

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: P163558

Luminaire Tested: **LDRL-SL3-E06-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163558
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-E06-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (126) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10354.1 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

Input Watts (W): 150.5
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

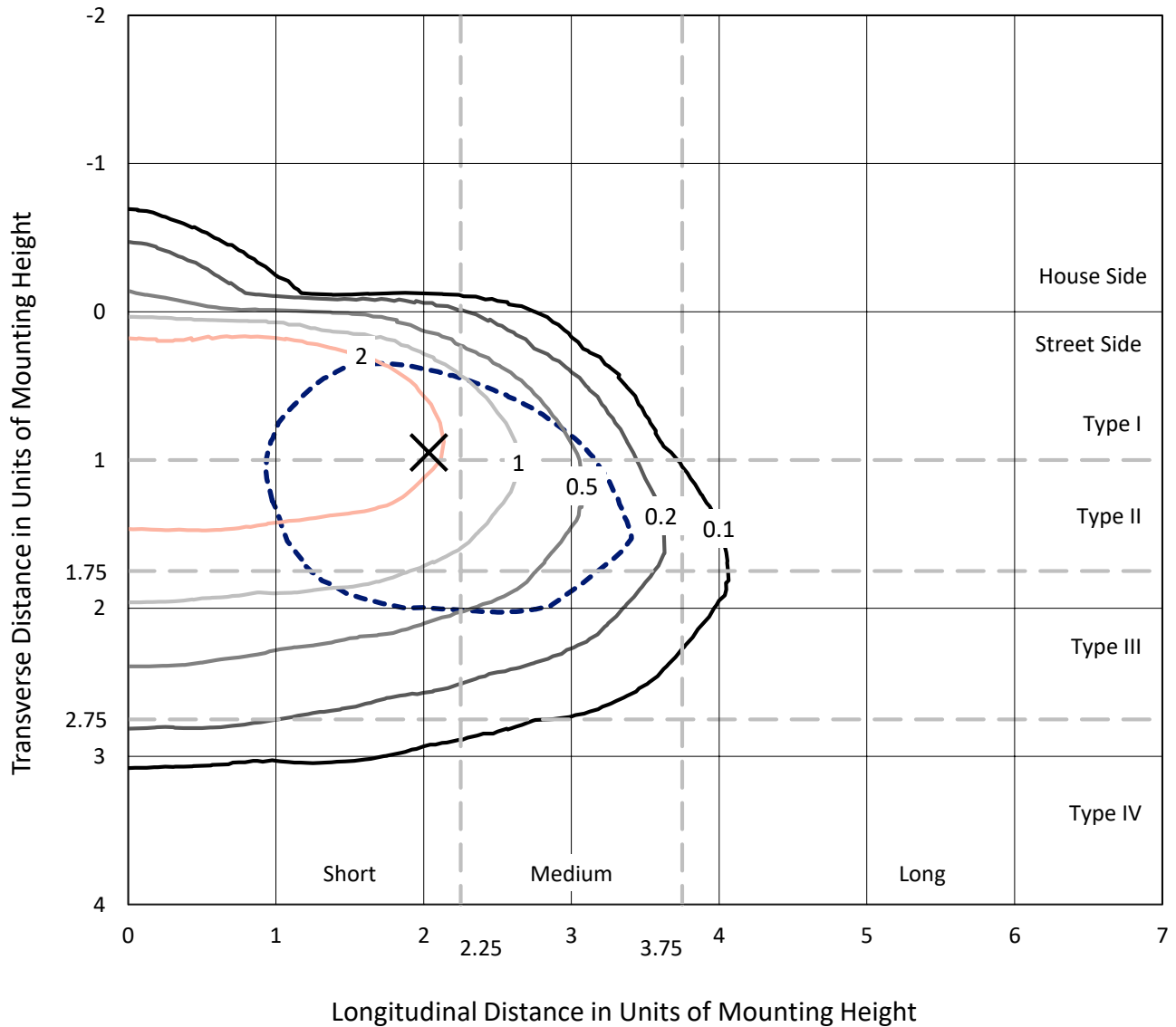


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Iso-Footcandle Lines of Horizontal Illumination

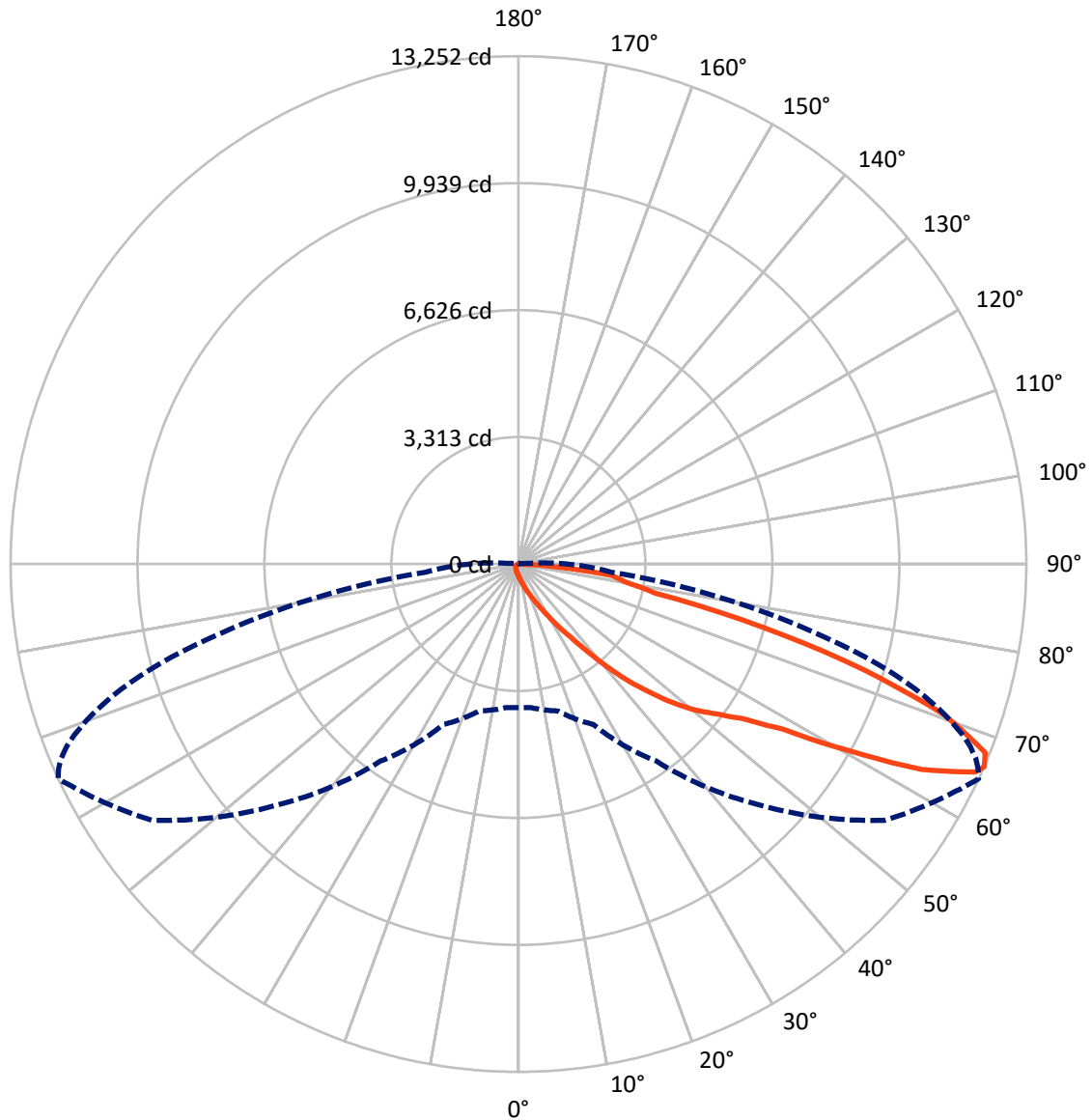
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.3 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	224.3	0.0	224.3
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	10129.8	0.0	10129.8
	% Fixture	97.8	0.0	97.8
Total	Lumens	10354.1	0.0	10354.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.0	0.3
10°-20°	148.3	1.4
20°-30°	320.0	3.1
30°-40°	683.3	6.6
40°-50°	1511.1	14.6
50°-60°	2560.8	24.7
60°-70°	3417.1	33.0
70°-80°	1505.2	14.5
80°-90°	173.4	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°	10354.1	100.0
0°-180°	10354.1	100.0



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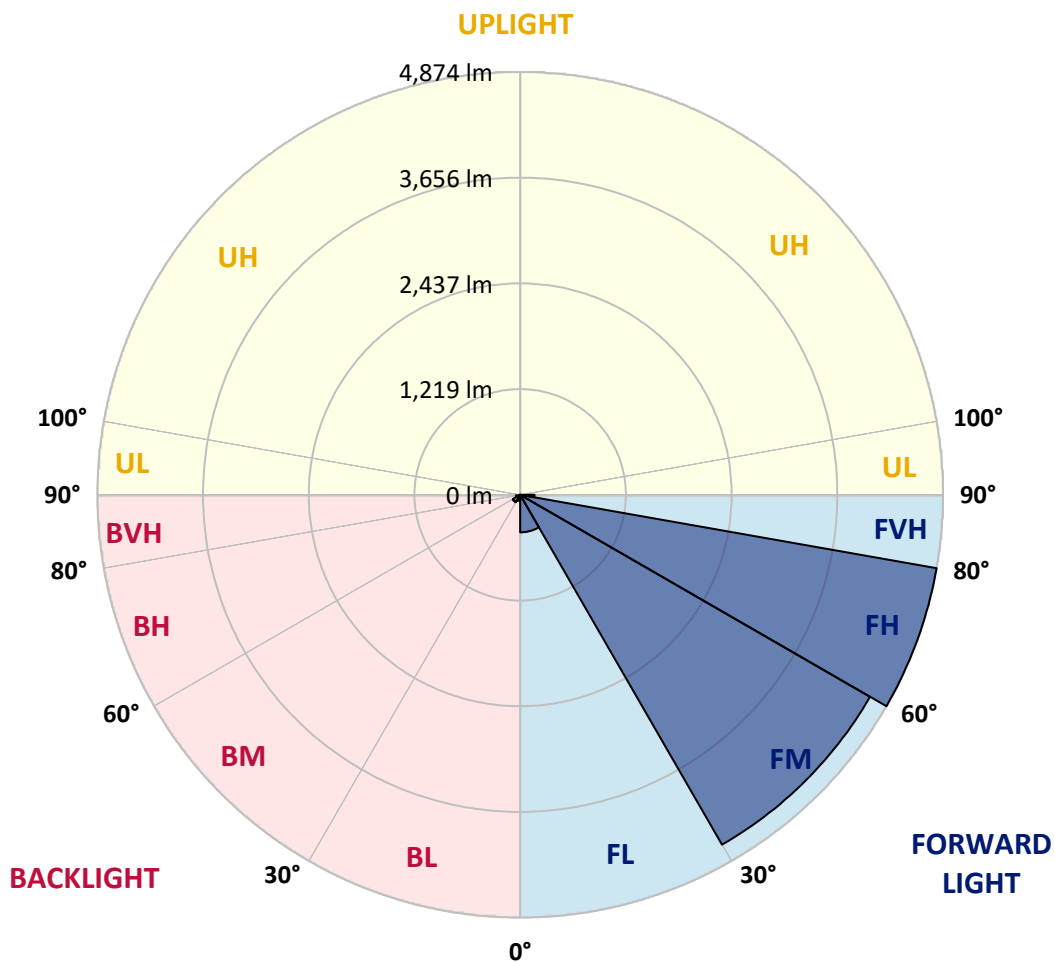
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	432.5	4.2			
FM	(30°-60°)	4656.6	45.0			
FH	(60°-80°)	4874.2	47.1			G2/5000
FVH	(80°-90°)	166.5	1.6			G2/225
BL	(0°-30°)	70.8	0.7	B0/110		
BM	(30°-60°)	98.5	1.0	B0/220		
BH	(60°-80°)	48.1	0.5	B0/110		G0/110
