

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: P146591

Luminaire Tested: **LDRL-T3-E02-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146591
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-E02-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6127.5 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

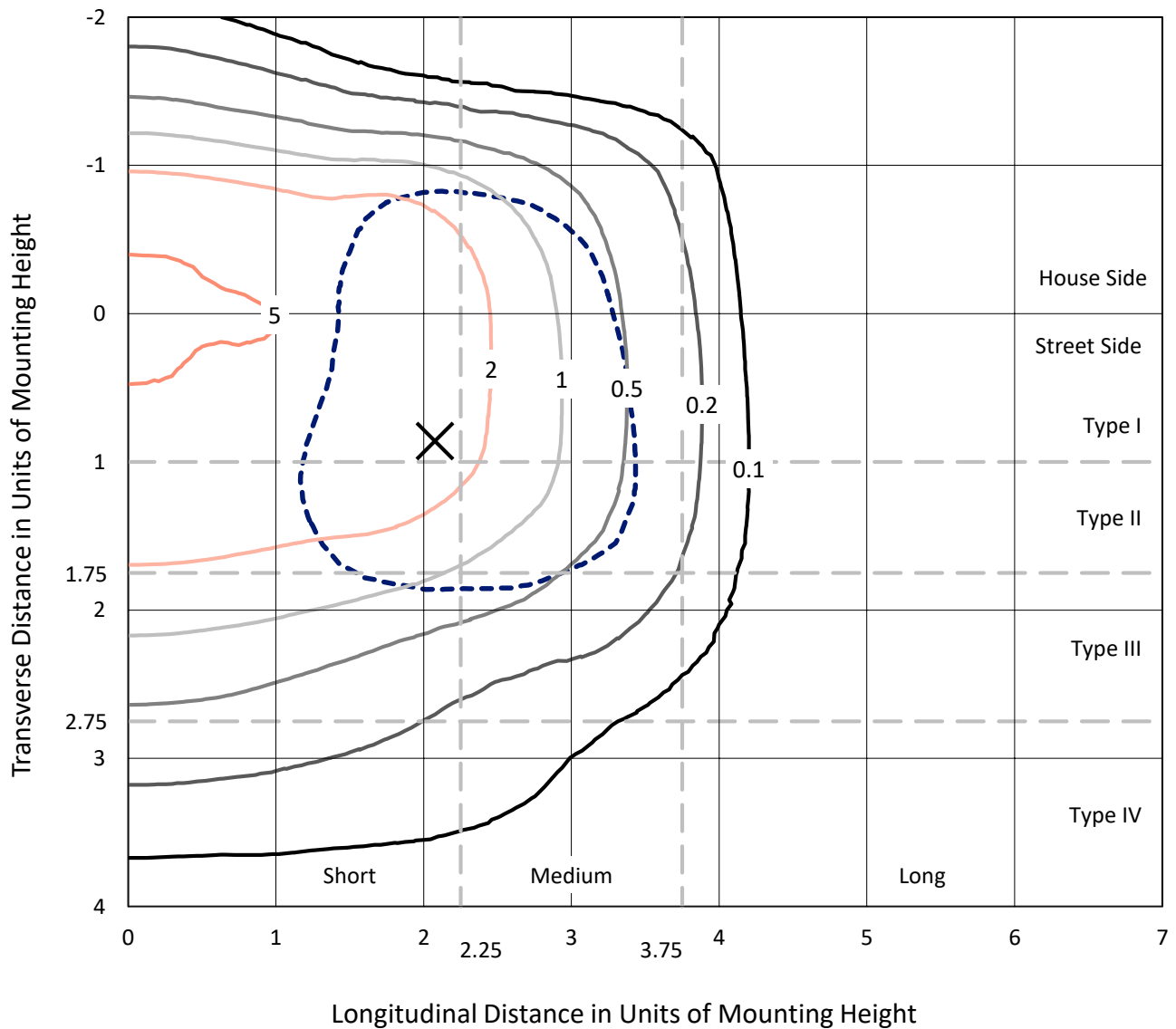
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

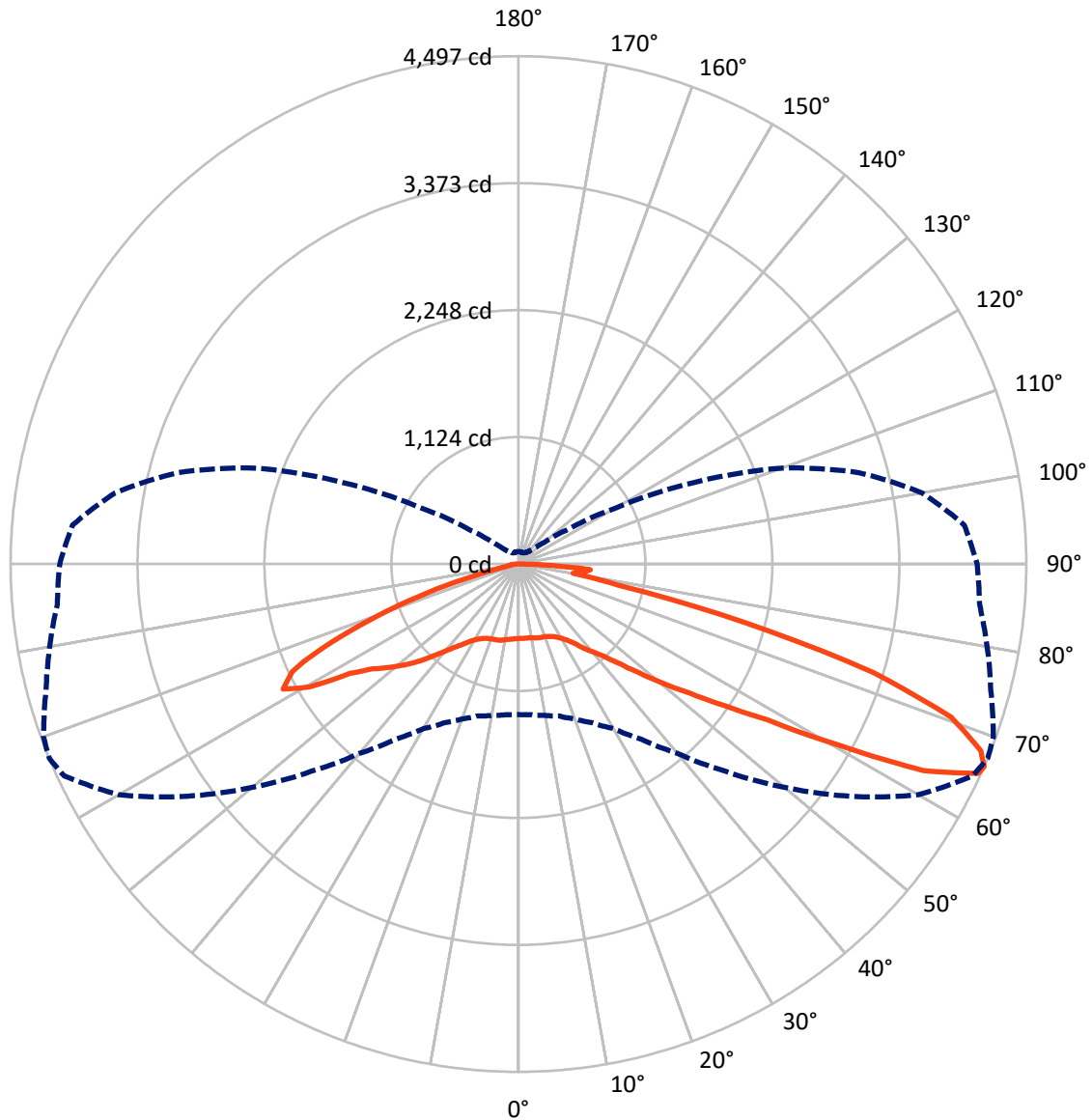
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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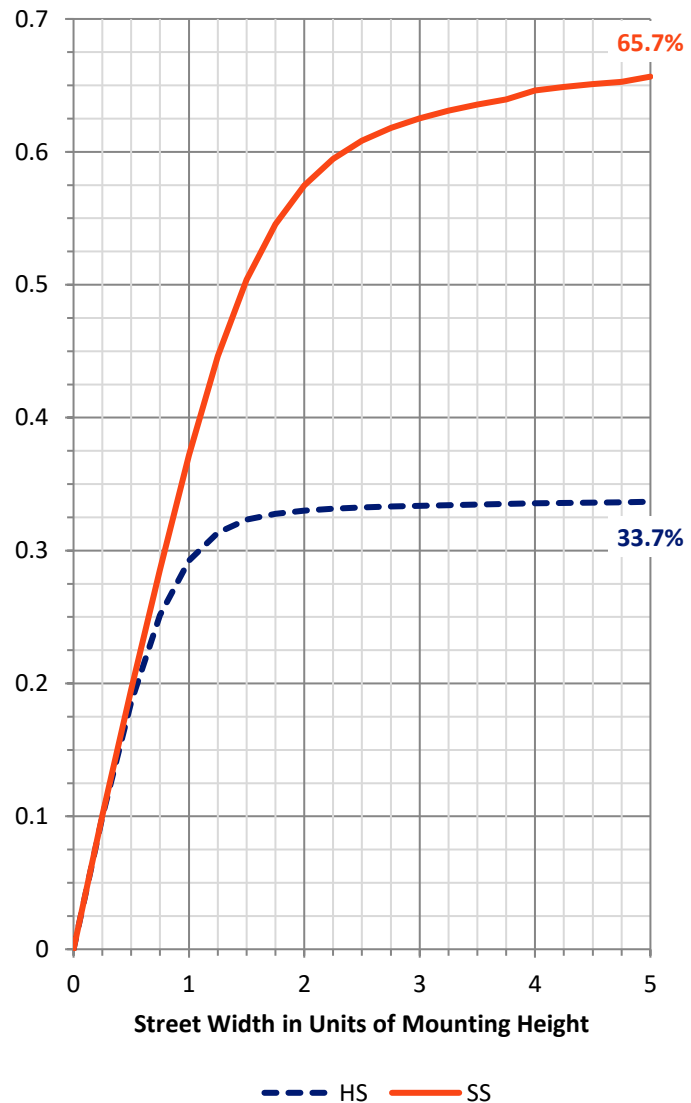
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2081.7	0.0	2081.7
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	4045.8	0.0	4045.8
	% Fixture	66.0	0.0	66.0
Total	Lumens	6127.5	0.0	6127.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	1.0
10°-20°	187.7	3.1
20°-30°	322.7	5.3
30°-40°	519.1	8.5
40°-50°	855.6	14.0
50°-60°	1341.2	21.9
60°-70°	1856.1	30.3
70°-80°	840.0	13.7
80°-90°	141.7	2.3
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°	6127.5	100.0
0°-180°	6127.5	100.0



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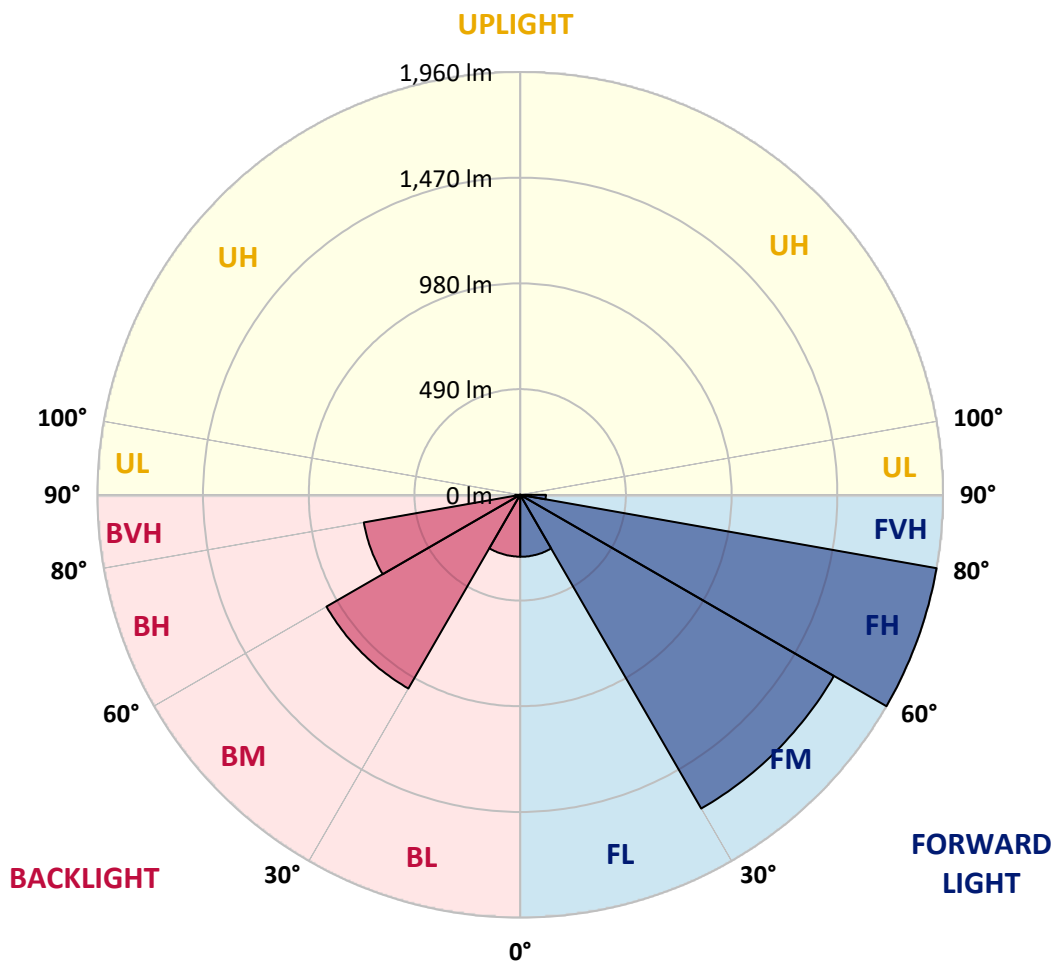
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	287.4	4.7			
FM	(30°-60°)	1679.2	27.4			
FH	(60°-80°)	1960.1	32.0			G2/5000
FVH	(80°-90°)	119.1	1.9			G2/225
