

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: LUMARK

Report Number: P212956

Luminaire Tested: **NFFLD-S-C15-D-UNV-33**

Test Date: 05/20/16

Test Information

Test Method: LM-79-08
Report Number: P212956
Test Lab: INNOVATION CENTER(G2)
Test Date: 05/20/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NFFLD-S-C15-D-UNV-33
Description: LOW WATTAGE LED FLOODLIGHT
Light Source: (2) CITIZEN 4000 70
CLU028-1204C4-40AL7K3
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OT50/UNV0680C/2DIMLT2

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5550.1 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Luminous Opening: (L: 0 ' x W: 0.46 ' x H: 0 '
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G1

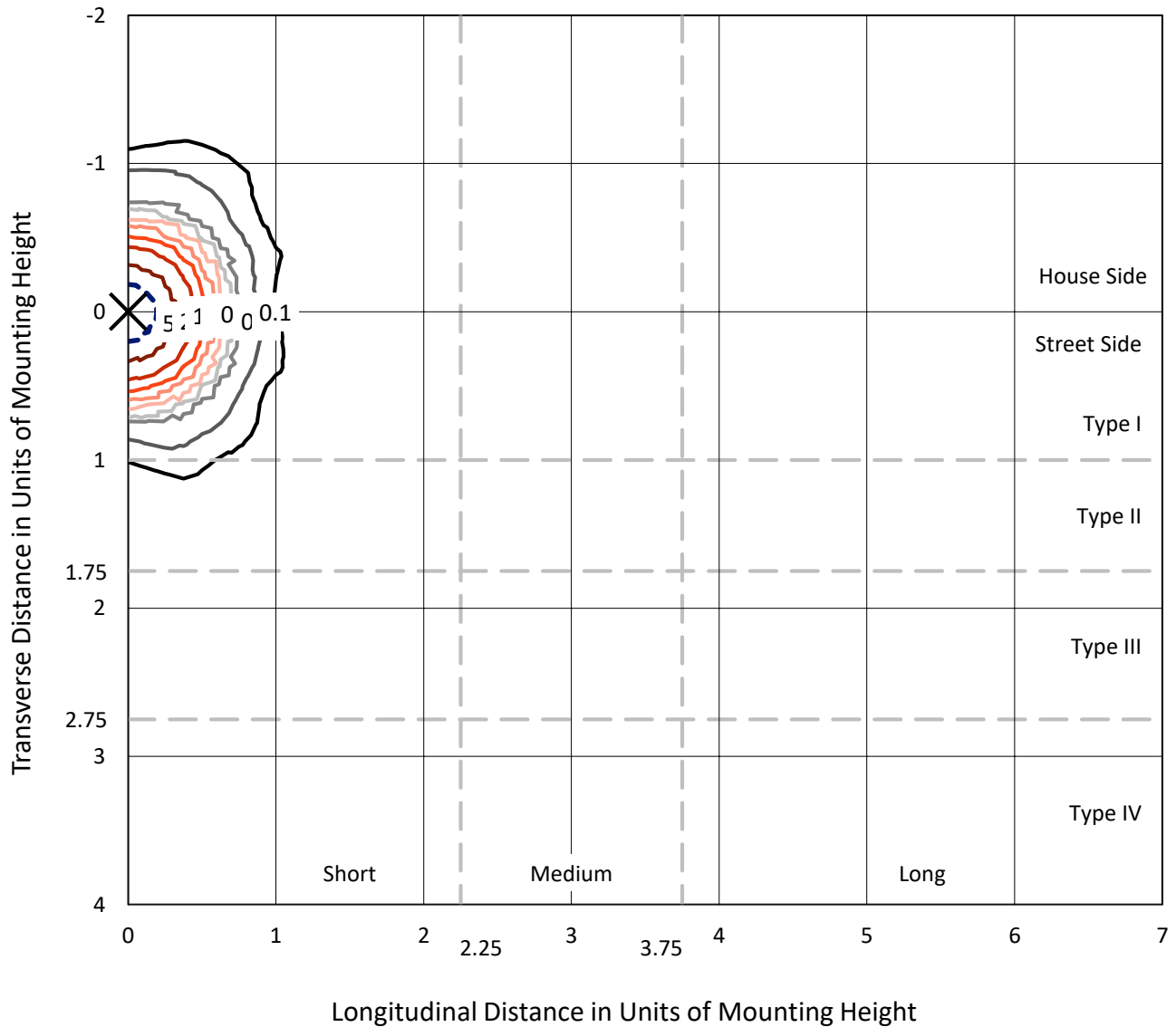
Input Watts (W): 57.8
Input Voltage (V): 120.1
Input Current (Ain): 0.483
Voltage Rise (V): NR
Power Factor: 0.9989
Total Harmonic Distortion (THDi): 4.56%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.3
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

