	350.1	357.8	362.6	366.4	369.3	370.3
62.5°	318.3	328.9	337.6	345.3	351.0	354.9	357.8	357.8
65°	304.9	315.4	325.1	332.7	338.5	342.4	345.3	346.2
67.5°	291.4	301.0	311.6	319.3	325.1	329.9	332.7	332.7
70°	277.0	287.5	297.2	305.8	311.6	315.4	319.3	319.3
72.5°	261.6	273.1	283.7	290.4	297.2	302.0	304.9	304.9
75°	247.2	258.7	268.3	277.0	283.7	287.5	290.4	292.4
77.5°	231.8	244.3	253.9	262.5	269.3	273.1	277.0	277.9
80°	217.3	228.9	239.5	248.1	254.9	258.7	261.6	262.5
82.5°	202.9	215.4	225.0	233.7	240.4	245.2	248.1	249.1
85°	190.4	202.0	212.5	221.2	227.0	231.8	235.6	235.6
87.5°	179.8	191.4	202.0	210.6	216.4	221.2	224.1	225.0
90°	172.1	183.7	193.3	202.0	208.7	213.5	215.4	217.3
92.5°	166.4	178.9	188.5	197.1	202.9	207.7	210.6	212.5
95°	162.5	174.1	183.7	192.3	199.1	202.9	205.8	206.8
97.5°	157.7	169.3	178.9	187.5	193.3	198.1	201.0	202.0
100°	151.9	163.5	173.1	181.8	187.5	192.3	195.2	196.2
102.5°	147.1	157.7	167.3	175.0	181.8	186.6	189.5	190.4
105°	141.4	151.9	161.6	169.3	176.0	179.8	182.7	183.7
107.5°	135.6	146.2	154.8	162.5	169.3	173.1	176.0	177.0
110°	128.9	139.4	149.1	156.8	161.6	166.4	169.3	169.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	123.1	132.7	142.3	149.1	154.8	158.7	161.6	162.5
115°	116.4	126.0	134.6	142.3	147.1	151.0	153.9	154.8
117.5°	110.6	119.3	127.9	134.6	140.4	144.3	146.2	147.1
120°	103.9	112.5	121.2	126.9	132.7	135.6	138.5	138.5
122.5°	98.1	106.7	113.5	120.2	125.0	127.9	130.8	130.8
125°	92.3	100.0	106.7	112.5	117.3	121.2	122.1	123.1
127.5°	86.6	93.3	100.0	105.8	109.6	112.5	114.4	115.4
130°	80.8	87.5	94.2	99.1	102.9	105.8	107.7	107.7
132.5°	76.9	82.7	87.5	92.3	96.2	98.1	100.0	101.0
135°	72.1	76.9	81.7	86.6	89.4	91.4	93.3	93.3
137.5°	67.3	72.1	76.9	79.8	83.7	85.6	86.6	87.5
140°	62.5	67.3	71.2	75.0	76.9	78.9	80.8	80.8
142.5°	57.7	61.5	65.4	69.2	71.2	73.1	74.1	75.0
145°	52.9	56.7	60.6	63.5	65.4	67.3	68.3	68.3
147.5°	48.1	51.9	54.8	57.7	59.6	61.5	62.5	62.5
150°	42.3	46.2	49.0	51.9	53.9	54.8	55.8	55.8
152.5°	35.6	40.4	43.3	46.2	47.1	49.0	49.0	50.0
155°	29.8	33.7	37.5	39.4	41.4	42.3	43.3	43.3
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)