

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: P163793

Luminaire Tested: **LDRL-SL4-F01-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163793
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-F01-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (7) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1671.9 lumens
Efficiency: N/A
Efficacy: 64.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 25.9
Input Voltage (V): NR
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

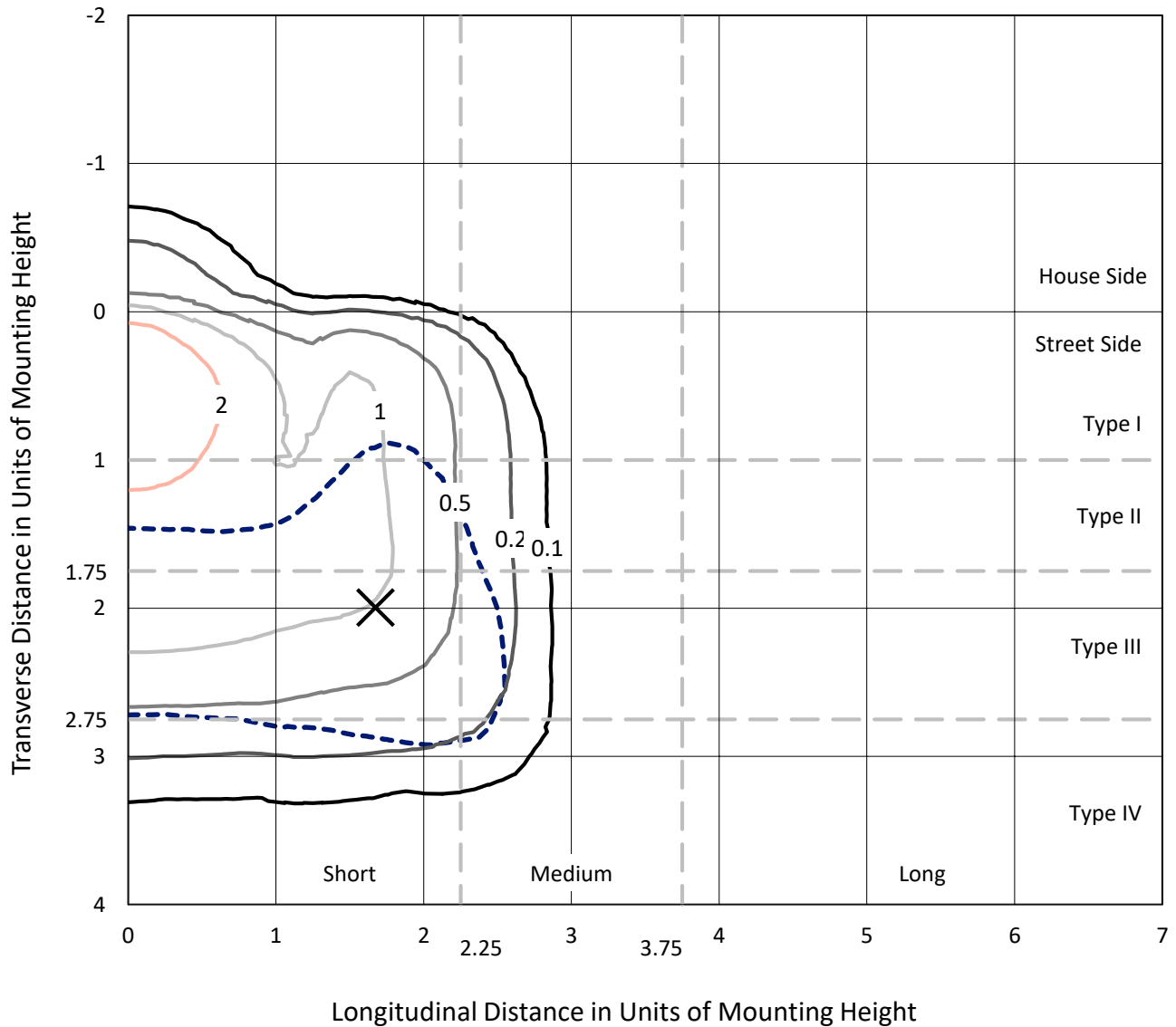


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Iso-Footcandle Lines of Horizontal Illumination

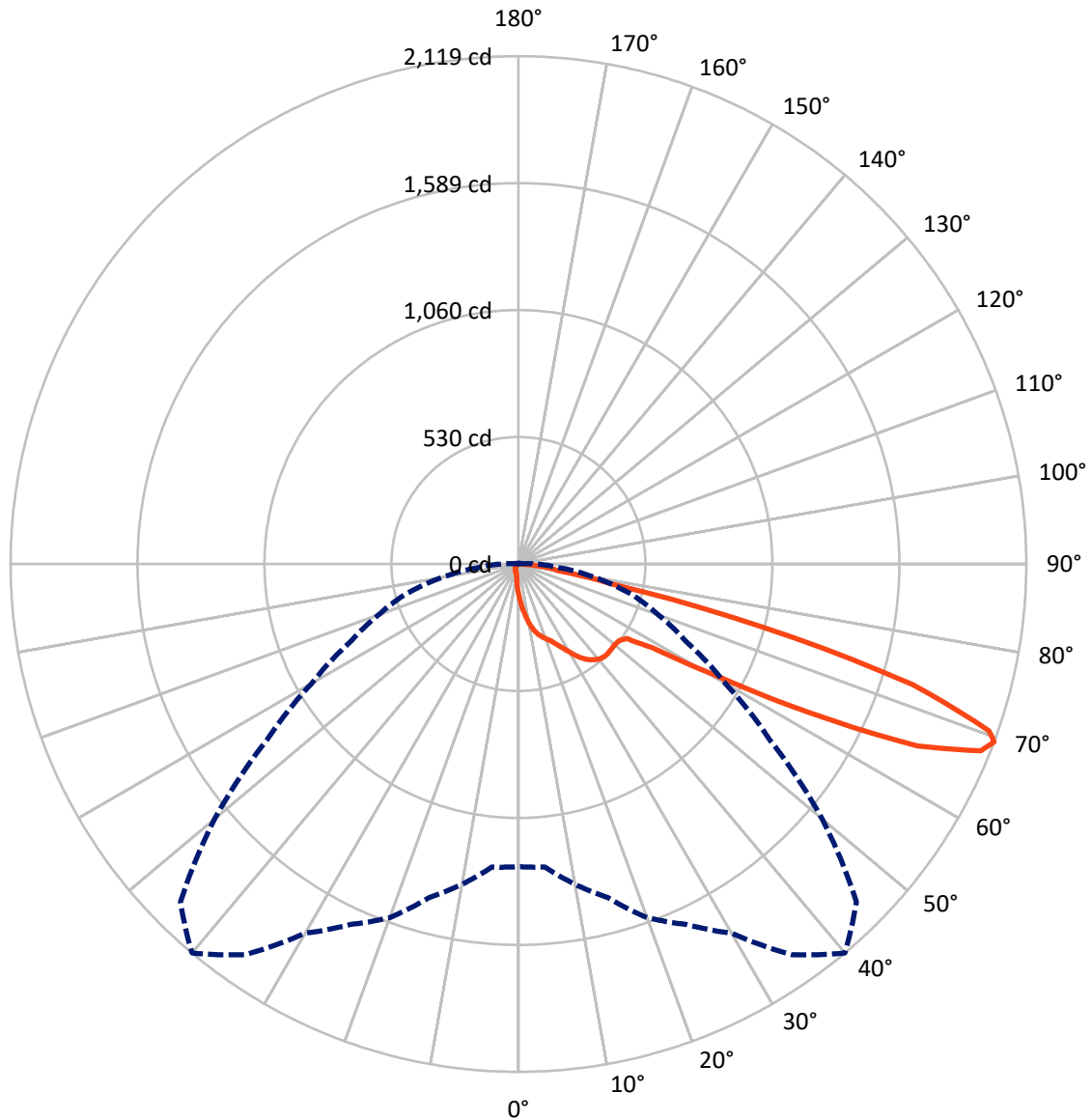
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	49.8	0.0	49.8
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	1622.1	0.0	1622.1
	% Fixture	97.0	0.0	97.0
Total	Lumens	1671.9	0.0	1671.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.0	0.8
10°-20°	44.7	2.7
20°-30°	85.6	5.1
30°-40°	142.4	8.5
40°-50°	192.7	11.5
50°-60°	301.4	18.0
60°-70°	619.6	37.1
70°-80°	249.3	14.9
80°-90°	23.1	1.4
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°	1671.9	100.0
0°-180°	1671.9	100.0



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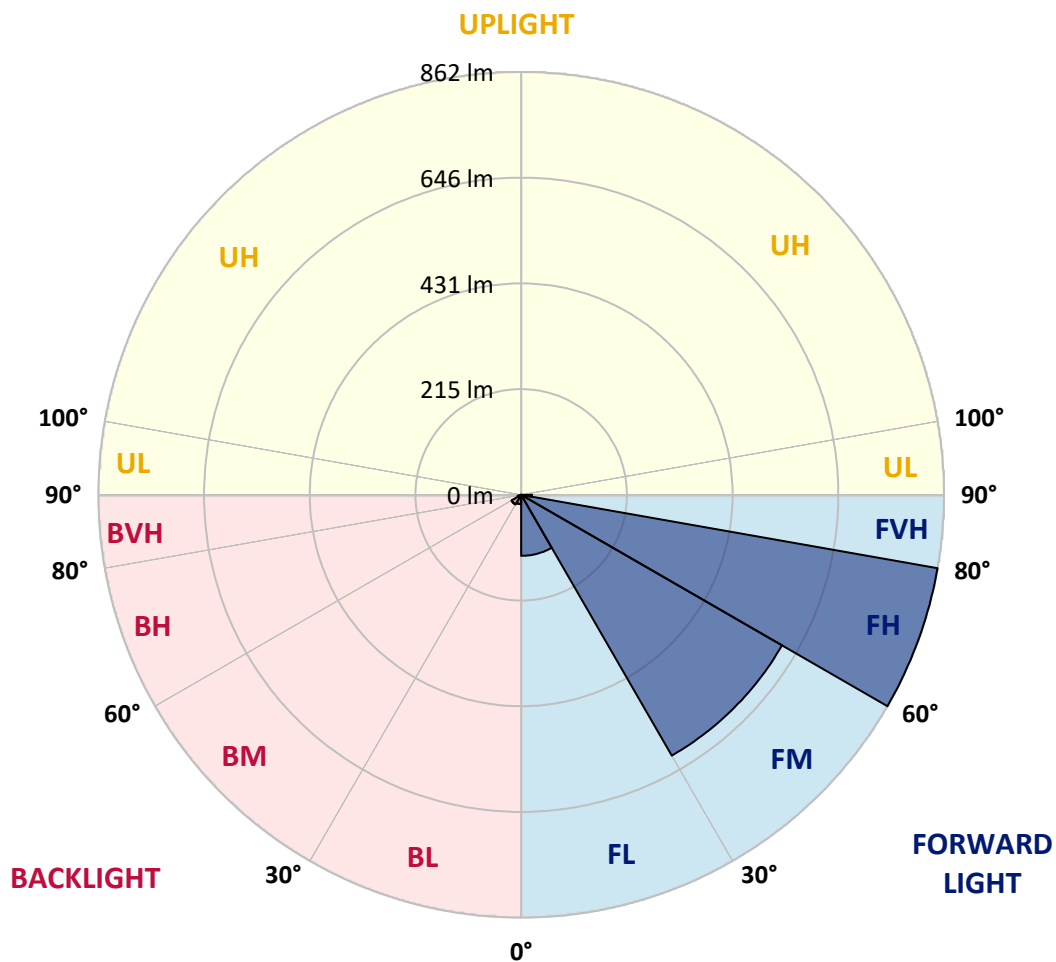
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	124.4	7.4			
FM (30°-60°)	613.8	36.7			
FH (60°-80°)	861.7	51.5			G1/1800