BVH	(80°-90°)	6.9	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5
2.5°	394.1	392.2	384.2	384.2	372.2	364.2	354.4	344.4	344.4	342.4	340.3
5°	521.6	509.6	507.6	485.8	467.8	441.9	418.0	386.1	382.2	378.3	376.2
7.5°	662.8	660.9	643.0	617.1	581.3	533.5	485.8	433.9	426.0	422.0	414.1
10°	846.0	836.1	812.2	768.3	714.7	650.9	573.3	491.7	481.7	473.8	469.8
12.5°	1021.1	1003.3	989.4	933.6	865.9	772.4	678.8	561.4	553.4	543.4	527.5
15°	1184.4	1168.5	1144.6	1096.9	1021.1	903.8	794.2	650.9	631.1	617.1	605.2
17.5°	1311.9	1301.9	1274.1	1220.2	1138.6	1035.2	903.8	742.5	726.6	708.6	686.7
20°	1433.3	1419.4	1375.5	1301.9	1214.3	1134.7	1033.1	861.9	840.0	818.1	794.2
22.5°	1548.8	1534.7	1463.1	1341.7	1248.1	1214.3	1178.5	997.3	963.5	945.5	921.6
25°	1709.9	1680.1	1568.6	1375.5	1250.2	1276.0	1337.7	1172.5	1140.6	1114.7	1076.9
27.5°	1926.9	1887.1	1711.9	1425.3	1258.0	1343.6	1520.8	1385.5	1351.6	1321.8	1280.0
30°	2171.8	2145.8	1936.9	1544.7	1315.8	1443.2	1725.8	1656.3	1616.4	1580.5	1530.8
32.5°	2418.6	2382.7	2175.8	1771.6	1471.1	1636.3	1982.7	1970.7	1919.0	1885.2	1831.4
35°	2635.5	2617.7	2464.4	2143.9	1825.4	1974.7	2325.0	2339.0	2293.2	2257.4	2197.7
37.5°	2782.9	2782.9	2753.0	2544.0	2388.8	2500.2	2828.7	2830.7	2784.9	2703.3	2673.5
40°	2858.5	2880.4	2987.9	3027.7	3019.8	3163.2	3489.6	3453.7	3415.9	3374.1	3274.6
42.5°	3013.8	3033.7	3262.6	3537.4	3716.5	3905.6	4130.5	4118.5	4072.9	3997.1	3905.6
45°	3276.6	3302.4	3575.2	4011.0	4379.3	4648.1	4791.5	4735.7	4689.9	4618.2	4570.4
47.5°	3611.0	3660.7	3969.3	4508.7	4952.6	5396.5	5545.9	5398.6	5358.7	5303.1	5225.4
50°	3967.3	4015.1	4343.5	4960.6	5462.3	5991.8	6240.6	5991.8	5934.0	5916.2	5828.6
