

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: P837986

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2LO-35-120-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: P837986
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

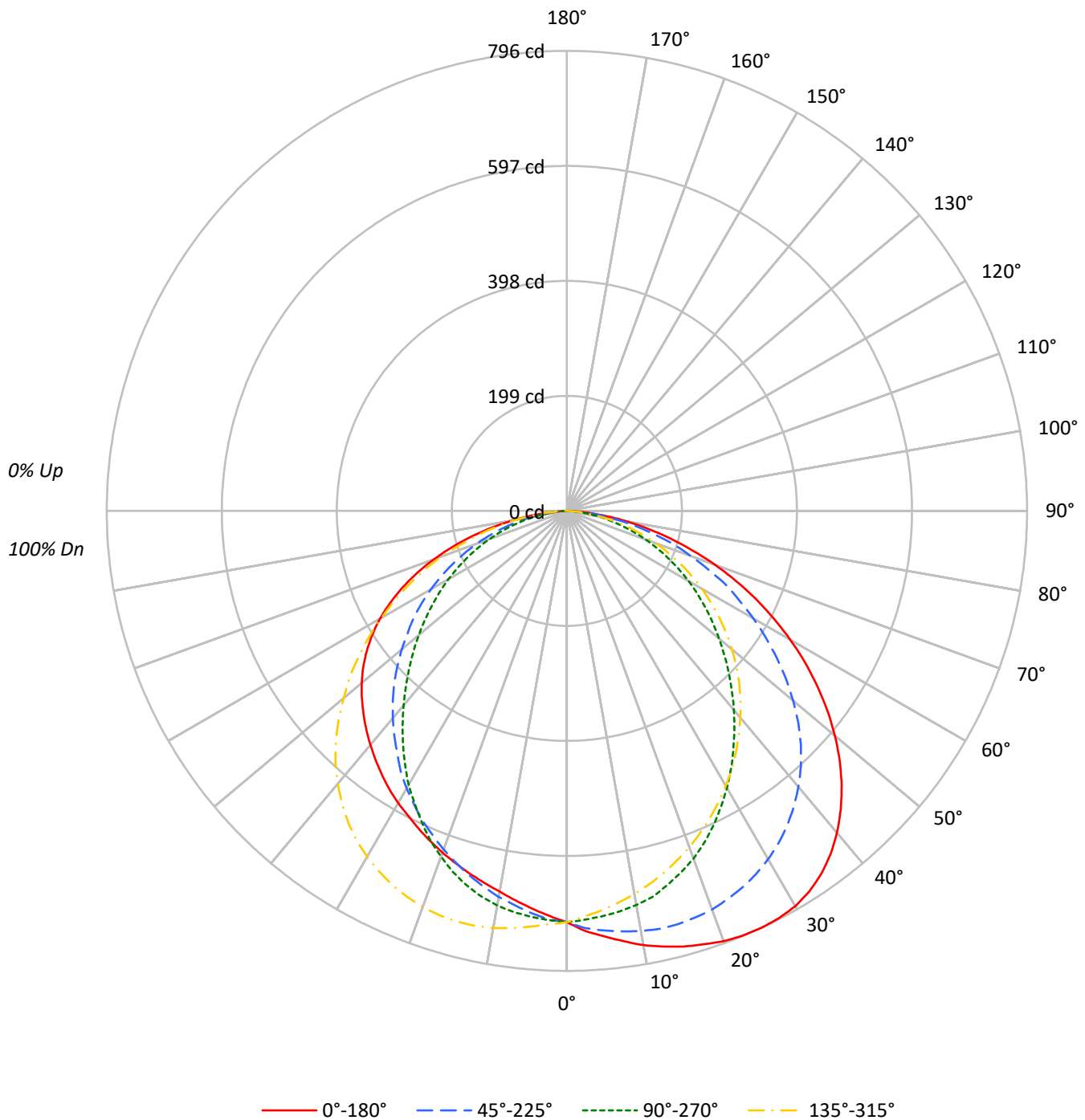
Lumens per Lamp: N/A
Luminaire Lumens: 2088.1 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	1915	1915	1915	1915
5°	1996	1901	1865	1905
10°	2085	1892	1828	1894
15°	2174	1868	1810	1868
20°	2269	1834	1802	1823
25°	2363	1782	1802	1764
30°	2454	1720	1814	1701
35°	2520	1650	1832	1623
40°	2553	1579	1858	1543
45°	2558	1507	1893	1469
50°	2534	1438	1940	1400
55°	2481	1374	1983	1336
60°	2404	1307	2010	1273
65°	2296	1230	1999	1202
70°	2145	1140	1928	1120
75°	1930	1017	1770	1012
80°	1636	852	1488	865
85°	1139	565	942	580

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°	67.6	3.2
10°-20°	195.7	9.4
20°-30°	299.9	14.4
30°-40°	364.6	17.5
40°-50°	379.1	18.2
50°-60°	342.4	16.4
60°-70°	260.3	12.5
70°-80°	145.1	7.0
80°-90°	33.4	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°	563.1	27.0
0°-40°	927.7	44.4
0°-60°	1649.2	79.0
0°-90°	2088.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2088.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	712	712	712	712	712	
5°	739	704	691	705	739	71
15°	780	670	650	670	780	221
25°	796	600	607	594	796	368
35°	767	502	558	494	767	479
45°	672	396	498	386	672	518
55°	529	293	423	285	529	472
65°	361	193	314	189	361	356
75°	186	98	170	97	186	197
85°	37	18	30	19	37	46
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°	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7
2.5°	727.5	716.9	717.0	726.3	719.2	722.7	712.7	716.5	715.4	716.2	708.1
5°	738.9	727.5	727.3	735.3	727.3	728.8	716.2	718.7	715.0	712.7	703.9
7.5°	751.0	739.6	738.4	745.4	734.9	733.8	719.8	719.8	713.2	707.4	699.1
10°	763.0	751.2	749.7	755.0	742.1	738.3	721.3	718.7	709.9	701.2	692.3
12.5°	772.0	760.0	758.9	762.2	747.6	740.6	721.3	716.2	703.2	691.1	684.1
15°	780.4	768.1	765.0	766.7	749.9	740.6	719.0	711.0	694.4	678.5	670.4
17.5°	786.4	774.6	771.5	771.3	751.0	737.8	714.0	703.1	683.1	663.9	655.8
20°	792.4	780.6	776.6	773.6	750.7	734.0	706.7	691.9	668.7	647.1	640.3
