

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: P837935

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-3LO-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: P837935
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-LD4-3LO-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

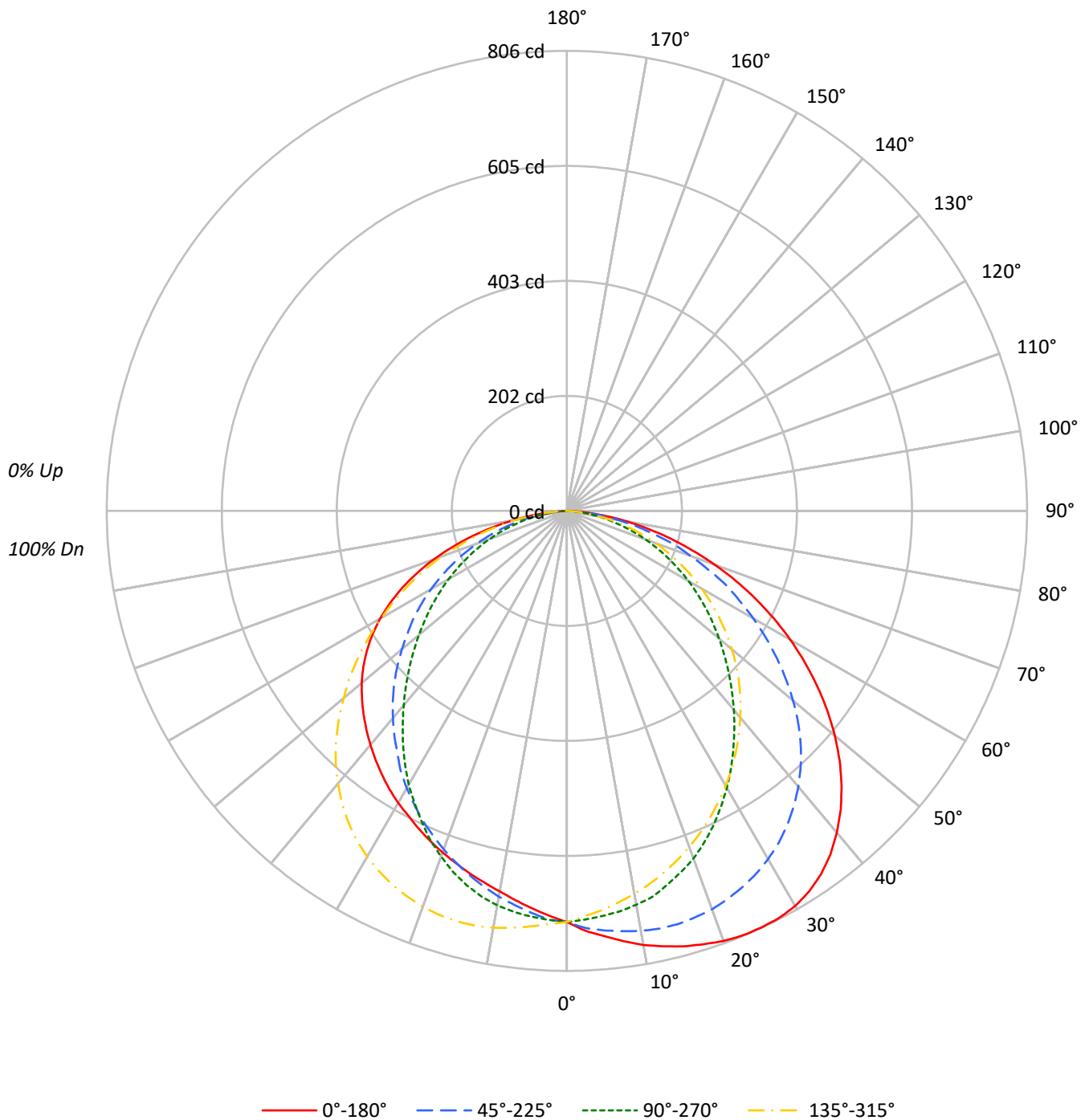
Lumens per Lamp: N/A
Luminaire Lumens: 2113.4 lumens
Efficiency: N/A
Efficacy: 60.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	1938	1938	1938	1938
5°	2020	1925	1888	1928
10°	2110	1915	1850	1917
15°	2201	1890	1832	1891
20°	2297	1856	1824	1845
25°	2392	1804	1824	1786
30°	2484	1741	1836	1722
35°	2550	1670	1854	1643
40°	2584	1598	1880	1562
45°	2589	1525	1917	1487
50°	2565	1456	1963	1417
55°	2511	1391	2007	1352
60°	2433	1323	2034	1288
65°	2324	1245	2023	1217
70°	2171	1154	1951	1133
75°	1954	1029	1790	1024
80°	1657	862	1505	876
85°	1152	571	954	587

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°	68.4	3.2
10°-20°	198.0	9.4
20°-30°	303.5	14.4
30°-40°	369.1	17.5
40°-50°	383.7	18.2
50°-60°	346.6	16.4
60°-70°	263.5	12.5
70°-80°	146.9	7.0
80°-90°	33.8	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°	570.0	27.0
0°-40°	939.0	44.4
0°-60°	1669.2	79.0
0°-90°	2113.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2113.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	720	720	720	720	720	
5°	748	712	699	714	748	72
15°	790	678	658	679	790	224
25°	806	608	614	601	806	372
35°	776	508	564	500	776	485
45°	680	401	504	391	680	524
55°	535	296	428	288	535	478
65°	365	196	318	191	365	361
75°	188	99	172	98	188	200
85°	37	18	31	19	37	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°	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3
2.5°	736.3	725.6	725.7	735.1	727.9	731.4	721.4	725.2	724.0	724.9	716.7
5°	747.9	736.3	736.1	744.2	736.1	737.7	724.9	727.4	723.7	721.4	712.5
7.5°	760.2	748.6	747.4	754.5	743.9	742.7	728.6	728.6	721.9	716.0	707.6
10°	772.3	760.3	758.8	764.2	751.1	747.2	730.1	727.4	718.5	709.8	700.7
12.5°	781.3	769.2	768.1	771.4	756.6	749.6	730.1	724.9	711.8	699.5	692.5
15°	789.9	777.5	774.3	776.0	759.0	749.6	727.7	719.7	702.9	686.7	678.5
17.5°	796.0	784.0	780.8	780.7	760.2	746.7	722.7	711.6	691.4	672.0	663.7
