

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: P837768

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1STD-20-120-EDD-90**

Issue Date: 5/21/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P837768
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-1STD-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

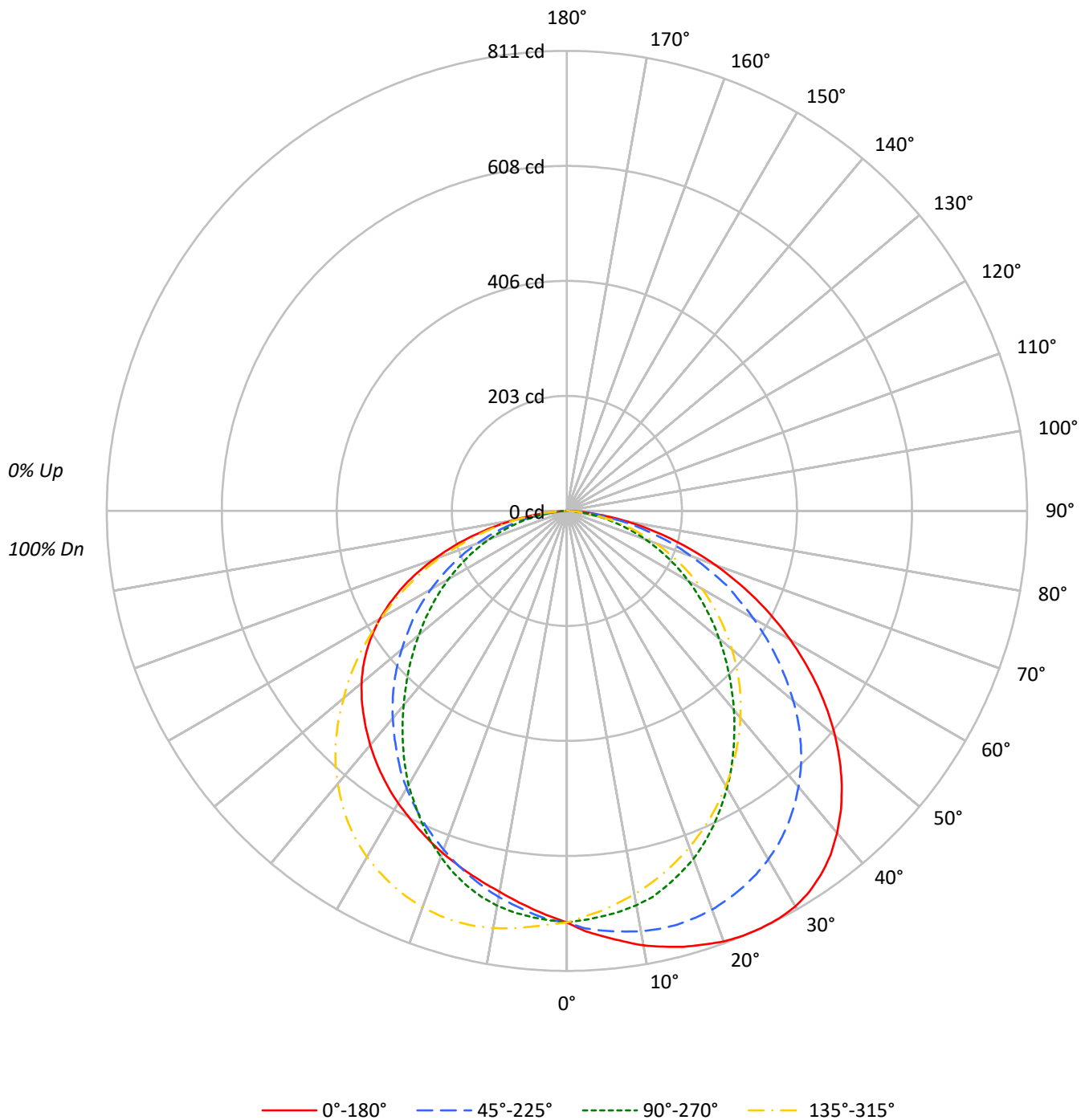
Lumens per Lamp: N/A
Luminaire Lumens: 2128.5 lumens
Efficiency: N/A
Efficacy: 63.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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



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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°	1952	1952	1952	1952
5°	2035	1938	1902	1941
10°	2125	1928	1863	1931
15°	2216	1904	1845	1904
20°	2313	1869	1837	1859
25°	2409	1817	1836	1798
30°	2502	1754	1849	1734
35°	2568	1682	1867	1655
40°	2603	1609	1893	1573
45°	2608	1536	1930	1498
50°	2583	1466	1977	1427
55°	2530	1400	2022	1361
60°	2450	1333	2048	1298
65°	2341	1254	2038	1225
70°	2186	1162	1965	1141
75°	1967	1037	1804	1031
80°	1667	868	1516	882
85°	1161	574	960	590

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	3.2
10°-20°	199.5	9.4
20°-30°	305.7	14.4
30°-40°	371.7	17.5
40°-50°	386.4	18.2
50°-60°	349.0	16.4
60°-70°	265.4	12.5
70°-80°	147.9	7.0
80°-90°	34.1	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°	574.0	27.0
0°-40°	945.7	44.4
0°-60°	1681.1	79.0
0°-90°	2128.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2128.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	726	726	726	726	726	
5°	753	718	704	719	753	73
15°	796	683	662	684	796	226
25°	811	612	618	606	811	375
35°	782	512	568	504	782	488
45°	685	404	507	394	685	528
55°	539	298	431	290	539	481
65°	368	197	320	192	368	363
75°	189	100	174	99	189	201
85°	38	19	31	19	38	47
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°	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5
2.5°	741.6	730.7	730.9	740.4	733.1	736.7	726.5	730.4	729.2	730.1	721.8
5°	753.2	741.6	741.4	749.5	741.4	742.9	730.1	732.6	728.9	726.5	717.5
7.5°	765.6	753.9	752.7	759.8	749.2	748.0	733.8	733.8	727.0	721.1	712.6
10°	777.8	765.8	764.2	769.7	756.5	752.6	735.3	732.6	723.6	714.8	705.7
12.5°	786.9	774.7	773.5	776.9	762.0	754.9	735.3	730.1	716.9	704.5	697.4
