

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: P837949

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1HI-27-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P837949
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-LD4-1HI-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

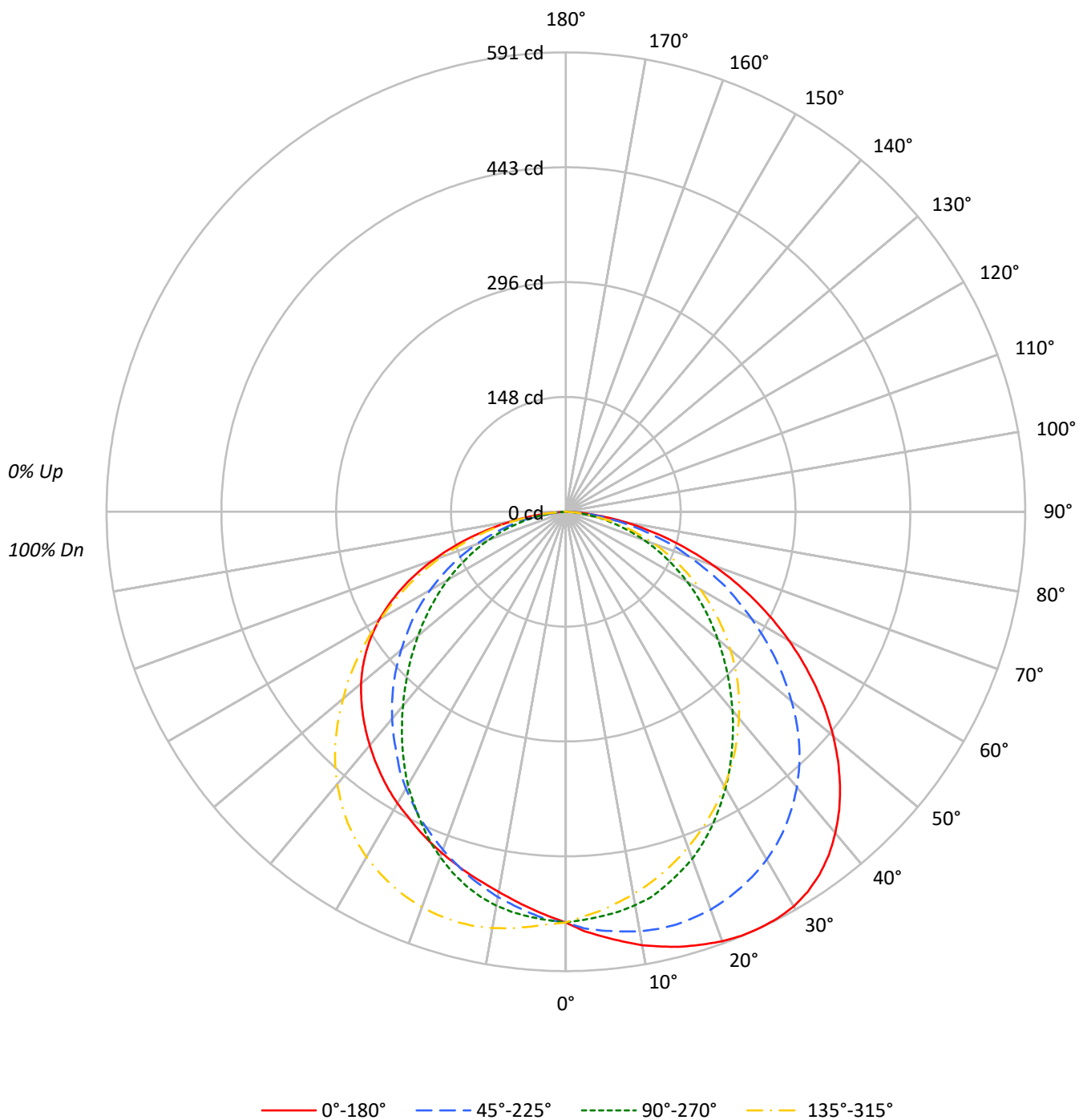
Lumens per Lamp: N/A
Luminaire Lumens: 1549.8 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 22
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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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°	1422	1422	1422	1422
5°	1482	1411	1385	1414
10°	1547	1404	1357	1406
15°	1614	1386	1343	1387
20°	1684	1361	1337	1353
25°	1754	1323	1337	1309
30°	1822	1277	1346	1263
35°	1870	1224	1360	1205
40°	1895	1172	1379	1145
45°	1899	1118	1405	1090
50°	1881	1067	1440	1039
55°	1842	1020	1472	991
60°	1784	970	1491	945
65°	1704	913	1484	892
70°	1592	847	1431	831
75°	1433	755	1313	751
80°	1215	632	1103	642
85°	846	420	701	429

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.2	3.2
10°-20°	145.2	9.4
20°-30°	222.6	14.4
30°-40°	270.6	17.5
40°-50°	281.3	18.2
50°-60°	254.1	16.4
60°-70°	193.2	12.5
70°-80°	107.7	7.0
80°-90°	24.8	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°	418.0	27.0
0°-40°	688.6	44.4
0°-60°	1224.1	79.0
0°-90°	1549.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1549.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	528	528	528	528	528	
5°	548	522	513	523	548	53
15°	579	498	482	498	579	164
25°	591	446	450	441	591	273
35°	569	373	414	367	569	356
45°	499	294	369	286	499	384
55°	393	217	314	211	393	350
65°	268	143	233	140	268	264
75°	138	73	126	72	138	146
85°	27	14	23	14	27	34
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°	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3
2.5°	540.0	532.1	532.2	539.1	533.8	536.4	529.0	531.8	531.0	531.6	525.5
5°	548.5	540.0	539.8	545.8	539.8	540.9	531.6	533.4	530.7	529.0	522.5
7.5°	557.5	549.0	548.1	553.3	545.5	544.6	534.3	534.3	529.4	525.1	518.9
10°	566.3	557.6	556.5	560.4	550.8	548.0	535.4	533.4	526.9	520.5	513.8
12.5°	573.0	564.1	563.2	565.7	554.9	549.7	535.4	531.6	522.0	513.0	507.8
15°	579.3	570.1	567.8	569.0	556.6	549.7	533.7	527.8	515.4	503.6	497.6
