

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: P163553

Luminaire Tested: **LDRL-SL3-F05-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163553
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-F05-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (35) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7123 lumens
Efficiency: N/A
Efficacy: 53.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

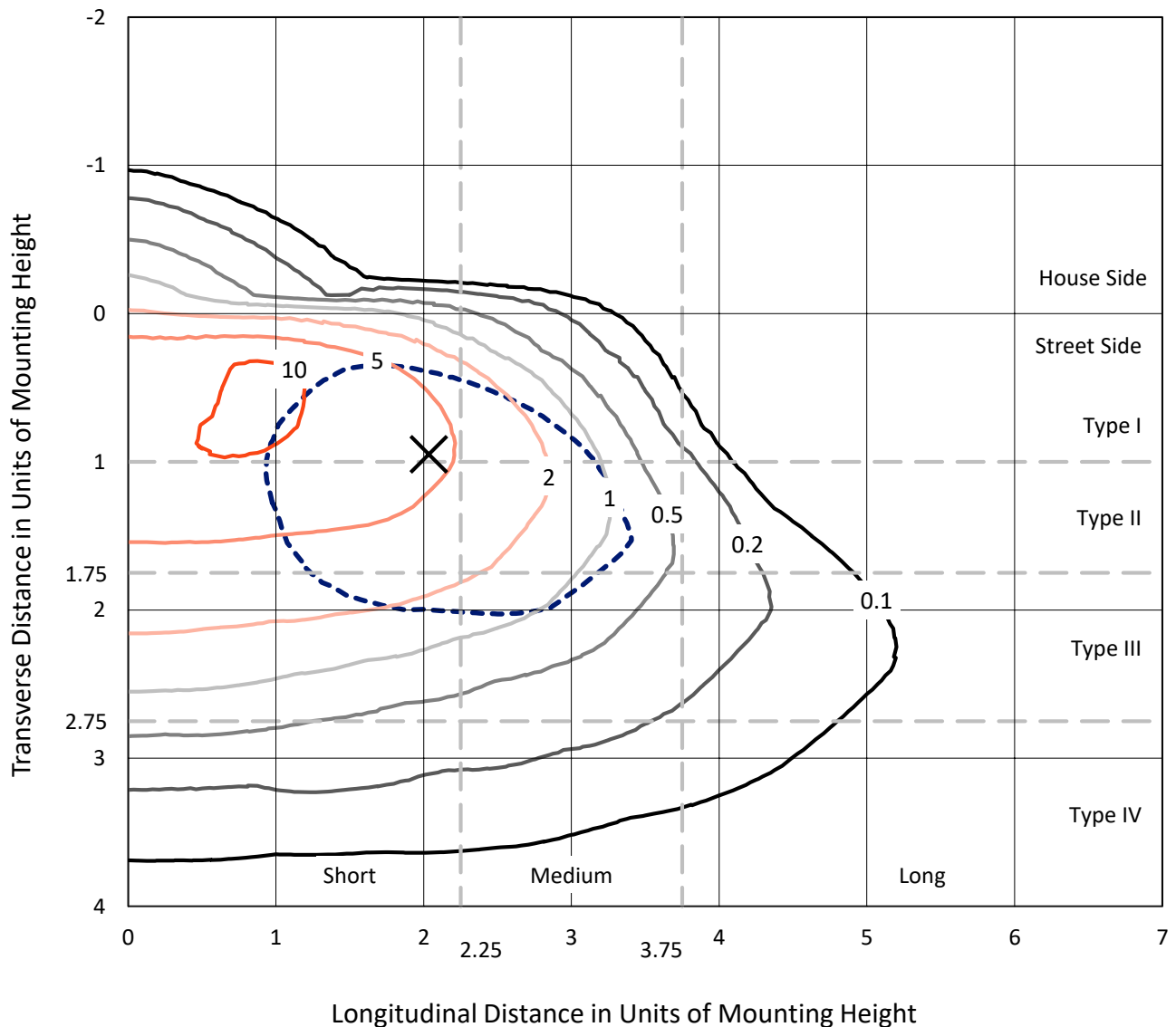
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

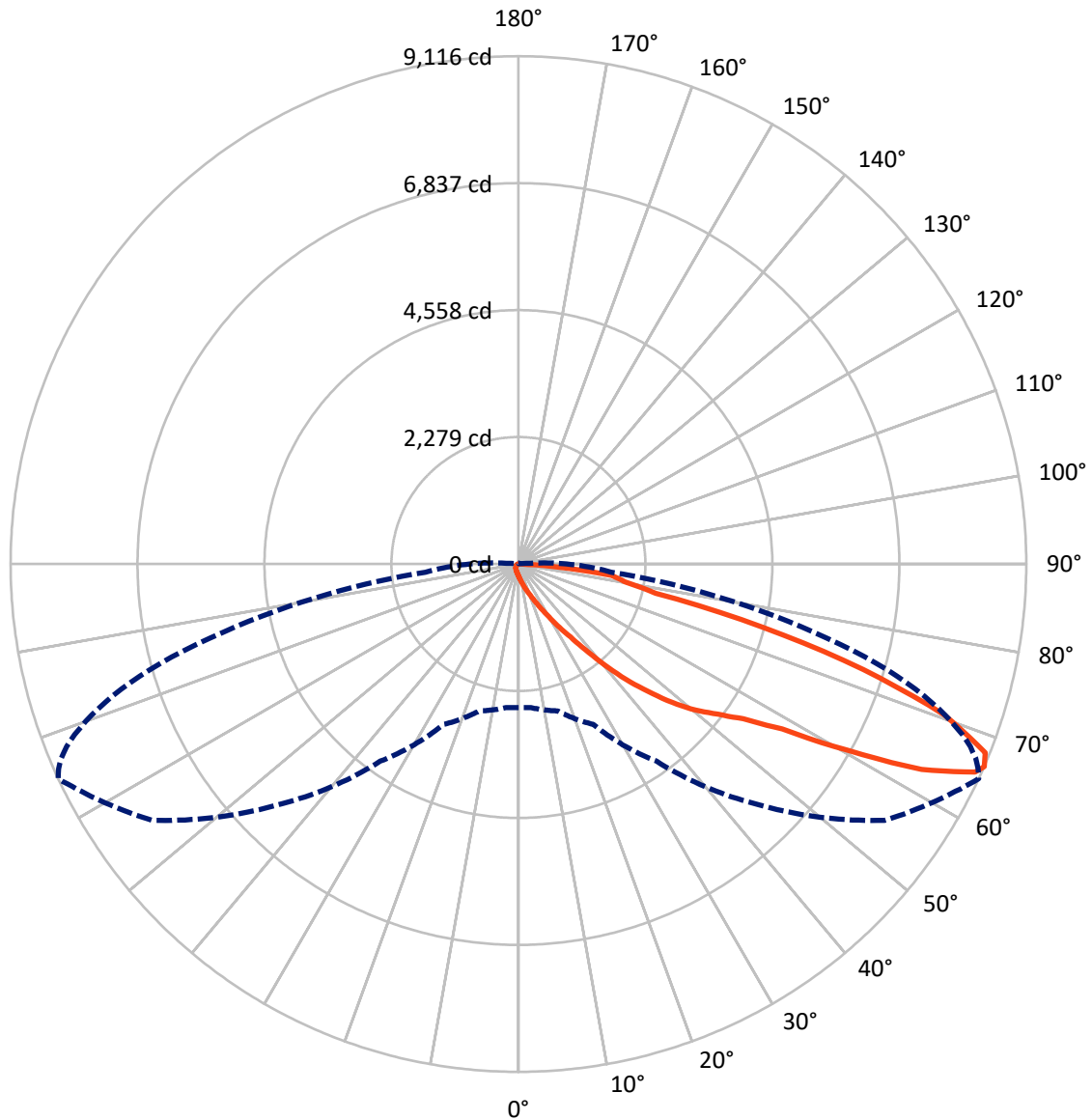
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.8 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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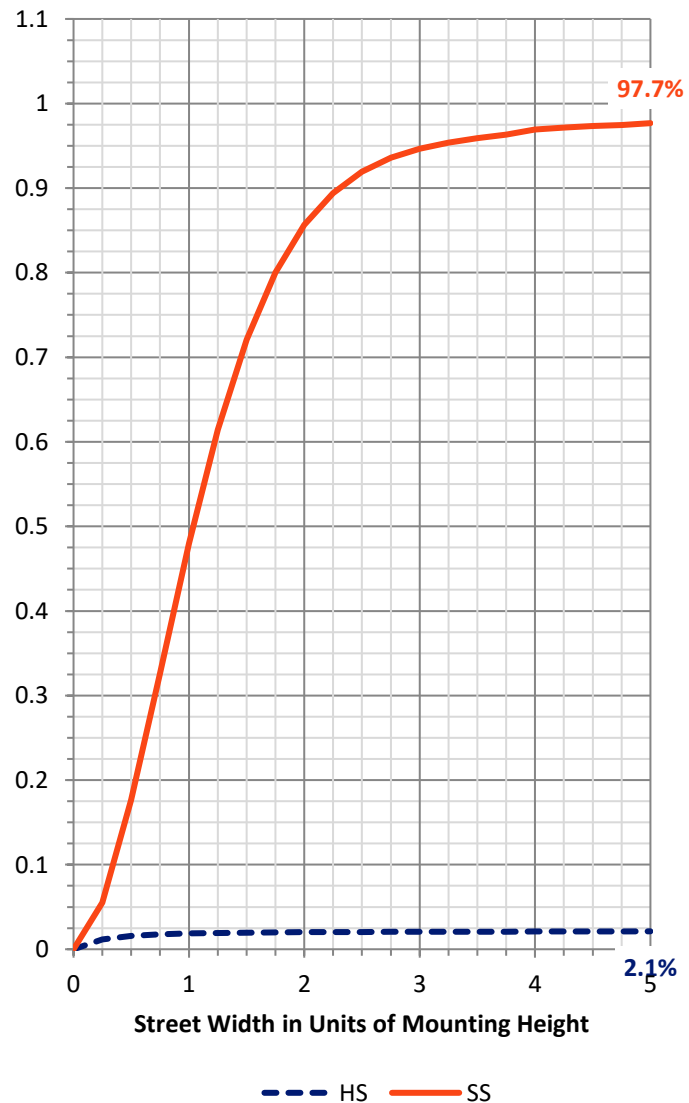
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	154.3	0.0	154.3
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	6968.7	0.0	6968.7
	% Fixture	97.8	0.0	97.8
Total	Lumens	7123.0	0.0	7123.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.1	0.3
10°-20°	102.1	1.4
20°-30°	220.1	3.1
30°-40°	470.1	6.6
40°-50°	1039.5	14.6
50°-60°	1761.6	24.7
60°-70°	2350.8	33.0
70°-80°	1035.5	14.5
80°-90°	119.3	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°	7123.0	100.0
0°-180°	7123.0	100.0



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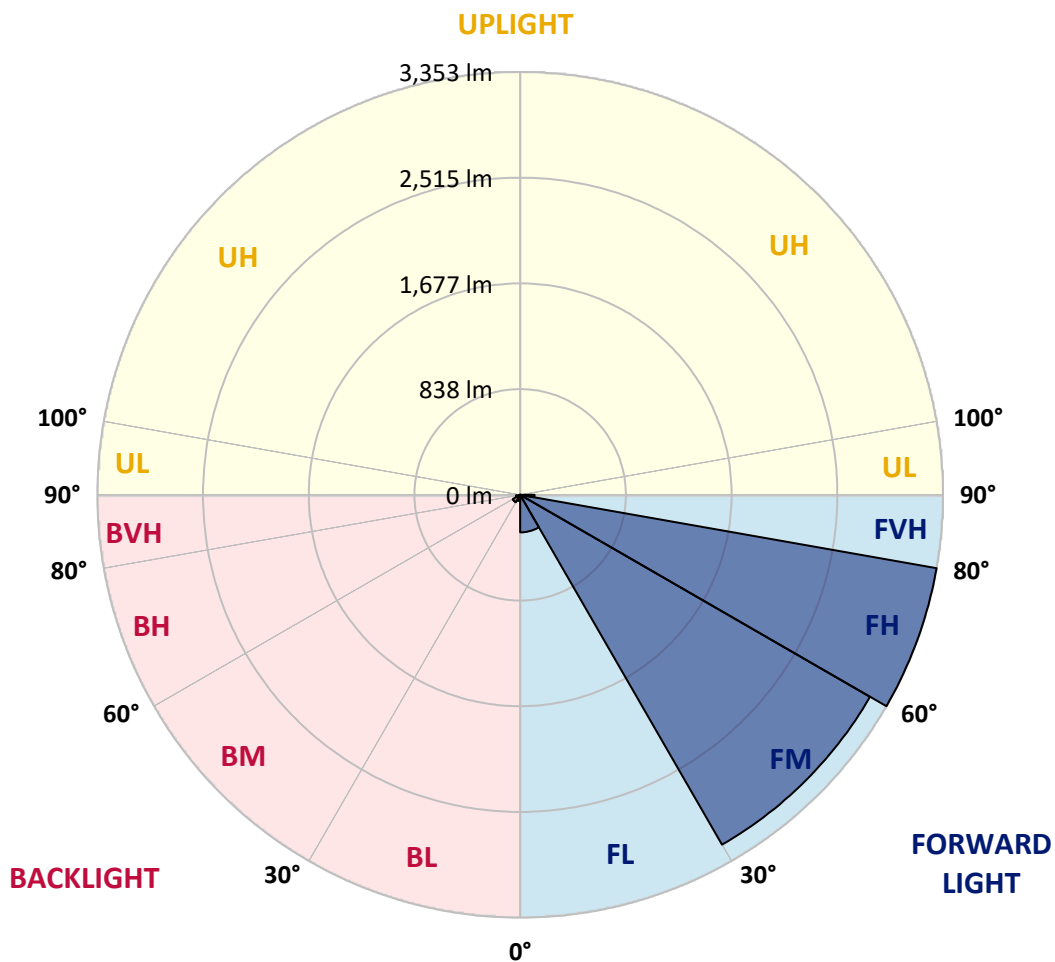