BL	(0°-30°)	286.5	4.7	B1/500		
BM	(30°-60°)	1036.7	16.9	B2/2500		
BH	(60°-80°)	735.9	12.0	B2/1000		G2/1000
BVH	(80°-90°)	22.6	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6
2.5°	658.8	658.3	657.9	657.9	657.5	657.9	658.3	658.8	658.3	658.8	658.3
5°	657.5	657.5	657.1	657.1	657.1	657.1	657.5	657.9	657.5	658.3	657.5
7.5°	652.2	654.7	653.8	654.7	655.5	656.3	656.7	657.5	658.8	659.6	658.8
10°	645.2	646.4	646.9	647.7	649.3	651.4	653.0	655.1	657.9	658.8	659.6
12.5°	632.5	634.1	635.4	637.0	639.5	642.8	645.6	648.9	653.8	657.1	660.0
15°	623.1	625.1	625.5	627.6	630.0	633.7	637.4	642.3	648.9	654.7	660.4
17.5°	629.2	630.0	629.2	629.2	630.0	631.7	634.5	638.6	645.6	652.6	659.6
20°	647.7	647.7	646.9	646.4	645.6	644.0	643.6	643.2	647.7	653.0	659.2
22.5°	665.3	665.3	664.9	666.6	666.1	666.1	664.9	662.9	660.8	660.0	664.1
25°	676.4	678.1	678.9	681.3	683.0	685.4	686.3	685.8	683.0	678.1	676.8
27.5°	694.5	695.7	696.5	699.4	702.7	705.6	708.4	712.1	712.1	707.6	701.4
30°	729.4	727.7	728.5	729.4	732.2	736.3	740.0	745.0	747.4	745.8	737.6
32.5°	761.8	763.4	764.2	766.7	769.6	775.7	780.3	786.0	791.3	792.2	788.0
35°	809.4	808.6	807.3	816.0	819.2	826.2	831.6	839.8	843.9	847.6	845.1
37.5°	884.5	882.0	880.4	882.9	887.4	891.9	899.7	905.8	912.8	921.4	918.6
40°	990.8	995.7	988.8	992.0	995.7	985.5	992.4	998.2	1010.1	1010.5	1010.1
42.5°	1129.1	1132.8	1131.2	1133.2	1126.7	1123.4	1120.5	1123.4	1138.2	1136.1	1126.3