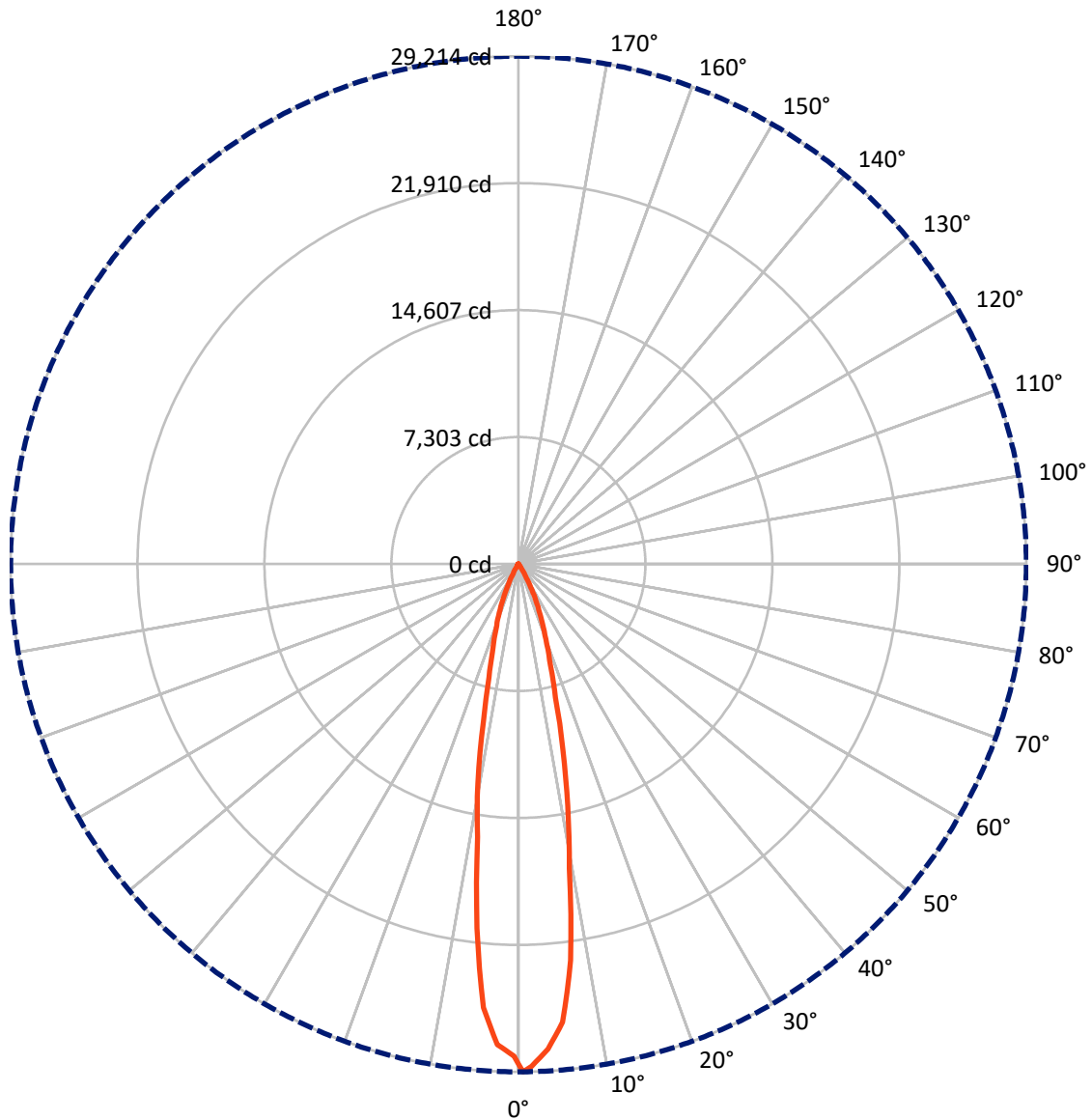
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 292.1 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 0-Deg Vertical

