

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: P163838

Luminaire Tested: **LDRL-SL4-E06-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163838
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-E06-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 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: 12151.6 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G3

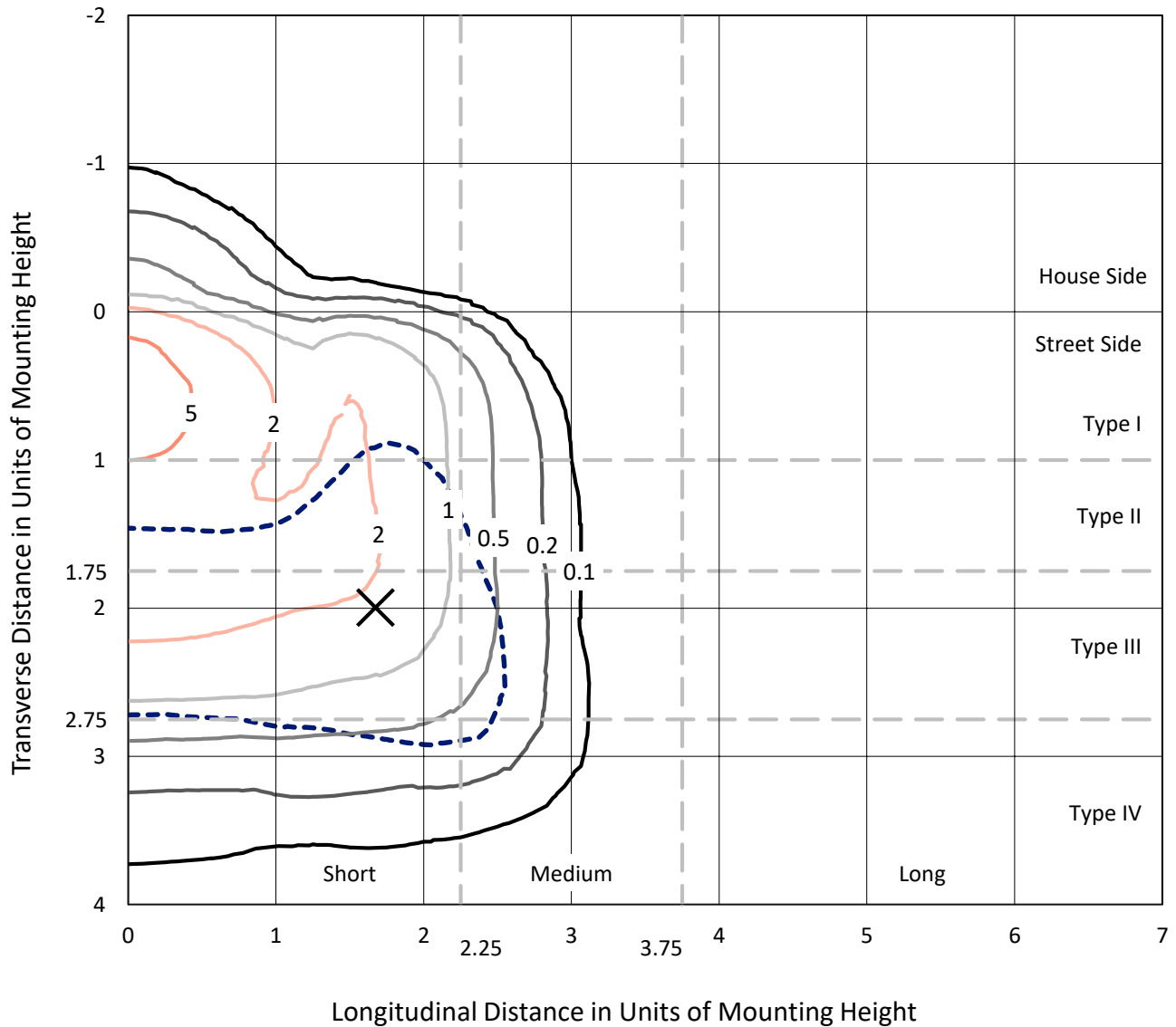
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

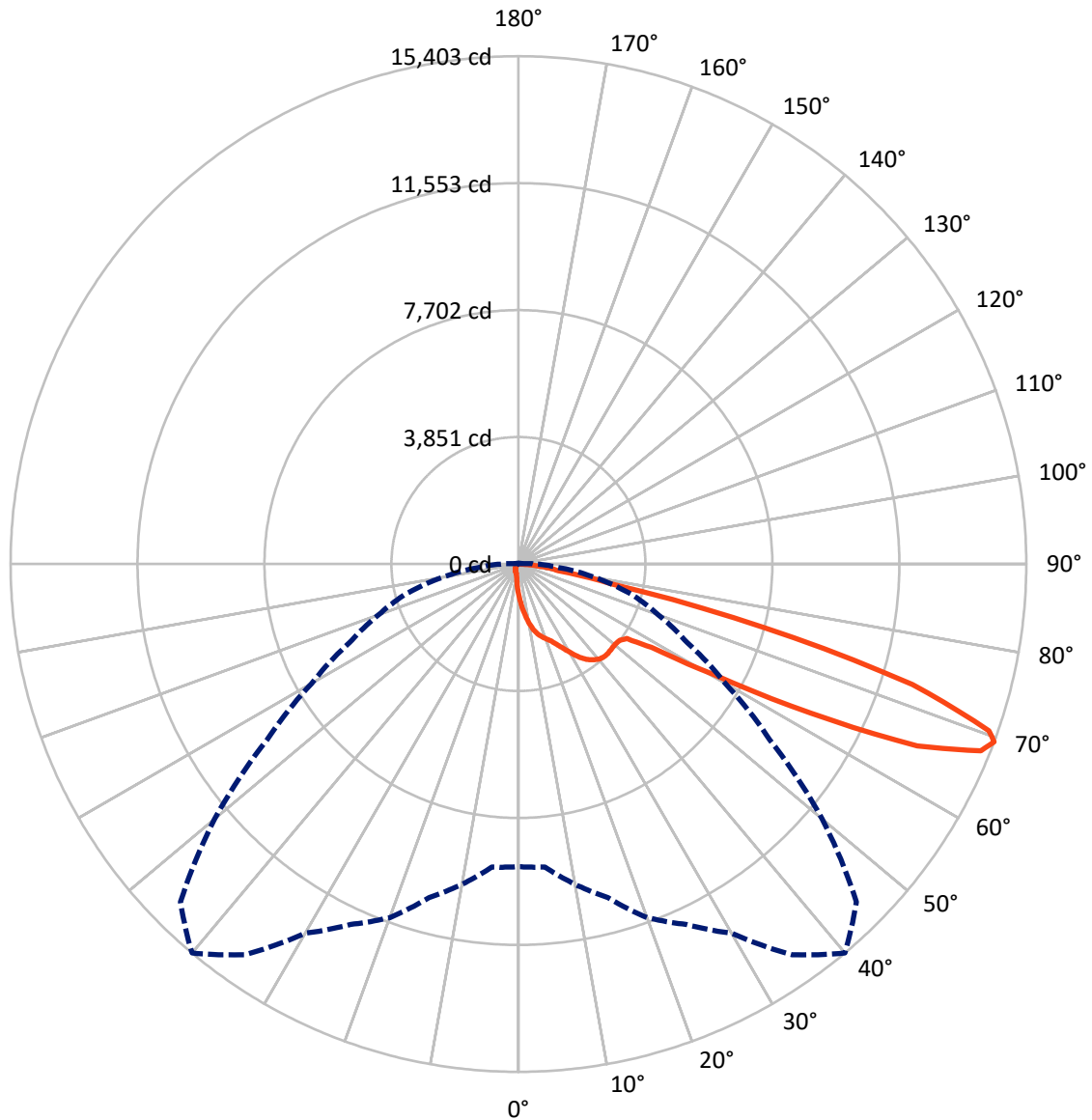


Based on 20 foot mounting height. Maximum calculated value = 6.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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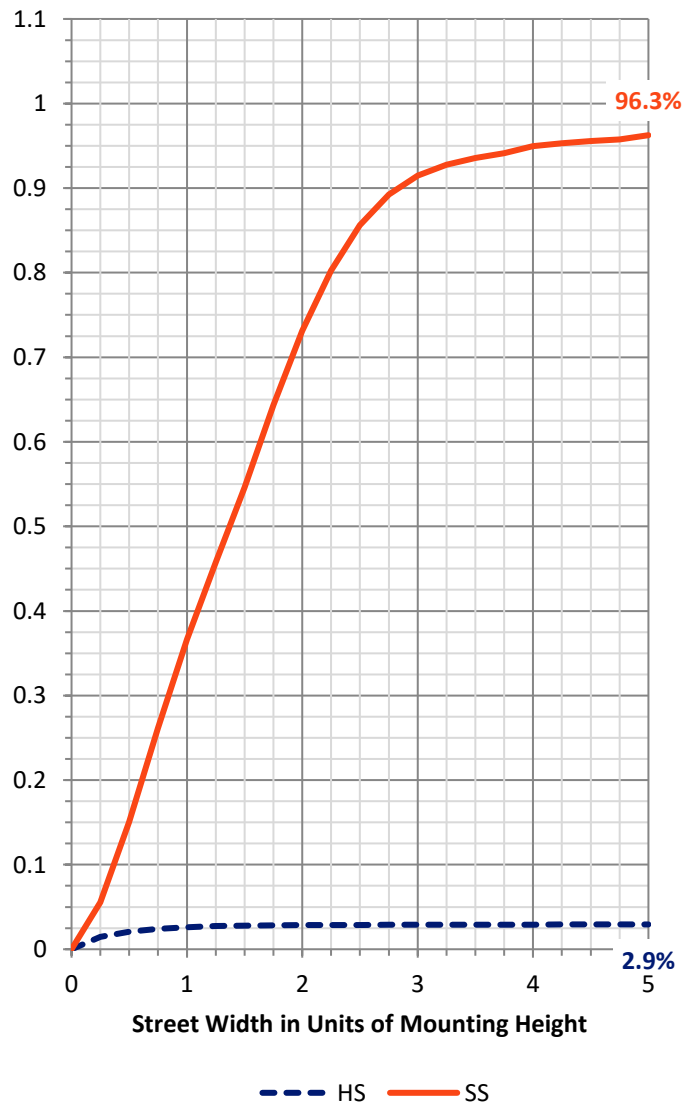
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	361.8	0.0	361.8
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	11789.8	0.0	11789.8
	% Fixture	97.0	0.0	97.0
Total	Lumens	12151.6	0.0	12151.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.3	0.8
10°-20°	325.2	2.7
20°-30°	622.4	5.1
