

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: P163538

Luminaire Tested: **LDRL-SL3-E04-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163538
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL3-E04-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6902.8 lumens
Efficiency: N/A
Efficacy: 71.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

Input Watts (W): 97.2
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

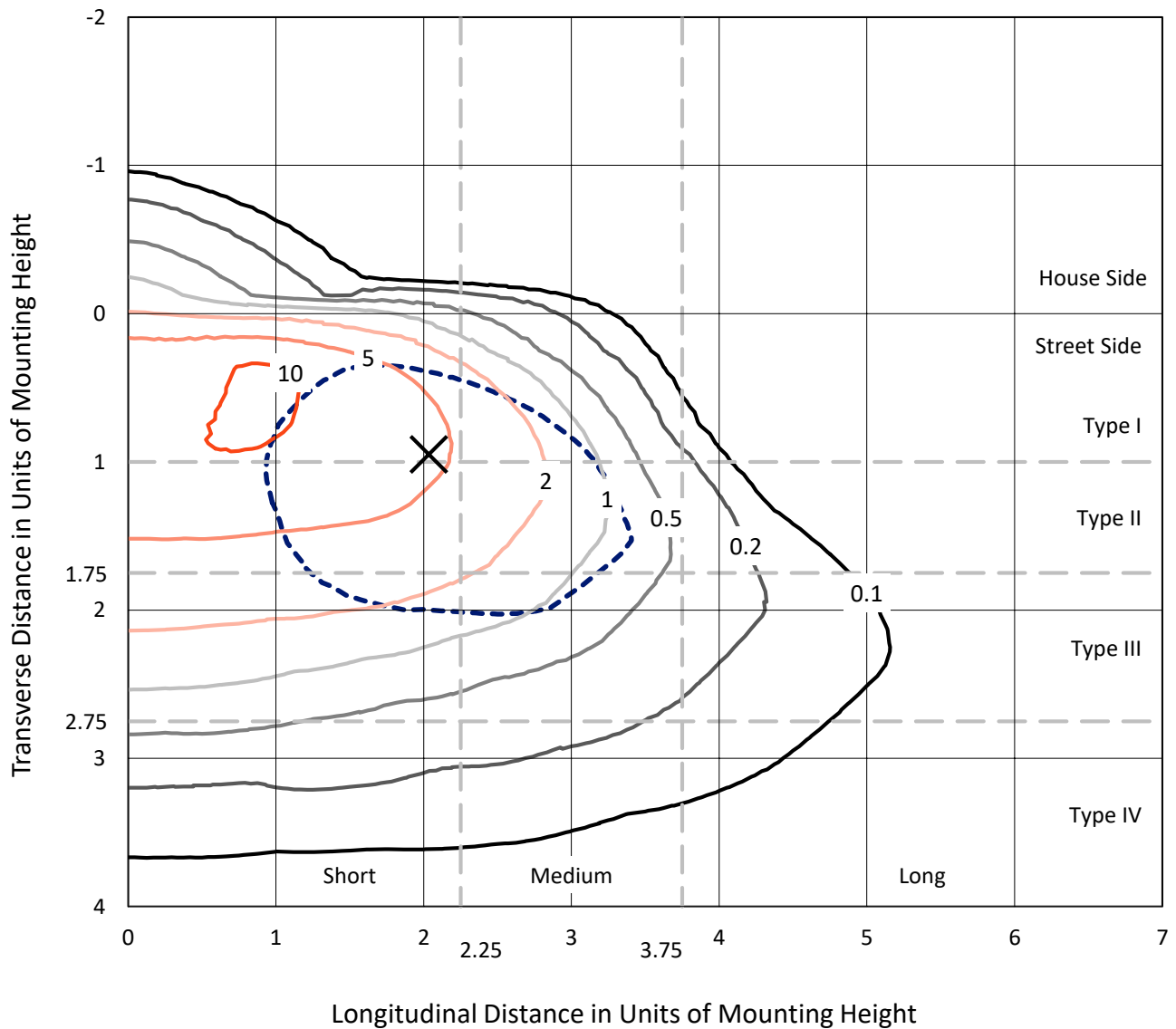


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Iso-Footcandle Lines of Horizontal Illumination

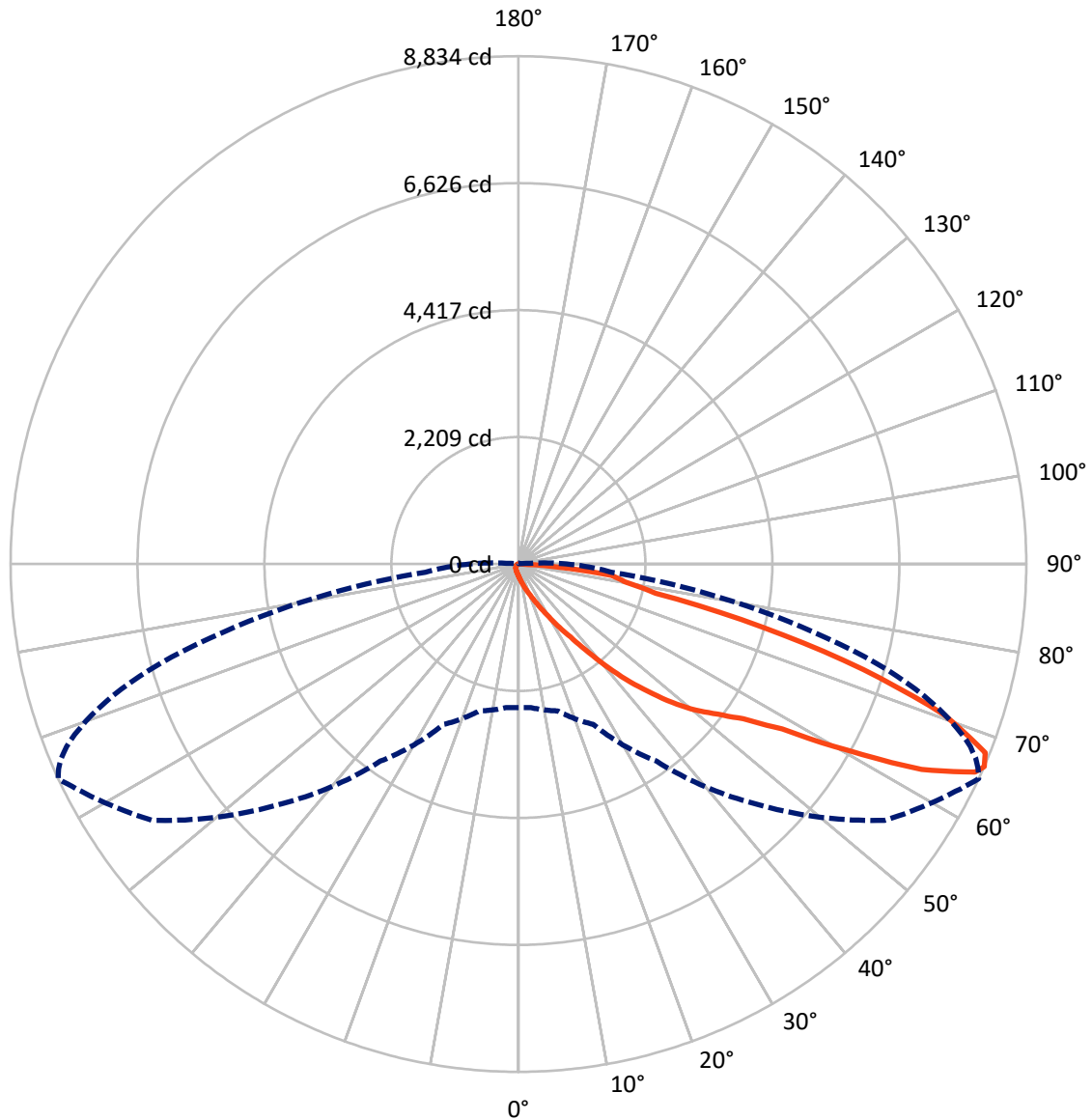
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.4 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	149.6	0.0	149.6
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	6753.2	0.0	6753.2
	% Fixture	97.8	0.0	97.8
Total	Lumens	6902.8	0.0	6902.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.3	0.3
10°-20°	98.9	1.4
20°-30°	213.3	3.1
30°-40°	455.5	6.6
40°-50°	1007.4	14.6
50°-60°	1707.2	24.7
60°-70°	2278.1	33.0
70°-80°	1003.5	14.5
80°-90°	115.6	1.7
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°	6902.8	100.0
0°-180°	6902.8	100.0



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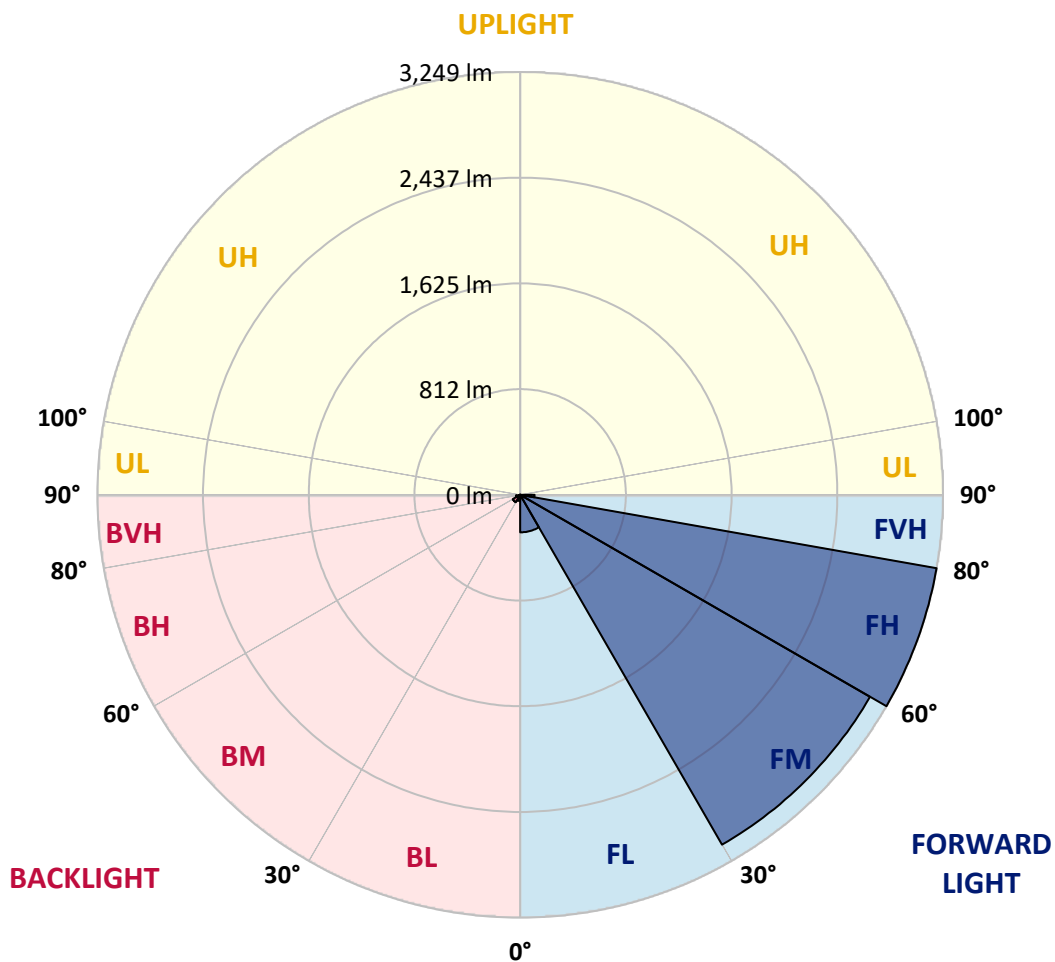
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	288.3	4.2			
FM	(30°-60°)	3104.4	45.0			
FH	(60°-80°)	3249.5	47.1			G2/5000
FVH	(80°-90°)	111.0	1.6			G2/225
BL	(0°-30°)	47.2	0.7	B0/110		
BM	(30°-60°)	65.7	1.0	B0/220		
BH	(60°-80°)	32.1	0.5	B0/110		G0/110