FVH (80°-90°)	22.2	1.3			G1/100
BL (0°-30°)	18.9	1.1	B0/110		
BM (30°-60°)	22.7	1.4	B0/220		
BH (60°-80°)	7.3	0.4	B0/110		G0/110
BVH (80°-90°)	0.9	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3
2.5°	168.4	166.5	164.3	164.3	161.6	161.6	159.9	155.6	155.0	152.6	150.1
5°	215.0	213.4	210.6	208.2	206.0	202.1	199.4	194.2	188.4	183.0	178.0
7.5°	260.5	259.6	254.7	253.9	250.3	244.0	238.6	230.9	221.0	213.4	204.3
10°	302.6	300.7	299.6	295.0	289.8	282.9	274.4	265.1	253.6	241.6	228.7
12.5°	336.1	335.0	330.0	328.1	322.6	315.8	305.1	293.1	281.6	265.9	250.9
15°	361.0	359.1	355.8	352.8	346.2	340.2	330.3	317.2	303.2	286.2	268.1
17.5°	381.8	378.2	377.4	372.8	365.9	358.8	347.8	335.8	319.3	302.4	282.7
20°	409.7	404.8	403.2	396.3	388.4	378.5	365.9	350.8	333.6	315.0	294.7
22.5°	442.6	439.0	435.5	429.5	419.3	405.3	387.0	370.6	348.7	328.1	306.2
25°	489.2	486.2	480.4	472.2	459.6	442.9	420.7	396.6	370.8	344.5	318.8
27.5°	534.4	531.6	527.5	521.2	507.0	488.6	461.2	430.6	398.0	366.2	337.7
30°	576.8	574.3	570.2	563.9	551.3	533.3	502.3	469.4	428.9	391.9	357.7
32.5°	622.5	621.7	617.1	608.0	597.1	572.7	539.0	503.7	462.6	419.9	379.9
35°	674.3	668.0	663.6	654.6	636.0	609.9	570.5	531.9	488.6	444.8	400.1
37.5°	718.1	712.1	706.6	695.1	672.4	639.3	594.6	552.2	507.5	462.9	417.4
40°	750.2	747.2	740.6	725.5	700.1	660.6	612.4	566.1	521.2	476.3	431.4
42.5°	774.0	769.3	761.9	746.3	716.2	671.3	619.5	571.9	527.5	484.5	440.4