17.5°	583.7	575.0	572.6	572.5	557.5	547.6	530.0	521.8	507.1	492.8	486.7
20°	588.1	579.4	576.4	574.2	557.2	544.8	524.6	513.6	496.3	480.3	475.3
22.5°	590.4	581.4	578.2	574.8	555.6	539.6	517.9	504.0	484.3	465.2	461.0
25°	590.7	581.5	578.0	573.2	552.4	533.4	509.3	492.4	470.3	449.1	445.6
27.5°	589.7	579.6	576.2	570.4	547.6	525.9	499.1	479.2	455.6	432.1	428.3
30°	586.3	576.1	572.7	565.2	540.8	516.7	487.8	464.5	439.2	414.3	410.9
32.5°	579.4	569.4	566.7	559.2	533.4	506.0	474.8	448.8	421.1	397.3	392.3
35°	569.3	559.3	557.6	549.7	523.1	493.1	460.5	431.5	401.8	377.6	372.7
37.5°	556.1	547.7	545.1	537.4	510.9	478.6	444.1	412.8	382.2	356.1	353.2
40°	539.5	531.6	529.6	522.7	496.7	462.5	426.3	393.4	362.0	337.8	333.6
42.5°	520.5	513.1	512.0	504.8	479.2	444.6	407.1	373.4	341.0	317.5	313.4
45°	498.9	491.8	491.5	484.8	460.1	424.7	386.9	353.0	320.4	296.1	293.9
47.5°	475.1	468.7	468.7	462.5	438.8	402.9	366.1	331.8	299.7	278.2	274.3
50°	449.3	443.2	441.4	438.3	415.3	379.2	344.2	311.1	279.2	258.8	254.9
52.5°	421.7	416.5	417.7	412.1	389.8	354.4	322.0	287.8	258.6	240.0	236.2
55°	392.6	385.2	386.3	384.2	363.1	328.9	297.1	268.6	238.4	220.9	217.4
57.5°	362.4	352.8	356.7	355.5	334.8	302.8	274.3	246.8	218.3	202.2	198.8
60°	331.5	322.2	326.3	325.2	305.7	276.6	250.8	225.3	198.4	183.7	180.3
62.5°	299.7	291.2	294.9	294.0	276.1	249.9	227.3	203.9	178.3	165.1	161.9
65°	267.6	259.5	262.8	262.2	245.7	225.7	203.3	181.9	158.1	146.6	143.4
67.5°	234.9	227.3	230.4	230.4	215.3	196.2	179.2	159.6	138.3	128.4	125.4
70°	202.3	195.3	198.0	197.8	185.0	169.4	154.8	137.3	118.2	110.0	107.6
72.5°	169.6	163.4	165.9	165.6	154.9	144.9	130.4	115.2	98.6	92.0	89.8
75°	137.8	132.0	134.3	134.1	125.3	116.0	106.2	93.6	79.4	74.8	72.6
77.5°	107.4	101.5	103.5	103.5	97.1	90.3	82.6	72.8	62.7	57.8	56.2
80°	78.4	75.5	74.5	74.7	70.4	65.9	62.0	52.6	45.2	41.9	40.8
82.5°	51.5	49.2	48.2	48.4	46.0	43.3	40.8	34.3	29.3	27.4	26.7
85°	27.4	25.6	24.8	25.4	24.9	23.4	22.2	17.7	14.7	13.9	13.6
87.5°	8.6	7.5	6.9	9.1	7.8	6.9	6.7	5.3	4.1	4.1	3.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3
2.5°	527.5	527.5	522.7	521.6	521.1	521.7	516.9	516.1	523.0	520.6	515.3
5°	523.3	523.1	516.3	515.1	515.1	514.3	508.9	507.7	514.6	512.6	506.8