BVH	(80°-90°)	4.6	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	262.8	261.5	256.1	256.1	248.2	242.8	236.3	229.6	229.6	228.3	226.9
5°	347.7	339.8	338.4	323.8	311.9	294.6	278.7	257.4	254.8	252.2	250.8
7.5°	441.9	440.6	428.7	411.4	387.5	355.7	323.8	289.3	284.0	281.3	276.1
10°	564.0	557.4	541.5	512.2	476.4	433.9	382.2	327.8	321.1	315.9	313.2
12.5°	680.8	668.9	659.6	622.4	577.2	514.9	452.6	374.2	368.9	362.3	351.7
15°	789.6	779.0	763.1	731.2	680.8	602.5	529.5	433.9	420.7	411.4	403.5
17.5°	874.6	867.9	849.4	813.5	759.1	690.1	602.5	495.0	484.4	472.4	457.8
20°	955.5	946.2	917.0	867.9	809.6	756.4	688.7	574.6	560.0	545.4	529.5
22.5°	1032.5	1023.2	975.4	894.4	832.0	809.6	785.7	664.8	642.3	630.4	614.4
25°	1140.0	1120.1	1045.7	917.0	833.4	850.7	891.8	781.6	760.4	743.1	717.9
27.5°	1284.6	1258.1	1141.3	950.2	838.7	895.7	1013.9	923.7	901.1	881.2	853.3
30°	1447.9	1430.6	1291.3	1029.8	877.2	962.2	1150.6	1104.2	1077.6	1053.7	1020.5
32.5°	1612.4	1588.5	1450.5	1181.1	980.7	1090.9	1321.8	1313.8	1279.3	1256.8	1220.9
35°	1757.0	1745.1	1642.9	1429.2	1217.0	1316.5	1550.0	1559.4	1528.8	1504.9	1465.1
37.5°	1855.3	1855.3	1835.3	1696.0	1592.5	1666.8	1885.8	1887.1	1856.6	1802.2	1782.3
40°	1905.7	1920.3	1992.0	2018.5	2013.2	2108.8	2326.4	2302.5	2277.3	2249.4	2183.1
42.5°	2009.2	2022.5	2175.1	2358.2	2477.7	2603.8	2753.7	2745.7	2715.2	2664.8	2603.8
45°	2184.4	2201.6	2383.4	2674.0	2919.6	3098.8	3194.3	3157.1	3126.6	3078.8	3047.0
47.5°	2407.3	2440.5	2646.2	3005.8	3301.8	3597.7	3697.3	3599.1	3572.5	3535.4	3483.6
50°	2644.9	2676.7	2895.7	3307.1	3641.5	3994.5	4160.4	3994.5	3956.0	3944.1	3885.7
