

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: P837876

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1STD-35-120-EDD**

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: P837876
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-LD4-1STD-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

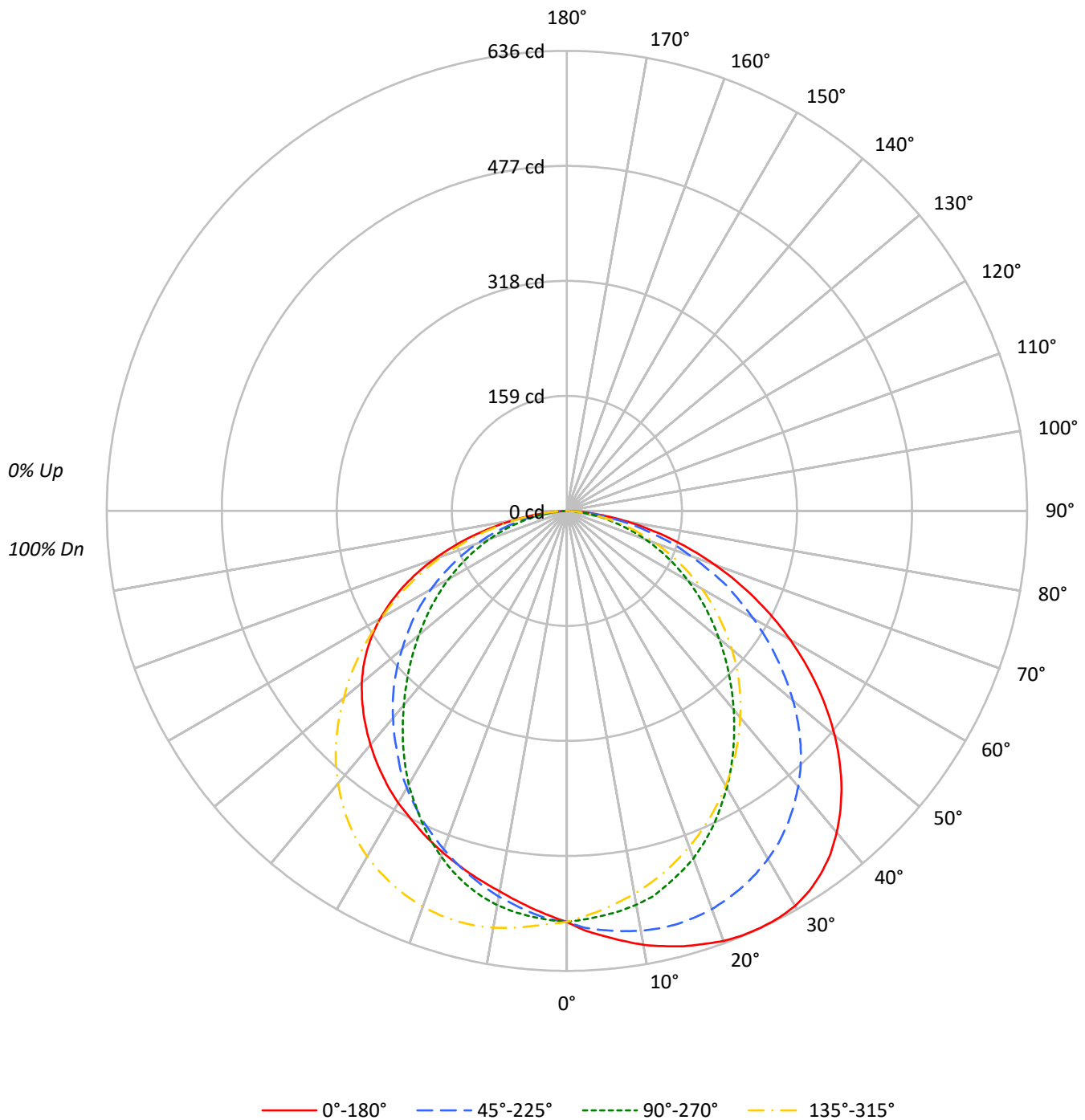
Lumens per Lamp: N/A
Luminaire Lumens: 1667.2 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	1529	1529	1529	1529
5°	1594	1518	1489	1521
10°	1665	1510	1459	1512
15°	1736	1491	1445	1492
20°	1812	1464	1439	1456
25°	1887	1423	1439	1409
30°	1960	1374	1448	1359
35°	2012	1317	1463	1296
40°	2038	1260	1483	1232
45°	2042	1203	1512	1173
50°	2023	1148	1549	1118
55°	1981	1097	1583	1066
60°	1919	1044	1604	1017
65°	1833	982	1596	960
70°	1713	910	1539	894
75°	1541	812	1413	808
80°	1306	680	1187	690
85°	908	451	753	463

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	3.2
10°-20°	156.2	9.4
20°-30°	239.4	14.4
30°-40°	291.1	17.5
40°-50°	302.7	18.2
50°-60°	273.4	16.4
60°-70°	207.8	12.5
70°-80°	115.9	7.0
80°-90°	26.7	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°	449.6	27.0
0°-40°	740.7	44.4
0°-60°	1316.8	79.0
0°-90°	1667.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1667.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	568	568	568	568	568	
5°	590	562	551	563	590	57
15°	623	535	519	535	623	177
25°	636	479	484	474	636	294
35°	612	401	445	395	612	382
45°	537	316	397	308	537	413
55°	422	234	338	227	422	377
65°	288	154	251	151	288	285
75°	148	78	136	78	148	157
85°	29	15	24	15	29	37
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°	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3
2.5°	580.8	572.4	572.5	579.9	574.2	577.0	569.0	572.1	571.2	571.8	565.3
5°	590.0	580.8	580.7	587.1	580.7	581.9	571.8	573.8	570.9	569.0	562.0
7.5°	599.7	590.5	589.6	595.2	586.8	585.9	574.7	574.7	569.4	564.8	558.2
10°	609.2	599.8	598.6	602.9	592.5	589.5	575.9	573.8	566.8	559.9	552.7
12.5°	616.4	606.8	605.9	608.6	596.9	591.3	575.9	571.8	561.5	551.8	546.3
15°	623.1	613.3	610.8	612.1	598.7	591.3	574.1	567.7	554.5	541.7	535.2
17.5°	627.9	618.5	616.0	615.8	599.7	589.1	570.1	561.4	545.5	530.1	523.6
20°	632.7	623.3	620.1	617.7	599.4	586.0	564.3	552.5	533.9	516.7	511.3