45°	1267.4	1272.8	1271.5	1272.4	1285.1	1279.8	1284.3	1285.1	1300.3	1296.2	1288.8
47.5°	1385.7	1394.7	1396.7	1404.1	1421.4	1435.3	1454.6	1469.0	1476.4	1481.3	1487.0
50°	1479.2	1485.8	1497.3	1515.8	1540.8	1565.0	1608.5	1636.8	1662.7	1680.8	1699.2
52.5°	1541.2	1548.6	1566.2	1594.2	1630.3	1674.6	1725.5	1784.6	1839.2	1871.2	1898.7
55°	1566.7	1574.0	1595.8	1632.3	1680.4	1737.0	1810.0	1893.4	1966.0	2039.5	2081.8
57.5°	1551.9	1560.1	1585.1	1626.2	1684.0	1758.3	1849.0	1951.2	2057.5	2168.8	2253.7
60°	1508.4	1515.8	1544.1	1586.8	1652.9	1736.6	1845.3	1973.4	2122.8	2287.8	2449.1
62.5°	1448.5	1459.5	1484.6	1528.1	1593.7	1685.3	1809.2	1975.9	2190.1	2456.1	2770.1
65°	1372.1	1380.3	1402.5	1437.0	1509.2	1604.8	1735.8	1939.7	2219.7	2596.9	3045.1
66°	1332.7	1340.5	1361.0	1393.5	1459.5	1551.5	1682.4	1891.3	2186.8	2596.0	3074.2
67.5°	1263.3	1267.0	1281.8	1313.8	1356.9	1439.4	1560.9	1756.7	2047.7	2486.5	2992.9
70°	1059.8	1065.1	1079.5	1095.9	1111.9	1141.4	1226.4	1355.7	1588.4	2009.1	2492.2
72.5°	733.0	741.3	756.9	787.2	812.3	849.6	882.9	926.0	1003.1	1295.4	1783.0
75°	529.9	532.8	555.7	609.1	659.6	734.3	800.4	821.3	795.0	790.5	1047.4
77.5°	316.0	320.1	353.4	407.2	459.7	561.1	696.5	801.2	859.1	838.5	793.0
80°	133.0	138.7	158.4	172.4	215.9	300.9	434.7	598.8	751.5	845.5	824.2
82.5°	42.7	49.7	58.7	71.0	83.7	112.1	173.6	259.8	410.4	612.0	752.3