52.5°	4275.9	4315.7	4632.1	5309.0	5852.5	6473.5	6835.8	6507.3	6465.6	6405.9	6342.1
55°	4459.0	4490.9	4787.4	5476.2	6117.2	6907.5	7411.1	7122.5	7060.8	7036.9	6945.3
57.5°	4520.7	4552.6	4819.3	5498.1	6260.6	7303.6	8109.8	8119.7	8046.1	7960.5	7932.7
60°	4520.7	4556.5	4781.5	5444.3	6399.8	7725.6	9041.4	9871.5	9712.2	9696.3	9594.9
62.5°	4333.5	4367.4	4594.3	5279.2	6587.0	8295.0	10339.3	11804.4	11758.7	11655.1	11487.9
65°	3927.6	3947.4	4170.4	4857.1	6515.3	8818.5	11464.0	13090.4	13016.7	12813.7	12598.7
66°	3744.3	3760.3	3969.3	4616.2	6280.4	8890.2	11663.1	13251.5	13130.1	12959.0	12716.2
67.5°	3479.6	3507.4	3654.8	4168.4	5717.0	8641.3	11537.7	13138.1	13032.6	12825.6	12582.7
70°	2323.0	2303.2	2822.7	3199.0	4355.4	7040.8	10351.3	11796.5	11798.4	11700.9	11603.4
72.5°	1102.8	1114.7	1266.0	1968.8	2850.5	4703.8	8239.2	9415.7	9551.0	9375.8	9254.4
75°	792.2	810.2	901.7	1204.4	1700.0	2822.7	5340.9	6585.0	6589.0	6278.4	6001.7
77.5°	230.9	240.8	338.4	742.5	1274.1	1905.0	3067.6	3660.7	3575.2	3352.2	3143.2
80°	95.6	95.6	99.5	236.9	511.6	1293.9	2145.8	2818.8	2808.8	2723.2	2599.7
82.5°	35.8	37.8	47.8	97.5	121.4	318.5	1431.3	2446.5	2440.5	2319.1	2231.5
85°	3.9	3.9	11.9	41.7	45.8	59.7	286.7	1078.9	1073.0	1078.9	945.5
87.5°	0.0	0.0	2.0	3.9	5.9	8.0	11.9	41.7	45.8	43.8	39.8
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5
2.5°	340.3	336.4	336.4	334.4	334.4	334.4	332.5	330.5	330.5	328.4	326.4
5°	372.2	368.3	366.3	362.3	360.3	358.3	354.4	352.3	348.3	346.4	344.4
7.5°	410.0	402.2	400.1	394.1	388.1	384.2	380.2	374.2	370.3	362.3	360.3
10°	457.8	447.8	440.0	431.9	426.0	416.1	410.0	402.2	394.1	388.1	382.2