22.5°	635.1	625.4	621.9	618.4	597.7	580.4	557.1	542.1	520.9	500.4	495.9
25°	635.5	625.5	621.8	616.6	594.2	573.8	547.8	529.7	506.0	483.2	479.3
27.5°	634.4	623.5	619.8	613.6	589.1	565.7	536.8	515.5	490.0	464.9	460.8
30°	630.7	619.7	616.1	608.0	581.8	555.8	524.8	499.7	472.4	445.6	442.1
32.5°	623.3	612.5	609.6	601.5	573.8	544.3	510.7	482.8	452.9	427.4	422.0
35°	612.4	601.7	599.8	591.3	562.7	530.5	495.3	464.2	432.3	406.1	401.0
37.5°	598.2	589.2	586.4	578.1	549.6	514.8	477.7	444.1	411.2	383.1	379.9
40°	580.3	571.8	569.7	562.3	534.3	497.5	458.6	423.2	389.4	363.3	358.8
42.5°	559.9	551.9	550.8	543.1	515.5	478.3	438.0	401.6	366.8	341.6	337.1
45°	536.7	529.0	528.8	521.5	495.0	456.9	416.2	379.8	344.6	318.5	316.1
47.5°	511.1	504.2	504.2	497.5	472.0	433.4	393.8	357.0	322.4	299.3	295.1
50°	483.3	476.8	474.8	471.5	446.7	407.9	370.2	334.7	300.4	278.4	274.3
52.5°	453.6	448.0	449.4	443.3	419.3	381.2	346.4	309.6	278.2	258.2	254.1
55°	422.3	414.4	415.6	413.3	390.6	353.8	319.6	289.0	256.5	237.7	233.8
57.5°	389.8	379.5	383.7	382.4	360.1	325.7	295.1	265.5	234.9	217.5	213.8
60°	356.6	346.6	351.0	349.8	328.9	297.6	269.7	242.3	213.4	197.6	193.9
62.5°	322.4	313.2	317.2	316.3	297.1	268.8	244.6	219.4	191.8	177.6	174.2
65°	287.9	279.2	282.7	282.1	264.3	242.8	218.7	195.6	170.1	157.7	154.3
67.5°	252.6	244.6	247.9	247.9	231.6	211.0	192.7	171.7	148.7	138.1	134.9
70°	217.7	210.1	213.0	212.7	199.0	182.3	166.5	147.7	127.1	118.4	115.7
72.5°	182.4	175.8	178.4	178.2	166.6	155.9	140.2	123.9	106.0	99.0	96.6
75°	148.2	142.0	144.5	144.2	134.8	124.7	114.3	100.7	85.4	80.5	78.1
77.5°	115.6	109.2	111.3	111.3	104.5	97.2	88.8	78.3	67.5	62.2	60.4
80°	84.3	81.3	80.2	80.3	75.7	70.9	66.7	56.6	48.6	45.1	43.9
82.5°	55.4	52.9	51.8	52.1	49.4	46.5	43.9	36.8	31.5	29.4	28.8
85°	29.4	27.6	26.6	27.3	26.8	25.2	23.9	19.1	15.8	15.0	14.6
87.5°	9.3	8.1	7.4	9.8	8.4	7.4	7.2	5.7	4.4	4.4	4.2
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3
2.5°	567.5	567.5	562.3	561.1	560.6	561.2	556.1	555.1	562.6	560.0	554.3
5°	563.0	562.7	555.4	554.1	554.1	553.3	547.4	546.1	553.5	551.4	545.2
7.5°	557.4	556.6	548.0	547.0	545.7	545.2	538.7	537.8	544.1	542.8	537.0
10°	550.6	549.8	539.6	539.0	537.5	536.4	530.3	529.7	536.2	534.1	529.4