85°	15.6	16.0	22.2	30.8	34.1	39.4	50.5	78.0	138.7	229.4	426.9
87.5°	6.2	7.4	8.6	11.9	12.3	12.7	14.4	18.5	18.1	15.6	80.9
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6
2.5°	658.8	659.6	659.2	659.6	659.6	658.8	658.8	660.4	659.2	660.0	660.0
5°	658.3	659.2	658.8	659.6	659.6	659.2	659.2	661.6	661.2	662.5	663.3
7.5°	660.0	660.4	660.0	660.0	661.2	660.8	661.2	662.0	664.1	666.1	667.8
10°	662.0	662.9	664.1	664.5	666.1	665.7	667.0	668.2	670.3	672.3	674.4
12.5°	664.9	667.4	671.1	671.9	673.5	674.8	676.8	678.1	679.7	683.0	685.4
15°	667.4	671.9	676.4	678.1	679.7	681.3	683.4	684.6	687.5	690.4	693.2
17.5°	668.2	673.5	679.3	681.3	683.0	685.8	688.3	690.8	694.1	697.8	701.0
20°	668.6	676.0	683.4	685.8	689.5	693.6	697.8	699.8	704.3	708.8	711.7
22.5°	672.3	681.3	691.6	696.1	699.8	707.2	712.5	715.8	721.1	724.8	726.1
25°	682.6	692.0	704.3	711.3	717.5	728.1	734.7	740.8	743.7	748.6	747.4
27.5°	701.0	708.4	724.4	733.9	741.7	755.6	768.3	774.1	778.6	781.1	778.2
30°	732.6	735.5	753.2	764.7	777.8	799.5	813.5	820.9	826.6	827.0	819.7
32.5°	779.8	775.3	790.9	807.3	824.6	850.8	869.7	877.5	882.0	882.5	866.0
35°	843.9	836.1	849.2	865.2	886.6	921.0	944.8	953.9	960.8	957.6	933.3
37.5°	924.7	924.3	930.5	951.0	975.2	1019.5	1044.6	1049.5	1049.1	1039.2	1002.7
40°	1014.6	1007.2	1008.0	1022.8	1050.7	1109.0	1143.9	1152.1	1149.2	1134.9	1087.3
42.5°	1127.9	1124.6	1113.5	1121.3	1147.2	1218.2	1260.5	1268.7	1271.1	1247.3	1191.1
