

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: FAIL-SAFE

Report Number: P837933

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2STD-20-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P837933
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2R-LD4-2STD-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

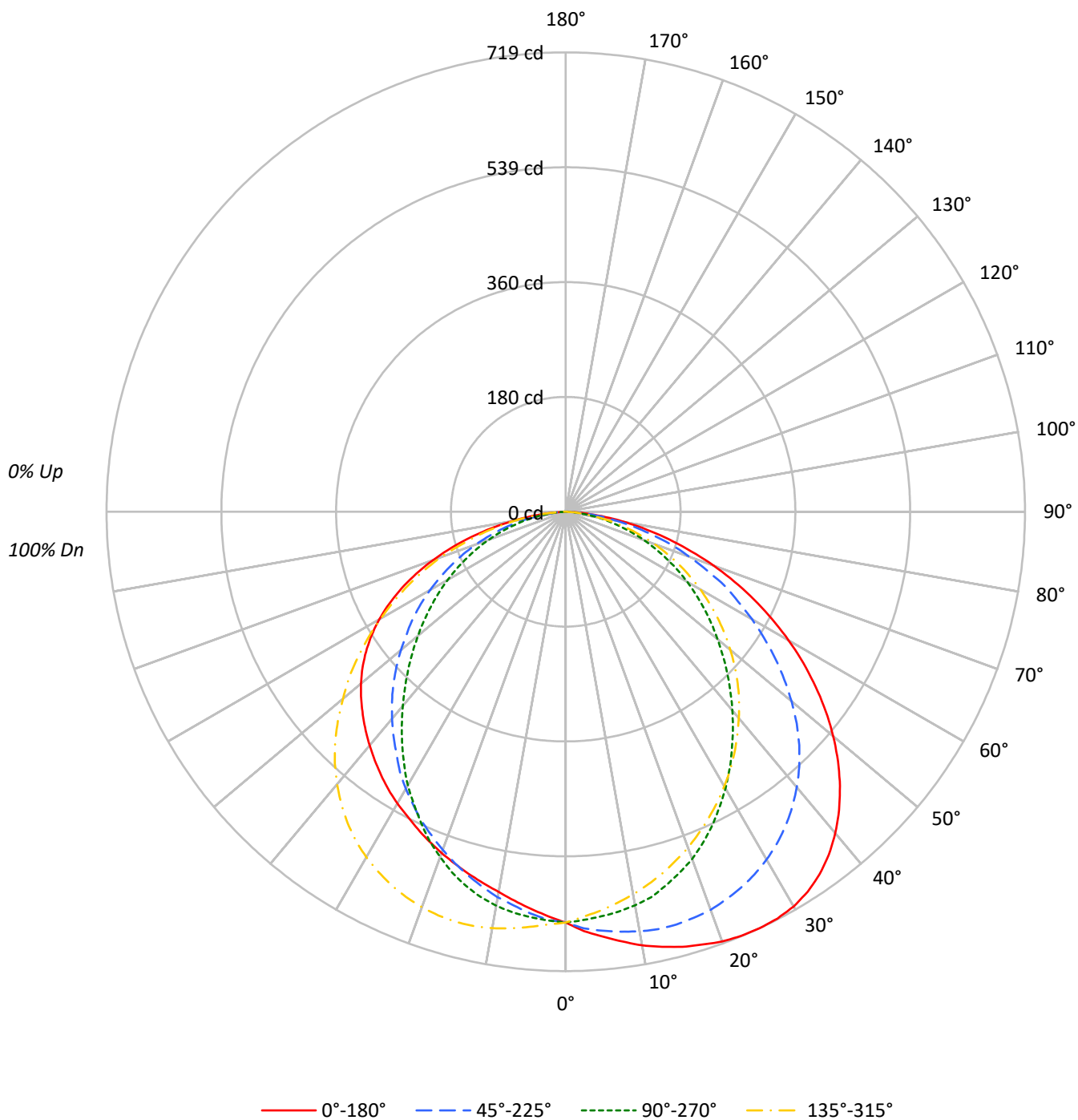
Lumens per Lamp: N/A
Luminaire Lumens: 1886.1 lumens
Efficiency: N/A
Efficacy: 56.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): 120
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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	1730	1730	1730	1730
5°	1803	1717	1685	1720
10°	1883	1709	1651	1711
15°	1964	1687	1635	1687
20°	2050	1656	1628	1647
25°	2135	1610	1627	1594
30°	2217	1554	1638	1537
35°	2276	1490	1655	1466
40°	2306	1426	1678	1394
45°	2311	1361	1710	1327
50°	2289	1299	1752	1264
55°	2242	1241	1791	1207
60°	2171	1181	1815	1150
65°	2074	1112	1806	1086
70°	1937	1030	1741	1011
75°	1744	918	1598	914
80°	1478	769	1344	781
85°	1028	509	852	522

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.0	3.2
10°-20°	176.8	9.4
20°-30°	270.9	14.4
30°-40°	329.4	17.5
40°-50°	342.4	18.2
50°-60°	309.3	16.4
60°-70°	235.1	12.5
70°-80°	131.1	7.0
80°-90°	30.2	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	508.7	27.0
0°-40°	838.0	44.4
0°-60°	1489.7	79.0
0°-90°	1886.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1886.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	643	643	643	643	643	
5°	668	636	624	637	668	64
15°	705	606	587	606	705	200
25°	719	542	548	537	719	332
35°	693	454	504	446	693	433
45°	607	358	449	349	607	467
55°	478	264	382	257	478	427
65°	326	175	284	170	326	322
75°	168	88	154	88	168	178
85°	33	16	28	17	33	42
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9
2.5°	657.1	647.5	647.7	656.1	649.6	652.8	643.8	647.2	646.2	646.9	639.6
5°	667.5	657.1	657.0	664.2	657.0	658.3	646.9	649.2	645.9	643.8	635.8
7.5°	678.4	668.1	667.0	673.3	663.9	662.8	650.2	650.2	644.2	639.0	631.5
10°	689.2	678.6	677.2	682.0	670.3	666.9	651.6	649.2	641.2	633.4	625.3
12.5°	697.3	686.5	685.5	688.5	675.3	669.0	651.6	646.9	635.2	624.3	618.0
15°	705.0	693.9	691.0	692.5	677.4	669.0	649.5	642.3	627.3	612.9	605.5