45°	782.8	778.9	772.1	755.1	722.5	674.3	619.2	570.2	527.8	487.0	446.4
47.5°	777.6	773.7	767.7	751.8	719.8	670.7	614.3	565.6	525.0	487.8	451.9
50°	760.3	758.1	753.5	740.0	711.3	663.9	609.9	563.1	524.5	491.9	459.6
52.5°	758.7	757.3	751.5	738.1	708.8	661.7	609.4	564.5	529.2	497.1	465.1
55°	927.1	907.7	864.1	827.1	766.3	694.0	637.1	586.7	548.9	517.6	495.2
57.5°	1317.7	1288.6	1231.4	1161.0	1021.3	884.1	774.3	694.8	655.7	641.4	649.9
60°	1500.6	1495.4	1486.4	1453.0	1381.5	1263.4	1132.0	989.8	932.9	927.9	945.2
62.5°	1587.4	1584.1	1586.9	1582.8	1560.6	1526.1	1488.3	1426.9	1370.5	1334.1	1256.9
65°	1627.4	1629.6	1645.2	1657.6	1660.3	1669.3	1697.0	1773.4	1829.3	1735.3	1520.9
67.5°	1525.8	1538.7	1574.6	1619.5	1672.1	1723.0	1805.2	1966.2	2081.0	1970.6	1666.0
69°	1263.2	1269.5	1357.1	1441.7	1570.2	1660.0	1779.2	1990.3	2119.3	1994.7	1654.5
70°	994.5	1000.2	1094.2	1209.2	1426.4	1542.0	1697.8	1949.5	2083.5	1962.7	1595.4
72.5°	448.6	440.4	473.5	535.2	771.3	954.8	1227.3	1579.5	1718.9	1572.4	1193.6
75°	313.3	309.8	313.3	313.6	350.3	451.9	570.2	856.2	1058.8	913.7	570.2
77.5°	242.7	240.2	237.7	235.0	239.4	268.1	279.6	303.7	394.4	373.0	217.5
80°	192.0	189.8	195.8	193.9	193.9	197.2	195.0	186.0	169.0	156.7	140.2
82.5°	89.3	89.8	89.8	97.5	117.5	137.2	143.5	134.5	119.4	101.6	81.9
85°	8.5	9.6	16.2	24.9	49.6	55.9	56.1	46.6	46.6	36.7	29.6
