

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: P163546

Luminaire Tested: **LDRL-SL3-E05-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163546
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-E05-E-7030-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: (105) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7680.3 lumens
Efficiency: N/A
Efficacy: 60.3 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

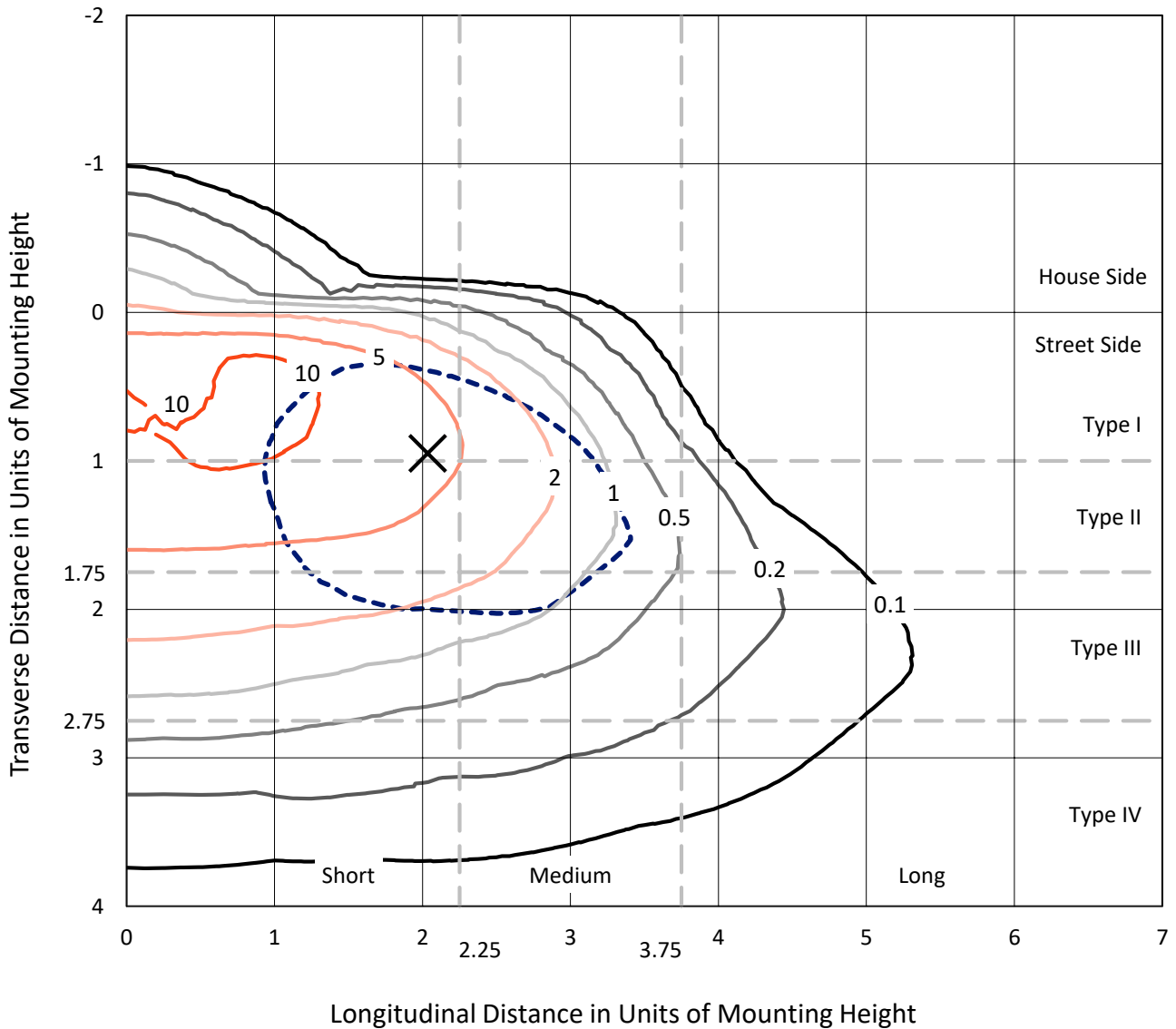
Input Watts (W): 127.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

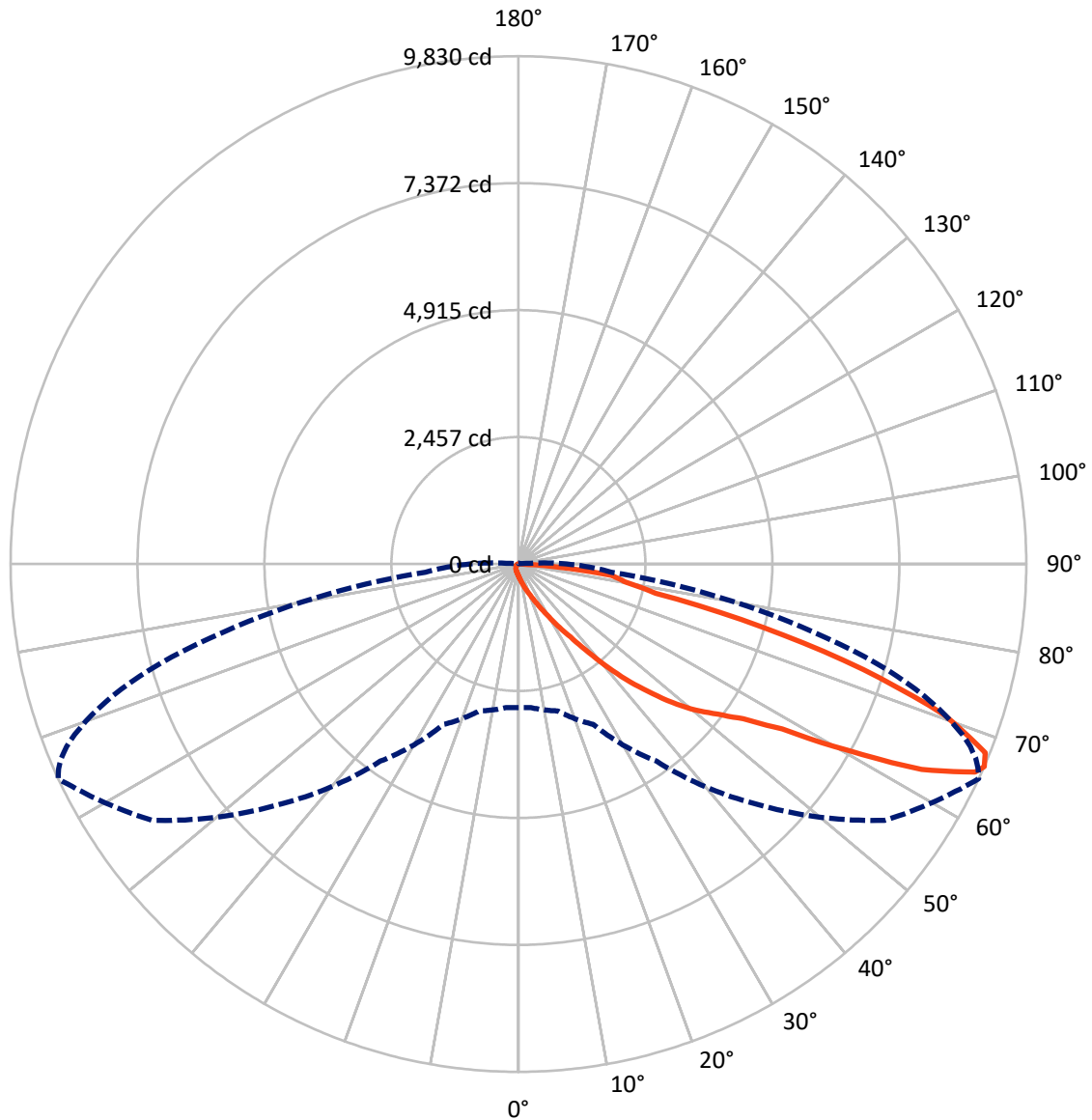
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.7 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	166.4	0.0	166.4
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	7513.9	0.0	7513.9
	% Fixture	97.8	0.0	97.8
Total	Lumens	7680.3	0.0	7680.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.0	0.3
10°-20°	110.0	1.4
20°-30°	237.3	3.1
30°-40°	506.8	6.6
40°-50°	1120.9	14.6
50°-60°	1899.5	24.7
60°-70°	2534.7	33.0
70°-80°	1116.5	14.5
80°-90°	128.6	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°	7680.3	100.0
0°-180°	7680.3	100.0



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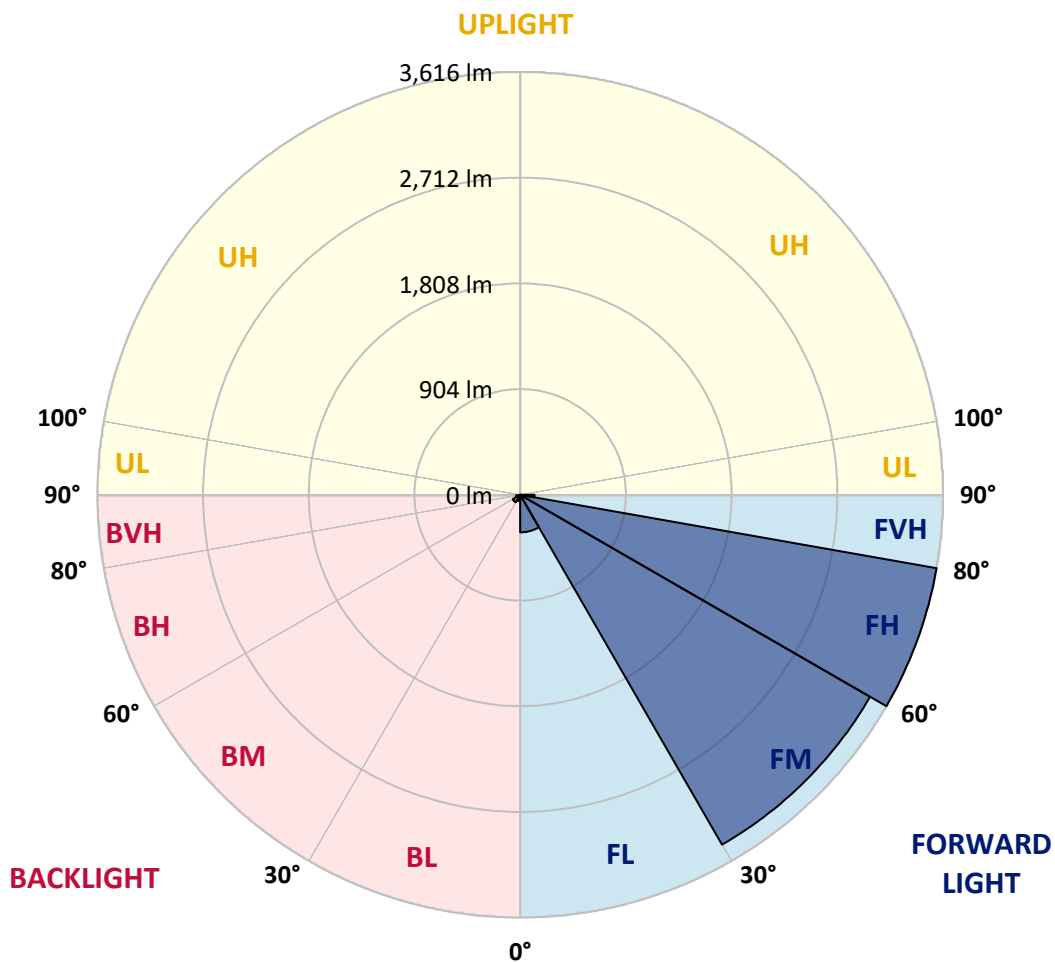
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	320.8	4.2			
FM	(30°-60°)	3454.1	45.0			
FH	(60°-80°)	3615.5	47.1			G2/5000
FVH	(80°-90°)	123.5	1.6			G2/225
BL	(0°-30°)	52.5	0.7	B0/110		
BM	(30°-60°)	73.1	1.0	B0/220		
BH	(60°-80°)	35.7	0.5	B0/110		G0/110
BVH	(80°-90°)	5.1	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°	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8