15°	795.5	783.0	779.8	781.5	764.4	754.9	732.9	724.8	707.9	691.6	683.3
17.5°	801.6	789.6	786.4	786.2	765.6	752.1	727.9	716.7	696.4	676.7	668.5
20°	807.7	795.7	791.7	788.6	765.3	748.2	720.4	705.3	681.7	659.7	652.7
22.5°	810.8	798.4	794.0	789.5	763.1	741.1	711.3	692.1	665.1	638.8	633.1
25°	811.3	798.6	793.9	787.3	758.7	732.6	699.4	676.2	645.9	616.8	611.9
27.5°	809.9	796.1	791.3	783.4	752.1	722.3	685.4	658.1	625.6	593.5	588.2
30°	805.2	791.1	786.6	776.3	742.7	709.6	670.0	638.0	603.1	568.9	564.4
32.5°	795.7	782.0	778.3	768.0	732.6	694.9	652.0	616.3	578.3	545.6	538.8
35°	781.8	768.1	765.8	754.9	718.4	677.3	632.4	592.6	551.9	518.5	511.9
37.5°	763.7	752.2	748.7	738.0	701.6	657.3	609.9	566.9	524.9	489.1	485.0
40°	740.9	730.1	727.3	717.9	682.2	635.1	585.5	540.3	497.2	463.9	458.1
42.5°	714.8	704.7	703.1	693.3	658.1	610.6	559.1	512.8	468.3	436.1	430.3
45°	685.2	675.4	675.1	665.7	631.9	583.3	531.4	484.8	440.0	406.7	403.6
47.5°	652.5	643.7	643.7	635.1	602.6	553.4	502.8	455.7	411.6	382.1	376.7
50°	617.0	608.7	606.2	601.9	570.3	520.7	472.7	427.3	383.5	355.4	350.1
52.5°	579.1	572.0	573.7	565.9	535.3	486.7	442.2	395.3	355.2	329.7	324.4
55°	539.2	529.0	530.5	527.7	498.7	451.7	408.0	368.9	327.5	303.4	298.5
57.5°	497.7	484.5	489.9	488.2	459.8	415.8	376.7	339.0	299.9	277.7	273.0
60°	455.2	442.5	448.1	446.6	419.9	379.9	344.4	309.3	272.5	252.3	247.6
62.5°	411.6	399.9	405.0	403.8	379.2	343.2	312.2	280.1	244.9	226.8	222.4
65°	367.6	356.4	361.0	360.1	337.4	310.0	279.2	249.8	217.1	201.4	197.0
67.5°	322.5	312.2	316.5	316.5	295.6	269.4	246.1	219.2	189.9	176.3	172.3
70°	277.9	268.2	272.0	271.6	254.0	232.7	212.6	188.5	162.3	151.1	147.7
72.5°	232.9	224.4	227.8	227.4	212.7	199.0	179.0	158.2	135.4	126.4	123.4
75°	189.2	181.2	184.5	184.1	172.1	159.2	145.9	128.6	109.0	102.7	99.7
77.5°	147.6	139.4	142.2	142.2	133.4	124.0	113.4	100.0	86.1	79.4	77.2
80°	107.6	103.7	102.4	102.6	96.6	90.5	85.1	72.3	62.1	57.5	56.0
82.5°	70.7	67.5	66.2	66.5	63.1	59.4	56.0	47.0	40.3	37.6	36.7
85°	37.6	35.2	34.0	34.9	34.2	32.2	30.5	24.4	20.1	19.1	18.6
87.5°	11.8	10.3	9.5	12.5	10.7	9.5	9.1	7.3	5.6	5.6	5.4
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°	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5
2.5°	724.5	724.5	717.9	716.3	715.7	716.5	709.9	708.7	718.2	715.0	707.7
5°	718.7	718.4	709.1	707.4	707.4	706.4	698.9	697.2	706.7	704.0	696.0