30°-40°	1035.1	8.5
40°-50°	1400.7	11.5
50°-60°	2190.5	18.0
60°-70°	4503.6	37.1
70°-80°	1812.2	14.9
80°-90°	167.6	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°	12151.6	100.0
0°-180°	12151.6	100.0



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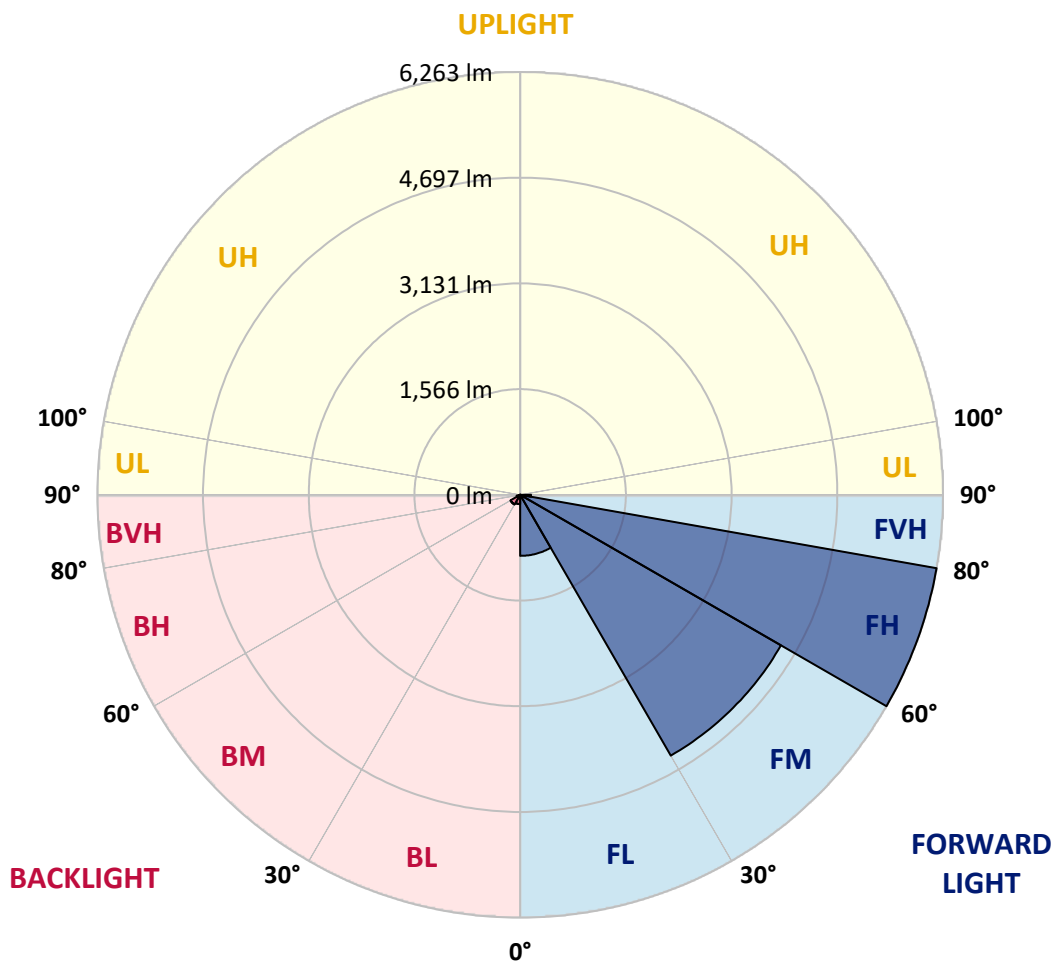
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	904.3	7.4			
FM (30°-60°)	4461.0	36.7			
FH (60°-80°)	6263.0	51.5			G3/7500
FVH (80°-90°)	161.4	1.3			G2/225
BL (0°-30°)	137.6	1.1	B1/500		
BM (30°-60°)	165.2	1.4	B0/220		
BH (60°-80°)	52.8	0.4	B0/110		G0/110
BVH (80°-90°)	6.2	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7
2.5°	1224.2	1210.3	1194.4	1194.4	1174.4	1174.4	1162.5	1130.7	1126.7	1108.8	1090.8
5°	1562.7	1550.7	1530.8	1512.9	1496.9	1469.1	1449.1	1411.3	1369.6	1329.7	1293.9
7.5°	1893.0	1887.1	1851.3	1845.3	1819.4	1773.6	1733.8	1678.1	1606.4	1550.7	1485.0
10°	2199.6	2185.7	2177.7	2143.9	2106.1	2056.3	1994.6	1926.9	1843.3	1755.7	1662.2
12.5°	2442.5	2434.6	2398.7	2384.7	2344.9	2295.2	2217.5	2129.9	2046.3	1932.9	1823.5