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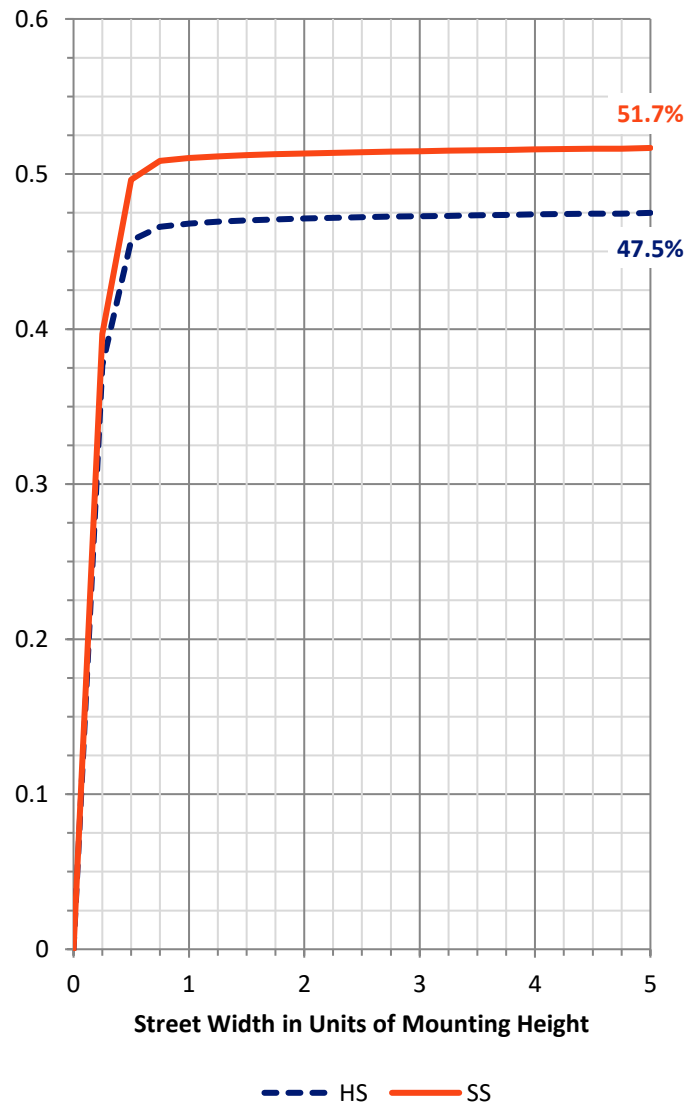
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2683.9	0.0	2683.9
	% Fixture	48.4	0.0	48.4
Street Side	Lumens	2866.3	0.0	2866.3
	% Fixture	51.6	0.0	51.6
Total	Lumens	5550.1	0.0	5550.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2078.2	37.4
10°-20°	2198.6	39.6
20°-30°	1006.6	18.1
30°-40°	198.4	3.6
40°-50°	33.8	0.6
50°-60°	20.2	0.4
60°-70°	18.4	0.3
70°-80°	34.6	0.6
80°-90°	24.5	0.4
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°-90°	5550.1	100.0
0°-180°	5550.1	100.0