12.5°	541.7	540.3	529.8	529.2	528.0	527.6	521.6	521.3	528.5	526.4	521.5
15°	530.1	528.9	517.2	517.5	517.6	517.6	512.8	512.6	519.6	518.7	513.4
17.5°	517.2	515.6	504.5	505.3	506.2	507.3	503.6	504.2	511.7	510.5	505.7
20°	502.6	501.0	490.2	492.4	494.4	496.5	494.2	496.0	502.9	502.4	498.8
22.5°	486.3	484.7	474.7	478.1	481.4	485.4	484.3	486.5	493.8	493.6	490.4
25°	466.5	466.9	458.0	462.2	467.8	473.3	473.7	477.2	485.3	484.5	481.6
27.5°	447.9	448.4	439.0	446.2	453.6	460.8	462.5	467.2	475.5	474.8	472.3
30°	428.4	429.1	419.9	429.7	438.7	447.5	451.2	457.7	466.1	466.1	463.4
32.5°	408.1	409.3	399.8	412.9	423.4	433.6	440.1	446.8	456.4	456.1	453.9
35°	387.3	388.6	379.9	396.6	407.1	419.5	427.6	436.6	445.1	445.2	443.5
37.5°	366.1	367.7	359.7	378.0	390.0	404.7	415.0	424.0	433.4	434.0	432.4
40°	345.0	346.8	339.9	357.5	372.6	389.0	401.0	411.6	421.9	422.2	421.1
42.5°	324.0	325.8	320.6	337.9	355.0	372.6	386.7	398.7	409.3	410.0	408.8
45°	303.4	305.0	301.3	320.1	336.6	355.8	371.9	385.6	396.3	397.3	396.9
47.5°	283.0	284.5	281.1	298.4	317.3	337.7	356.4	371.5	382.9	384.0	383.7
50°	263.0	264.2	260.6	278.6	297.4	319.2	338.7	356.2	368.9	370.0	369.8
52.5°	243.1	244.3	241.2	260.2	277.3	300.2	321.4	340.4	353.0	354.6	354.8
55°	223.9	224.4	222.0	240.2	256.8	280.7	305.1	323.6	336.2	337.5	338.3
57.5°	204.7	204.8	202.8	220.2	236.1	260.6	286.2	305.5	317.5	318.8	320.0
60°	185.6	185.4	183.2	200.0	215.3	239.5	266.2	285.4	296.9	298.1	299.7
62.5°	166.6	166.2	164.2	179.7	194.1	218.0	244.8	263.4	274.4	275.2	277.3
65°	147.8	147.4	145.5	159.9	172.8	195.8	222.0	239.7	249.6	250.7	250.3
67.5°	129.2	128.4	127.0	139.8	151.6	172.8	198.0	214.9	223.1	224.0	226.5
70°	110.7	109.8	106.4	120.1	130.4	149.4	172.8	187.8	194.7	195.6	195.3
72.5°	92.4	91.5	87.9	100.5	109.2	125.8	146.7	159.2	165.2	166.0	166.0
75°	74.6	74.1	71.8	81.4	88.7	102.2	120.0	130.3	134.9	135.9	135.6
77.5°	57.5	57.1	54.9	63.1	68.8	78.9	93.2	101.3	104.7	105.8	108.0
80°	41.2	41.1	37.5	45.6	48.1	56.6	67.1	73.3	75.2	76.6	78.2
82.5°	26.4	26.5	22.9	29.8	30.9	36.3	42.8	46.7	48.0	49.2	50.4
85°	12.9	13.4	11.4	15.8	15.9	18.7	21.5	22.9	23.5	24.4	25.5
87.5°	3.3	3.8	2.1	4.5	4.0	5.2	6.0	6.4	6.2	6.9	7.3
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°	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3