22.5°	795.4	783.3	778.9	774.5	748.6	727.0	697.8	679.0	652.4	626.7	621.1
25°	795.9	783.4	778.8	772.3	744.2	718.7	686.1	663.4	633.7	605.1	600.3
27.5°	794.5	780.9	776.3	768.5	737.8	708.5	672.4	645.6	613.8	582.2	577.1
30°	789.9	776.1	771.6	761.5	728.6	696.1	657.3	625.9	591.7	558.1	553.7
32.5°	780.6	767.2	763.5	753.4	718.7	681.7	639.7	604.6	567.3	535.2	528.6
35°	767.0	753.5	751.2	740.6	704.7	664.4	620.4	581.4	541.4	508.7	502.2
37.5°	749.2	737.9	734.4	724.0	688.3	644.8	598.3	556.1	515.0	479.8	475.8
40°	726.8	716.2	713.5	704.2	669.2	623.1	574.4	530.1	487.8	455.0	449.4
42.5°	701.2	691.3	689.8	680.2	645.6	599.0	548.5	503.0	459.4	427.8	422.2
45°	672.2	662.6	662.2	653.1	619.9	572.3	521.3	475.6	431.6	398.9	395.9
47.5°	640.2	631.5	631.5	623.1	591.2	542.9	493.2	447.1	403.7	374.9	369.5
50°	605.3	597.2	594.7	590.5	559.5	510.8	463.7	419.2	376.2	348.6	343.5
52.5°	568.1	561.1	562.8	555.2	525.1	477.5	433.8	387.8	348.5	323.4	318.2
55°	528.9	519.0	520.5	517.6	489.2	443.1	400.3	361.9	321.2	297.7	292.8
57.5°	488.2	475.3	480.6	479.0	451.1	407.9	369.5	332.5	294.2	272.4	267.8
60°	446.6	434.1	439.6	438.1	411.9	372.7	337.8	303.5	267.3	247.5	242.9
62.5°	403.7	392.3	397.3	396.1	372.0	336.7	306.3	274.8	240.2	222.5	218.1
65°	360.6	349.6	354.1	353.3	331.0	304.1	273.9	245.0	213.0	197.6	193.2
67.5°	316.4	306.3	310.4	310.4	290.0	264.3	241.4	215.0	186.3	173.0	169.0
70°	272.6	263.1	266.8	266.5	249.2	228.3	208.5	184.9	159.2	148.3	144.9
72.5°	228.4	220.1	223.5	223.1	208.7	195.2	175.6	155.2	132.8	124.0	121.0
75°	185.6	177.8	181.0	180.6	168.8	156.2	143.1	126.2	106.9	100.8	97.8
77.5°	144.8	136.8	139.5	139.5	130.8	121.7	111.2	98.1	84.5	77.9	75.7
80°	105.6	101.8	100.4	100.6	94.8	88.8	83.5	70.9	60.9	56.4	55.0
82.5°	69.4	66.2	64.9	65.2	61.9	58.3	55.0	46.2	39.5	36.9	36.0
85°	36.9	34.5	33.4	34.2	33.5	31.5	29.9	23.9	19.8	18.8	18.3
87.5°	11.6	10.1	9.3	12.3	10.5	9.3	9.0	7.1	5.5	5.5	5.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P837986

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7
2.5°	710.7	710.7	704.2	702.7	702.1	702.9	696.4	695.3	704.6	701.4	694.3
5°	705.1	704.7	695.6	693.9	693.9	692.9	685.6	684.0	693.3	690.6	682.8
7.5°	698.1	697.1	686.3	685.1	683.5	682.8	674.7	673.5	681.5	679.8	672.5
10°	689.6	688.6	675.8	675.0	673.2	671.9	664.2	663.4	671.5	668.9	663.1