2.5°	292.4	290.9	285.0	285.0	276.1	270.2	262.9	255.5	255.5	254.0	252.5
5°	386.9	378.0	376.5	360.3	347.0	327.8	310.1	286.4	283.5	280.6	279.0
7.5°	491.7	490.2	477.0	457.8	431.2	395.8	360.3	321.9	316.0	313.0	307.2
10°	627.6	620.2	602.4	569.9	530.1	482.8	425.3	364.7	357.3	351.5	348.4
12.5°	757.4	744.2	733.9	692.5	642.3	572.9	503.5	416.4	410.5	403.1	391.3
15°	878.6	866.8	849.1	813.6	757.4	670.4	589.1	482.8	468.1	457.8	448.9
17.5°	973.1	965.7	945.0	905.1	844.6	767.9	670.4	550.8	539.0	525.6	509.4
20°	1063.1	1052.8	1020.3	965.7	900.7	841.7	766.3	639.3	623.1	606.8	589.1
22.5°	1148.8	1138.4	1085.2	995.2	925.8	900.7	874.2	739.7	714.7	701.4	683.6
25°	1268.4	1246.3	1163.5	1020.3	927.3	946.5	992.3	869.7	846.0	826.9	798.8
27.5°	1429.3	1399.8	1269.8	1057.2	933.2	996.6	1128.1	1027.7	1002.6	980.5	949.4
30°	1611.0	1591.7	1436.7	1145.8	976.0	1070.5	1280.2	1228.5	1199.0	1172.4	1135.5
32.5°	1794.0	1767.4	1613.9	1314.1	1091.2	1213.8	1470.7	1461.8	1423.5	1398.3	1358.4
35°	1954.9	1941.7	1828.0	1590.2	1354.0	1464.7	1724.6	1735.0	1701.0	1674.4	1630.1
37.5°	2064.3	2064.3	2042.1	1887.1	1771.9	1854.6	2098.2	2099.7	2065.7	2005.2	1983.1
40°	2120.3	2136.6	2216.3	2245.8	2240.0	2346.3	2588.4	2561.9	2533.8	2502.8	2429.0
42.5°	2235.5	2250.3	2420.1	2623.9	2756.8	2897.1	3063.8	3055.0	3021.1	2964.9	2897.1
45°	2430.4	2449.6	2651.9	2975.2	3248.4	3447.8	3554.1	3512.7	3478.8	3425.6	3390.2
47.5°	2678.5	2715.4	2944.3	3344.4	3673.7	4002.9	4113.7	4004.5	3974.9	3933.6	3876.0
50°	2942.8	2978.3	3221.8	3679.6	4051.7	4444.5	4629.0	4444.5	4401.6	4388.4	4323.4