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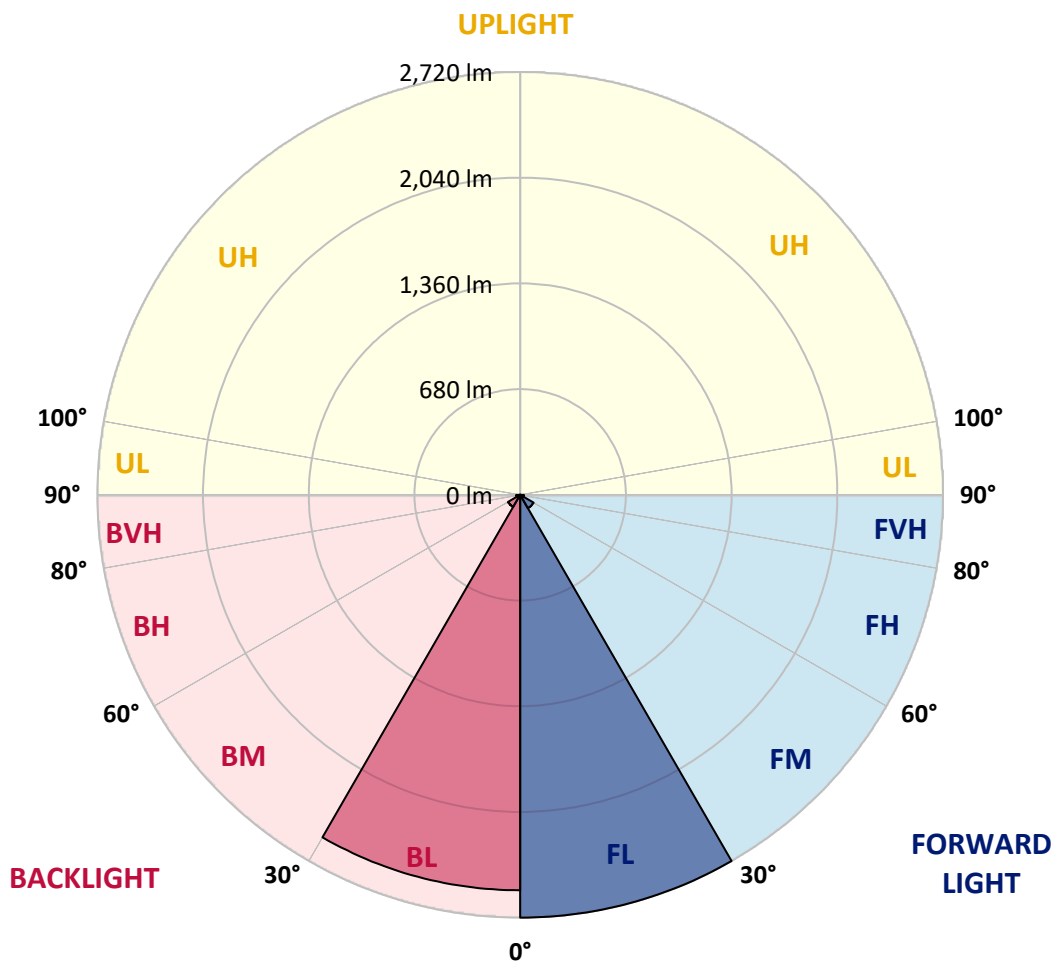
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2719.9	49.0			
FM (30°-60°)	99.6	1.8			
FH (60°-80°)	23.1	0.4			G0/660
FVH (80°-90°)	23.3	0.4			G1/100
BL (0°-30°)	2543.8	45.8	B4/5000		
BM (30°-60°)	90.7	1.6	B0/220		
BH (60°-80°)	24.7	0.4	B0/110		G0/660
BVH (80°-90°)	24.3	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6
1°	28907.4	28788.7	28683.4	28595.4	28527.7	28482.6	28461.4	28464.6	28491.7	28541.3	28500.5
3°	27945.9	27907.0	27865.6	27738.2	27658.2	27631.2	27658.0	27734.8	27746.7	27770.3	27719.4
5°	26479.6	26313.6	26093.0	26026.1	26014.6	25940.6	25840.4	25818.2	25953.4	25956.9	25818.8
7°	22998.4	22688.4	22476.3	22390.1	22384.7	22282.9	22042.4	21927.7	21977.7	21975.1	21724.7
9°	17764.8	17549.8	17720.9	17723.1	17542.8	17399.8	17392.1	17209.0	16885.9	16806.2	16675.9
11°	14219.8	14047.0	13971.5	13935.8	13902.4	13838.9	13739.8	13691.0	13700.9	13702.1	13479.5
13°	10960.1	10791.5	10781.3	10666.5	10632.6	10610.4	10558.5	10500.6	10312.8	10195.0	10040.6
15°	7983.7	7906.6	8044.5	7832.9	7916.1	7882.5	7695.4	7711.7	7470.2	7317.4	7267.1
17°	6130.4	6066.0	6083.6	6004.4	6011.9	5932.0	5901.1	5848.3	5759.2	5647.6	5622.5
19.5°	4591.3	4512.9	4508.6	4455.1	4459.6	4466.0	4422.9	4408.7	4318.6	4327.0	4224.4
22.5°	3258.7	3224.7	3206.9	3204.1	3201.4	3196.9	3144.9	3124.5	3090.5	3041.3	3011.4
25.5°	2172.5	2132.8	2132.1	2117.5	2138.5	2122.9	2069.3	2063.9	2035.0	1996.9	1965.6
29°	1039.4	1022.0	1045.0	1008.4	1017.1	1002.4	1007.1	1000.3	926.4	882.8	884.7
33°	207.5	239.2	292.6	258.0	272.3	260.2	285.4	290.3	234.3	169.6	216.9
37.5°	48.9	67.9	80.7	76.3	71.1	65.1	70.3	70.1	74.9	52.9	68.0
42.5°	39.9	48.2	62.3	57.4	60.8	53.5	50.8	48.7	50.2	37.9	35.1
47.5°	19.9	28.2	45.5	40.5	44.8	38.9	22.4	35.8	25.0	18.0	20.1
55°	12.0	22.3	26.3	16.1	19.3	19.7	4.3	8.4	8.3	4.0	4.4
65°	19.9	27.6	20.5	17.3	13.0	10.7	12.0	15.5	13.1	6.0	17.7
75°	8.0	26.9	15.1	16.9	18.7	25.3	28.4	29.4	36.8	27.9	35.8
85°	0.0	13.3	41.6	61.4	76.6	76.9	79.8	87.6	90.7	90.8	84.7
