

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: P163831

Luminaire Tested: **LDRL-SL4-F05-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163831
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-F05-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (35) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7440.9 lumens
Efficiency: N/A
Efficacy: 55.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-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

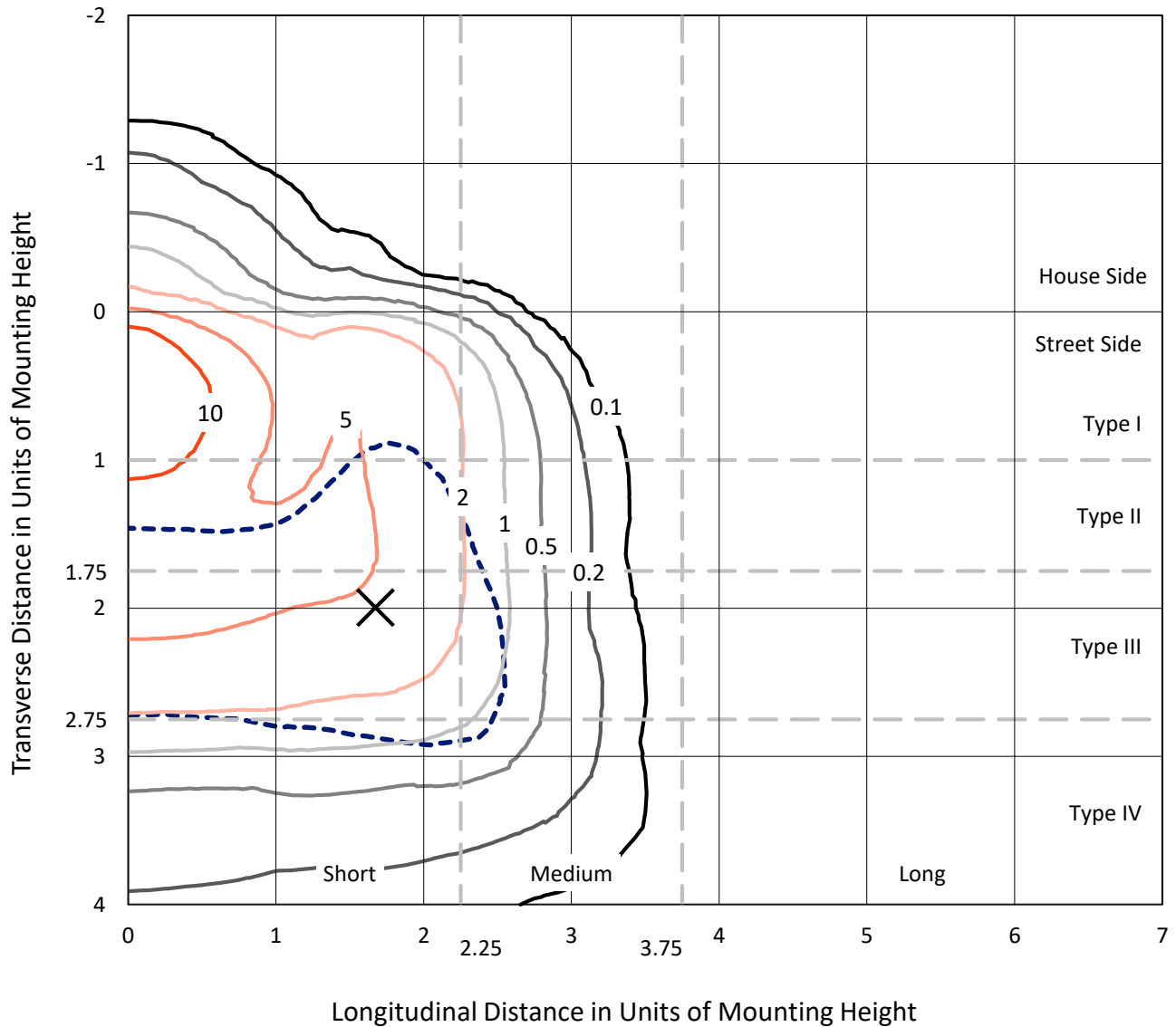


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

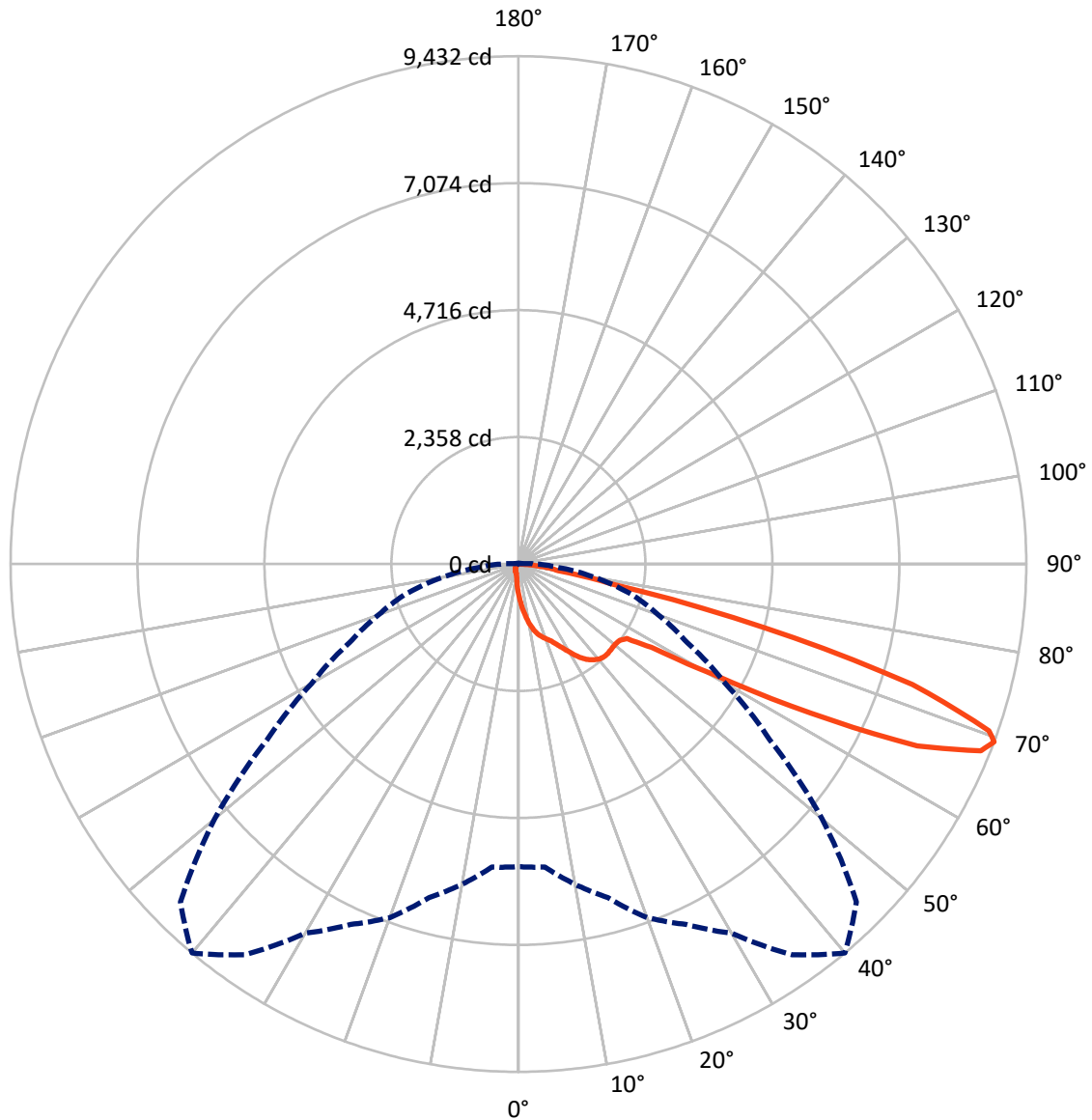


Based on 10 foot mounting height. Maximum calculated value = 16.6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	221.5	0.0	221.5
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	7219.4	0.0	7219.4
	% Fixture	97.0	0.0	97.0
Total	Lumens	7440.9	0.0	7440.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.8	0.8
10°-20°	199.1	2.7
20°-30°	381.1	5.1
30°-40°	633.8	8.5
40°-50°	857.7	11.5
50°-60°	1341.3	18.0
60°-70°	2757.7	37.1
70°-80°	1109.7	14.9
80°-90°	102.6	1.4
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°	7440.9	100.0
0°-180°	7440.9	100.0



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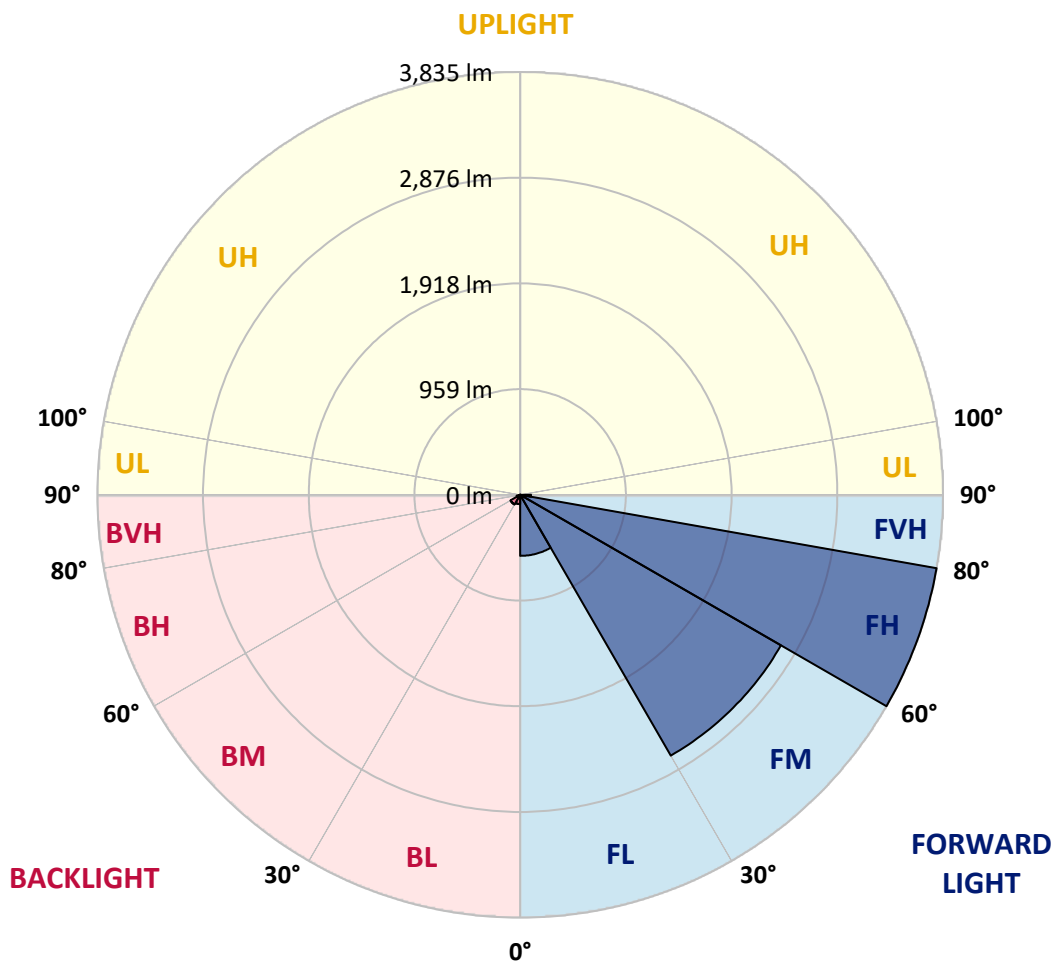
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	553.8	7.4			
FM (30°-60°)	2731.7	36.7			
FH (60°-80°)	3835.1	51.5			G2/5000
FVH (80°-90°)	98.8	1.3			G1/100
BL (0°-30°)	84.3	1.1	B0/110		
BM (30°-60°)	101.2	1.4	B0/220		