17.5°	710.4	699.7	696.9	696.7	678.4	666.4	645.0	635.1	617.1	599.7	592.4
20°	715.8	705.1	701.5	698.8	678.1	663.0	638.4	625.0	604.1	584.6	578.4
22.5°	718.5	707.5	703.6	699.6	676.2	656.7	630.3	613.3	589.4	566.1	561.0
25°	718.9	707.7	703.5	697.6	672.3	649.2	619.8	599.3	572.4	546.6	542.3
27.5°	717.7	705.4	701.2	694.2	666.4	640.0	607.3	583.2	554.4	525.9	521.3
30°	713.5	701.1	697.0	687.9	658.2	628.8	593.7	565.4	534.5	504.2	500.1
32.5°	705.1	693.0	689.7	680.5	649.2	615.7	577.8	546.2	512.4	483.5	477.5
35°	692.8	680.7	678.6	669.0	636.6	600.2	560.4	525.2	489.0	459.5	453.6
37.5°	676.8	666.6	663.4	654.0	621.7	582.5	540.5	502.4	465.2	433.4	429.8
40°	656.5	646.9	644.5	636.1	604.5	562.8	518.9	478.8	440.6	411.0	405.9
42.5°	633.4	624.4	623.1	614.4	583.2	541.1	495.5	454.4	414.9	386.5	381.4
45°	607.2	598.5	598.2	590.0	560.0	516.9	470.9	429.6	389.9	360.4	357.7
47.5°	578.3	570.5	570.5	562.8	534.0	490.4	445.5	403.8	364.7	338.6	333.8
50°	546.8	539.4	537.2	533.4	505.4	461.4	418.8	378.7	339.8	314.9	310.3
52.5°	513.2	506.9	508.4	501.5	474.3	431.3	391.9	350.3	314.8	292.1	287.5
55°	477.8	468.8	470.1	467.6	441.9	400.3	361.6	326.9	290.2	268.9	264.5
57.5°	441.0	429.3	434.1	432.6	407.4	368.5	333.8	300.4	265.7	246.1	241.9
60°	403.4	392.2	397.1	395.8	372.1	336.7	305.2	274.1	241.4	223.6	219.4
62.5°	364.7	354.4	358.9	357.8	336.1	304.1	276.7	248.2	217.0	201.0	197.1
65°	325.7	315.8	319.9	319.1	299.0	274.7	247.4	221.3	192.4	178.5	174.6
67.5°	285.8	276.7	280.4	280.4	262.0	238.7	218.0	194.2	168.3	156.3	152.7
70°	246.2	237.7	241.0	240.7	225.1	206.2	188.4	167.1	143.8	133.9	130.9
72.5°	206.3	198.9	201.8	201.6	188.5	176.4	158.7	140.2	120.0	112.0	109.3
75°	167.7	160.6	163.5	163.2	152.5	141.1	129.3	114.0	96.6	91.0	88.3
77.5°	130.8	123.6	126.0	126.0	118.2	109.9	100.5	88.6	76.3	70.3	68.4
80°	95.4	91.9	90.7	90.9	85.6	80.2	75.4	64.0	55.0	51.0	49.6
82.5°	62.7	59.8	58.6	58.9	55.9	52.6	49.6	41.7	35.7	33.3	32.5
85°	33.3	31.2	30.1	30.9	30.3	28.5	27.0	21.6	17.8	16.9	16.5
87.5°	10.5	9.1	8.4	11.1	9.4	8.4	8.1	6.4	4.9	4.9	4.8
90°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9
2.5°	642.0	642.0	636.1	634.8	634.2	634.9	629.1	628.0	636.4	633.6	627.1
5°	636.9	636.6	628.3	626.8	626.8	625.9	619.3	617.8	626.2	623.8	616.8
7.5°	630.6	629.7	619.9	618.9	617.4	616.8	609.4	608.4	615.6	614.1	607.5