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	297.5	4.2			
FM	(30°-60°)	3203.4	45.0			
FH	(60°-80°)	3353.2	47.1			G2/5000
FVH	(80°-90°)	114.5	1.6			G2/225
BL	(0°-30°)	48.7	0.7	B0/110		
BM	(30°-60°)	67.8	1.0	B0/220		
BH	(60°-80°)	33.1	0.5	B0/110		G0/110
BVH	(80°-90°)	4.8	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°	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0
2.5°	271.1	269.8	264.3	264.3	256.1	250.6	243.8	236.9	236.9	235.6	234.1
5°	358.8	350.6	349.2	334.2	321.8	304.0	287.6	265.6	262.9	260.2	258.8
7.5°	456.0	454.6	442.3	424.6	399.9	367.0	334.2	298.5	293.1	290.3	284.9
10°	582.0	575.2	558.7	528.6	491.6	447.8	394.4	338.2	331.4	326.0	323.2
12.5°	702.5	690.2	680.6	642.3	595.7	531.4	467.0	386.2	380.7	373.8	362.9
15°	814.8	803.9	787.4	754.6	702.5	621.8	546.4	447.8	434.1	424.6	416.3
17.5°	902.5	895.6	876.5	839.5	783.3	712.1	621.8	510.8	499.9	487.5	472.4
20°	986.0	976.4	946.3	895.6	835.4	780.6	710.7	593.0	577.9	562.8	546.4
22.5°	1065.5	1055.8	1006.5	923.0	858.6	835.4	810.7	686.0	662.8	650.5	634.0
25°	1176.3	1155.8	1079.1	946.3	860.0	877.8	920.3	806.6	784.6	766.9	740.9
27.5°	1325.6	1298.2	1177.7	980.5	865.5	924.3	1046.2	953.1	929.8	909.3	880.5
30°	1494.1	1476.2	1332.4	1062.7	905.2	992.9	1187.3	1139.4	1112.0	1087.3	1053.1
32.5°	1663.8	1639.2	1496.8	1218.8	1012.0	1125.7	1364.0	1355.7	1320.2	1296.9	1259.9
35°	1813.1	1800.8	1695.3	1474.8	1255.8	1358.5	1599.4	1609.1	1577.6	1552.9	1511.9