BH (60°-80°)	32.3	0.4	B0/110		G0/110
BVH (80°-90°)	3.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0
2.5°	749.6	741.1	731.4	731.4	719.2	719.2	711.8	692.4	689.9	679.0	668.0
5°	956.9	949.6	937.4	926.4	916.6	899.6	887.4	864.2	838.7	814.2	792.3
7.5°	1159.2	1155.6	1133.6	1129.9	1114.1	1086.1	1061.7	1027.5	983.7	949.6	909.3
10°	1346.9	1338.4	1333.5	1312.8	1289.6	1259.2	1221.4	1179.9	1128.7	1075.1	1017.8
12.5°	1495.6	1490.8	1468.9	1460.3	1435.9	1405.4	1357.9	1304.3	1253.1	1183.6	1116.6
15°	1606.5	1598.0	1583.4	1570.0	1540.7	1513.9	1470.1	1411.6	1349.3	1273.8	1193.3
17.5°	1699.2	1683.4	1679.7	1659.0	1628.5	1596.8	1548.0	1494.4	1421.3	1345.7	1258.0
20°	1823.5	1801.6	1794.3	1763.8	1728.5	1684.6	1628.5	1561.4	1484.7	1401.7	1311.6
22.5°	1969.8	1954.0	1938.1	1911.3	1866.2	1804.0	1722.3	1649.2	1551.7	1460.3	1362.8
25°	2177.0	2163.7	2138.0	2101.5	2045.4	1971.0	1872.3	1765.0	1650.4	1533.4	1418.9
27.5°	2378.2	2366.0	2347.7	2319.7	2256.3	2174.6	2052.7	1916.2	1771.1	1629.8	1502.9
30°	2567.1	2556.1	2537.9	2509.8	2453.7	2373.3	2235.5	2089.2	1908.9	1744.3	1591.9
32.5°	2770.6	2767.0	2746.3	2706.1	2657.3	2548.8	2398.9	2241.6	2058.8	1868.6	1690.7
35°	3001.0	2973.0	2953.5	2913.3	2830.4	2714.6	2539.1	2367.2	2174.6	1979.5	1780.9
37.5°	3196.1	3169.3	3144.9	3093.7	2992.5	2845.0	2646.3	2457.4	2258.7	2060.0	1857.7
40°	3338.7	3325.3	3296.0	3229.0	3115.7	2940.1	2725.5	2519.5	2319.7	2119.8	1919.8
42.5°	3444.8	3424.0	3391.1	3321.6	3187.5	2987.6	2757.3	2545.2	2347.7	2156.3	1960.1
45°	3483.8	3466.7	3436.2	3360.6	3215.6	3001.0	2756.0	2537.9	2348.9	2167.3	1986.8
