

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: P838022

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2LO-50-120-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: P838022
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-LD4-2LO-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

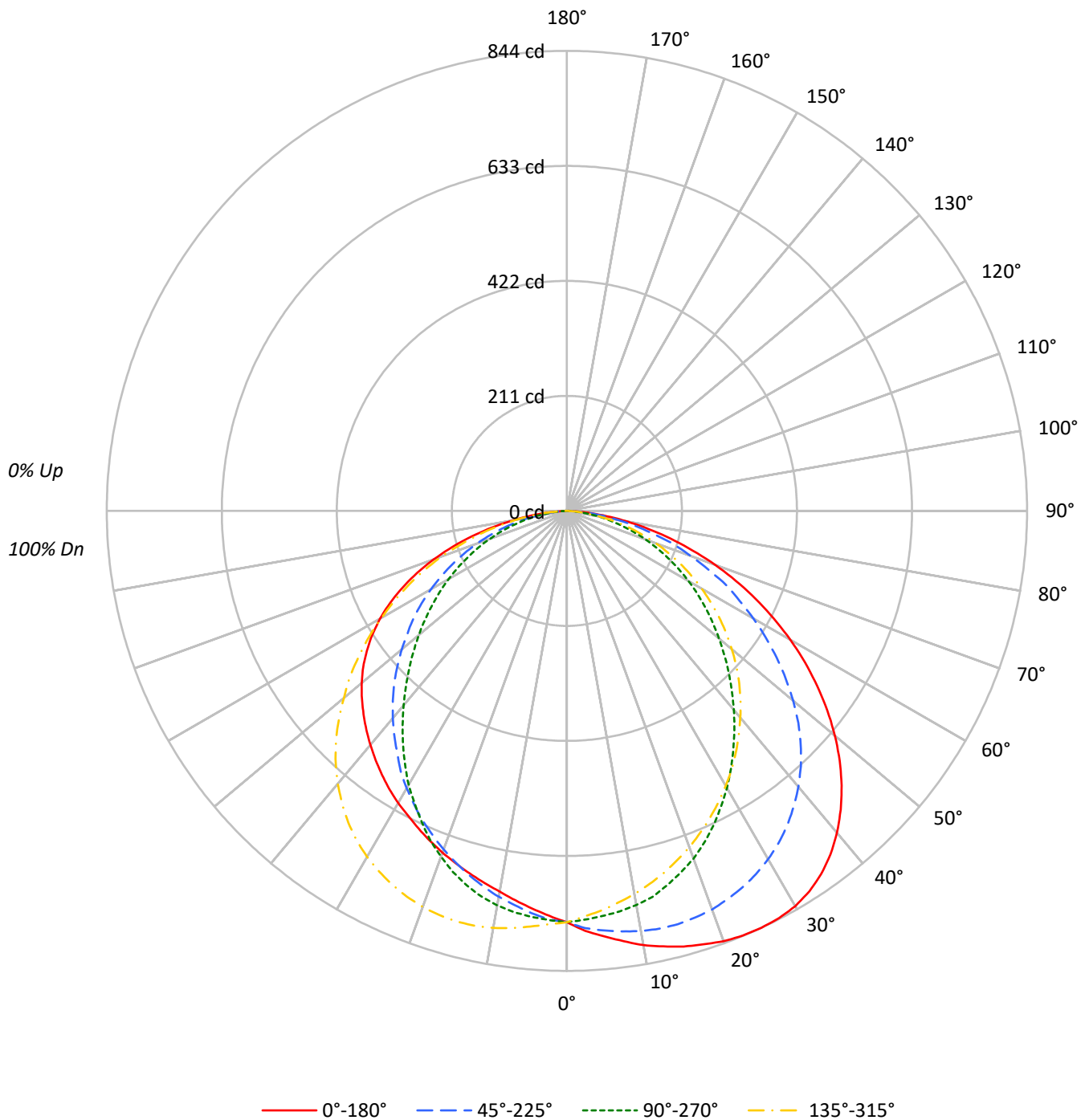
Lumens per Lamp: N/A
Luminaire Lumens: 2213.8 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2031	2031	2031	2031
5°	2116	2016	1978	2019
10°	2211	2006	1938	2008
15°	2305	1980	1919	1981
20°	2406	1944	1910	1933
25°	2505	1890	1910	1871
30°	2602	1824	1923	1804
35°	2671	1749	1942	1721
40°	2707	1674	1969	1636
45°	2712	1598	2007	1557
50°	2687	1525	2057	1484
55°	2631	1457	2102	1416
60°	2548	1386	2131	1350
65°	2434	1305	2119	1274
70°	2274	1209	2044	1186
75°	2046	1078	1876	1072
80°	1734	903	1576	916
85°	1207	599	1000	614

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°	71.6	3.2
10°-20°	207.5	9.4
20°-30°	317.9	14.4
30°-40°	386.6	17.5
40°-50°	401.9	18.2
50°-60°	363.0	16.4
60°-70°	276.0	12.5
70°-80°	153.9	7.0
80°-90°	35.4	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°	597.0	27.0
0°-40°	983.6	44.4
0°-60°	1748.5	79.0
0°-90°	2213.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2213.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	755	755	755	755	755	
5°	783	746	732	748	783	76
15°	827	711	689	711	827	235
25°	844	636	643	630	844	390
35°	813	532	591	524	813	508
45°	713	420	528	409	713	549
55°	561	310	448	302	561	501
65°	382	205	333	200	382	378
75°	197	104	180	103	197	209
85°	39	19	32	20	39	49
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°	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6
2.5°	771.3	760.0	760.2	770.1	762.5	766.2	755.6	759.7	758.5	759.3	750.7
5°	783.4	771.3	771.1	779.6	771.1	772.7	759.3	762.0	758.1	755.6	746.3
7.5°	796.3	784.1	782.9	790.3	779.2	778.0	763.2	763.2	756.2	750.0	741.2
10°	809.0	796.5	794.9	800.5	786.8	782.7	764.8	762.0	752.6	743.5	734.0
12.5°	818.5	805.8	804.6	808.1	792.6	785.2	764.8	759.3	745.6	732.8	725.4
15°	827.4	814.4	811.1	812.8	795.1	785.2	762.3	753.9	736.3	719.4	710.7
17.5°	833.8	821.3	817.9	817.8	796.3	782.2	757.0	745.4	724.3	703.9	695.3
20°	840.1	827.6	823.4	820.2	795.9	778.2	749.3	733.6	709.0	686.1	678.9