52.5°	3171.7	3201.2	3435.9	3938.0	4341.2	4801.8	5070.6	4826.9	4795.9	4751.6	4704.3
55°	3307.5	3331.2	3551.1	4062.0	4537.5	5123.7	5497.3	5283.2	5237.4	5219.7	5151.8
57.5°	3353.3	3376.9	3574.8	4078.3	4643.8	5417.5	6015.5	6022.9	5968.3	5904.8	5884.2
60°	3353.3	3379.9	3546.7	4038.4	4747.1	5730.5	6706.5	7322.3	7204.1	7192.4	7117.1
62.5°	3214.4	3239.6	3407.9	3915.9	4886.0	6152.9	7669.3	8756.0	8722.1	8645.3	8521.3
65°	2913.3	2928.0	3093.4	3602.8	4832.8	6541.2	8503.6	9709.9	9655.3	9504.7	9345.2
66°	2777.4	2789.3	2944.3	3424.2	4658.5	6594.4	8651.3	9829.5	9739.4	9612.5	9432.4
67.5°	2581.0	2601.7	2711.0	3092.0	4240.7	6409.8	8558.2	9745.4	9667.1	9513.5	9333.3
70°	1723.1	1708.4	2093.8	2372.9	3230.7	5222.6	7678.2	8750.2	8751.6	8679.3	8607.0
72.5°	818.0	826.9	939.1	1460.4	2114.4	3489.1	6111.5	6984.2	7084.6	6954.6	6864.6
75°	587.6	601.0	668.8	893.3	1261.0	2093.8	3961.7	4884.5	4887.4	4657.1	4451.9
77.5°	171.3	178.7	251.0	550.8	945.0	1413.0	2275.4	2715.4	2651.9	2486.5	2331.5
80°	70.9	70.9	73.8	175.7	379.5	959.7	1591.7	2090.8	2083.4	2020.0	1928.4
82.5°	26.6	28.0	35.4	72.3	90.1	236.3	1061.7	1814.7	1810.3	1720.2	1655.3
85°	2.9	2.9	8.9	31.0	34.0	44.3	212.6	800.3	795.9	800.3	701.4
87.5°	0.0	0.0	1.5	2.9	4.4	5.9	8.9	31.0	34.0	32.5	29.5
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°	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8
2.5°	252.5	249.5	249.5	248.1	248.1	248.1	246.6	245.1	245.1	243.6	242.1
5°	276.1	273.2	271.7	268.7	267.2	265.8	262.9	261.3	258.4	256.9	255.5
7.5°	304.1	298.3	296.7	292.4	287.9	285.0	282.0	277.6	274.6	268.7	267.2