37.5°	1914.5	1914.5	1893.9	1750.1	1643.3	1720.0	1946.0	1947.3	1915.8	1859.7	1839.2
40°	1966.5	1981.6	2055.5	2082.9	2077.5	2176.1	2400.6	2376.0	2350.0	2321.2	2252.7
42.5°	2073.3	2087.0	2244.5	2433.5	2556.7	2686.8	2841.5	2833.3	2801.9	2749.8	2686.8
45°	2254.1	2271.9	2459.5	2759.3	3012.7	3197.6	3296.2	3257.9	3226.3	3177.0	3144.2
47.5°	2484.1	2518.4	2730.6	3101.7	3407.1	3712.5	3815.2	3713.9	3686.5	3648.2	3594.7
50°	2729.3	2762.1	2988.1	3412.6	3757.7	4122.0	4293.1	4122.0	4082.2	4069.9	4009.7
52.5°	2941.6	2968.9	3186.6	3652.3	4026.2	4453.3	4702.6	4476.6	4447.9	4406.8	4362.9
55°	3067.5	3089.5	3293.4	3767.3	4208.3	4751.9	5098.4	4899.8	4857.4	4841.0	4777.9
57.5°	3110.0	3131.9	3315.4	3782.4	4306.9	5024.4	5579.0	5585.9	5535.2	5476.3	5457.2
60°	3110.0	3134.6	3289.4	3745.3	4402.7	5314.7	6219.9	6791.0	6681.4	6670.5	6600.7
62.5°	2981.2	3004.5	3160.6	3631.8	4531.4	5706.4	7112.8	8120.7	8089.2	8018.0	7903.0
65°	2701.9	2715.6	2869.0	3341.4	4482.1	6066.6	7886.5	9005.3	8954.7	8815.0	8667.1
66°	2575.9	2586.9	2730.6	3175.7	4320.5	6115.9	8023.5	9116.2	9032.7	8915.0	8747.9
67.5°	2393.8	2412.9	2514.3	2867.6	3933.0	5944.7	7937.2	9038.2	8965.6	8823.2	8656.1
70°	1598.1	1584.5	1941.8	2200.7	2996.3	4843.7	7121.0	8115.2	8116.6	8049.5	7982.4
72.5°	758.6	766.9	871.0	1354.4	1961.0	3235.9	5668.0	6477.4	6570.5	6450.0	6366.5
75°	545.0	557.4	620.3	828.5	1169.5	1941.8	3674.2	4530.1	4532.8	4319.2	4128.8