22.5°	843.3	830.4	825.9	821.1	793.7	770.8	739.8	719.9	691.7	664.5	658.5
25°	843.8	830.6	825.7	818.8	789.1	762.0	727.5	703.4	671.9	641.6	636.5
27.5°	842.4	828.0	823.0	814.8	782.2	751.2	712.9	684.5	650.7	617.3	611.8
30°	837.5	822.9	818.1	807.4	772.5	738.0	696.8	663.6	627.3	591.8	587.0
32.5°	827.6	813.4	809.5	798.8	762.0	722.7	678.2	641.0	601.4	567.5	560.4
35°	813.2	798.9	796.5	785.2	747.2	704.4	657.8	616.4	574.0	539.3	532.4
37.5°	794.4	782.4	778.7	767.6	729.8	683.6	634.4	589.7	546.0	508.7	504.5
40°	770.6	759.3	756.5	746.7	709.5	660.6	609.0	562.0	517.1	482.5	476.5
42.5°	743.5	732.9	731.3	721.1	684.5	635.1	581.6	533.3	487.0	453.6	447.6
45°	712.7	702.5	702.1	692.4	657.2	606.7	552.7	504.3	457.6	423.0	419.8
47.5°	678.7	669.6	669.6	660.6	626.8	575.6	522.9	474.0	428.1	397.4	391.8
50°	641.8	633.1	630.5	626.1	593.2	541.6	491.6	444.4	398.9	369.6	364.2
52.5°	602.3	594.9	596.7	588.6	556.7	506.2	459.9	411.2	369.5	342.9	337.4
55°	560.8	550.2	551.8	548.8	518.7	469.8	424.4	383.7	340.6	315.6	310.5
57.5°	517.7	503.9	509.6	507.8	478.2	432.5	391.8	352.6	311.9	288.8	283.9
60°	473.5	460.3	466.1	464.5	436.7	395.2	358.2	321.8	283.4	262.4	257.5
62.5°	428.1	415.9	421.2	420.0	394.5	357.0	324.7	291.3	254.7	235.9	231.3
65°	382.3	370.7	375.4	374.6	351.0	322.5	290.4	259.8	225.8	209.5	204.9
67.5°	335.5	324.7	329.1	329.1	307.5	280.2	255.9	227.9	197.5	183.4	179.2
70°	289.0	279.0	282.9	282.5	264.2	242.0	221.1	196.1	168.8	157.2	153.7
72.5°	242.2	233.4	236.9	236.6	221.3	207.0	186.2	164.6	140.8	131.5	128.3
75°	196.8	188.5	191.9	191.5	179.0	165.6	151.7	133.8	113.4	106.8	103.7
77.5°	153.5	145.0	147.9	147.9	138.7	129.0	117.9	104.0	89.6	82.6	80.3
80°	111.9	107.9	106.5	106.7	100.5	94.2	88.5	75.2	64.6	59.8	58.3
82.5°	73.6	70.2	68.8	69.2	65.7	61.8	58.3	48.9	41.9	39.1	38.2
85°	39.1	36.6	35.4	36.3	35.6	33.4	31.7	25.3	20.9	19.9	19.4
87.5°	12.3	10.7	9.9	13.0	11.1	9.9	9.5	7.6	5.8	5.8	5.6
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°	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6
2.5°	753.5	753.5	746.7	745.1	744.4	745.2	738.4	737.2	747.0	743.7	736.1
5°	747.5	747.2	737.5	735.7	735.7	734.7	726.9	725.2	735.0	732.2	724.0
7.5°	740.1	739.1	727.6	726.4	724.7	724.0	715.3	714.1	722.5	720.8	713.0