47.5°	3460.6	3443.5	3416.7	3346.0	3203.4	2985.2	2734.1	2517.1	2336.7	2171.0	2011.3
50°	3383.8	3374.0	3353.3	3293.6	3165.6	2954.7	2714.6	2506.1	2334.3	2189.2	2045.4
52.5°	3376.5	3370.4	3344.8	3285.1	3154.6	2944.9	2712.1	2512.2	2355.0	2212.4	2069.8
55°	4126.2	4039.6	3845.7	3681.2	3410.6	3088.8	2835.2	2611.0	2442.8	2303.8	2203.8
57.5°	5864.3	5735.1	5480.4	5167.1	4545.4	3934.7	3446.0	3092.4	2918.2	2854.8	2892.5
60°	6678.6	6655.4	6615.2	6466.5	6148.4	5623.0	5037.9	4405.3	4151.7	4129.8	4206.6
62.5°	7065.0	7050.4	7062.6	7044.3	6945.6	6792.0	6623.8	6350.7	6099.6	5937.5	5593.7
65°	7242.9	7252.7	7322.2	7377.1	7389.2	7429.5	7552.6	7892.7	8141.3	7723.2	6768.8
67.5°	6790.8	6848.0	7007.7	7207.6	7441.6	7668.3	8034.0	8750.8	9261.5	8770.3	7414.8
69°	5621.8	5649.8	6039.9	6416.5	6988.2	7388.0	7918.3	8858.1	9432.2	8877.6	7363.7
70°	4426.0	4451.6	4869.7	5381.6	6348.2	6862.6	7556.2	8676.4	9272.5	8734.9	7100.4
72.5°	1996.7	1960.1	2107.6	2381.8	3432.6	4249.2	5462.1	7029.6	7650.1	6998.0	5312.2
75°	1394.4	1378.6	1394.4	1395.7	1559.0	2011.3	2537.9	3810.4	4712.5	4066.4	2537.9
77.5°	1080.0	1069.0	1058.1	1045.9	1065.4	1193.3	1244.5	1351.8	1755.3	1660.2	967.8
80°	854.5	844.7	871.5	863.0	863.0	877.6	867.9	827.7	752.1	697.2	624.1
82.5°	397.4	399.8	399.8	433.9	522.9	610.7	638.7	598.5	531.5	452.2	364.5
85°	37.8	42.7	71.9	110.9	220.6	248.7	249.9	207.2	207.2	163.3	131.6
87.5°	0.0	1.2	1.2	1.2	10.9	30.5	25.6	7.3	3.6	3.6	6.1
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°	70°	75°	80°	85°	90°	95°	100°	105°