45°	1286.7	1283.9	1259.2	1260.9	1279.8	1354.5	1398.4	1411.9	1412.3	1389.8	1316.7
47.5°	1479.2	1476.8	1448.0	1439.8	1449.3	1515.8	1570.4	1573.2	1574.0	1542.9	1466.9
50°	1697.6	1690.6	1668.9	1660.2	1649.2	1722.6	1766.5	1766.1	1761.6	1727.1	1641.8
52.5°	1908.6	1924.2	1915.9	1899.1	1899.5	1952.5	1993.9	1970.9	1973.8	1941.0	1842.9
55°	2133.9	2173.7	2203.7	2209.8	2206.9	2234.0	2257.0	2216.0	2200.8	2195.5	2091.2
57.5°	2373.2	2475.0	2567.3	2605.9	2591.1	2640.8	2661.3	2618.6	2619.4	2661.3	2571.4
60°	2692.9	2949.8	3182.6	3254.8	3288.5	3370.6	3334.0	3331.6	3396.0	3450.2	3283.5
62.5°	3178.1	3603.7	3975.1	4028.9	4056.0	4074.5	4058.0	4013.3	4079.8	4086.4	3829.4
65°	3545.8	4045.3	4404.5	4471.8	4466.8	4372.9	4281.7	4192.3	4191.4	4125.8	3794.9
66°	3585.6	4087.2	4437.3	4496.8	4475.1	4330.2	4214.4	4098.3	4060.9	3962.4	3626.7
67.5°	3498.6	4014.1	4361.8	4415.1	4368.7	4148.3	3990.7	3833.5	3777.3	3640.2	3297.9
70°	2990.9	3522.0	3987.0	4064.2	4009.2	3716.6	3483.0	3310.2	3157.1	3022.1	2739.7
72.5°	2319.0	2716.3	3208.4	3288.9	3293.4	3064.4	2801.3	2635.4	2457.3	2321.9	2110.1
75°	1521.1	1821.5	2092.0	2064.9	2072.7	1892.5	1735.8	1597.9	1436.5	1329.8	1228.9
77.5°	889.0	996.6	971.9	904.6	848.0	666.6	476.9	327.5	285.7	298.0	336.2
80°	772.9	712.5	557.8	490.5	446.2	302.9	162.9	114.9	101.0	102.2	108.4
82.5°	832.0	863.2	708.4	583.2	508.5	356.7	191.7	95.6	69.0	80.4	88.7