10°	731.2	730.1	716.6	715.7	713.7	712.3	704.2	703.4	712.0	709.2	703.0
12.5°	719.4	717.4	703.5	702.7	701.1	700.5	692.6	692.3	701.8	699.0	692.4
15°	703.9	702.3	686.8	687.2	687.3	687.3	681.0	680.7	690.0	688.7	681.7
17.5°	686.8	684.7	669.9	671.0	672.2	673.6	668.7	669.6	679.4	677.8	671.5
20°	667.5	665.3	650.9	653.9	656.5	659.4	656.2	658.6	667.8	667.1	662.3
22.5°	645.8	643.7	630.3	634.9	639.3	644.6	643.2	646.0	655.7	655.5	651.3
25°	619.4	619.9	608.1	613.8	621.2	628.6	629.1	633.7	644.4	643.3	639.5
27.5°	594.8	595.5	583.0	592.5	602.3	611.8	614.1	620.5	631.4	630.5	627.1
30°	568.9	569.8	557.6	570.6	582.6	594.2	599.2	607.8	618.9	618.9	615.3
32.5°	542.0	543.5	530.9	548.3	562.2	575.7	584.4	593.3	606.0	605.7	602.7
35°	514.3	516.1	504.5	526.6	540.5	557.1	567.8	579.8	591.1	591.2	588.9
37.5°	486.2	488.3	477.7	502.0	517.8	537.4	551.1	563.1	575.6	576.3	574.2
40°	458.2	460.5	451.3	474.7	494.8	516.6	532.4	546.5	560.3	560.6	559.2
42.5°	430.2	432.6	425.8	448.7	471.4	494.8	513.4	529.5	543.5	544.4	542.8
45°	402.9	405.0	400.1	425.1	446.9	472.4	493.9	512.0	526.3	527.5	527.0
47.5°	375.8	377.7	373.3	396.2	421.4	448.5	473.3	493.4	508.5	509.9	509.6
50°	349.2	350.8	346.0	370.0	395.0	423.8	449.7	473.0	489.9	491.3	491.1
52.5°	322.8	324.4	320.3	345.5	368.2	398.7	426.8	452.0	468.7	470.8	471.2
55°	297.3	298.0	294.8	318.9	340.9	372.8	405.2	429.7	446.4	448.1	449.2
57.5°	271.8	271.9	269.3	292.4	313.5	346.0	380.0	405.7	421.6	423.3	424.9
60°	246.4	246.2	243.3	265.6	285.8	318.1	353.4	379.0	394.3	395.9	398.0
62.5°	221.3	220.7	218.1	238.7	257.7	289.5	325.1	349.7	364.4	365.4	368.2
65°	196.3	195.7	193.3	212.3	229.5	260.0	294.8	318.2	331.4	332.8	332.3
67.5°	171.6	170.6	168.6	185.7	201.4	229.5	263.0	285.3	296.2	297.5	300.8
70°	147.0	145.7	141.3	159.5	173.2	198.4	229.5	249.4	258.6	259.8	259.3
72.5°	122.7	121.5	116.7	133.4	145.0	167.0	194.8	211.4	219.3	220.4	220.4
75°	99.1	98.4	95.4	108.1	117.8	135.7	159.3	173.0	179.2	180.4	180.1
77.5°	76.4	75.9	72.9	83.8	91.4	104.7	123.7	134.5	139.1	140.5	143.5
80°	54.7	54.6	49.8	60.5	63.9	75.2	89.1	97.3	99.8	101.7	103.8
82.5°	35.0	35.2	30.5	39.6	41.0	48.2	56.9	62.0	63.7	65.3	66.9
85°	17.1	17.8	15.1	20.9	21.1	24.8	28.5	30.5	31.2	32.4	33.8
87.5°	4.4	5.1	2.8	6.0	5.3	6.9	7.9	8.4	8.3	9.2	9.7