0°	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0
2.5°	648.5	644.8	630.2	615.6	602.1	587.5	574.1	560.7	546.1	535.1	521.7
5°	758.2	731.4	700.9	671.7	642.4	611.9	580.2	552.1	522.9	496.1	470.5
7.5°	869.1	816.7	775.3	722.9	675.3	627.8	583.9	538.8	497.3	458.4	421.8
10°	963.0	899.6	835.0	767.9	699.7	636.3	575.4	521.7	466.9	419.3	374.2
12.5°	1039.8	959.3	880.1	796.0	719.2	638.7	563.2	498.5	433.9	380.3	334.0
15°	1109.3	1016.6	921.5	824.0	726.5	635.1	550.9	470.5	404.7	343.7	291.3
17.5°	1165.3	1059.3	952.0	842.3	737.5	630.2	535.1	451.0	374.2	310.8	259.6
20°	1214.1	1103.2	987.4	864.2	744.8	629.0	521.7	426.6	347.4	280.3	230.3
22.5°	1259.2	1148.3	1023.9	892.3	755.7	627.8	509.5	408.4	324.2	257.2	207.2
25°	1310.4	1193.3	1062.9	921.5	775.3	632.6	502.2	393.7	303.5	235.2	189.0
27.5°	1367.7	1244.5	1109.3	958.1	800.8	642.4	499.7	377.9	285.2	214.5	174.3
30°	1448.1	1305.5	1155.6	994.7	824.0	653.3	497.3	368.1	266.9	198.7	159.7
32.5°	1518.8	1365.2	1206.8	1032.4	849.6	664.3	496.1	354.7	249.9	182.8	148.7
35°	1593.2	1420.1	1250.6	1069.0	871.5	676.5	494.9	345.0	234.0	167.0	137.8
37.5°	1657.7	1466.4	1284.7	1100.7	895.9	687.5	496.1	336.4	219.4	153.6	128.0
40°	1712.6	1513.9	1322.6	1129.9	921.5	704.5	497.3	327.9	204.8	141.4	119.4
42.5°	1761.4	1559.0	1362.8	1162.9	950.8	724.1	504.6	320.6	192.6	130.4	110.9
45°	1799.2	1600.5	1406.7	1209.2	998.3	755.7	518.1	315.7	180.4	120.6	103.6
47.5°	1838.2	1661.4	1481.0	1282.3	1067.8	805.7	541.2	314.5	170.6	113.3	97.5
50°	1891.8	1722.3	1546.8	1356.7	1131.2	856.9	569.3	315.7	158.5	106.0	91.4