85°	645.6	821.7	757.7	640.3	538.5	379.2	195.8	60.7	41.0	55.0	69.4
87.5°	183.9	291.0	232.7	205.6	165.8	113.3	46.8	24.2	22.2	28.7	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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6	659.6
2.5°	660.4	660.4	661.6	662.0	662.5	662.5	663.3	663.3	663.7	665.3	664.9
5°	664.5	665.7	667.4	668.2	669.4	669.8	671.1	671.1	672.3	673.5	673.1
7.5°	669.4	670.7	671.9	673.1	674.4	676.0	675.6	675.2	674.8	673.9	673.1
10°	676.4	677.6	678.9	678.5	677.6	676.8	673.5	669.8	668.2	664.9	662.5
12.5°	687.9	689.1	687.9	684.6	680.1	674.8	667.8	661.6	657.9	653.0	650.1
15°	696.5	697.8	695.3	689.5	682.2	675.2	665.7	657.9	651.4	646.0	641.9
17.5°	703.1	702.3	696.9	690.4	682.6	676.8	668.2	659.6	651.8	644.4	638.6
20°	712.5	708.0	700.2	692.0	684.2	679.3	672.3	664.5	656.3	645.6	638.2
22.5°	724.8	716.6	706.4	698.2	690.8	685.8	678.9	671.5	663.7	651.4	641.1
25°	742.5	729.4	717.5	708.8	702.3	697.3	688.7	680.9	672.3	660.0	646.9
27.5°	767.1	748.2	735.9	727.3	720.7	715.0	703.9	694.5	683.4	671.1	655.5
30°	799.1	776.1	762.6	755.2	748.2	740.0	728.1	714.2	699.8	683.4	666.6
32.5°	838.9	813.1	800.4	793.0	783.9	772.9	757.3	738.8	717.5	695.7	674.8
35°	895.6	866.0	852.1	839.4	826.2	809.8	786.4	759.7	731.4	703.1	677.2
37.5°	951.8	924.3	907.1	893.9	873.4	846.7	814.3	777.4	739.6	703.5	672.3
40°	1031.4	999.4	979.3	955.9	922.7	881.2	834.0	784.4	737.6	694.1	657.1