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°	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6
2.5°	738.6	744.2	741.4	750.5	754.0	748.4	758.3	758.5	751.4	759.7	764.3
5°	727.1	732.9	731.2	740.7	745.1	740.1	752.1	754.4	747.5	756.9	764.3
7.5°	715.5	722.4	720.1	729.8	735.0	731.2	744.0	747.7	742.4	752.6	762.5
10°	705.5	711.3	708.8	719.0	723.6	720.4	733.1	740.0	735.0	747.5	759.3
12.5°	695.6	700.4	697.5	706.0	710.4	706.3	721.8	728.2	724.7	737.7	752.8
15°	682.9	688.2	684.3	691.9	695.3	691.7	704.4	715.3	710.9	725.2	741.9
17.5°	673.3	676.3	671.0	677.0	678.9	674.1	687.0	697.7	694.6	710.0	729.4
20°	662.5	665.0	657.6	660.9	660.8	654.8	666.6	677.1	675.0	692.1	714.1
22.5°	650.6	651.8	643.2	643.9	643.5	633.7	644.2	655.0	654.1	671.3	696.0
25°	637.9	638.1	627.0	626.6	622.7	611.1	620.5	632.6	630.0	648.6	674.5
27.5°	625.4	623.6	610.2	607.1	600.9	587.0	595.3	606.2	604.6	622.9	651.6
30°	612.0	609.7	593.3	587.5	578.6	562.5	569.4	579.6	580.5	596.5	626.6
32.5°	599.3	593.5	575.4	566.9	555.7	537.0	540.7	551.1	552.5	568.7	599.7
35°	583.0	579.1	556.7	542.3	531.2	510.8	514.7	521.9	524.0	539.8	571.3
37.5°	567.5	561.3	537.6	519.9	505.7	484.2	485.3	492.7	494.8	510.8	542.0
40°	551.5	542.7	517.1	496.5	480.2	457.6	456.4	464.2	465.7	481.4	509.6
42.5°	534.4	523.8	495.1	472.6	453.8	430.9	428.4	435.1	436.9	452.2	479.8
45°	517.1	504.5	472.6	448.0	427.4	404.0	401.5	406.6	409.2	423.7	450.2
47.5°	498.8	484.0	449.4	421.9	400.6	377.2	374.2	379.3	381.4	395.7	420.9
50°	479.6	461.7	425.4	395.2	374.0	351.0	346.6	352.6	354.5	367.9	392.5
52.5°	458.5	438.6	399.9	368.2	347.1	325.1	319.8	325.6	327.9	340.9	363.6
55°	436.2	414.7	374.2	343.4	320.5	299.1	294.6	296.9	301.9	314.2	335.3
57.5°	411.0	389.7	347.1	315.8	293.8	273.2	269.5	271.6	276.2	288.1	307.1
60°	384.2	361.7	319.5	288.1	266.8	247.3	244.0	245.9	250.8	261.7	279.3
62.5°	357.8	332.5	291.0	259.8	240.4	222.3	221.4	220.7	225.3	235.9	251.3
65°	325.8	301.5	261.2	231.6	214.0	197.7	194.1	195.7	200.1	209.8	226.0
67.5°	291.5	269.5	230.8	203.5	187.8	173.2	170.2	170.9	175.5	183.9	198.0
70°	255.0	235.7	199.6	175.1	161.9	148.2	146.3	146.4	150.8	158.2	170.6
72.5°	216.9	199.4	168.1	147.1	136.2	126.4	124.6	122.5	126.6	132.9	143.5
75°	178.0	162.6	136.8	119.7	111.1	102.8	101.2	99.1	103.1	108.6	116.9
77.5°	138.7	126.4	106.3	93.1	86.4	80.3	78.9	76.6	80.6	84.7	91.2