12.5°	519.5	505.6	493.6	485.8	471.7	459.8	447.8	441.9	426.0	418.0	408.1
15°	587.2	571.3	557.4	541.4	531.4	511.6	495.6	477.8	469.8	455.8	440.0
17.5°	674.8	648.9	627.0	611.1	591.2	571.3	553.4	535.5	511.6	495.6	475.8
20°	768.3	746.4	716.6	688.8	664.9	641.0	615.0	591.2	569.4	543.4	519.5
22.5°	887.8	856.0	820.2	792.2	760.5	734.5	698.7	666.9	631.1	597.2	569.4
25°	1039.1	997.3	963.5	923.6	885.8	846.0	802.2	762.4	716.6	684.7	637.0
27.5°	1226.3	1186.4	1140.6	1088.9	1051.1	991.3	933.6	883.8	830.0	780.3	726.6
30°	1465.2	1407.4	1359.6	1309.9	1234.2	1176.4	1108.8	1041.1	967.5	917.7	836.1
32.5°	1751.8	1690.0	1618.3	1546.7	1477.1	1395.5	1311.9	1228.2	1146.6	1055.0	971.4
35°	2102.1	2028.5	1946.9	1869.2	1761.7	1674.1	1568.6	1453.2	1361.6	1256.1	1150.6
37.5°	2566.0	2444.4	2372.8	2291.3	2145.8	2026.4	1909.0	1793.6	1632.4	1520.8	1371.6
40°	3147.1	3075.5	2958.0	2826.6	2695.3	2538.0	2378.8	2225.5	2038.3	1883.2	1709.9
42.5°	3829.9	3724.5	3605.1	3415.9	3282.6	3097.4	2916.3	2713.2	2484.3	2285.2	2082.2
45°	4470.9	4345.5	4254.0	4064.9	3925.5	3706.5	3487.6	3272.6	3007.9	2751.0	2516.1
47.5°	5163.7	5060.1	4908.9	4755.6	4614.3	4367.4	4130.5	3869.8	3591.0	3286.5	2981.9
50°	5772.8	5691.2	5587.6	5402.6	5245.3	5038.2	4759.6	4474.9	4122.6	3820.1	3473.7
52.5°	6290.4	6226.7	6081.4	5950.0	5808.7	5613.6	5364.8	5092.0	4711.8	4379.3	3985.2
55°	6901.5	6855.7	6728.3	6646.7	6521.2	6334.2	6101.2	5848.4	5446.4	5084.0	4638.2
57.5°	7902.8	7866.9	7755.5	7721.6	7598.3	7435.0	7148.3	6877.6	6407.8	5957.9	5448.4
60°	9561.0	9489.3	9326.1	9242.5	8981.7	8762.7	8390.5	8018.3	7450.9	6877.6	6264.5