20°	802.0	790.1	786.0	783.0	759.8	742.9	715.3	700.4	676.8	655.0	648.1
22.5°	805.0	792.8	788.4	783.9	757.7	735.8	706.2	687.2	660.4	634.3	628.6
25°	805.5	792.9	788.2	781.7	753.3	727.4	694.5	671.5	641.4	612.5	607.6
27.5°	804.2	790.4	785.7	777.8	746.7	717.2	680.5	653.5	621.2	589.3	584.1
30°	799.5	785.5	781.0	770.8	737.5	704.6	665.2	633.5	598.9	564.9	560.4
32.5°	790.1	776.5	772.8	762.5	727.4	689.9	647.4	612.0	574.2	541.7	535.0
35°	776.3	762.7	760.3	749.6	713.3	672.5	627.9	588.4	547.9	514.8	508.3
37.5°	758.3	746.9	743.4	732.8	696.7	652.6	605.6	562.9	521.2	485.6	481.6
40°	735.6	724.9	722.2	712.8	677.3	630.6	581.4	536.5	493.7	460.6	454.9
42.5°	709.8	699.7	698.2	688.4	653.5	606.3	555.2	509.1	464.9	433.0	427.3
45°	680.4	670.6	670.3	661.0	627.4	579.2	527.6	481.4	436.9	403.8	400.8
47.5°	647.9	639.2	639.2	630.6	598.4	549.5	499.2	452.5	408.7	379.4	374.0
50°	612.6	604.4	601.9	597.7	566.3	517.0	469.3	424.3	380.8	352.9	347.7
52.5°	575.0	567.9	569.6	561.9	531.5	483.3	439.1	392.5	352.7	327.3	322.1
55°	535.3	525.3	526.8	523.9	495.2	448.5	405.1	366.3	325.1	301.3	296.4
57.5°	494.2	481.1	486.4	484.8	456.5	412.9	374.0	336.6	297.8	275.7	271.0
60°	452.0	439.4	444.9	443.4	416.9	377.2	341.9	307.2	270.5	250.5	245.8
62.5°	408.7	397.1	402.1	400.9	376.6	340.8	310.0	278.1	243.1	225.2	220.8
65°	365.0	353.9	358.4	357.6	335.1	307.8	277.3	248.0	215.6	200.0	195.6
67.5°	320.3	310.0	314.2	314.2	293.6	267.5	244.3	217.6	188.5	175.1	171.1
70°	275.9	266.3	270.0	269.7	252.2	231.0	211.0	187.2	161.1	150.1	146.7
72.5°	231.2	222.8	226.2	225.8	211.2	197.6	177.8	157.1	134.4	125.5	122.5
75°	187.9	180.0	183.2	182.8	170.9	158.1	144.8	127.7	108.2	102.0	99.0
77.5°	146.5	138.5	141.1	141.1	132.4	123.2	112.6	99.3	85.5	78.8	76.6
80°	106.9	103.0	101.7	101.8	95.9	89.9	84.5	71.7	61.7	57.1	55.6
82.5°	70.2	67.0	65.7	66.0	62.7	59.0	55.6	46.7	40.0	37.3	36.5
85°	37.3	35.0	33.8	34.6	33.9	31.9	30.2	24.2	20.0	19.0	18.5
87.5°	11.8	10.2	9.4	12.4	10.6	9.4	9.1	7.2	5.5	5.5	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°	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3
2.5°	719.3	719.3	712.8	711.3	710.6	711.4	704.9	703.7	713.1	709.9	702.7
5°	713.6	713.3	704.1	702.4	702.4	701.4	694.0	692.3	701.7	699.0	691.1
7.5°	706.6	705.6	694.6	693.5	691.8	691.1	682.9	681.7	689.8	688.1	680.7