10°	339.6	332.2	326.3	320.4	316.0	308.6	304.1	298.3	292.4	287.9	283.5
12.5°	385.3	375.0	366.2	360.3	349.9	341.0	332.2	327.8	316.0	310.1	302.7
15°	435.6	423.8	413.5	401.6	394.2	379.5	367.6	354.4	348.4	338.1	326.3
17.5°	500.5	481.3	465.1	453.3	438.5	423.8	410.5	397.2	379.5	367.6	352.9
20°	569.9	553.7	531.6	510.9	493.2	475.5	456.2	438.5	422.3	403.1	385.3
22.5°	658.5	635.0	608.4	587.6	564.1	544.8	518.2	494.7	468.1	443.0	422.3
25°	770.8	739.7	714.7	685.1	657.1	627.6	595.0	565.5	531.6	507.9	472.5
27.5°	909.6	880.0	846.0	807.7	779.6	735.3	692.5	655.6	615.7	578.8	539.0
30°	1086.8	1044.0	1008.5	971.6	915.5	872.6	822.5	772.2	717.6	680.7	620.2
32.5°	1299.4	1253.6	1200.4	1147.3	1095.7	1035.1	973.1	911.1	850.5	782.6	720.5
35°	1559.3	1504.7	1444.1	1386.5	1306.7	1241.8	1163.5	1077.9	1010.0	931.7	853.4
37.5°	1903.3	1813.2	1760.0	1699.6	1591.7	1503.1	1416.1	1330.4	1210.8	1128.1	1017.4
40°	2334.4	2281.3	2194.1	2096.7	1999.2	1882.6	1764.5	1650.8	1512.0	1396.9	1268.4
42.5°	2840.9	2762.7	2674.1	2533.8	2434.9	2297.5	2163.2	2012.6	1842.8	1695.1	1544.5
45°	3316.4	3223.3	3155.4	3015.2	2911.8	2749.4	2587.0	2427.5	2231.1	2040.6	1866.3
47.5°	3830.2	3753.4	3641.3	3527.5	3422.7	3239.6	3063.8	2870.5	2663.7	2437.8	2211.9
50°	4282.1	4221.5	4144.7	4007.4	3890.8	3737.2	3530.5	3319.3	3058.0	2833.6	2576.7
52.5°	4665.9	4618.7	4510.9	4413.5	4308.6	4164.0	3979.4	3777.1	3495.0	3248.4	2956.1
55°	5119.2	5085.3	4990.8	4930.3	4837.2	4698.5	4525.7	4338.1	4039.9	3771.1	3440.4
57.5°	5862.0	5835.4	5752.7	5727.6	5636.1	5515.0	5302.4	5101.5	4753.1	4419.3	4041.4
60°	7092.0	7038.8	6917.7	6855.7	6662.3	6499.9	6223.8	5947.6	5526.8	5101.5	4646.8