62.5°	11336.6	11135.5	10825.0	10558.3	10188.0	9807.8	9310.2	8740.8	8075.9	7395.2	6690.5
65°	12294.1	11951.7	11559.6	11135.5	10655.8	10096.4	9469.4	8786.6	8072.0	7353.4	6608.9
66°	12403.5	12017.4	11601.3	11129.6	10596.1	10000.8	9363.9	8647.2	7904.7	7204.1	6459.5
67.5°	12266.2	11862.1	11422.2	10898.7	10321.3	9704.3	9035.5	8290.9	7576.4	6865.6	6141.1
70°	11304.8	10902.7	10510.5	9959.1	9344.0	8723.0	8089.9	7257.8	6580.9	5928.1	5283.1
72.5°	9027.5	8754.7	8366.6	7894.8	7295.6	6567.0	6039.5	5295.1	4707.9	4074.8	3575.2
75°	5641.4	5257.3	4777.5	4176.3	3718.5	3127.3	2818.8	2253.3	1919.0	1626.3	1343.6
77.5°	2884.4	2595.8	2259.4	1921.0	1596.5	1274.1	985.3	696.7	469.8	326.4	242.8
80°	2382.7	2128.0	1849.3	1540.8	1254.1	973.4	700.7	477.8	304.5	199.1	155.3
82.5°	1968.8	1753.8	1504.9	1218.3	969.4	764.4	531.4	346.4	215.0	139.4	109.5
85°	838.0	760.5	587.2	465.8	350.3	258.8	181.1	121.4	85.6	69.7	63.7
87.5°	35.8	39.8	37.8	29.8	21.9	21.9	19.9	15.9	15.9	15.9	15.9
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°	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5
2.5°	326.4	324.5	322.5	322.5	320.5	318.5	306.6	296.6	284.7	276.7	268.7
5°	340.3	338.4	334.4	332.5	328.4	326.4	300.6	278.6	260.8	246.9	236.9
7.5°	354.4	352.3	346.4	340.3	338.4	334.4	292.6	264.7	240.8	225.0	215.0
10°	372.2	366.3	360.3	352.3	346.4	340.3	284.7	248.9	223.0	209.0	199.1
12.5°	398.1	388.1	378.3	368.3	360.3	350.3	280.6	234.9	209.0	193.1	183.1
15°	428.0	414.1	402.2	390.2	376.2	366.3	272.7	223.0	197.0	181.1	169.2
17.5°	455.8	440.0	422.0	404.1	390.2	376.2	264.7	211.0	185.1	169.2	157.2
20°	495.6	471.7	449.9	428.0	408.1	390.2	252.8	199.1	175.2	157.2	145.3