10°	698.0	697.0	684.1	683.2	681.4	680.0	672.3	671.5	679.7	677.0	671.1
12.5°	686.7	684.9	671.6	670.8	669.3	668.8	661.2	660.9	669.9	667.3	661.0
15°	672.0	670.4	655.7	656.0	656.2	656.2	650.1	649.8	658.7	657.5	650.8
17.5°	655.7	653.6	639.5	640.5	641.7	643.1	638.3	639.2	648.6	647.1	641.0
20°	637.2	635.2	621.4	624.2	626.8	629.4	626.4	628.8	637.5	636.8	632.3
22.5°	616.5	614.5	601.7	606.1	610.3	615.3	614.0	616.7	625.9	625.7	621.7
25°	591.3	591.8	580.5	585.9	593.0	600.0	600.5	604.9	615.2	614.2	610.5
27.5°	567.8	568.4	556.5	565.6	575.0	584.1	586.3	592.3	602.7	601.9	598.7
30°	543.1	543.9	532.3	544.8	556.2	567.3	572.0	580.2	590.8	590.8	587.4
32.5°	517.4	518.9	506.8	523.4	536.7	549.6	557.9	566.4	578.5	578.2	575.3
35°	491.0	492.7	481.6	502.7	516.0	531.8	542.1	553.5	564.2	564.4	562.2
37.5°	464.1	466.1	456.0	479.2	494.3	513.0	526.1	537.5	549.5	550.1	548.1
40°	437.4	439.6	430.8	453.2	472.3	493.2	508.3	521.7	534.8	535.2	533.8
42.5°	410.7	413.0	406.5	428.3	450.0	472.3	490.1	505.4	518.9	519.7	518.2
45°	384.6	386.6	381.9	405.8	426.6	451.0	471.5	488.8	502.4	503.6	503.1
47.5°	358.7	360.6	356.4	378.2	402.3	428.1	451.8	471.0	485.4	486.8	486.4
50°	333.4	334.9	330.3	353.2	377.1	404.6	429.3	451.5	467.6	469.0	468.8
52.5°	308.2	309.7	305.8	329.8	351.5	380.6	407.5	431.5	447.5	449.5	449.8
55°	283.8	284.5	281.5	304.5	325.5	355.9	386.8	410.2	426.1	427.8	428.8
57.5°	259.4	259.6	257.1	279.1	299.3	330.3	362.8	387.3	402.4	404.1	405.6
60°	235.2	235.1	232.2	253.6	272.9	303.6	337.4	361.8	376.4	377.9	379.9
62.5°	211.2	210.7	208.2	227.9	246.0	276.4	310.4	333.9	347.8	348.8	351.5
65°	187.4	186.9	184.5	202.6	219.1	248.2	281.5	303.8	316.4	317.7	317.2
67.5°	163.8	162.8	161.0	177.3	192.2	219.1	251.0	272.4	282.8	284.0	287.2
70°	140.3	139.1	134.9	152.2	165.3	189.4	219.1	238.1	246.8	248.0	247.5
72.5°	117.1	115.9	111.4	127.4	138.5	159.5	186.0	201.8	209.4	210.4	210.4
75°	94.6	93.9	91.1	103.2	112.4	129.6	152.1	165.2	171.1	172.2	171.9
77.5°	72.9	72.4	69.6	80.0	87.2	100.0	118.1	128.4	132.7	134.1	136.9
80°	52.3	52.1	47.6	57.8	61.0	71.7	85.0	92.9	95.3	97.1	99.1
82.5°	33.4	33.6	29.1	37.8	39.2	46.0	54.3	59.1	60.8	62.3	63.9
85°	16.3	17.0	14.5	20.0	20.2	23.7	27.2	29.1	29.7	30.9	32.3
87.5°	4.2	4.9	2.7	5.7	5.0	6.6	7.6	8.1	7.9	8.7	9.2