42.5°	1129.1	1092.6	1062.6	1020.4	968.6	908.7	843.5	780.3	723.2	673.1	632.5
45°	1252.7	1205.1	1155.0	1088.5	1009.3	925.5	843.0	765.9	698.6	641.9	601.7
47.5°	1396.7	1329.8	1245.7	1144.3	1036.0	929.7	829.9	740.0	661.6	599.2	552.9
50°	1544.9	1448.0	1328.6	1187.4	1049.5	919.4	800.8	697.8	613.2	542.2	492.1
52.5°	1727.6	1577.3	1403.7	1216.6	1043.8	889.0	752.3	638.2	547.9	478.6	421.1
55°	1945.1	1725.9	1475.1	1232.6	1018.3	834.4	678.9	560.3	465.4	402.2	350.5
57.5°	2305.0	1958.6	1597.0	1256.4	968.2	753.2	589.4	466.7	377.6	323.8	282.4
60°	2925.6	2436.0	1854.8	1315.1	898.9	637.4	475.7	365.7	292.2	249.1	220.0
62.5°	3358.6	2725.3	1993.5	1294.9	781.1	502.0	351.7	261.5	213.0	184.7	165.0
65°	3274.5	2611.2	1826.5	1100.0	612.0	355.0	234.0	176.9	149.4	131.8	121.9
66°	3123.5	2485.2	1699.2	987.5	530.7	295.9	192.9	146.5	128.5	115.7	109.2
67.5°	2848.1	2224.2	1470.6	792.6	397.3	218.4	146.5	114.1	104.3	97.7	93.2
70°	2358.0	1758.7	1012.6	468.3	210.1	122.3	93.2	84.1	79.6	76.8	76.3
72.5°	1808.0	1261.7	585.7	226.6	112.5	81.3	71.4	68.1	66.5	65.7	65.7
75°	1116.8	711.7	261.9	113.7	77.6	66.5	62.0	60.3	59.9	59.9	59.9
77.5°	392.8	247.9	117.4	83.3	68.1	59.9	56.2	55.4	56.2	56.2	56.2
80°	108.4	95.6	85.0	73.9	61.6	55.4	52.1	51.7	53.4	53.8	52.1
82.5°	84.6	79.6	72.6	66.1	56.2	50.5	48.8	49.7	50.5	49.3	46.8
85°	72.2	69.0	50.9	50.9	45.6	43.9	43.5	44.3	43.9	40.6	37.4
87.5°	41.0	36.1	27.5	30.0	32.0	32.8	27.5	29.6	29.1	25.9	24.2