2.5°	556.2	560.4	558.3	565.2	567.9	563.6	571.0	571.2	565.9	572.1	575.5
5°	547.6	551.9	550.6	557.8	561.1	557.4	566.4	568.1	563.0	570.0	575.5
7.5°	538.8	544.0	542.3	549.6	553.5	550.6	560.3	563.1	559.1	566.8	574.2
10°	531.3	535.6	533.8	541.5	544.9	542.5	552.1	557.3	553.5	563.0	571.8
12.5°	523.8	527.4	525.3	531.7	535.0	531.9	543.6	548.4	545.7	555.5	566.9
15°	514.3	518.3	515.4	521.1	523.6	520.9	530.5	538.7	535.4	546.1	558.7
17.5°	507.0	509.3	505.3	509.8	511.3	507.7	517.4	525.4	523.1	534.7	549.3
20°	498.9	500.8	495.2	497.7	497.6	493.1	502.0	509.9	508.3	521.2	537.8
22.5°	489.9	490.8	484.3	484.9	484.6	477.2	485.1	493.2	492.6	505.6	524.1
25°	480.4	480.5	472.2	471.9	469.0	460.2	467.2	476.4	474.4	488.5	507.9
27.5°	471.0	469.6	459.6	457.2	452.5	442.1	448.3	456.5	455.3	469.1	490.7
30°	460.9	459.2	446.8	442.5	435.7	423.6	428.8	436.5	437.2	449.2	471.9
32.5°	451.3	447.0	433.3	427.0	418.5	404.4	407.2	415.0	416.1	428.3	451.6
35°	439.0	436.1	419.3	408.4	400.0	384.7	387.6	393.0	394.6	406.5	430.3
37.5°	427.4	422.7	404.8	391.6	380.8	364.7	365.4	371.0	372.6	384.7	408.1
40°	415.3	408.7	389.4	373.9	361.6	344.6	343.7	349.5	350.7	362.5	383.7
42.5°	402.4	394.5	372.9	355.9	341.7	324.5	322.6	327.7	329.0	340.5	361.3
45°	389.4	379.9	355.9	337.3	321.8	304.2	302.4	306.2	308.2	319.1	339.1
47.5°	375.7	364.5	338.4	317.7	301.7	284.1	281.8	285.7	287.2	298.0	316.9
50°	361.2	347.7	320.4	297.6	281.7	264.3	261.0	265.5	267.0	277.0	295.6
52.5°	345.3	330.3	301.2	277.3	261.4	244.8	240.8	245.2	246.9	256.8	273.9
55°	328.5	312.3	281.8	258.6	241.4	225.2	221.9	223.6	227.3	236.6	252.5
57.5°	309.5	293.5	261.4	237.8	221.2	205.7	202.9	204.5	208.0	217.0	231.3
60°	289.4	272.4	240.6	217.0	201.0	186.2	183.7	185.2	188.9	197.1	210.4
62.5°	269.5	250.4	219.1	195.6	181.1	167.4	166.8	166.2	169.7	177.6	189.3
65°	245.4	227.1	196.7	174.4	161.2	148.9	146.2	147.4	150.7	158.0	170.2
67.5°	219.5	202.9	173.8	153.2	141.4	130.4	128.2	128.7	132.2	138.5	149.1
70°	192.1	177.5	150.3	131.9	121.9	111.6	110.2	110.3	113.6	119.2	128.4
72.5°	163.3	150.2	126.6	110.8	102.6	95.2	93.8	92.3	95.3	100.1	108.0
75°	134.0	122.5	103.0	90.1	83.6	77.4	76.2	74.6	77.7	81.8	88.0
77.5°	104.5	95.2	80.1	70.1	65.1	60.4	59.4	57.7	60.7	63.8	68.7