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°	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3
2.5°	705.1	710.4	707.7	716.5	719.8	714.5	723.9	724.0	717.3	725.2	729.6
5°	694.1	699.7	698.0	707.1	711.3	706.6	718.0	720.2	713.6	722.5	729.6
7.5°	683.0	689.6	687.4	696.7	701.7	698.0	710.3	713.8	708.8	718.5	727.9
10°	673.5	679.0	676.7	686.4	690.8	687.8	699.8	706.4	701.7	713.6	724.9
12.5°	664.1	668.6	665.9	674.0	678.2	674.3	689.1	695.1	691.8	704.2	718.7
15°	652.0	657.0	653.3	660.5	663.7	660.4	672.5	682.9	678.7	692.3	708.3
17.5°	642.7	645.6	640.5	646.2	648.1	643.6	655.8	666.1	663.1	677.8	696.3
20°	632.5	634.8	627.8	631.0	630.8	625.1	636.3	646.4	644.4	660.7	681.7
22.5°	621.0	622.2	614.0	614.7	614.3	604.9	615.0	625.2	624.4	640.9	664.4
25°	608.9	609.1	598.5	598.2	594.5	583.4	592.3	603.9	601.4	619.2	643.9
27.5°	597.0	595.3	582.6	579.5	573.7	560.4	568.3	578.7	577.2	594.7	622.1
30°	584.2	582.1	566.4	560.9	552.3	537.0	543.6	553.3	554.2	569.5	598.2
32.5°	572.1	566.6	549.3	541.2	530.5	512.7	516.2	526.1	527.4	542.9	572.5
35°	556.5	552.8	531.5	517.7	507.1	487.6	491.3	498.2	500.2	515.4	545.4
37.5°	541.7	535.9	513.2	496.4	482.8	462.3	463.3	470.3	472.3	487.6	517.4
40°	526.4	518.0	493.7	474.0	458.4	436.9	435.7	443.1	444.6	459.6	486.4
42.5°	510.1	500.1	472.7	451.2	433.2	411.3	409.0	415.4	417.1	431.7	458.1
45°	493.7	481.6	451.2	427.6	408.0	385.6	383.3	388.2	390.7	404.5	429.8
47.5°	476.2	462.1	429.0	402.8	382.4	360.1	357.2	362.1	364.1	377.7	401.8
50°	457.9	440.7	406.1	377.2	357.1	335.1	330.9	336.6	338.4	351.2	374.7
52.5°	437.7	418.7	381.8	351.5	331.4	310.4	305.3	310.9	313.0	325.5	347.2
55°	416.4	395.9	357.2	327.8	306.0	285.5	281.3	283.5	288.2	299.9	320.1
57.5°	392.4	372.0	331.4	301.4	280.4	260.8	257.3	259.3	263.6	275.1	293.2
60°	366.8	345.3	305.0	275.1	254.7	236.1	232.9	234.7	239.4	249.9	266.7
62.5°	341.6	317.4	277.8	248.0	229.5	212.2	211.4	210.7	215.1	225.2	239.9
65°	311.0	287.8	249.4	221.1	204.3	188.7	185.3	186.9	191.1	200.3	215.8
67.5°	278.3	257.3	220.3	194.2	179.3	165.3	162.5	163.2	167.5	175.6	189.0
70°	243.5	225.0	190.5	167.2	154.6	141.5	139.6	139.8	144.0	151.1	162.8
72.5°	207.0	190.4	160.5	140.5	130.1	120.6	119.0	116.9	120.8	126.9	136.9
75°	169.9	155.3	130.6	114.3	106.0	98.1	96.6	94.6	98.5	103.7	111.6
77.5°	132.4	120.6	101.5	88.9	82.5	76.6	75.3	73.1	77.0	80.8	87.0