7.5°	518.1	517.4	509.4	508.5	507.3	506.8	500.8	499.9	505.8	504.6	499.2
10°	511.9	511.1	501.6	501.0	499.7	498.7	493.0	492.4	498.4	496.5	492.1
12.5°	503.6	502.3	492.5	491.9	490.8	490.4	484.9	484.6	491.3	489.3	484.8
15°	492.8	491.7	480.8	481.1	481.2	481.2	476.7	476.5	483.0	482.2	477.2
17.5°	480.8	479.3	469.0	469.7	470.6	471.6	468.1	468.7	475.6	474.5	470.1
20°	467.3	465.8	455.7	457.8	459.6	461.6	459.4	461.1	467.5	467.0	463.7
22.5°	452.1	450.6	441.3	444.5	447.5	451.2	450.3	452.2	459.0	458.9	455.9
25°	433.6	434.0	425.7	429.7	434.9	440.0	440.4	443.6	451.1	450.4	447.7
27.5°	416.4	416.9	408.1	414.8	421.7	428.3	429.9	434.4	442.0	441.4	439.0
30°	398.3	398.9	390.4	399.5	407.9	416.0	419.4	425.5	433.2	433.2	430.8
32.5°	379.4	380.5	371.6	383.8	393.6	403.1	409.1	415.4	424.3	424.0	421.9
35°	360.1	361.3	353.2	368.7	378.4	390.0	397.5	405.9	413.8	413.9	412.3
37.5°	340.3	341.8	334.4	351.4	362.5	376.2	385.8	394.2	402.9	403.4	402.0
40°	320.7	322.3	315.9	332.3	346.4	361.7	372.7	382.6	392.2	392.5	391.5
42.5°	301.2	302.9	298.1	314.1	330.0	346.4	359.4	370.7	380.5	381.1	380.0
45°	282.1	283.5	280.1	297.6	312.9	330.7	345.8	358.5	368.4	369.3	368.9
47.5°	263.1	264.4	261.4	277.4	295.0	314.0	331.3	345.4	356.0	357.0	356.7
50°	244.5	245.6	242.3	259.0	276.5	296.7	314.8	331.1	342.9	343.9	343.8
52.5°	226.0	227.1	224.3	241.9	257.8	279.1	298.8	316.4	328.1	329.6	329.9
55°	208.1	208.6	206.4	223.3	238.7	261.0	283.7	300.8	312.5	313.7	314.5
57.5°	190.3	190.4	188.5	204.7	219.5	242.3	266.0	284.0	295.1	296.3	297.5
60°	172.5	172.4	170.3	185.9	200.1	222.7	247.4	265.3	276.0	277.1	278.6
62.5°	154.9	154.5	152.7	167.1	180.4	202.7	227.6	244.8	255.1	255.8	257.8
65°	137.4	137.0	135.3	148.6	160.7	182.0	206.4	222.8	232.0	233.0	232.6
67.5°	120.1	119.4	118.0	130.0	141.0	160.7	184.1	199.7	207.4	208.2	210.6
70°	102.9	102.0	98.9	111.6	121.3	138.9	160.7	174.6	181.0	181.9	181.5
72.5°	85.9	85.0	81.7	93.4	101.5	116.9	136.4	148.0	153.5	154.3	154.3
75°	69.4	68.9	66.8	75.7	82.4	95.0	111.5	121.1	125.4	126.3	126.1
77.5°	53.5	53.1	51.0	58.7	64.0	73.3	86.6	94.1	97.3	98.3	100.4
80°	38.3	38.2	34.9	42.4	44.7	52.6	62.4	68.1	69.9	71.2	72.7
82.5°	24.5	24.6	21.3	27.7	28.7	33.8	39.8	43.4	44.6	45.7	46.8
85°	12.0	12.4	10.6	14.7	14.8	17.4	20.0	21.3	21.8	22.7	23.7