62.5°	8409.0	8259.9	8029.5	7831.7	7557.1	7275.0	6905.9	6483.6	5990.4	5485.5	4962.8
65°	9119.3	8865.3	8574.4	8259.9	7904.0	7489.1	7024.0	6517.6	5987.5	5454.4	4902.2
66°	9200.5	8914.0	8605.4	8255.5	7859.7	7418.2	6945.8	6414.2	5863.4	5343.7	4791.4
67.5°	9098.6	8798.9	8472.5	8084.2	7656.0	7198.3	6702.2	6149.9	5619.8	5092.7	4555.2
70°	8385.5	8087.2	7796.3	7387.3	6931.1	6470.4	6000.8	5383.6	4881.5	4397.2	3918.8
72.5°	6696.2	6493.9	6206.0	5856.0	5411.6	4871.2	4479.9	3927.7	3492.1	3022.6	2651.9
75°	4184.6	3899.6	3543.8	3097.8	2758.2	2319.7	2090.8	1671.4	1423.5	1206.4	996.6
77.5°	2139.5	1925.4	1675.9	1424.9	1184.3	945.0	730.9	516.8	348.4	242.1	180.1
80°	1767.4	1578.5	1371.8	1142.9	930.2	722.0	519.8	354.4	225.9	147.7	115.2
82.5°	1460.4	1300.9	1116.3	903.7	719.1	567.0	394.2	256.9	159.5	103.4	81.2
85°	621.6	564.1	435.6	345.5	259.8	192.0	134.4	90.1	63.5	51.7	47.2
87.5°	26.6	29.5	28.0	22.1	16.3	16.3	14.8	11.8	11.8	11.8	11.8
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8	231.8
2.5°	242.1	240.7	239.2	239.2	237.7	236.3	227.4	220.0	211.2	205.2	199.3
5°	252.5	251.0	248.1	246.6	243.6	242.1	222.9	206.7	193.4	183.1	175.7
7.5°	262.9	261.3	256.9	252.5	251.0	248.1	217.0	196.4	178.7	166.9	159.5
10°	276.1	271.7	267.2	261.3	256.9	252.5	211.2	184.6	165.4	155.0	147.7
12.5°	295.3	287.9	280.6	273.2	267.2	259.8	208.2	174.3	155.0	143.2	135.8
15°	317.5	307.2	298.3	289.4	279.0	271.7	202.3	165.4	146.1	134.4	125.5
17.5°	338.1	326.3	313.0	299.8	289.4	279.0	196.4	156.5	137.3	125.5	116.6
20°	367.6	349.9	333.7	317.5	302.7	289.4	187.5	147.7	130.0	116.6	107.8