52.5°	2850.6	2877.1	3088.1	3539.3	3901.7	4315.6	4557.2	4338.2	4310.4	4270.6	4228.0
55°	2972.7	2993.9	3191.6	3650.8	4078.2	4605.0	4940.7	4748.3	4707.2	4691.3	4630.2
57.5°	3013.8	3035.1	3212.9	3665.4	4173.7	4869.1	5406.5	5413.2	5364.1	5307.0	5288.5
60°	3013.8	3037.7	3187.7	3629.5	4266.5	5150.4	6027.6	6581.0	6474.8	6464.2	6396.6
62.5°	2889.0	2911.6	3062.9	3519.5	4391.3	5530.0	6892.9	7869.6	7839.1	7770.1	7658.6
65°	2618.4	2631.6	2780.3	3238.1	4343.5	5879.0	7642.7	8726.9	8677.8	8542.5	8399.1
66°	2496.2	2506.9	2646.2	3077.5	4186.9	5926.8	7775.4	8834.4	8753.4	8639.3	8477.4
67.5°	2319.7	2338.3	2436.5	2778.9	3811.4	5760.9	7691.8	8758.8	8688.4	8550.4	8388.5
70°	1548.7	1535.5	1881.8	2132.7	2903.6	4693.9	6900.8	7864.3	7865.6	7800.6	7735.6
72.5°	735.2	743.1	844.0	1312.5	1900.3	3135.9	5492.8	6277.1	6367.4	6250.5	6169.6
75°	528.2	540.1	601.1	802.9	1133.3	1881.8	3560.6	4390.0	4392.6	4185.6	4001.2
77.5°	153.9	160.6	225.6	495.0	849.4	1270.0	2045.1	2440.5	2383.4	2234.8	2095.5
80°	63.7	63.7	66.3	157.9	341.1	862.6	1430.6	1879.2	1872.5	1815.5	1733.1
82.5°	23.9	25.2	31.9	65.0	80.9	212.4	954.2	1631.0	1627.0	1546.1	1487.7
85°	2.6	2.6	8.0	27.8	30.5	39.8	191.1	719.3	715.3	719.3	630.4
87.5°	0.0	0.0	1.3	2.6	3.9	5.3	8.0	27.8	30.5	29.2	26.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	226.9	224.3	224.3	223.0	223.0	223.0	221.6	220.3	220.3	218.9	217.6
5°	248.2	245.5	244.2	241.5	240.2	238.9	236.3	234.9	232.2	230.9	229.6
7.5°	273.4	268.1	266.7	262.8	258.7	256.1	253.5	249.5	246.8	241.5	240.2
10°	305.2	298.6	293.3	288.0	284.0	277.4	273.4	268.1	262.8	258.7	254.8