87.5°	3.1	3.6	2.0	4.2	3.7	4.8	5.5	5.9	5.8	6.4	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3
2.5°	517.0	521.0	519.0	525.4	527.9	523.9	530.8	531.0	526.0	531.8	535.0
5°	509.0	513.1	511.9	518.5	521.6	518.1	526.5	528.1	523.3	529.9	535.0
7.5°	500.9	505.7	504.1	510.9	514.6	511.9	520.9	523.4	519.8	526.9	533.8
10°	493.9	497.9	496.2	503.4	506.6	504.3	513.2	518.0	514.6	523.3	531.6
12.5°	487.0	490.3	488.3	494.2	497.3	494.5	505.3	509.8	507.3	516.4	527.0
15°	478.1	481.8	479.1	484.4	486.7	484.3	493.1	500.8	497.7	507.7	519.4
17.5°	471.3	473.4	469.7	473.9	475.3	471.9	480.9	488.5	486.2	497.1	510.6
20°	463.8	465.5	460.4	462.7	462.6	458.4	466.6	474.0	472.6	484.5	499.9
22.5°	455.4	456.3	450.3	450.7	450.5	443.6	451.0	458.5	457.9	470.0	487.2
25°	446.6	446.7	438.9	438.7	436.0	427.8	434.4	442.9	441.0	454.1	472.2
27.5°	437.8	436.6	427.2	425.0	420.7	410.9	416.7	424.4	423.3	436.1	456.2
30°	428.4	426.8	415.4	411.3	405.0	393.8	398.6	405.8	406.4	417.6	438.7
32.5°	419.6	415.5	402.8	396.9	389.0	376.0	378.5	385.8	386.8	398.1	419.8
35°	408.1	405.4	389.8	379.6	371.9	357.6	360.3	365.4	366.8	377.9	400.0
37.5°	397.3	393.0	376.3	364.0	354.0	339.0	339.7	344.9	346.4	357.6	379.4
40°	386.1	379.9	362.0	347.6	336.2	320.4	319.5	324.9	326.0	337.0	356.7
42.5°	374.1	366.7	346.6	330.9	317.7	301.6	299.9	304.6	305.8	316.6	335.9
45°	362.0	353.2	330.9	313.6	299.2	282.8	281.1	284.6	286.5	296.6	315.2
47.5°	349.2	338.9	314.6	295.4	280.5	264.1	262.0	265.5	267.0	277.0	294.6
50°	335.8	323.2	297.8	276.6	261.8	245.7	242.6	246.8	248.2	257.5	274.8
52.5°	321.0	307.1	280.0	257.8	243.0	227.6	223.9	228.0	229.6	238.7	254.6
55°	305.3	290.3	262.0	240.4	224.4	209.4	206.3	207.9	211.3	220.0	234.7
57.5°	287.7	272.8	243.0	221.1	205.7	191.2	188.7	190.1	193.3	201.7	215.0
60°	269.0	253.2	223.6	201.7	186.8	173.1	170.8	172.1	175.6	183.2	195.6
62.5°	250.5	232.8	203.7	181.9	168.3	155.6	155.0	154.5	157.7	165.1	176.0
65°	228.1	211.1	182.9	162.2	149.8	138.4	135.9	137.0	140.1	146.9	158.2
67.5°	204.1	188.7	161.5	142.4	131.5	121.3	119.2	119.6	122.9	128.8	138.6
70°	178.5	165.0	139.7	122.6	113.4	103.8	102.4	102.5	105.6	110.8	119.4
72.5°	151.8	139.6	117.7	103.0	95.4	88.5	87.2	85.8	88.6	93.0	100.4
75°	124.6	113.9	95.7	83.8	77.8	72.0	70.9	69.4	72.2	76.0	81.8
77.5°	97.1	88.5	74.4	65.2	60.5	56.2	55.2	53.6	56.4	59.3	63.8