7.5°	711.6	710.6	699.6	698.4	696.7	696.0	687.7	686.6	694.7	693.0	685.5
10°	703.0	702.0	688.9	688.1	686.2	684.9	677.1	676.2	684.5	681.8	675.9
12.5°	691.6	689.8	676.4	675.6	674.0	673.5	665.9	665.6	674.7	672.0	665.7
15°	676.7	675.2	660.3	660.7	660.8	660.8	654.7	654.4	663.4	662.2	655.4
17.5°	660.3	658.3	644.1	645.1	646.3	647.6	642.9	643.7	653.2	651.7	645.6
20°	641.7	639.7	625.8	628.7	631.2	633.9	630.9	633.3	642.1	641.4	636.8
22.5°	620.9	618.9	606.0	610.4	614.6	619.7	618.4	621.1	630.4	630.2	626.1
25°	595.5	596.0	584.7	590.1	597.2	604.3	604.8	609.2	619.5	618.5	614.8
27.5°	571.8	572.5	560.5	569.6	579.1	588.2	590.4	596.5	607.0	606.2	603.0
30°	546.9	547.8	536.1	548.6	560.1	571.3	576.1	584.3	595.0	595.0	591.6
32.5°	521.1	522.6	510.4	527.1	540.5	553.5	561.8	570.5	582.7	582.3	579.4
35°	494.5	496.2	485.0	506.3	519.7	535.6	545.9	557.4	568.3	568.4	566.2
37.5°	467.4	469.4	459.3	482.6	497.9	516.7	529.9	541.4	553.4	554.1	552.0
40°	440.5	442.7	433.9	456.4	475.7	496.7	511.9	525.5	538.7	539.0	537.6
42.5°	413.6	416.0	409.4	431.4	453.2	475.7	493.6	509.0	522.6	523.4	521.9
45°	387.4	389.4	384.7	408.7	429.7	454.2	474.9	492.3	506.0	507.2	506.7
47.5°	361.3	363.2	358.9	380.9	405.1	431.2	455.1	474.3	488.9	490.3	489.9
50°	335.7	337.3	332.7	355.7	379.7	407.5	432.4	454.7	471.0	472.3	472.1
52.5°	310.4	311.9	308.0	332.2	354.0	383.3	410.4	434.6	450.7	452.7	453.0
55°	285.8	286.5	283.5	306.6	327.8	358.4	389.6	413.1	429.2	430.9	431.9
57.5°	261.3	261.5	258.9	281.1	301.4	332.7	365.4	390.1	405.3	407.0	408.5
60°	236.9	236.8	233.9	255.4	274.8	305.8	339.8	364.3	379.1	380.6	382.6
62.5°	212.7	212.2	209.7	229.5	247.8	278.4	312.6	336.3	350.3	351.3	354.0
65°	188.7	188.2	185.8	204.1	220.7	250.0	283.5	306.0	318.7	320.0	319.5
67.5°	165.0	164.0	162.1	178.5	193.6	220.7	252.8	274.3	284.8	286.0	289.2
70°	141.3	140.1	135.9	153.3	166.5	190.7	220.7	239.8	248.6	249.8	249.3
72.5°	118.0	116.8	112.2	128.3	139.4	160.6	187.3	203.2	210.9	211.9	211.9
75°	95.3	94.6	91.7	103.9	113.2	130.5	153.2	166.4	172.3	173.5	173.1
77.5°	73.4	72.9	70.1	80.6	87.8	100.7	119.0	129.3	133.7	135.0	137.9
80°	52.6	52.5	47.9	58.2	61.4	72.3	85.6	93.6	96.0	97.8	99.8
82.5°	33.7	33.8	29.3	38.1	39.4	46.4	54.7	59.6	61.3	62.8	64.3
85°	16.4	17.1	14.6	20.1	20.3	23.9	27.4	29.3	30.0	31.1	32.5