77.5°	158.8	165.7	232.8	510.8	876.5	1310.5	2110.3	2518.4	2459.5	2306.1	2162.3
80°	65.7	65.7	68.4	163.0	352.0	890.1	1476.2	1939.1	1932.3	1873.4	1788.4
82.5°	24.6	26.0	32.9	67.1	83.5	219.1	984.6	1683.1	1678.9	1595.4	1535.2
85°	2.7	2.7	8.2	28.7	31.5	41.1	197.2	742.2	738.1	742.2	650.5
87.5°	0.0	0.0	1.4	2.7	4.1	5.5	8.2	28.7	31.5	30.2	27.4
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0
2.5°	234.1	231.4	231.4	230.1	230.1	230.1	228.7	227.4	227.4	225.9	224.6
5°	256.1	253.4	252.0	249.2	247.9	246.5	243.8	242.3	239.6	238.3	236.9
7.5°	282.1	276.7	275.2	271.1	267.0	264.3	261.6	257.4	254.7	249.2	247.9
10°	314.9	308.1	302.7	297.2	293.1	286.2	282.1	276.7	271.1	267.0	262.9
12.5°	357.4	347.8	339.6	334.2	324.5	316.3	308.1	304.0	293.1	287.6	280.7
15°	404.0	393.0	383.5	372.5	365.6	352.0	340.9	328.7	323.2	313.6	302.7
17.5°	464.2	446.4	431.3	420.4	406.7	393.0	380.7	368.4	352.0	340.9	327.3
20°	528.6	513.5	493.0	473.9	457.4	441.0	423.1	406.7	391.7	373.8	357.4
22.5°	610.7	588.9	564.2	545.0	523.2	505.3	480.6	458.8	434.1	410.8	391.7
25°	714.8	686.0	662.8	635.4	609.4	582.0	551.9	524.5	493.0	471.1	438.2
27.5°	843.6	816.2	784.6	749.1	723.1	682.0	642.3	608.0	571.0	536.8	499.9
30°	1007.9	968.2	935.3	901.1	849.0	809.3	762.8	716.2	665.5	631.3	575.2
32.5°	1205.1	1162.6	1113.3	1064.0	1016.2	960.0	902.5	845.0	788.8	725.8	668.3
35°	1446.1	1395.5	1339.3	1285.9	1211.9	1151.7	1079.1	999.7	936.7	864.1	791.5