52.5°	1930.8	1784.6	1632.2	1485.9	1282.3	1012.9	677.8	337.6	152.4	100.0	84.1
55°	2161.2	2135.6	2139.2	2163.7	2006.4	1723.6	1133.6	487.6	179.1	113.3	82.9
57.5°	3047.3	3137.6	3190.0	3188.8	2929.1	2429.4	1522.5	626.6	199.9	131.6	98.7
60°	4212.6	4144.4	4048.1	3810.4	3465.4	2773.1	1702.9	674.1	173.1	104.8	90.2
62.5°	5242.7	4842.9	4488.1	4102.9	3650.8	2892.5	1739.5	670.5	151.2	79.2	63.4
65°	5885.1	5165.9	4593.0	4110.2	3577.6	2792.6	1645.6	615.6	128.0	64.6	52.4
67.5°	6038.7	4991.6	4181.0	3565.4	2988.8	2173.4	1208.0	463.2	100.0	53.6	46.3
69°	5703.4	4436.9	3464.2	2765.8	2174.6	1442.0	747.2	292.5	76.8	48.8	42.7
70°	5246.4	3859.2	2821.8	2219.7	1610.2	1012.9	522.9	206.0	62.1	45.1	39.0
72.5°	3375.3	2027.1	1387.1	965.4	664.3	403.5	204.8	92.7	47.5	37.8	31.7
75°	1309.2	749.6	543.6	413.2	323.0	224.3	124.3	59.7	40.2	31.7	24.4
77.5°	644.8	493.6	403.5	276.7	160.9	100.0	67.0	46.3	32.9	23.1	15.8
80°	509.5	338.8	202.4	125.5	95.1	71.9	51.2	37.8	24.4	14.6	10.9
82.5°	260.9	142.6	104.8	85.4	70.7	56.1	41.5	26.8	15.8	9.7	8.5
85°	81.7	59.7	53.6	52.4	48.8	40.2	29.3	17.0	9.7	6.1	6.1
87.5°	6.1	8.5	10.9	8.5	9.7	8.5	10.9	7.3	4.9	4.9	3.6
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0	562.0
2.5°	512.0	497.3	483.9	475.4	459.6	453.5	447.3	444.9	433.9	436.4	426.6
5°	447.3	421.8	402.3	382.7	364.5	351.1	340.1	326.7	315.7	310.8	301.1
7.5°	388.8	356.0	330.3	309.6	287.6	270.6	256.0	246.3	236.5	226.7	221.8
10°	337.6	302.3	273.0	252.3	231.6	217.0	206.0	198.7	192.6	189.0	187.7
12.5°	290.1	256.0	229.1	210.9	195.1	187.7	182.8	179.1	177.9	176.7	176.7