22.5°	539.4	511.6	483.7	453.9	428.0	404.1	242.8	189.1	165.2	147.3	133.4
25°	595.2	561.4	523.6	485.8	455.8	423.9	232.8	179.2	155.3	137.3	123.4
27.5°	672.8	625.0	583.3	535.5	489.7	453.9	225.0	171.2	145.3	127.4	113.4
30°	778.3	708.6	643.0	591.2	537.5	485.8	217.0	161.2	137.3	117.5	101.5
32.5°	895.8	814.2	738.5	660.9	593.3	533.5	209.0	153.3	127.4	107.5	93.6
35°	1041.1	937.5	836.1	746.4	664.9	585.2	201.1	145.3	119.4	97.5	83.6
37.5°	1250.2	1120.8	987.4	871.9	766.4	660.9	195.0	137.3	109.5	87.5	73.6
40°	1536.8	1369.6	1206.3	1049.1	911.7	780.3	187.2	129.4	101.5	79.7	65.6
42.5°	1847.4	1644.3	1429.3	1252.1	1063.0	897.8	179.2	121.4	93.6	71.7	57.7
45°	2233.5	1980.7	1719.9	1479.1	1248.1	1035.2	171.2	113.4	83.6	63.7	49.7
47.5°	2655.5	2333.0	2038.3	1735.8	1461.1	1206.3	161.2	107.5	75.6	55.8	43.8
50°	3089.4	2749.1	2376.8	2032.4	1706.0	1377.5	151.3	97.5	67.7	49.7	35.8
52.5°	3557.3	3155.2	2774.9	2346.9	1966.8	1602.4	141.4	89.5	61.7	43.8	29.8
55°	4152.4	3702.6	3256.6	2776.9	2319.1	1863.2	131.4	79.7	53.7	37.8	23.9
57.5°	4900.9	4367.4	3820.1	3278.5	2723.2	2205.6	123.4	69.7	45.8	31.9	19.9
60°	5607.6	4984.5	4321.6	3698.5	3071.5	2468.3	111.4	61.7	39.8	25.9	19.9
62.5°	5973.9	5263.2	4548.5	3861.8	3193.0	2561.9	99.5	51.7	33.9	21.9	17.9
65°	5884.3	5159.8	4467.0	3774.3	3119.3	2502.2	87.5	45.8	29.8	19.9	17.9
66°	5754.9	5038.2	4341.5	3682.7	3057.6	2438.5	81.6	43.8	27.8	19.9	15.9
67.5°	5472.3	4779.5	4114.6	3501.5	2888.4	2317.1	73.6	39.8	25.9	17.9	15.9
70°	4674.0	4044.9	3513.5	2968.0	2468.3	1952.8	59.7	33.9	21.9	15.9	15.9
72.5°	3093.5	2665.5	2311.1	1988.6	1662.2	1289.9	49.7	27.8	17.9	15.9	13.9