12.5°	678.5	676.7	663.6	662.7	661.2	660.7	653.3	652.9	661.9	659.2	653.1
15°	663.9	662.4	647.8	648.1	648.3	648.3	642.3	642.0	650.8	649.6	643.0
17.5°	647.8	645.8	631.9	632.8	634.0	635.3	630.7	631.5	640.8	639.3	633.3
20°	629.5	627.5	613.9	616.7	619.2	621.9	618.9	621.2	629.9	629.2	624.7
22.5°	609.1	607.1	594.5	598.8	603.0	607.9	606.6	609.3	618.4	618.2	614.3
25°	584.2	584.7	573.6	578.9	585.9	592.8	593.3	597.7	607.8	606.8	603.1
27.5°	561.0	561.6	549.8	558.8	568.1	577.1	579.2	585.2	595.5	594.7	591.5
30°	536.6	537.4	525.9	538.2	549.5	560.5	565.1	573.2	583.7	583.7	580.4
32.5°	511.2	512.7	500.7	517.1	530.3	543.0	551.2	559.6	571.6	571.3	568.4
35°	485.1	486.8	475.8	496.7	509.8	525.4	535.6	546.9	557.5	557.6	555.5
37.5°	458.5	460.5	450.6	473.5	488.4	506.8	519.8	531.1	542.9	543.5	541.5
40°	432.1	434.3	425.7	447.7	466.7	487.3	502.2	515.5	528.4	528.8	527.4
42.5°	405.7	408.1	401.6	423.2	444.6	466.7	484.3	499.4	512.7	513.5	512.0
45°	380.0	382.0	377.4	400.9	421.5	445.6	465.8	482.9	496.4	497.5	497.0
47.5°	354.4	356.3	352.1	373.7	397.4	423.0	446.4	465.3	479.6	480.9	480.6
50°	329.4	330.9	326.4	349.0	372.5	399.8	424.2	446.1	462.0	463.3	463.2
52.5°	304.5	306.0	302.1	325.9	347.3	376.0	402.6	426.3	442.1	444.1	444.4
55°	280.4	281.1	278.1	300.8	321.6	351.6	382.2	405.2	421.0	422.7	423.7
57.5°	256.3	256.5	254.0	275.8	295.7	326.4	358.4	382.7	397.6	399.3	400.8
60°	232.4	232.3	229.4	250.5	269.6	300.0	333.4	357.4	371.9	373.4	375.4
62.5°	208.7	208.2	205.7	225.1	243.0	273.1	306.6	329.9	343.6	344.6	347.3
65°	185.1	184.6	182.3	200.2	216.5	245.2	278.1	300.2	312.6	313.9	313.4
67.5°	161.9	160.9	159.0	175.1	189.9	216.5	248.0	269.1	279.4	280.6	283.7
70°	138.6	137.5	133.3	150.4	163.4	187.1	216.5	235.2	243.9	245.0	244.5
72.5°	115.7	114.5	110.1	125.8	136.8	157.5	183.8	199.4	206.9	207.9	207.9
75°	93.5	92.8	90.0	101.9	111.1	128.0	150.2	163.2	169.0	170.2	169.8
77.5°	72.1	71.6	68.7	79.0	86.2	98.8	116.7	126.8	131.2	132.5	135.3
80°	51.6	51.5	47.0	57.1	60.3	70.9	84.0	91.8	94.1	96.0	97.9
82.5°	33.0	33.2	28.7	37.4	38.7	45.5	53.6	58.4	60.1	61.6	63.1
85°	16.1	16.8	14.3	19.8	19.9	23.4	26.9	28.7	29.4	30.5	31.9
87.5°	4.2	4.8	2.7	5.6	5.0	6.5	7.5	8.0	7.8	8.6	9.1
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7