15°	2623.6	2609.7	2585.8	2563.9	2516.1	2472.4	2400.7	2305.2	2203.6	2080.2	1948.8
17.5°	2774.9	2749.1	2743.0	2709.3	2659.4	2607.7	2528.0	2440.5	2321.1	2197.7	2054.3
20°	2978.0	2942.1	2930.2	2880.4	2822.7	2751.0	2659.4	2550.0	2424.6	2289.2	2141.9
22.5°	3216.8	3191.0	3165.1	3121.3	3047.7	2946.1	2812.7	2693.3	2534.1	2384.7	2225.5
25°	3555.2	3533.4	3491.5	3431.8	3340.2	3218.8	3057.6	2882.4	2695.3	2504.1	2317.1
27.5°	3883.7	3863.8	3834.0	3788.2	3684.6	3551.3	3352.2	3129.3	2892.4	2661.5	2454.4
30°	4192.3	4174.3	4144.5	4098.7	4007.1	3875.7	3650.8	3411.9	3117.3	2848.6	2599.7
32.5°	4524.6	4518.7	4484.9	4419.2	4339.6	4162.4	3917.6	3660.7	3362.1	3051.6	2761.0
35°	4900.9	4855.1	4823.2	4757.6	4622.3	4433.1	4146.5	3865.7	3551.3	3232.7	2908.3
37.5°	5219.5	5175.6	5135.9	5052.3	4887.0	4646.2	4321.6	4013.1	3688.7	3364.1	3033.7
40°	5452.3	5430.4	5382.6	5273.2	5088.1	4801.4	4451.0	4114.6	3788.2	3461.8	3135.2
42.5°	5625.6	5591.7	5537.9	5424.5	5205.4	4879.0	4502.8	4156.5	3834.0	3521.5	3201.0
45°	5689.2	5661.4	5611.5	5488.1	5251.2	4900.9	4500.7	4144.5	3836.0	3539.3	3244.7