87.5°	0.0	0.3	0.3	0.3	2.5	6.8	5.7	1.6	0.8	0.8	1.4
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3
2.5°	145.7	144.9	141.6	138.3	135.3	132.0	129.0	126.0	122.7	120.2	117.2
5°	170.4	164.3	157.5	150.9	144.3	137.5	130.4	124.1	117.5	111.5	105.7
7.5°	195.3	183.5	174.2	162.4	151.7	141.1	131.2	121.1	111.7	103.0	94.8
10°	216.4	202.1	187.6	172.5	157.2	143.0	129.3	117.2	104.9	94.2	84.1
12.5°	233.6	215.5	197.7	178.9	161.6	143.5	126.5	112.0	97.5	85.5	75.1
15°	249.2	228.4	207.1	185.2	163.2	142.7	123.8	105.7	90.9	77.2	65.5
17.5°	261.8	238.0	213.9	189.3	165.7	141.6	120.2	101.3	84.1	69.8	58.3
20°	272.8	247.9	221.8	194.2	167.3	141.3	117.2	95.9	78.0	63.0	51.8
22.5°	282.9	258.0	230.1	200.5	169.8	141.1	114.5	91.8	72.8	57.8	46.6
25°	294.4	268.1	238.8	207.1	174.2	142.1	112.8	88.5	68.2	52.9	42.5
27.5°	307.3	279.6	249.2	215.3	179.9	144.3	112.3	84.9	64.1	48.2	39.2
30°	325.4	293.3	259.6	223.5	185.2	146.8	111.7	82.7	60.0	44.6	35.9
32.5°	341.3	306.7	271.1	232.0	190.9	149.3	111.5	79.7	56.1	41.1	33.4
35°	358.0	319.1	281.0	240.2	195.8	152.0	111.2	77.5	52.6	37.5	31.0
37.5°	372.5	329.5	288.7	247.3	201.3	154.5	111.5	75.6	49.3	34.5	28.7
40°	384.8	340.2	297.2	253.9	207.1	158.3	111.7	73.7	46.0	31.8	26.8
42.5°	395.8	350.3	306.2	261.3	213.6	162.7	113.4	72.0	43.3	29.3	24.9
45°	404.3	359.6	316.1	271.7	224.3	169.8	116.4	70.9	40.5	27.1	23.3
47.5°	413.0	373.3	332.8	288.1	239.9	181.0	121.6	70.7	38.3	25.5	21.9