10°	622.9	622.0	610.5	609.7	608.1	606.9	600.0	599.3	606.6	604.2	599.0
12.5°	612.9	611.2	599.4	598.7	597.3	596.9	590.1	589.8	597.9	595.5	590.0
15°	599.7	598.4	585.2	585.5	585.6	585.6	580.2	579.9	587.9	586.8	580.8
17.5°	585.2	583.4	570.8	571.7	572.7	573.9	569.7	570.5	578.9	577.5	572.1
20°	568.7	566.9	554.6	557.1	559.4	561.8	559.1	561.2	569.0	568.4	564.3
22.5°	550.2	548.4	537.0	540.9	544.7	549.2	548.0	550.4	558.6	558.5	554.9
25°	527.7	528.2	518.1	522.9	529.2	535.5	536.0	539.9	549.0	548.1	544.8
27.5°	506.7	507.3	496.7	504.8	513.2	521.3	523.2	528.6	537.9	537.2	534.3
30°	484.7	485.4	475.1	486.2	496.4	506.3	510.5	517.8	527.3	527.3	524.3
32.5°	461.7	463.1	452.3	467.1	479.0	490.5	497.9	505.5	516.3	516.0	513.5
35°	438.2	439.7	429.8	448.7	460.5	474.6	483.8	494.0	503.6	503.7	501.8
37.5°	414.2	416.0	407.0	427.7	441.2	457.8	469.5	479.7	490.4	491.0	489.2
40°	390.4	392.3	384.5	404.4	421.5	440.1	453.6	465.6	477.3	477.6	476.4
42.5°	366.5	368.6	362.8	382.3	401.6	421.5	437.4	451.1	463.1	463.8	462.5
45°	343.3	345.1	340.9	362.2	380.8	402.5	420.8	436.2	448.4	449.4	449.0
47.5°	320.2	321.8	318.1	337.6	359.0	382.1	403.3	420.3	433.2	434.4	434.1
50°	297.5	298.9	294.8	315.2	336.5	361.1	383.2	403.0	417.3	418.5	418.4
52.5°	275.0	276.4	272.9	294.4	313.7	339.7	363.7	385.1	399.4	401.2	401.5
55°	253.3	253.9	251.2	271.7	290.5	317.6	345.2	366.1	380.3	381.8	382.7
57.5°	231.5	231.7	229.4	249.1	267.1	294.8	323.8	345.7	359.2	360.7	362.0
60°	209.9	209.8	207.2	226.3	243.5	271.0	301.1	322.9	335.9	337.3	339.1
62.5°	188.5	188.1	185.8	203.3	219.5	246.7	277.0	298.0	310.4	311.3	313.7
65°	167.2	166.8	164.7	180.9	195.6	221.5	251.2	271.1	282.4	283.6	283.1
67.5°	146.2	145.3	143.7	158.2	171.6	195.6	224.0	243.1	252.4	253.4	256.3
70°	125.2	124.2	120.4	135.9	147.6	169.0	195.6	212.5	220.3	221.3	220.9
72.5°	104.5	103.5	99.4	113.7	123.6	142.3	166.0	180.1	186.9	187.8	187.8
75°	84.4	83.8	81.3	92.1	100.3	115.6	135.7	147.4	152.7	153.7	153.4
77.5°	65.1	64.6	62.1	71.4	77.8	89.2	105.4	114.6	118.5	119.7	122.2
80°	46.6	46.5	42.4	51.6	54.4	64.0	75.9	82.9	85.0	86.7	88.5
82.5°	29.8	30.0	25.9	33.7	34.9	41.1	48.4	52.8	54.3	55.6	57.0
85°	14.5	15.1	12.9	17.8	18.0	21.1	24.3	25.9	26.5	27.6	28.8
87.5°	3.7	4.3	2.4	5.1	4.5	5.8	6.7	7.2	7.0	7.8	8.2