80°	70.2	64.0	55.6	45.8	44.2	41.4	40.4	38.7	41.4	43.3	46.7
82.5°	45.3	41.2	36.4	29.6	29.3	27.2	26.7	24.8	27.2	28.3	30.9
85°	22.9	20.9	19.7	15.0	15.5	14.2	14.0	12.0	13.9	14.4	15.9
87.5°	6.5	6.9	6.2	3.7	4.7	4.4	4.4	3.2	4.4	4.4	5.1
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3
2.5°	528.7	530.8	531.3	531.2	532.6	540.0	537.5	540.0
5°	530.0	534.7	535.9	537.6	539.8	548.2	545.5	548.5
7.5°	530.7	537.7	540.5	543.8	547.4	556.7	554.5	557.5
10°	530.7	539.8	543.8	549.3	554.1	565.0	562.9	566.3
12.5°	528.5	540.2	545.8	553.5	559.7	571.4	570.5	573.0
15°	523.9	538.4	546.0	556.0	563.6	576.7	576.3	579.3
17.5°	517.8	535.2	544.4	557.0	566.6	581.2	582.1	583.7
20°	510.0	529.1	541.2	556.6	568.7	584.8	585.9	588.1
22.5°	499.8	521.8	536.4	555.0	568.9	586.3	588.3	590.4
25°	487.7	513.1	530.1	551.9	567.7	586.2	588.9	590.7
27.5°	473.9	501.8	522.1	547.0	564.2	584.2	587.5	589.7
30°	457.9	489.7	513.0	540.6	559.6	580.5	584.1	586.3
32.5°	441.4	476.4	502.1	532.3	552.8	574.6	577.7	579.4
35°	423.4	460.2	489.1	521.7	544.0	565.1	567.4	569.3
37.5°	403.8	442.7	474.2	509.8	531.7	551.9	554.0	556.1
40°	383.6	424.4	457.4	495.1	517.0	535.8	538.0	539.5
42.5°	363.3	404.0	439.5	477.9	499.7	517.7	519.0	520.5
45°	342.7	383.0	419.4	458.8	480.3	497.2	497.7	498.9
47.5°	321.7	361.2	397.4	436.9	458.3	473.7	474.2	475.1
50°	300.7	339.4	373.9	413.4	434.2	450.5	448.3	449.3
52.5°	280.0	316.4	351.7	388.0	408.6	423.0	423.6	421.7
55°	259.6	294.0	326.4	361.4	381.0	392.2	391.8	392.6
57.5°	239.1	271.3	301.0	333.1	352.2	362.8	365.0	362.4
60°	218.1	248.4	275.0	304.0	322.5	331.3	333.9	331.5
62.5°	197.3	225.1	249.3	274.5	291.7	302.6	302.4	299.7
65°	176.5	201.7	223.3	244.7	259.6	270.6	270.1	267.6
67.5°	157.2	178.1	197.4	214.8	227.7	235.2	237.8	234.9
70°	136.0	154.0	171.0	185.0	195.7	202.5	204.9	202.3
72.5°	114.8	130.1	142.1	155.5	163.8	169.4	172.0	169.6
75°	93.9	106.5	116.2	126.7	132.5	137.3	140.2	137.8
77.5°	73.6	83.3	91.1	98.7	105.4	106.5	109.1	107.4
80°	54.2	61.2	66.9	72.0	76.8	77.3	79.4	78.4
82.5°	36.1	40.8	42.3	47.6	50.6	50.2	52.2	51.5
85°	19.1	21.9	24.5	26.1	27.8	26.2	28.1	27.4
87.5°	6.4	6.8	5.9	8.4	9.2	7.9	9.0	8.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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