37.5°	1765.2	1681.6	1632.3	1576.2	1476.2	1394.0	1313.3	1233.9	1123.0	1046.2	943.6
40°	2165.0	2115.7	2034.9	1944.5	1854.2	1746.0	1636.5	1531.0	1402.2	1295.5	1176.3
42.5°	2634.7	2562.2	2480.1	2350.0	2258.2	2130.8	2006.2	1866.5	1709.1	1572.1	1432.4
45°	3075.7	2989.4	2926.5	2796.4	2700.5	2549.9	2399.3	2251.4	2069.2	1892.5	1730.9
47.5°	3552.3	3481.1	3377.0	3271.6	3174.3	3004.5	2841.5	2662.2	2470.4	2260.9	2051.4
50°	3971.3	3915.2	3843.9	3716.6	3608.5	3466.0	3274.3	3078.4	2836.1	2628.0	2389.7
52.5°	4327.4	4283.6	4183.6	4093.2	3996.0	3861.8	3690.6	3503.0	3241.4	3012.7	2741.6
55°	4747.8	4716.3	4628.7	4572.5	4486.2	4357.5	4197.3	4023.4	3746.8	3497.5	3190.8
57.5°	5436.6	5412.0	5335.3	5312.0	5227.1	5114.8	4917.6	4731.3	4408.2	4098.7	3748.1
60°	6577.4	6528.1	6415.8	6358.2	6178.8	6028.2	5772.1	5516.1	5125.7	4731.3	4309.6
62.5°	7798.9	7660.5	7446.9	7263.4	7008.7	6747.1	6404.8	6013.1	5555.7	5087.5	4602.7
65°	8457.5	8222.1	7952.3	7660.5	7330.5	6945.7	6514.4	6044.6	5553.0	5058.7	4546.5
66°	8532.8	8267.2	7981.0	7656.5	7289.4	6879.9	6441.8	5948.8	5438.0	4956.0	4443.8
67.5°	8438.4	8160.4	7857.7	7497.6	7100.4	6676.0	6215.8	5703.6	5212.1	4723.1	4224.7
70°	7777.0	7500.3	7230.6	6851.2	6428.1	6000.9	5565.4	4992.9	4527.3	4078.2	3634.5
72.5°	6210.3	6022.7	5755.7	5431.1	5018.9	4517.7	4154.8	3642.7	3238.7	2803.2	2459.5
75°	3881.0	3616.7	3286.7	2873.0	2558.1	2151.4	1939.1	1550.1	1320.2	1118.8	924.3