87.5°	4.2	4.9	2.7	5.8	5.1	6.6	7.6	8.1	8.0	8.8	9.3
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°	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5
2.5°	710.1	715.5	712.8	721.6	725.0	719.6	729.0	729.2	722.4	730.4	734.8
5°	699.1	704.7	703.0	712.1	716.3	711.6	723.1	725.3	718.7	727.7	734.8
7.5°	687.9	694.5	692.3	701.6	706.7	703.0	715.3	718.9	713.8	723.6	733.1
10°	678.3	683.9	681.5	691.3	695.7	692.7	704.8	711.4	706.7	718.7	730.1
12.5°	668.8	673.4	670.7	678.8	683.0	679.1	694.0	700.1	696.7	709.2	723.8
15°	656.6	661.7	658.0	665.2	668.5	665.1	677.3	687.7	683.5	697.2	713.3
17.5°	647.3	650.2	645.1	650.9	652.7	648.1	660.5	670.8	667.8	682.7	701.3
20°	637.0	639.3	632.2	635.5	635.3	629.5	640.9	651.0	649.0	665.4	686.6
22.5°	625.5	626.7	618.4	619.0	618.7	609.2	619.4	629.7	628.9	645.4	669.1
25°	613.3	613.5	602.8	602.5	598.7	587.6	596.5	608.2	605.7	623.6	648.5
27.5°	601.3	599.6	586.7	583.7	577.7	564.4	572.3	582.8	581.3	598.9	626.5
30°	588.4	586.2	570.5	564.9	556.3	540.9	547.5	557.3	558.1	573.5	602.5
32.5°	576.2	570.6	553.2	545.1	534.3	516.3	519.9	529.9	531.2	546.8	576.6
35°	560.5	556.8	535.3	521.4	510.7	491.1	494.8	501.8	503.8	519.0	549.3
37.5°	545.6	539.7	516.8	499.9	486.2	465.5	466.6	473.7	475.7	491.1	521.1
40°	530.2	521.7	497.2	477.4	461.7	440.0	438.8	446.3	447.8	462.8	489.9
42.5°	513.8	503.6	476.0	454.4	436.3	414.3	411.9	418.3	420.0	434.7	461.3
45°	497.2	485.0	454.4	430.7	410.9	388.4	386.0	390.9	393.5	407.3	432.9
47.5°	479.6	465.4	432.0	405.6	385.2	362.7	359.8	364.7	366.7	380.4	404.6
50°	461.1	443.9	409.0	379.9	359.6	337.4	333.2	339.0	340.8	353.7	377.4
52.5°	440.8	421.7	384.5	354.0	333.7	312.6	307.5	313.1	315.3	327.8	349.6
55°	419.3	398.7	359.8	330.2	308.2	287.5	283.3	285.5	290.2	302.1	322.4
57.5°	395.1	374.7	333.7	303.6	282.4	262.6	259.1	261.1	265.5	277.0	295.3
60°	369.4	347.8	307.1	277.0	256.6	237.8	234.6	236.4	241.2	251.6	268.6
62.5°	344.0	319.7	279.7	249.8	231.2	213.7	212.9	212.2	216.6	226.8	241.7
65°	313.2	289.9	251.1	222.7	205.8	190.0	186.7	188.2	192.4	201.7	217.3
67.5°	280.2	259.1	221.9	195.6	180.6	166.5	163.6	164.3	168.7	176.8	190.4
70°	245.2	226.6	191.9	168.4	155.7	142.5	140.6	140.8	145.0	152.1	164.0
72.5°	208.5	191.7	161.6	141.5	131.0	121.5	119.8	117.8	121.7	127.8	137.9
75°	171.1	156.4	131.5	115.1	106.8	98.8	97.3	95.3	99.2	104.4	112.4