80°	75.6	68.8	59.8	49.3	47.6	44.5	43.5	41.6	44.5	46.5	50.2
82.5°	48.8	44.3	39.1	31.8	31.5	29.3	28.8	26.6	29.3	30.5	33.3
85°	24.7	22.5	21.2	16.2	16.7	15.2	15.1	12.9	15.0	15.5	17.1
87.5°	7.0	7.4	6.6	4.0	5.0	4.8	4.8	3.4	4.8	4.8	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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	568.3	568.3	568.3	568.3	568.3	568.3	568.3	568.3
2.5°	568.8	571.0	571.6	571.4	572.9	580.8	578.2	580.8
5°	570.1	575.1	576.5	578.3	580.7	589.7	586.8	590.0
7.5°	570.9	578.5	581.4	585.0	588.8	598.9	596.5	599.7
10°	570.9	580.7	585.0	590.9	596.1	607.8	605.5	609.2
12.5°	568.5	581.1	587.1	595.4	602.1	614.6	613.7	616.4
15°	563.6	579.1	587.3	598.1	606.3	620.3	619.9	623.1
17.5°	557.0	575.7	585.6	599.1	609.5	625.3	626.2	627.9
20°	548.6	569.2	582.2	598.7	611.7	629.1	630.3	632.7
22.5°	537.6	561.4	577.0	597.0	612.0	630.7	632.8	635.1
25°	524.6	551.9	570.2	593.7	610.7	630.6	633.5	635.5
27.5°	509.8	539.8	561.6	588.4	607.0	628.4	632.0	634.4
30°	492.6	526.8	551.8	581.5	601.9	624.5	628.3	630.7
32.5°	474.8	512.4	540.2	572.6	594.6	618.1	621.4	623.3
35°	455.5	495.1	526.1	561.2	585.2	607.9	610.4	612.4
37.5°	434.4	476.3	510.1	548.4	572.0	593.7	596.0	598.2
40°	412.6	456.5	492.0	532.6	556.2	576.3	578.7	580.3
42.5°	390.8	434.6	472.8	514.0	537.5	556.9	558.3	559.9
45°	368.6	412.0	451.2	493.5	516.7	534.9	535.4	536.7
47.5°	346.1	388.5	427.5	470.0	493.0	509.5	510.1	511.1
50°	323.4	365.1	402.2	444.7	467.1	484.6	482.2	483.3
52.5°	301.2	340.4	378.3	417.4	439.5	455.1	455.7	453.6
55°	279.3	316.3	351.1	388.8	409.9	421.9	421.5	422.3
57.5°	257.2	291.9	323.8	358.3	378.8	390.2	392.6	389.8
60°	234.6	267.2	295.9	327.0	346.9	356.4	359.2	356.6
62.5°	212.2	242.2	268.2	295.3	313.8	325.5	325.3	322.4
65°	189.8	217.0	240.2	263.2	279.3	291.1	290.6	287.9
67.5°	169.1	191.5	212.3	231.0	245.0	253.0	255.8	252.6
70°	146.3	165.7	184.0	199.0	210.5	217.8	220.4	217.7
72.5°	123.5	140.0	152.8	167.3	176.2	182.3	185.0	182.4
75°	101.0	114.5	125.0	136.3	142.5	147.7	150.8	148.2
77.5°	79.1	89.6	98.0	106.2	113.3	114.5	117.3	115.6
80°	58.3	65.9	72.0	77.4	82.6	83.1	85.4	84.3
82.5°	38.8	43.9	45.5	51.2	54.5	53.9	56.2	55.4
85°	20.5	23.6	26.4	28.1	30.0	28.2	30.2	29.4
87.5°	6.9	7.3	6.4	9.0	9.9	8.5	9.7	9.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)