80°	100.3	91.4	79.4	65.5	63.2	59.1	57.7	55.3	59.1	61.8	66.7
82.5°	64.8	58.8	51.9	42.2	41.9	38.9	38.2	35.4	38.9	40.5	44.2
85°	32.7	29.9	28.2	21.5	22.2	20.2	20.1	17.1	19.9	20.6	22.7
87.5°	9.3	9.9	8.8	5.3	6.7	6.3	6.3	4.6	6.3	6.3	7.2
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	754.6	754.6	754.6	754.6	754.6	754.6	754.6	754.6
2.5°	755.3	758.3	759.0	758.8	760.7	771.3	767.8	771.3
5°	757.0	763.7	765.5	768.0	771.1	783.1	779.2	783.4
7.5°	758.1	768.1	772.0	776.8	781.9	795.2	792.1	796.3
10°	758.1	771.1	776.8	784.7	791.5	807.0	804.0	809.0
12.5°	754.9	771.7	779.6	790.7	799.5	816.2	815.0	818.5
15°	748.4	769.0	779.9	794.2	805.1	823.8	823.2	827.4
17.5°	739.6	764.4	777.6	795.6	809.3	830.3	831.5	833.8
20°	728.5	755.8	773.1	795.1	812.3	835.4	837.0	840.1
22.5°	713.9	745.4	766.2	792.8	812.7	837.5	840.3	843.3
25°	696.7	732.9	757.2	788.4	810.9	837.3	841.2	843.8
27.5°	677.0	716.7	745.8	781.3	806.0	834.5	839.2	842.4
30°	654.1	699.5	732.8	772.2	799.3	829.2	834.3	837.5
32.5°	630.5	680.5	717.3	760.4	789.6	820.8	825.2	827.6
35°	604.8	657.4	698.6	745.2	777.1	807.2	810.6	813.2
37.5°	576.8	632.4	677.3	728.2	759.5	788.4	791.4	794.4
40°	547.9	606.2	653.4	707.2	738.6	765.3	768.5	770.6
42.5°	518.9	577.2	627.8	682.6	713.7	739.4	741.4	743.5
45°	489.5	547.1	599.2	655.3	686.1	710.2	710.9	712.7
47.5°	459.6	515.9	567.6	624.2	654.6	676.6	677.3	678.7
50°	429.5	484.7	534.0	590.5	620.3	643.5	640.3	641.8
52.5°	399.9	452.0	502.3	554.3	583.7	604.3	605.1	602.3
55°	370.9	420.0	466.3	516.3	544.2	560.3	559.7	560.8
57.5°	341.5	387.6	430.0	475.8	503.1	518.2	521.4	517.7
60°	311.5	354.8	392.9	434.2	460.6	473.3	477.0	473.5
62.5°	281.8	321.6	356.1	392.2	416.6	432.3	431.9	428.1
65°	252.1	288.1	318.9	349.6	370.9	386.5	385.8	382.3
67.5°	224.6	254.3	282.0	306.8	325.3	336.0	339.7	335.5
70°	194.3	220.0	244.3	264.2	279.5	289.2	292.7	289.0
72.5°	164.0	185.9	202.9	222.1	233.9	242.0	245.7	242.2
75°	134.1	152.1	166.0	180.9	189.2	196.1	200.3	196.8
77.5°	105.1	119.0	130.1	141.0	150.5	152.1	155.8	153.5
80°	77.4	87.5	95.6	102.8	109.7	110.4	113.4	111.9
82.5°	51.6	58.3	60.4	67.9	72.3	71.6	74.6	73.6
85°	27.3	31.3	35.0	37.3	39.8	37.5	40.1	39.1
87.5°	9.2	9.7	8.4	12.0	13.2	11.3	12.8	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)