22.5°	400.1	379.5	358.8	336.7	317.5	299.8	180.1	140.3	122.6	109.2	98.9
25°	441.5	416.4	388.4	360.3	338.1	314.5	172.7	132.9	115.2	101.8	91.5
27.5°	499.1	463.6	432.7	397.2	363.2	336.7	166.9	127.0	107.8	94.5	84.1
30°	577.3	525.6	477.0	438.5	398.7	360.3	160.9	119.6	101.8	87.1	75.3
32.5°	664.5	603.9	547.8	490.2	440.1	395.8	155.0	113.7	94.5	79.7	69.4
35°	772.2	695.4	620.2	553.7	493.2	434.1	149.2	107.8	88.6	72.3	62.0
37.5°	927.3	831.3	732.4	646.7	568.5	490.2	144.7	101.8	81.2	64.9	54.6
40°	1140.0	1015.9	894.8	778.2	676.2	578.8	138.8	96.0	75.3	59.1	48.7
42.5°	1370.3	1219.7	1060.2	928.8	788.5	665.9	132.9	90.1	69.4	53.2	42.8
45°	1656.7	1469.2	1275.8	1097.1	925.8	767.9	127.0	84.1	62.0	47.2	36.9
47.5°	1969.7	1730.5	1512.0	1287.5	1083.8	894.8	119.6	79.7	56.1	41.4	32.5
50°	2291.6	2039.1	1763.0	1507.6	1265.4	1021.8	112.3	72.3	50.2	36.9	26.6
52.5°	2638.7	2340.4	2058.3	1740.8	1458.9	1188.6	104.9	66.4	45.8	32.5	22.1
55°	3080.1	2746.4	2415.6	2059.8	1720.2	1382.1	97.5	59.1	39.8	28.0	17.7
57.5°	3635.3	3239.6	2833.6	2431.9	2020.0	1636.0	91.5	51.7	34.0	23.7	14.8
60°	4159.5	3697.3	3205.6	2743.4	2278.4	1830.9	82.7	45.8	29.5	19.2	14.8
62.5°	4431.2	3904.0	3373.9	2864.5	2368.4	1900.3	73.8	38.4	25.1	16.3	13.2
65°	4364.7	3827.3	3313.5	2799.6	2313.8	1856.0	64.9	34.0	22.1	14.8	13.2
66°	4268.7	3737.2	3220.4	2731.6	2268.0	1808.8	60.6	32.5	20.6	14.8	11.8
67.5°	4059.1	3545.3	3052.1	2597.3	2142.5	1718.7	54.6	29.5	19.2	13.2	11.8
70°	3467.0	3000.4	2606.2	2201.5	1830.9	1448.5	44.3	25.1	16.3	11.8	11.8
72.5°	2294.6	1977.1	1714.3	1475.1	1232.9	956.8	36.9	20.6	13.2	11.8	10.3
75°	865.3	782.6	671.9	603.9	527.1	462.2	29.5	13.2	10.3	10.3	10.3