50°	425.1	387.0	347.6	304.8	254.2	192.5	127.9	70.9	35.6	23.8	20.5
52.5°	433.8	401.0	366.7	333.9	288.1	227.6	152.3	75.9	34.2	22.5	18.9
55°	485.6	479.9	480.7	486.2	450.8	387.3	254.7	109.6	40.3	25.5	18.6
57.5°	684.7	705.0	716.8	716.5	658.1	545.9	342.1	140.8	44.9	29.6	22.2
60°	946.5	931.2	909.6	856.2	778.6	623.1	382.6	151.5	38.9	23.5	20.3
62.5°	1178.0	1088.2	1008.4	921.9	820.3	649.9	390.8	150.6	34.0	17.8	14.2
65°	1322.3	1160.7	1032.0	923.5	803.9	627.5	369.7	138.3	28.7	14.5	11.8
67.5°	1356.8	1121.6	939.4	801.1	671.6	488.3	271.4	104.1	22.5	12.0	10.4
69°	1281.5	996.9	778.4	621.4	488.6	324.0	167.9	65.7	17.2	11.0	9.6
70°	1178.8	867.1	634.0	498.7	361.8	227.6	117.5	46.3	14.0	10.1	8.8
72.5°	758.4	455.5	311.7	216.9	149.3	90.7	46.0	20.8	10.7	8.5	7.1
75°	294.2	168.4	122.1	92.8	72.6	50.4	27.9	13.4	9.0	7.1	5.5
77.5°	144.9	110.9	90.7	62.2	36.2	22.5	15.1	10.4	7.4	5.2	3.6
80°	114.5	76.1	45.5	28.2	21.4	16.2	11.5	8.5	5.5	3.3	2.5
82.5°	58.6	32.0	23.5	19.2	15.9	12.6	9.3	6.0	3.6	2.2	1.9
85°	18.3	13.4	12.0	11.8	11.0	9.0	6.6	3.8	2.2	1.4	1.4
87.5°	1.4	1.9	2.5	1.9	2.2	1.9	2.5	1.6	1.1	1.1	0.8
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3	126.3
2.5°	115.0	111.7	108.7	106.8	103.3	101.9	100.5	100.0	97.5	98.1	95.9
5°	100.5	94.8	90.4	86.0	81.9	78.9	76.4	73.4	70.9	69.8	67.6
7.5°	87.4	80.0	74.2	69.6	64.6	60.8	57.5	55.3	53.1	50.9	49.8
10°	75.9	67.9	61.3	56.7	52.0	48.8	46.3	44.6	43.3	42.5	42.2