77.5°	1984.3	1785.7	1554.3	1321.5	1098.3	876.5	677.8	479.3	323.2	224.6	167.0
80°	1639.2	1463.9	1272.2	1059.9	862.7	669.6	482.1	328.7	209.5	137.0	106.8
82.5°	1354.4	1206.5	1035.3	838.1	666.9	525.9	365.6	238.3	147.9	95.9	75.3
85°	576.5	523.2	404.0	320.4	241.0	178.1	124.6	83.5	58.9	47.9	43.8
87.5°	24.6	27.4	26.0	20.5	15.1	15.1	13.7	10.9	10.9	10.9	10.9
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0	215.0
2.5°	224.6	223.2	221.8	221.8	220.5	219.1	210.9	204.1	195.8	190.3	184.8
5°	234.1	232.8	230.1	228.7	225.9	224.6	206.8	191.7	179.4	169.8	163.0
7.5°	243.8	242.3	238.3	234.1	232.8	230.1	201.3	182.1	165.7	154.8	147.9
10°	256.1	252.0	247.9	242.3	238.3	234.1	195.8	171.2	153.4	143.7	137.0
12.5°	273.9	267.0	260.2	253.4	247.9	241.0	193.0	161.6	143.7	132.8	126.0
15°	294.4	284.9	276.7	268.4	258.8	252.0	187.6	153.4	135.5	124.6	116.4
17.5°	313.6	302.7	290.3	278.0	268.4	258.8	182.1	145.2	127.3	116.4	108.2
20°	340.9	324.5	309.5	294.4	280.7	268.4	173.9	137.0	120.5	108.2	100.0
22.5°	371.1	352.0	332.7	312.2	294.4	278.0	167.0	130.1	113.7	101.3	91.7
25°	409.5	386.2	360.2	334.2	313.6	291.6	160.2	123.2	106.8	94.4	84.9
27.5°	462.8	430.0	401.3	368.4	336.9	312.2	154.8	117.7	100.0	87.7	78.0
30°	535.4	487.5	442.3	406.7	369.7	334.2	149.3	110.9	94.4	80.8	69.8
32.5°	616.2	560.1	508.1	454.6	408.1	367.0	143.7	105.5	87.7	73.9	64.4
35°	716.2	645.0	575.2	513.5	457.4	402.6	138.3	100.0	82.2	67.1	57.5