75°	1166.6	1055.0	905.8	814.2	710.6	623.1	39.8	17.9	13.9	13.9	13.9
77.5°	207.0	191.1	169.2	155.3	143.3	131.4	31.9	11.9	11.9	13.9	13.9
80°	139.4	129.4	117.5	107.5	99.5	89.5	21.9	10.0	11.9	11.9	13.9
82.5°	99.5	93.6	87.5	79.7	73.6	65.6	13.9	10.0	11.9	11.9	11.9
85°	59.7	55.8	51.7	47.8	41.7	39.8	10.0	10.0	10.0	11.9	11.9
87.5°	15.9	13.9	15.9	15.9	11.9	13.9	8.0	8.0	8.0	10.0	10.0
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°	312.5	312.5	312.5	312.5	312.5
2.5°	264.7	264.7	260.8	266.7	266.7
5°	228.9	228.9	226.9	228.9	228.9
7.5°	209.0	207.0	207.0	207.0	209.0
10°	191.1	189.1	189.1	189.1	189.1
12.5°	175.2	173.1	171.2	173.1	173.1
15°	161.2	157.2	157.2	157.2	157.2
17.5°	149.2	145.3	143.3	143.3	143.3
20°	137.3	131.4	131.4	131.4	131.4
22.5°	125.3	119.4	119.4	119.4	119.4
25°	113.4	107.5	107.5	107.5	107.5
27.5°	103.6	97.5	97.5	97.5	97.5
30°	91.6	87.5	87.5	89.5	87.5
32.5°	83.6	77.6	77.6	79.7	79.7
35°	73.6	69.7	69.7	69.7	69.7
37.5°	63.7	59.7	59.7	59.7	59.7
40°	55.8	51.7	49.7	51.7	51.7
42.5°	47.8	43.8	41.7	41.7	41.7
45°	41.7	35.8	33.9	35.8	35.8
47.5°	33.9	29.8	29.8	31.9	31.9
50°	25.9	25.9	27.8	31.9	31.9
52.5°	23.9	23.9	27.8	31.9	31.9
55°	21.9	23.9	27.8	29.8	31.9
57.5°	19.9	23.9	27.8	29.8	29.8
60°	19.9	21.9	25.9	29.8	29.8
62.5°	17.9	19.9	23.9	27.8	27.8
65°	17.9	19.9	23.9	27.8	27.8
66°	17.9	19.9	23.9	27.8	27.8
67.5°	17.9	19.9	23.9	27.8	27.8
70°	17.9	19.9	23.9	25.9	25.9
72.5°	15.9	17.9	21.9	25.9	25.9
75°	15.9	17.9	21.9	25.9	25.9
77.5°	15.9	17.9	21.9	25.9	25.9
80°	15.9	17.9	21.9	23.9	25.9
82.5°	13.9	17.9	19.9	23.9	23.9
85°	13.9	15.9	19.9	21.9	23.9
87.5°	11.9	13.9	15.9	19.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)