77.5°	153.5	141.8	125.5	115.2	106.3	97.5	23.7	8.9	8.9	10.3	10.3
80°	103.4	96.0	87.1	79.7	73.8	66.4	16.3	7.4	8.9	8.9	10.3
82.5°	73.8	69.4	64.9	59.1	54.6	48.7	10.3	7.4	8.9	8.9	8.9
85°	44.3	41.4	38.4	35.4	31.0	29.5	7.4	7.4	7.4	8.9	8.9
87.5°	11.8	10.3	11.8	11.8	8.9	10.3	5.9	5.9	5.9	7.4	7.4
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):

	145°	155°	165°	175°	180°
0°	231.8	231.8	231.8	231.8	231.8
2.5°	196.4	196.4	193.4	197.8	197.8
5°	169.8	169.8	168.3	169.8	169.8
7.5°	155.0	153.5	153.5	153.5	155.0
10°	141.8	140.3	140.3	140.3	140.3
12.5°	130.0	128.4	127.0	128.4	128.4
15°	119.6	116.6	116.6	116.6	116.6
17.5°	110.7	107.8	106.3	106.3	106.3
20°	101.8	97.5	97.5	97.5	97.5
22.5°	93.0	88.6	88.6	88.6	88.6
25°	84.1	79.7	79.7	79.7	79.7
27.5°	76.8	72.3	72.3	72.3	72.3
30°	68.0	64.9	64.9	66.4	64.9
32.5°	62.0	57.5	57.5	59.1	59.1
35°	54.6	51.7	51.7	51.7	51.7
37.5°	47.2	44.3	44.3	44.3	44.3
40°	41.4	38.4	36.9	38.4	38.4
42.5°	35.4	32.5	31.0	31.0	31.0
45°	31.0	26.6	25.1	26.6	26.6
47.5°	25.1	22.1	22.1	23.7	23.7
50°	19.2	19.2	20.6	23.7	23.7
52.5°	17.7	17.7	20.6	23.7	23.7
55°	16.3	17.7	20.6	22.1	23.7
57.5°	14.8	17.7	20.6	22.1	22.1
60°	14.8	16.3	19.2	22.1	22.1
62.5°	13.2	14.8	17.7	20.6	20.6
65°	13.2	14.8	17.7	20.6	20.6
66°	13.2	14.8	17.7	20.6	20.6
67.5°	13.2	14.8	17.7	20.6	20.6
70°	13.2	14.8	17.7	19.2	19.2
72.5°	11.8	13.2	16.3	19.2	19.2
75°	11.8	13.2	16.3	19.2	19.2
77.5°	11.8	13.2	16.3	19.2	19.2
80°	11.8	13.2	16.3	17.7	19.2
82.5°	10.3	13.2	14.8	17.7	17.7
85°	10.3	11.8	14.8	16.3	17.7
87.5°	8.9	10.3	11.8	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)