47.5°	5651.4	5623.5	5579.8	5464.3	5231.4	4875.1	4464.9	4110.7	3816.0	3545.4	3284.6
50°	5525.9	5510.1	5476.2	5378.7	5169.6	4825.3	4433.1	4092.7	3812.1	3575.2	3340.2
52.5°	5514.0	5504.0	5462.3	5364.8	5151.7	4809.3	4429.1	4102.7	3845.9	3613.0	3380.1
55°	6738.3	6597.0	6280.4	6011.7	5569.8	5044.3	4630.2	4264.0	3989.3	3762.3	3599.0
57.5°	9576.9	9365.8	8949.9	8438.3	7423.1	6425.7	5627.5	5050.2	4765.6	4662.0	4723.7
60°	10906.6	10868.8	10803.2	10560.2	10040.7	9182.7	8227.2	7194.1	6780.1	6744.2	6869.7
62.5°	11537.7	11513.8	11533.7	11503.8	11342.6	11091.8	10817.1	10371.1	9961.1	9696.3	9135.0
65°	11828.2	11844.3	11957.7	12047.3	12067.1	12132.9	12334.0	12889.3	13295.4	12612.6	11054.0
67.5°	11089.8	11183.3	11444.1	11770.6	12152.7	12523.0	13120.2	14290.7	15124.8	14322.5	12109.0
69°	9180.8	9226.6	9863.5	10478.6	11412.3	12065.2	12931.1	14465.9	15403.4	14497.8	12025.4
70°	7228.0	7269.8	7952.5	8788.6	10367.2	11207.2	12339.9	14169.2	15142.7	14264.8	11595.4
72.5°	3260.7	3201.0	3441.8	3889.6	5605.6	6939.3	8920.0	11479.9	12493.2	11428.2	8675.2