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):

	160°	165°	170°	175°	180°
0°	659.6	659.6	659.6	659.6	659.6
2.5°	665.7	665.7	666.6	666.6	666.1
5°	673.9	673.9	675.2	674.4	674.8
7.5°	672.3	670.7	670.7	669.8	669.4
10°	660.8	657.9	656.3	657.1	655.9
12.5°	647.7	645.2	643.6	643.2	642.8
15°	639.5	636.6	635.4	634.5	634.5
17.5°	635.0	631.7	630.0	628.8	628.4
20°	632.9	628.8	626.3	625.1	624.3
22.5°	633.7	628.8	625.5	623.9	623.1
25°	637.0	630.8	626.7	624.7	623.5
27.5°	642.8	634.5	630.0	627.2	625.5
30°	649.7	638.2	631.7	627.6	625.9
32.5°	654.2	638.6	630.4	624.3	622.6
35°	653.4	634.1	623.5	615.7	614.4
37.5°	645.2	622.2	609.1	598.8	597.6
40°	627.6	604.2	589.0	578.7	576.3
42.5°	602.9	578.7	562.3	552.9	549.6
45°	566.8	537.3	522.1	514.3	509.8
47.5°	515.9	488.0	471.2	464.6	458.9
50°	458.1	427.3	415.0	407.6	401.0
52.5°	389.9	363.7	354.2	347.2	341.9
55°	323.8	305.4	294.3	286.9	287.3
57.5°	260.2	249.1	243.0	235.2	236.0
60°	204.8	195.4	195.4	190.4	188.8
62.5°	156.4	152.7	151.5	149.8	146.9
65°	118.6	118.6	119.0	119.0	117.4
66°	106.7	107.9	109.6	109.6	107.5
67.5°	92.3	94.0	95.6	96.5	96.5
70°	76.3	78.4	79.2	80.0	79.6
72.5°	66.9	68.5	68.5	69.0	68.1
75°	60.7	61.6	62.0	61.2	60.7
77.5°	56.2	56.6	56.2	55.8	55.4
80°	50.9	50.5	49.3	47.6	47.2
82.5°	43.9	42.3	41.5	39.0	38.6
85°	35.3	33.2	31.6	28.3	26.7
87.5°	23.4	22.6	21.3	15.6	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)