15°	253.6	219.4	198.7	185.3	177.9	174.3	173.1	170.6	168.2	167.0	167.0
17.5°	219.4	193.8	179.1	171.8	168.2	165.8	163.3	160.9	158.5	157.2	157.2
20°	196.3	175.5	168.2	163.3	159.7	157.2	153.6	151.2	149.9	148.7	147.5
22.5°	177.9	164.5	159.7	156.0	151.2	147.5	145.1	142.6	140.2	139.0	137.8
25°	164.5	156.0	152.4	147.5	142.6	139.0	135.3	131.6	129.2	128.0	125.5
27.5°	154.8	148.7	143.9	137.8	132.9	129.2	125.5	121.9	119.4	117.0	115.8
30°	146.3	140.2	134.1	129.2	123.1	119.4	114.6	110.9	109.7	107.3	104.8
32.5°	137.8	131.6	125.5	119.4	113.3	108.5	106.0	101.2	98.7	97.5	95.1
35°	128.0	121.9	114.6	109.7	103.6	98.7	95.1	91.4	89.0	86.6	85.4
37.5°	119.4	112.1	104.8	98.7	93.9	89.0	85.4	81.7	79.2	76.8	75.6
40°	109.7	102.4	95.1	89.0	84.1	80.5	76.8	73.1	70.7	69.4	69.4
42.5°	101.2	92.7	85.4	80.5	76.8	71.9	68.2	64.6	63.4	62.1	63.4
45°	92.7	84.1	78.0	73.1	69.4	64.6	60.9	58.5	57.3	58.5	59.7
47.5°	85.4	76.8	70.7	67.0	63.4	59.7	56.1	53.6	53.6	56.1	58.5
50°	78.0	69.4	64.6	62.1	58.5	54.8	50.0	48.8	50.0	52.4	54.8
52.5°	70.7	60.9	57.3	56.1	52.4	48.8	45.1	43.9	45.1	47.5	46.3
55°	63.4	53.6	52.4	51.2	47.5	42.7	39.0	39.0	39.0	37.8	35.4
57.5°	60.9	47.5	46.3	45.1	41.5	36.6	34.2	31.7	30.5	26.8	25.6
60°	63.4	42.7	42.7	40.2	36.6	31.7	28.0	24.4	21.9	19.5	19.5
62.5°	51.2	39.0	37.8	35.4	30.5	25.6	21.9	18.2	17.0	15.8	15.8
65°	41.5	35.4	32.9	29.3	25.6	20.7	17.0	14.6	13.4	13.4	14.6
67.5°	37.8	31.7	28.0	24.4	20.7	15.8	13.4	12.2	12.2	13.4	13.4
69°	35.4	29.3	25.6	21.9	18.2	14.6	12.2	12.2	12.2	12.2	13.4