90°	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9
2.5°	629.2	634.0	631.6	639.4	642.4	637.6	646.0	646.2	640.2	647.2	651.1
5°	619.5	624.4	622.9	631.0	634.8	630.6	640.8	642.7	636.9	644.8	651.1
7.5°	609.6	615.4	613.5	621.7	626.2	622.9	633.9	637.0	632.5	641.2	649.6
10°	601.1	606.0	603.9	612.6	616.5	613.8	624.6	630.4	626.2	636.9	646.9
12.5°	592.7	596.7	594.3	601.5	605.3	601.8	615.0	620.4	617.4	628.5	641.4
15°	581.9	586.4	583.1	589.5	592.4	589.4	600.2	609.4	605.7	617.8	632.1
17.5°	573.6	576.2	571.7	576.8	578.4	574.4	585.3	594.5	591.8	605.0	621.4
20°	564.5	566.6	560.3	563.1	563.0	557.9	567.9	576.9	575.1	589.7	608.4
22.5°	554.3	555.3	548.0	548.6	548.3	539.9	548.9	558.0	557.3	572.0	593.0
25°	543.5	543.6	534.2	533.9	530.6	520.7	528.6	539.0	536.7	552.6	574.7
27.5°	532.8	531.3	519.9	517.2	512.0	500.1	507.2	516.5	515.1	530.7	555.2
30°	521.4	519.5	505.5	500.6	492.9	479.3	485.1	493.8	494.6	508.2	533.9
32.5°	510.6	505.7	490.2	483.0	473.4	457.5	460.7	469.5	470.7	484.5	510.9
35°	496.7	493.4	474.3	462.0	452.6	435.2	438.5	444.6	446.4	459.9	486.8
37.5°	483.5	478.2	458.0	443.0	430.8	412.5	413.4	419.7	421.5	435.2	461.7
40°	469.8	462.3	440.6	423.0	409.1	389.9	388.9	395.5	396.8	410.1	434.1
42.5°	455.3	446.3	421.8	402.7	386.6	367.1	365.0	370.7	372.2	385.3	408.8
45°	440.6	429.8	402.7	381.7	364.1	344.2	342.1	346.4	348.7	361.0	383.6
47.5°	425.0	412.4	382.9	359.5	341.3	321.4	318.8	323.2	325.0	337.1	358.6
50°	408.6	393.4	362.5	336.7	318.7	299.0	295.3	300.4	302.0	313.4	334.4
52.5°	390.7	373.7	340.7	313.7	295.7	277.0	272.5	277.4	279.4	290.5	309.8
55°	371.6	353.3	318.8	292.6	273.1	254.8	251.0	253.0	257.2	267.7	285.7
57.5°	350.2	332.0	295.7	269.0	250.3	232.7	229.6	231.4	235.3	245.5	261.7
60°	327.4	308.2	272.2	245.5	227.3	210.7	207.8	209.5	213.7	223.0	238.0
62.5°	304.9	283.3	247.9	221.3	204.8	189.4	188.7	188.1	192.0	201.0	214.1
65°	277.6	256.9	222.5	197.4	182.4	168.4	165.4	166.8	170.5	178.8	192.6
67.5°	248.3	229.6	196.6	173.4	160.0	147.6	145.0	145.6	149.5	156.7	168.7
70°	217.3	200.8	170.1	149.2	138.0	126.3	124.6	124.8	128.5	134.8	145.3
72.5°	184.8	169.9	143.2	125.4	116.1	107.7	106.2	104.4	107.8	113.2	122.2
75°	151.6	138.6	116.5	102.0	94.6	87.6	86.2	84.4	87.9	92.5	99.6
77.5°	118.2	107.7	90.6	79.3	73.6	68.4	67.2	65.2	68.7	72.1	77.7