37.5°	860.0	771.0	679.3	599.8	527.2	454.6	134.2	94.4	75.3	60.2	50.7
40°	1057.2	942.2	829.9	721.7	627.2	536.8	128.8	89.0	69.8	54.8	45.1
42.5°	1270.9	1131.2	983.3	861.4	731.3	617.6	123.2	83.5	64.4	49.3	39.7
45°	1536.5	1362.6	1183.2	1017.5	858.6	712.1	117.7	78.0	57.5	43.8	34.2
47.5°	1826.8	1605.0	1402.2	1194.1	1005.1	829.9	110.9	73.9	52.0	38.4	30.2
50°	2125.3	1891.2	1635.1	1398.2	1173.6	947.6	104.1	67.1	46.6	34.2	24.6
52.5°	2447.2	2170.5	1909.0	1614.5	1353.0	1102.4	97.2	61.6	42.4	30.2	20.5
55°	2856.6	2547.2	2240.3	1910.3	1595.4	1281.8	90.4	54.8	36.9	26.0	16.4
57.5°	3371.5	3004.5	2628.0	2255.4	1873.4	1517.3	84.9	47.9	31.5	21.9	13.7
60°	3857.7	3429.0	2973.0	2544.4	2113.0	1698.0	76.7	42.4	27.4	17.8	13.7
62.5°	4109.7	3620.7	3129.1	2656.7	2196.6	1762.4	68.4	35.6	23.3	15.1	12.3
65°	4048.0	3549.6	3073.0	2596.5	2145.9	1721.3	60.2	31.5	20.5	13.7	12.3
66°	3959.0	3466.0	2986.7	2533.4	2103.5	1677.5	56.2	30.2	19.1	13.7	10.9
67.5°	3764.6	3288.0	2830.6	2408.8	1987.1	1594.0	50.7	27.4	17.8	12.3	10.9
70°	3215.4	2782.6	2417.0	2041.8	1698.0	1343.4	41.1	23.3	15.1	10.9	10.9
72.5°	2128.1	1833.7	1589.9	1368.0	1143.5	887.4	34.2	19.1	12.3	10.9	9.6
75°	802.5	725.8	623.1	560.1	488.8	428.6	27.4	12.3	9.6	9.6	9.6
77.5°	142.4	131.5	116.4	106.8	98.6	90.4	21.9	8.2	8.2	9.6	9.6
80°	95.9	89.0	80.8	73.9	68.4	61.6	15.1	6.9	8.2	8.2	9.6
82.5°	68.4	64.4	60.2	54.8	50.7	45.1	9.6	6.9	8.2	8.2	8.2