70°	32.9	28.0	24.4	20.7	15.8	12.2	10.9	10.9	12.2	12.2	13.4
72.5°	25.6	21.9	20.7	17.0	12.2	10.9	9.7	10.9	10.9	12.2	12.2
75°	19.5	15.8	15.8	13.4	9.7	8.5	8.5	9.7	9.7	10.9	10.9
77.5°	13.4	10.9	10.9	9.7	8.5	7.3	7.3	8.5	9.7	9.7	10.9
80°	9.7	8.5	7.3	8.5	7.3	6.1	7.3	8.5	8.5	9.7	9.7
82.5°	7.3	7.3	7.3	7.3	6.1	6.1	7.3	7.3	8.5	9.7	9.7
85°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	7.3	7.3	8.5	8.5
87.5°	3.6	3.6	3.6	4.9	4.9	6.1	6.1	6.1	6.1	7.3	7.3
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):

	165°	170°	175°	180°
0°	562.0	562.0	562.0	562.0
2.5°	424.2	423.0	418.1	419.3
5°	297.5	290.1	295.0	293.8
7.5°	218.2	217.0	215.7	218.2
10°	186.5	186.5	185.3	186.5
12.5°	175.5	175.5	175.5	175.5
15°	167.0	167.0	165.8	165.8
17.5°	157.2	157.2	157.2	156.0
20°	147.5	146.3	146.3	146.3
22.5°	136.5	135.3	135.3	135.3
25°	125.5	124.3	124.3	124.3
27.5°	114.6	113.3	112.1	112.1
30°	103.6	102.4	101.2	101.2
32.5°	92.7	91.4	90.2	90.2
35°	82.9	82.9	81.7	80.5
37.5°	74.3	74.3	74.3	74.3
40°	68.2	69.4	69.4	69.4
42.5°	64.6	65.8	67.0	68.2
45°	62.1	64.6	65.8	65.8
47.5°	60.9	62.1	63.4	63.4
50°	56.1	54.8	54.8	54.8
52.5°	45.1	42.7	41.5	40.2
55°	32.9	31.7	29.3	29.3
57.5°	23.1	23.1	21.9	21.9
60°	18.2	18.2	17.0	18.2
62.5°	15.8	15.8	15.8	15.8
65°	14.6	14.6	14.6	14.6
67.5°	14.6	14.6	14.6	14.6
69°	13.4	13.4	13.4	13.4
70°	13.4	13.4	13.4	13.4
72.5°	12.2	12.2	12.2	12.2
75°	10.9	12.2	12.2	12.2
77.5°	10.9	10.9	10.9	10.9
80°	9.7	9.7	10.9	10.9
82.5°	9.7	9.7	9.7	9.7
85°	8.5	8.5	9.7	9.7
87.5°	7.3	7.3	8.5	8.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)