77.5°	133.4	121.5	102.2	89.5	83.1	77.2	75.8	73.6	77.5	81.4	87.7
80°	96.5	87.8	76.3	63.0	60.8	56.9	55.5	53.1	56.9	59.4	64.1
82.5°	62.3	56.5	49.9	40.6	40.3	37.4	36.7	34.0	37.4	38.9	42.5
85°	31.5	28.8	27.1	20.6	21.3	19.5	19.3	16.4	19.1	19.8	21.8
87.5°	9.0	9.5	8.5	5.1	6.4	6.1	6.1	4.4	6.1	6.1	6.9
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°	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5
2.5°	726.2	729.0	729.7	729.5	731.4	741.6	738.2	741.6
5°	727.9	734.3	736.0	738.3	741.4	752.9	749.2	753.2
7.5°	728.9	738.5	742.2	746.8	751.7	764.6	761.5	765.6
10°	728.9	741.4	746.8	754.4	761.0	775.9	773.0	777.8
12.5°	725.8	741.9	749.5	760.2	768.6	784.7	783.5	786.9
15°	719.6	739.4	749.9	763.6	774.1	792.0	791.5	795.5
17.5°	711.1	735.0	747.7	764.9	778.1	798.3	799.4	801.6
20°	700.4	726.7	743.3	764.4	781.0	803.2	804.7	807.7
22.5°	686.4	716.7	736.7	762.2	781.3	805.2	807.9	810.8
25°	669.8	704.7	728.0	758.0	779.6	805.0	808.7	811.3
27.5°	650.9	689.1	717.0	751.2	774.9	802.3	806.9	809.9
30°	628.9	672.5	704.5	742.4	768.5	797.2	802.1	805.2
32.5°	606.2	654.2	689.6	731.1	759.2	789.1	793.3	795.7
35°	581.5	632.1	671.7	716.5	747.1	776.1	779.3	781.8
37.5°	554.6	608.0	651.2	700.1	730.2	758.0	760.9	763.7
40°	526.8	582.8	628.2	680.0	710.1	735.8	738.9	740.9
42.5°	498.9	554.9	603.6	656.3	686.2	710.9	712.8	714.8
45°	470.6	526.0	576.1	630.0	659.7	682.8	683.5	685.2
47.5°	441.9	496.0	545.8	600.1	629.4	650.5	651.2	652.5
50°	412.9	466.1	513.4	567.8	596.4	618.7	615.7	617.0
52.5°	384.5	434.6	483.0	532.9	561.2	581.0	581.8	579.1
55°	356.6	403.8	448.3	496.3	523.3	538.7	538.1	539.2
57.5°	328.3	372.6	413.4	457.4	483.7	498.2	501.3	497.7
60°	299.5	341.2	377.7	417.5	442.9	455.1	458.6	455.2
62.5°	270.9	309.2	342.3	377.0	400.6	415.6	415.3	411.6
65°	242.3	277.0	306.6	336.1	356.6	371.6	370.9	367.6
67.5°	215.9	244.5	271.1	295.0	312.7	323.1	326.6	322.5
70°	186.8	211.5	234.9	254.0	268.7	278.0	281.4	277.9
72.5°	157.7	178.7	195.1	213.6	224.9	232.7	236.2	232.9
75°	129.0	146.2	159.6	174.0	181.9	188.5	192.6	189.2
77.5°	101.0	114.4	125.1	135.6	144.7	146.2	149.8	147.6
80°	74.5	84.1	91.9	98.8	105.4	106.1	109.0	107.6
82.5°	49.6	56.0	58.0	65.3	69.6	68.9	71.8	70.7
85°	26.2	30.1	33.7	35.9	38.2	36.0	38.6	37.6
87.5°	8.8	9.3	8.1	11.5	12.7	10.8	12.4	11.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)