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6
1°	28471.7	28447.2	28421.4	28391.7	28359.2	28328.0	28305.5	28300.9	28305.5	28328.0	28359.2
3°	27686.7	27557.4	27487.0	27480.5	27538.0	27654.9	27654.2	27675.5	27654.2	27654.9	27538.0
5°	25548.9	25463.9	25458.0	25365.5	25274.4	25345.8	25606.6	25603.8	25606.6	25345.8	25274.4
7°	21445.3	21339.0	21324.5	21208.5	20970.4	20882.4	21067.0	21088.3	21067.0	20882.4	20970.4
9°	16807.0	16662.4	16456.1	16370.2	16376.2	16323.3	16017.5	15874.6	16017.5	16323.3	16376.2
11°	13255.4	13177.2	13093.7	12961.8	12870.7	12754.7	12776.1	12822.4	12776.1	12754.7	12870.7
13°	9938.3	9825.1	9740.1	9643.6	9524.3	9439.1	9390.1	9272.4	9390.1	9439.1	9524.3
15°	7252.5	7083.3	7087.9	7048.0	6855.1	6949.4	6864.0	6723.9	6864.0	6949.4	6855.1
17°	5552.5	5496.0	5440.4	5402.7	5376.6	5367.2	5304.0	5294.5	5304.0	5367.2	5376.6
19.5°	4188.9	4109.4	4090.7	4046.7	4027.9	4029.2	3954.5	3949.9	3954.5	4029.2	4027.9
22.5°	2972.4	2948.5	2948.5	2891.8	2871.7	2853.2	2833.3	2822.8	2833.3	2853.2	2871.7
25.5°	1947.1	1908.2	1891.2	1866.0	1824.3	1829.6	1798.4	1773.5	1798.4	1829.6	1824.3
29°	917.9	871.7	844.8	837.5	803.4	831.3	791.9	755.1	791.9	831.3	803.4
33°	256.3	240.1	218.1	216.4	179.2	227.7	178.2	137.6	178.2	227.7	179.2
37.5°	63.9	74.2	62.9	71.5	76.5	82.3	73.5	64.8	73.5	82.3	76.5
42.5°	46.2	53.3	48.9	59.0	59.2	65.0	60.2	60.8	60.2	65.0	59.2
47.5°	33.8	28.5	35.6	46.9	50.6	45.9	39.8	31.9	39.8	45.9	50.6
55°	19.1	10.6	15.6	34.4	28.7	32.3	16.6	0.0	16.6	32.3	28.7
65°	18.1	12.1	25.8	15.5	16.3	27.8	17.0	0.0	17.0	27.8	16.3
75°	34.4	31.8	35.4	22.4	15.7	14.2	24.8	0.0	24.8	14.2	15.7
85°	91.2	81.2	83.2	84.3	66.3	47.6	13.3	0.0	13.3	47.6	66.3
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6	29213.6
1°	28391.7	28421.4	28447.2	28471.7	28500.5	28541.3	28491.7	28464.6	28461.4	28482.6	28527.7
3°	27480.5	27487.0	27557.4	27686.7	27719.4	27770.3	27746.7	27734.8	27658.0	27631.2	27658.2
5°	25365.5	25458.0	25463.9	25548.9	25818.8	25956.9	25953.4	25818.2	25840.4	25940.6	26014.6
7°	21208.5	21324.5	21339.0	21445.3	21724.7	21975.1	21977.7	21927.7	22042.4	22282.9	22384.7