2.5°	696.6	701.9	699.3	707.9	711.2	705.9	715.2	715.4	708.7	716.5	720.8
5°	685.8	691.3	689.6	698.6	702.7	698.1	709.4	711.5	705.1	713.9	720.8
7.5°	674.8	681.3	679.2	688.3	693.3	689.6	701.7	705.2	700.2	709.9	719.2
10°	665.4	670.9	668.5	678.2	682.5	679.5	691.5	697.9	693.3	705.1	716.2
12.5°	656.1	660.6	657.9	665.9	670.0	666.2	680.8	686.8	683.5	695.8	710.0
15°	644.1	649.1	645.5	652.6	655.8	652.4	664.4	674.7	670.5	684.0	699.8
17.5°	635.0	637.8	632.8	638.5	640.3	635.8	648.0	658.1	655.1	669.7	688.0
20°	624.9	627.2	620.2	623.4	623.2	617.6	628.7	638.7	636.7	652.8	673.5
22.5°	613.6	614.8	606.6	607.3	606.9	597.7	607.6	617.7	616.9	633.2	656.4
25°	601.6	601.8	591.3	591.0	587.4	576.4	585.2	596.7	594.2	611.8	636.2
27.5°	589.8	588.2	575.6	572.6	566.8	553.7	561.5	571.8	570.3	587.5	614.6
30°	577.2	575.1	559.6	554.2	545.7	530.6	537.1	546.7	547.5	562.6	591.0
32.5°	565.3	559.8	542.7	534.7	524.1	506.5	510.0	519.8	521.1	536.4	565.6
35°	549.8	546.2	525.1	511.5	501.0	481.8	485.4	492.2	494.2	509.2	538.9
37.5°	535.2	529.4	507.0	490.4	477.0	456.7	457.7	464.7	466.7	481.8	511.2
40°	520.1	511.8	487.8	468.3	452.9	431.6	430.5	437.8	439.3	454.0	480.6
42.5°	504.0	494.1	467.0	445.7	428.0	406.4	404.1	410.4	412.0	426.5	452.6
45°	487.8	475.8	445.7	422.5	403.1	381.0	378.7	383.5	386.0	399.6	424.7
47.5°	470.5	456.5	423.8	397.9	377.8	355.8	352.9	357.8	359.8	373.2	396.9
50°	452.4	435.5	401.3	372.7	352.8	331.0	326.9	332.5	334.4	347.0	370.2
52.5°	432.5	413.7	377.2	347.3	327.4	306.6	301.6	307.1	309.3	321.6	343.0
55°	411.4	391.1	352.9	323.9	302.3	282.1	277.9	280.1	284.7	296.3	316.3
57.5°	387.6	367.6	327.4	297.8	277.1	257.7	254.2	256.2	260.5	271.8	289.7
60°	362.4	341.2	301.3	271.8	251.7	233.3	230.1	231.9	236.6	246.9	263.5
62.5°	337.5	313.6	274.4	245.0	226.8	209.7	208.8	208.2	212.5	222.5	237.1
65°	307.3	284.4	246.4	218.5	201.9	186.4	183.1	184.6	188.8	197.9	213.2
67.5°	274.9	254.2	217.6	191.9	177.1	163.4	160.5	161.2	165.5	173.5	186.8
70°	240.6	222.3	188.3	165.2	152.7	139.8	138.0	138.1	142.3	149.2	160.9
72.5°	204.5	188.1	158.5	138.8	128.5	119.2	117.5	115.5	119.4	125.3	135.3
75°	167.8	153.4	129.0	112.9	104.8	97.0	95.5	93.5	97.3	102.4	110.2
77.5°	130.8	119.2	100.3	87.8	81.5	75.7	74.4	72.2	76.0	79.9	86.0
80°	94.6	86.2	74.9	61.8	59.6	55.8	54.5	52.1	55.8	58.3	62.9