12.5°	346.3	337.1	329.1	323.8	314.5	306.5	298.6	294.6	284.0	278.7	272.0
15°	391.5	380.9	371.6	360.9	354.3	341.1	330.4	318.5	313.2	303.9	293.3
17.5°	449.8	432.6	418.0	407.4	394.1	380.9	368.9	357.0	341.1	330.4	317.2
20°	512.2	497.6	477.8	459.2	443.3	427.4	410.0	394.1	379.6	362.3	346.3
22.5°	591.9	570.7	546.8	528.2	507.0	489.7	465.8	444.6	420.7	398.1	379.6
25°	692.7	664.8	642.3	615.7	590.5	564.0	534.8	508.3	477.8	456.5	424.6
27.5°	817.5	790.9	760.4	725.9	700.7	660.9	622.4	589.2	553.4	520.2	484.4
30°	976.8	938.3	906.4	873.3	822.8	784.3	739.2	694.1	645.0	611.8	557.4
32.5°	1167.9	1126.7	1078.9	1031.1	984.7	930.3	874.6	818.8	764.4	703.3	647.6
35°	1401.4	1352.3	1297.9	1246.1	1174.4	1116.1	1045.7	968.8	907.7	837.4	767.0
37.5°	1710.6	1629.6	1581.8	1527.5	1430.6	1350.9	1272.7	1195.7	1088.2	1013.9	914.4
40°	2098.1	2050.3	1972.0	1884.4	1796.8	1692.0	1585.9	1483.7	1358.9	1255.5	1140.0
42.5°	2553.3	2483.0	2403.4	2277.3	2188.4	2064.9	1944.2	1808.8	1656.2	1523.5	1388.1
45°	2980.6	2897.0	2836.0	2709.9	2617.0	2471.0	2325.1	2181.7	2005.3	1834.0	1677.4
47.5°	3442.5	3373.4	3272.6	3170.4	3076.2	2911.6	2753.7	2579.9	2394.0	2191.0	1987.9
50°	3848.6	3794.1	3725.1	3601.7	3496.9	3358.8	3173.0	2983.3	2748.4	2546.7	2315.8
52.5°	4193.6	4151.1	4054.3	3966.7	3872.4	3742.4	3576.5	3394.7	3141.2	2919.6	2656.8
55°	4601.0	4570.4	4485.6	4431.1	4347.5	4222.8	4067.5	3899.0	3630.9	3389.3	3092.1
57.5°	5268.5	5244.6	5170.3	5147.8	5065.5	4956.7	4765.6	4585.0	4271.9	3971.9	3632.2
60°	6374.0	6326.2	6217.4	6161.6	5987.8	5841.8	5593.7	5345.5	4967.3	4585.0	4176.3