12.5°	65.2	57.5	51.5	47.4	43.8	42.2	41.1	40.3	40.0	39.7	39.7
15°	57.0	49.3	44.6	41.6	40.0	39.2	38.9	38.3	37.8	37.5	37.5
17.5°	49.3	43.5	40.3	38.6	37.8	37.3	36.7	36.2	35.6	35.3	35.3
20°	44.1	39.4	37.8	36.7	35.9	35.3	34.5	34.0	33.7	33.4	33.1
22.5°	40.0	37.0	35.9	35.1	34.0	33.1	32.6	32.0	31.5	31.2	31.0
25°	37.0	35.1	34.2	33.1	32.0	31.2	30.4	29.6	29.0	28.7	28.2
27.5°	34.8	33.4	32.3	31.0	29.9	29.0	28.2	27.4	26.8	26.3	26.0
30°	32.9	31.5	30.1	29.0	27.7	26.8	25.8	24.9	24.6	24.1	23.5
32.5°	31.0	29.6	28.2	26.8	25.5	24.4	23.8	22.7	22.2	21.9	21.4
35°	28.7	27.4	25.8	24.6	23.3	22.2	21.4	20.5	20.0	19.4	19.2
37.5°	26.8	25.2	23.5	22.2	21.1	20.0	19.2	18.3	17.8	17.2	17.0
40°	24.6	23.0	21.4	20.0	18.9	18.1	17.2	16.4	15.9	15.6	15.6
42.5°	22.7	20.8	19.2	18.1	17.2	16.2	15.3	14.5	14.2	14.0	14.2
45°	20.8	18.9	17.5	16.4	15.6	14.5	13.7	13.1	12.9	13.1	13.4
47.5°	19.2	17.2	15.9	15.1	14.2	13.4	12.6	12.0	12.0	12.6	13.1
50°	17.5	15.6	14.5	14.0	13.1	12.3	11.2	11.0	11.2	11.8	12.3
52.5°	15.9	13.7	12.9	12.6	11.8	11.0	10.1	9.9	10.1	10.7	10.4
55°	14.2	12.0	11.8	11.5	10.7	9.6	8.8	8.8	8.8	8.5	7.9
57.5°	13.7	10.7	10.4	10.1	9.3	8.2	7.7	7.1	6.8	6.0	5.7
60°	14.2	9.6	9.6	9.0	8.2	7.1	6.3	5.5	4.9	4.4	4.4
62.5°	11.5	8.8	8.5	7.9	6.8	5.7	4.9	4.1	3.8	3.6	3.6
65°	9.3	7.9	7.4	6.6	5.7	4.7	3.8	3.3	3.0	3.0	3.3
67.5°	8.5	7.1	6.3	5.5	4.7	3.6	3.0	2.7	2.7	3.0	3.0
69°	7.9	6.6	5.7	4.9	4.1	3.3	2.7	2.7	2.7	2.7	3.0
70°	7.4	6.3	5.5	4.7	3.6	2.7	2.5	2.5	2.7	2.7	3.0