85°	41.1	38.4	35.6	32.9	28.7	27.4	6.9	6.9	6.9	8.2	8.2
87.5°	10.9	9.6	10.9	10.9	8.2	9.6	5.5	5.5	5.5	6.9	6.9
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):

	145°	155°	165°	175°	180°
0°	215.0	215.0	215.0	215.0	215.0
2.5°	182.1	182.1	179.4	183.5	183.5
5°	157.5	157.5	156.1	157.5	157.5
7.5°	143.7	142.4	142.4	142.4	143.7
10°	131.5	130.1	130.1	130.1	130.1
12.5°	120.5	119.1	117.7	119.1	119.1
15°	110.9	108.2	108.2	108.2	108.2
17.5°	102.7	100.0	98.6	98.6	98.6
20°	94.4	90.4	90.4	90.4	90.4
22.5°	86.2	82.2	82.2	82.2	82.2
25°	78.0	73.9	73.9	73.9	73.9
27.5°	71.2	67.1	67.1	67.1	67.1
30°	63.0	60.2	60.2	61.6	60.2
32.5°	57.5	53.4	53.4	54.8	54.8
35°	50.7	47.9	47.9	47.9	47.9
37.5°	43.8	41.1	41.1	41.1	41.1
40°	38.4	35.6	34.2	35.6	35.6
42.5°	32.9	30.2	28.7	28.7	28.7
45°	28.7	24.6	23.3	24.6	24.6
47.5°	23.3	20.5	20.5	21.9	21.9
50°	17.8	17.8	19.1	21.9	21.9
52.5°	16.4	16.4	19.1	21.9	21.9
55°	15.1	16.4	19.1	20.5	21.9
57.5°	13.7	16.4	19.1	20.5	20.5
60°	13.7	15.1	17.8	20.5	20.5
62.5°	12.3	13.7	16.4	19.1	19.1
65°	12.3	13.7	16.4	19.1	19.1
66°	12.3	13.7	16.4	19.1	19.1
67.5°	12.3	13.7	16.4	19.1	19.1
70°	12.3	13.7	16.4	17.8	17.8
72.5°	10.9	12.3	15.1	17.8	17.8
75°	10.9	12.3	15.1	17.8	17.8
77.5°	10.9	12.3	15.1	17.8	17.8
80°	10.9	12.3	15.1	16.4	17.8
82.5°	9.6	12.3	13.7	16.4	16.4
85°	9.6	10.9	13.7	15.1	16.4
87.5°	8.2	9.6	10.9	13.7	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)