62.5°	7557.7	7423.7	7216.6	7038.8	6792.0	6538.5	6206.8	5827.2	5383.9	4930.1	4460.4
65°	8196.0	7967.8	7706.4	7423.7	7103.9	6730.9	6312.9	5857.7	5381.3	4902.2	4405.9
66°	8269.0	8011.6	7734.2	7419.7	7064.0	6667.2	6242.6	5764.8	5269.8	4802.7	4306.4
67.5°	8177.5	7908.1	7614.8	7265.8	6880.9	6469.6	6023.6	5527.3	5050.9	4577.1	4094.1
70°	7536.5	7268.4	7007.0	6639.4	6229.4	5815.3	5393.3	4838.5	4387.3	3952.1	3522.1
72.5°	6018.3	5836.5	5577.7	5263.2	4863.7	4378.0	4026.4	3530.0	3138.6	2716.6	2383.4
75°	3761.0	3504.8	3185.0	2784.2	2479.0	2084.9	1879.2	1502.2	1279.3	1084.2	895.7
77.5°	1922.9	1730.5	1506.2	1280.7	1064.4	849.4	656.9	464.5	313.2	217.6	161.9
80°	1588.5	1418.7	1232.9	1027.2	836.1	648.9	467.2	318.5	203.0	132.7	103.5
82.5°	1312.5	1169.2	1003.3	812.2	646.3	509.6	354.3	230.9	143.3	92.9	73.0
85°	558.7	507.0	391.5	310.5	233.5	172.5	120.8	80.9	57.1	46.5	42.4
87.5°	23.9	26.5	25.2	19.9	14.6	14.6	13.3	10.6	10.6	10.6	10.6
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	217.6	216.3	215.0	215.0	213.7	212.4	204.4	197.8	189.8	184.5	179.1
5°	226.9	225.6	223.0	221.6	218.9	217.6	200.4	185.8	173.9	164.6	157.9
7.5°	236.3	234.9	230.9	226.9	225.6	223.0	195.0	176.5	160.6	150.0	143.3
10°	248.2	244.2	240.2	234.9	230.9	226.9	189.8	165.9	148.7	139.3	132.7
12.5°	265.4	258.7	252.2	245.5	240.2	233.5	187.1	156.6	139.3	128.7	122.1
15°	285.3	276.1	268.1	260.1	250.8	244.2	181.8	148.7	131.3	120.8	112.8
17.5°	303.9	293.3	281.3	269.4	260.1	250.8	176.5	140.7	123.4	112.8	104.8
20°	330.4	314.5	300.0	285.3	272.0	260.1	168.5	132.7	116.8	104.8	96.9