82.5°	61.1	55.4	49.0	39.8	39.5	36.7	36.0	33.4	36.7	38.2	41.7
85°	30.9	28.2	26.6	20.3	20.9	19.1	18.9	16.1	18.8	19.4	21.4
87.5°	8.8	9.3	8.3	5.0	6.3	6.0	6.0	4.3	6.0	6.0	6.8
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	711.7	711.7	711.7	711.7	711.7	711.7	711.7	711.7
2.5°	712.4	715.2	715.9	715.7	717.5	727.5	724.2	727.5
5°	714.0	720.3	722.0	724.3	727.3	738.6	734.9	738.9
7.5°	715.0	724.5	728.1	732.6	737.4	750.1	747.1	751.0
10°	715.0	727.3	732.6	740.1	746.6	761.2	758.4	763.0
12.5°	712.0	727.8	735.3	745.7	754.0	769.8	768.6	772.0
15°	705.9	725.3	735.6	749.1	759.4	776.9	776.4	780.4
17.5°	697.6	721.0	733.5	750.4	763.3	783.1	784.3	786.4
20°	687.1	712.9	729.1	749.9	766.2	787.9	789.4	792.4
22.5°	673.4	703.1	722.7	747.7	766.5	789.9	792.6	795.4
25°	657.1	691.3	714.2	743.6	764.8	789.7	793.4	795.9
27.5°	638.5	676.0	703.4	736.9	760.2	787.1	791.6	794.5
30°	616.9	659.7	691.1	728.3	753.9	782.1	786.9	789.9
32.5°	594.7	641.8	676.5	717.2	744.7	774.1	778.3	780.6
35°	570.4	620.1	658.9	702.9	733.0	761.3	764.5	767.0
37.5°	544.0	596.5	638.8	686.8	716.4	743.6	746.4	749.2
40°	516.8	571.8	616.2	667.0	696.6	721.8	724.8	726.8
42.5°	489.4	544.4	592.2	643.8	673.2	697.4	699.3	701.2
45°	461.7	516.0	565.1	618.1	647.1	669.9	670.5	672.2
47.5°	433.5	486.6	535.4	588.7	617.4	638.2	638.8	640.2
50°	405.1	457.2	503.7	557.0	585.0	606.9	604.0	605.3
52.5°	377.2	426.3	473.8	522.8	550.5	569.9	570.8	568.1
55°	349.8	396.1	439.8	486.9	513.3	528.4	527.9	528.9
57.5°	322.1	365.6	405.6	448.7	474.5	488.7	491.7	488.2
60°	293.8	334.7	370.5	409.6	434.5	446.4	449.9	446.6
62.5°	265.8	303.3	335.8	369.9	393.0	407.7	407.4	403.7
65°	237.7	271.8	300.8	329.7	349.8	364.6	363.9	360.6
67.5°	211.8	239.9	266.0	289.4	306.8	316.9	320.4	316.4
70°	183.3	207.5	230.4	249.2	263.6	272.8	276.1	272.6
72.5°	154.7	175.3	191.4	209.5	220.6	228.3	231.8	228.4
75°	126.5	143.4	156.6	170.7	178.5	184.9	188.9	185.6
77.5°	99.1	112.2	122.7	133.0	141.9	143.4	146.9	144.8
80°	73.0	82.5	90.1	97.0	103.4	104.1	106.9	105.6
82.5°	48.6	55.0	56.9	64.1	68.2	67.6	70.4	69.4
85°	25.7	29.6	33.0	35.2	37.5	35.4	37.9	36.9
87.5°	8.6	9.1	8.0	11.3	12.5	10.6	12.1	11.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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