80°	95.8	87.2	75.8	62.5	60.3	56.5	55.1	52.8	56.5	59.0	63.7
82.5°	61.8	56.1	49.6	40.3	40.0	37.1	36.5	33.8	37.1	38.6	42.2
85°	31.3	28.6	26.9	20.5	21.2	19.3	19.2	16.3	19.0	19.7	21.7
87.5°	8.9	9.4	8.4	5.0	6.4	6.0	6.0	4.4	6.0	6.0	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°	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3
2.5°	721.0	723.9	724.5	724.4	726.2	736.3	733.0	736.3
5°	722.7	729.1	730.8	733.1	736.1	747.6	743.9	747.9
7.5°	723.7	733.3	737.0	741.5	746.4	759.2	756.1	760.2
10°	723.7	736.1	741.5	749.1	755.6	770.4	767.6	772.3
12.5°	720.7	736.6	744.2	754.8	763.2	779.2	778.0	781.3
15°	714.5	734.1	744.5	758.2	768.6	786.4	785.9	789.9
17.5°	706.1	729.8	742.4	759.5	772.6	792.6	793.8	796.0
20°	695.5	721.5	738.0	759.0	775.5	797.5	799.0	802.0
22.5°	681.5	711.6	731.4	756.8	775.8	799.5	802.2	805.0
25°	665.1	699.7	722.9	752.6	774.1	799.3	803.0	805.5
27.5°	646.2	684.2	711.9	745.9	769.4	796.6	801.2	804.2
30°	624.4	667.8	699.5	737.2	763.0	791.6	796.5	799.5
32.5°	601.9	649.6	684.7	725.9	753.8	783.5	787.7	790.1
35°	577.4	627.6	666.9	711.4	741.9	770.6	773.8	776.3
37.5°	550.6	603.7	646.6	695.1	725.1	752.6	755.5	758.3
40°	523.1	578.7	623.7	675.1	705.1	730.6	733.6	735.6
42.5°	495.4	551.0	599.4	651.6	681.4	705.9	707.7	709.8
45°	467.3	522.2	572.0	625.6	655.0	678.0	678.7	680.4
47.5°	438.7	492.5	541.9	595.8	624.9	645.9	646.6	647.9
50°	410.0	462.8	509.8	563.7	592.1	614.3	611.3	612.6
52.5°	381.8	431.5	479.6	529.1	557.2	576.9	577.7	575.0
55°	354.0	400.9	445.1	492.8	519.6	534.8	534.3	535.3
57.5°	326.0	370.0	410.5	454.2	480.2	494.7	497.7	494.2
60°	297.4	338.8	375.0	414.5	439.7	451.8	455.4	452.0
62.5°	269.0	307.0	339.9	374.4	397.7	412.7	412.3	408.7
65°	240.6	275.1	304.5	333.7	354.0	369.0	368.3	365.0
67.5°	214.4	242.8	269.2	292.9	310.5	320.8	324.3	320.3
70°	185.5	210.0	233.2	252.2	266.8	276.1	279.4	275.9
72.5°	156.6	177.4	193.7	212.1	223.3	231.0	234.6	231.2
75°	128.0	145.2	158.5	172.7	180.6	187.2	191.2	187.9
77.5°	100.3	113.6	124.2	134.6	143.7	145.2	148.7	146.5
80°	73.9	83.5	91.2	98.1	104.7	105.4	108.2	106.9
82.5°	49.2	55.6	57.6	64.9	69.1	68.4	71.2	70.2
85°	26.0	29.9	33.4	35.6	38.0	35.8	38.3	37.3
87.5°	8.7	9.2	8.1	11.4	12.6	10.8	12.3	11.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)