22.5°	359.6	341.1	322.4	302.6	285.3	269.4	161.9	126.1	110.2	98.2	88.9
25°	396.8	374.2	349.0	323.8	303.9	282.6	155.2	119.4	103.5	91.5	82.3
27.5°	448.5	416.7	388.9	357.0	326.5	302.6	150.0	114.1	96.9	85.0	75.6
30°	518.9	472.4	428.7	394.1	358.3	323.8	144.6	107.5	91.5	78.3	67.6
32.5°	597.2	542.8	492.4	440.6	395.5	355.7	139.3	102.2	85.0	71.7	62.4
35°	694.1	625.0	557.4	497.6	443.3	390.2	134.1	96.9	79.6	65.0	55.7
37.5°	833.4	747.2	658.3	581.3	510.9	440.6	130.0	91.5	73.0	58.4	49.1
40°	1024.5	913.1	804.2	699.4	607.8	520.2	124.8	86.3	67.6	53.1	43.8
42.5°	1231.6	1096.2	952.9	834.8	708.7	598.5	119.4	80.9	62.4	47.8	38.5
45°	1489.0	1320.5	1146.6	986.0	832.0	690.1	114.1	75.6	55.7	42.4	33.2
47.5°	1770.3	1555.3	1358.9	1157.2	974.1	804.2	107.5	71.7	50.4	37.2	29.2
50°	2059.6	1832.7	1584.6	1355.0	1137.3	918.3	100.9	65.0	45.1	33.2	23.9
52.5°	2371.5	2103.4	1849.9	1564.6	1311.2	1068.3	94.2	59.7	41.1	29.2	19.9
55°	2768.3	2468.4	2171.1	1851.3	1546.1	1242.2	87.6	53.1	35.8	25.2	15.9
57.5°	3267.3	2911.6	2546.7	2185.7	1815.5	1470.4	82.3	46.5	30.5	21.3	13.3
60°	3738.4	3323.0	2881.1	2465.7	2047.7	1645.5	74.3	41.1	26.5	17.2	13.3
62.5°	3982.6	3508.8	3032.3	2574.5	2128.6	1707.9	66.3	34.5	22.6	14.6	11.9
65°	3922.8	3439.8	2978.0	2516.2	2079.5	1668.1	58.4	30.5	19.9	13.3	11.9
66°	3836.6	3358.8	2894.4	2455.1	2038.4	1625.7	54.4	29.2	18.6	13.3	10.6
67.5°	3648.2	3186.3	2743.1	2334.3	1925.6	1544.7	49.1	26.5	17.2	11.9	10.6
70°	3116.0	2696.6	2342.3	1978.7	1645.5	1301.8	39.8	22.6	14.6	10.6	10.6
72.5°	2062.3	1777.0	1540.7	1325.7	1108.1	860.0	33.2	18.6	11.9	10.6	9.3
75°	777.7	703.3	603.8	542.8	473.7	415.4	26.5	11.9	9.3	9.3	9.3