72.5°	5.7	4.9	4.7	3.8	2.7	2.5	2.2	2.5	2.5	2.7	2.7
75°	4.4	3.6	3.6	3.0	2.2	1.9	1.9	2.2	2.2	2.5	2.5
77.5°	3.0	2.5	2.5	2.2	1.9	1.6	1.6	1.9	2.2	2.2	2.5
80°	2.2	1.9	1.6	1.9	1.6	1.4	1.6	1.9	1.9	2.2	2.2
82.5°	1.6	1.6	1.6	1.6	1.4	1.4	1.6	1.6	1.9	2.2	2.2
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.6	1.6	1.9	1.9
87.5°	0.8	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4	1.6	1.6
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):

	165°	170°	175°	180°
0°	126.3	126.3	126.3	126.3
2.5°	95.3	95.0	93.9	94.2
5°	66.8	65.2	66.3	66.0
7.5°	49.0	48.8	48.5	49.0
10°	41.9	41.9	41.6	41.9
12.5°	39.4	39.4	39.4	39.4
15°	37.5	37.5	37.3	37.3
17.5°	35.3	35.3	35.3	35.1
20°	33.1	32.9	32.9	32.9
22.5°	30.7	30.4	30.4	30.4
25°	28.2	27.9	27.9	27.9
27.5°	25.8	25.5	25.2	25.2
30°	23.3	23.0	22.7	22.7
32.5°	20.8	20.5	20.3	20.3
35°	18.6	18.6	18.3	18.1
37.5°	16.7	16.7	16.7	16.7
40°	15.3	15.6	15.6	15.6
42.5°	14.5	14.8	15.1	15.3
45°	14.0	14.5	14.8	14.8
47.5°	13.7	14.0	14.2	14.2
50°	12.6	12.3	12.3	12.3
52.5°	10.1	9.6	9.3	9.0
55°	7.4	7.1	6.6	6.6
57.5°	5.2	5.2	4.9	4.9
60°	4.1	4.1	3.8	4.1
62.5°	3.6	3.6	3.6	3.6
65°	3.3	3.3	3.3	3.3
67.5°	3.3	3.3	3.3	3.3
69°	3.0	3.0	3.0	3.0
70°	3.0	3.0	3.0	3.0
72.5°	2.7	2.7	2.7	2.7
75°	2.5	2.7	2.7	2.7
77.5°	2.5	2.5	2.5	2.5
80°	2.2	2.2	2.5	2.5
82.5°	2.2	2.2	2.2	2.2
85°	1.9	1.9	2.2	2.2
87.5°	1.6	1.6	1.9	1.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)