80°	85.5	77.8	67.6	55.8	53.8	50.4	49.2	47.1	50.4	52.6	56.8
82.5°	55.2	50.1	44.2	36.0	35.7	33.1	32.5	30.1	33.1	34.5	37.6
85°	27.9	25.5	24.0	18.3	18.9	17.2	17.1	14.5	16.9	17.5	19.3
87.5°	7.9	8.4	7.5	4.5	5.7	5.4	5.4	3.9	5.4	5.4	6.1
90°	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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	642.9	642.9	642.9	642.9	642.9	642.9	642.9	642.9
2.5°	643.5	646.0	646.6	646.5	648.1	657.1	654.1	657.1
5°	645.0	650.7	652.2	654.3	657.0	667.2	663.9	667.5
7.5°	645.9	654.4	657.7	661.8	666.1	677.5	674.8	678.4
10°	645.9	657.0	661.8	668.5	674.4	687.6	685.0	689.2
12.5°	643.2	657.4	664.2	673.6	681.1	695.4	694.3	697.3
15°	637.6	655.2	664.5	676.6	685.9	701.8	701.4	705.0
17.5°	630.1	651.3	662.5	677.8	689.5	707.4	708.4	710.4
20°	620.7	643.9	658.6	677.4	692.1	711.7	713.1	715.8
22.5°	608.2	635.1	652.8	675.4	692.4	713.5	715.9	718.5
25°	593.6	624.4	645.1	671.7	690.9	713.4	716.7	718.9
27.5°	576.8	610.6	635.4	665.7	686.7	711.0	715.0	717.7
30°	557.3	596.0	624.3	657.9	681.0	706.5	710.8	713.5
32.5°	537.2	579.8	611.1	647.8	672.7	699.3	703.0	705.1
35°	515.3	560.1	595.2	634.9	662.1	687.7	690.6	692.8
37.5°	491.4	538.8	577.1	620.4	647.1	671.7	674.2	676.8
40°	466.8	516.5	556.7	602.6	629.2	652.0	654.7	656.5
42.5°	442.1	491.7	534.9	581.6	608.1	630.0	631.6	633.4
45°	417.0	466.1	510.5	558.3	584.6	605.1	605.7	607.2
47.5°	391.6	439.5	483.6	531.8	557.7	576.5	577.1	578.3
50°	365.9	413.0	455.0	503.1	528.5	548.3	545.6	546.8
52.5°	340.7	385.1	428.0	472.2	497.3	514.8	515.6	513.2
55°	316.0	357.8	397.3	439.8	463.7	477.3	476.9	477.8
57.5°	290.9	330.2	366.4	405.3	428.6	441.5	444.2	441.0
60°	265.4	302.3	334.7	370.0	392.5	403.3	406.4	403.4
62.5°	240.1	274.0	303.4	334.1	355.0	368.3	368.0	364.7
65°	214.7	245.5	271.7	297.8	316.0	329.3	328.7	325.7
67.5°	191.4	216.7	240.2	261.4	277.1	286.3	289.4	285.8
70°	165.6	187.5	208.1	225.1	238.1	246.4	249.4	246.2
72.5°	139.8	158.4	172.9	189.3	199.3	206.2	209.3	206.3
75°	114.3	129.6	141.4	154.2	161.2	167.1	170.7	167.7
77.5°	89.5	101.4	110.8	120.1	128.2	129.6	132.7	130.8
80°	66.0	74.5	81.4	87.6	93.4	94.0	96.6	95.4
82.5°	43.9	49.6	51.4	57.9	61.6	61.0	63.6	62.7
85°	23.2	26.7	29.8	31.8	33.9	31.9	34.2	33.3
87.5°	7.8	8.2	7.2	10.2	11.2	9.6	10.9	10.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)