77.5°	138.0	127.4	112.8	103.5	95.6	87.6	21.3	8.0	8.0	9.3	9.3
80°	92.9	86.3	78.3	71.7	66.3	59.7	14.6	6.6	8.0	8.0	9.3
82.5°	66.3	62.4	58.4	53.1	49.1	43.8	9.3	6.6	8.0	8.0	8.0
85°	39.8	37.2	34.5	31.9	27.8	26.5	6.6	6.6	6.6	8.0	8.0
87.5°	10.6	9.3	10.6	10.6	8.0	9.3	5.3	5.3	5.3	6.6	6.6
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):

	145°	155°	165°	175°	180°
0°	208.3	208.3	208.3	208.3	208.3
2.5°	176.5	176.5	173.9	177.8	177.8
5°	152.6	152.6	151.3	152.6	152.6
7.5°	139.3	138.0	138.0	138.0	139.3
10°	127.4	126.1	126.1	126.1	126.1
12.5°	116.8	115.4	114.1	115.4	115.4
15°	107.5	104.8	104.8	104.8	104.8
17.5°	99.5	96.9	95.6	95.6	95.6
20°	91.5	87.6	87.6	87.6	87.6
22.5°	83.6	79.6	79.6	79.6	79.6
25°	75.6	71.7	71.7	71.7	71.7
27.5°	69.0	65.0	65.0	65.0	65.0
30°	61.1	58.4	58.4	59.7	58.4
32.5°	55.7	51.7	51.7	53.1	53.1
35°	49.1	46.5	46.5	46.5	46.5
37.5°	42.4	39.8	39.8	39.8	39.8
40°	37.2	34.5	33.2	34.5	34.5
42.5°	31.9	29.2	27.8	27.8	27.8
45°	27.8	23.9	22.6	23.9	23.9
47.5°	22.6	19.9	19.9	21.3	21.3
50°	17.2	17.2	18.6	21.3	21.3
52.5°	15.9	15.9	18.6	21.3	21.3
55°	14.6	15.9	18.6	19.9	21.3
57.5°	13.3	15.9	18.6	19.9	19.9
60°	13.3	14.6	17.2	19.9	19.9
62.5°	11.9	13.3	15.9	18.6	18.6
65°	11.9	13.3	15.9	18.6	18.6
66°	11.9	13.3	15.9	18.6	18.6
67.5°	11.9	13.3	15.9	18.6	18.6
70°	11.9	13.3	15.9	17.2	17.2
72.5°	10.6	11.9	14.6	17.2	17.2
75°	10.6	11.9	14.6	17.2	17.2
77.5°	10.6	11.9	14.6	17.2	17.2
80°	10.6	11.9	14.6	15.9	17.2
82.5°	9.3	11.9	13.3	15.9	15.9
85°	9.3	10.6	13.3	14.6	15.9
87.5°	8.0	9.3	10.6	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)