9°	16370.2	16456.1	16662.4	16807.0	16675.9	16806.2	16885.9	17209.0	17392.1	17399.8	17542.8
11°	12961.8	13093.7	13177.2	13255.4	13479.5	13702.1	13700.9	13691.0	13739.8	13838.9	13902.4
13°	9643.6	9740.1	9825.1	9938.3	10040.6	10195.0	10312.8	10500.6	10558.5	10610.4	10632.6
15°	7048.0	7087.9	7083.3	7252.5	7267.1	7317.4	7470.2	7711.7	7695.4	7882.5	7916.1
17°	5402.7	5440.4	5496.0	5552.5	5622.5	5647.6	5759.2	5848.3	5901.1	5932.0	6011.9
19.5°	4046.7	4090.7	4109.4	4188.9	4224.4	4327.0	4318.6	4408.7	4422.9	4466.0	4459.6
22.5°	2891.8	2948.5	2948.5	2972.4	3011.4	3041.3	3090.5	3124.5	3144.9	3196.9	3201.4
25.5°	1866.0	1891.2	1908.2	1947.1	1965.6	1996.9	2035.0	2063.9	2069.3	2122.9	2138.5
29°	837.5	844.8	871.7	917.9	884.7	882.8	926.4	1000.3	1007.1	1002.4	1017.1
33°	216.4	218.1	240.1	256.3	216.9	169.6	234.3	290.3	285.4	260.2	272.3
37.5°	71.5	62.9	74.2	63.9	68.0	52.9	74.9	70.1	70.3	65.1	71.1
42.5°	59.0	48.9	53.3	46.2	35.1	37.9	50.2	48.7	50.8	53.5	60.8
47.5°	46.9	35.6	28.5	33.8	20.1	18.0	25.0	35.8	22.4	38.9	44.8
55°	34.4	15.6	10.6	19.1	4.4	4.0	8.3	8.4	4.3	19.7	19.3
65°	15.5	25.8	12.1	18.1	17.7	6.0	13.1	15.5	12.0	10.7	13.0
75°	22.4	35.4	31.8	34.4	35.8	27.9	36.8	29.4	28.4	25.3	18.7
85°	84.3	83.2	81.2	91.2	84.7	90.8	90.7	87.6	79.8	76.9	76.6
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):

	330°	340°	350°	360°
0°	29213.6	29213.6	29213.6	29213.6
1°	28595.4	28683.4	28788.7	28907.4
3°	27738.2	27865.6	27907.0	27945.9
5°	26026.1	26093.0	26313.6	26479.6
7°	22390.1	22476.3	22688.4	22998.4
9°	17723.1	17720.9	17549.8	17764.8
11°	13935.8	13971.5	14047.0	14219.8
13°	10666.5	10781.3	10791.5	10960.1
15°	7832.9	8044.5	7906.6	7983.7
17°	6004.4	6083.6	6066.0	6130.4
19.5°	4455.1	4508.6	4512.9	4591.3
22.5°	3204.1	3206.9	3224.7	3258.7
25.5°	2117.5	2132.1	2132.8	2172.5
29°	1008.4	1045.0	1022.0	1039.4
33°	258.0	292.6	239.2	207.5
37.5°	76.3	80.7	67.9	48.9
42.5°	57.4	62.3	48.2	39.9
47.5°	40.5	45.5	28.2	19.9
55°	16.1	26.3	22.3	12.0
65°	17.3	20.5	27.6	19.9
75°	16.9	15.1	26.9	8.0
85°	61.4	41.6	13.3	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)