75°	2277.2	2251.4	2277.2	2279.3	2546.0	3284.6	4144.5	6222.6	7695.8	6640.7	4144.5
77.5°	1763.8	1745.8	1727.9	1708.0	1739.9	1948.8	2032.4	2207.6	2866.5	2711.3	1580.5
80°	1395.5	1379.5	1423.3	1409.4	1409.4	1433.3	1417.4	1351.6	1228.2	1138.6	1019.2
82.5°	648.9	653.0	653.0	708.6	853.9	997.3	1043.1	977.4	868.0	738.5	595.2
85°	61.7	69.7	117.5	181.1	360.3	406.1	408.1	338.4	338.4	266.7	215.0
87.5°	0.0	2.0	2.0	2.0	17.9	49.7	41.7	11.9	5.9	5.9	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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7
2.5°	1059.1	1053.0	1029.1	1005.3	983.3	959.4	937.5	915.7	891.8	873.9	852.0
5°	1238.2	1194.4	1144.6	1096.9	1049.1	999.3	947.5	901.7	853.9	810.2	768.3
7.5°	1419.4	1333.8	1266.0	1180.5	1102.8	1025.2	953.5	879.9	812.2	748.5	688.8
10°	1572.7	1469.1	1363.6	1254.1	1142.7	1039.1	939.6	852.0	762.4	684.7	611.1
12.5°	1698.0	1566.6	1437.2	1299.9	1174.4	1043.1	919.7	814.2	708.6	621.1	545.5
15°	1811.5	1660.2	1504.9	1345.7	1186.4	1037.1	899.7	768.3	660.9	561.4	475.8
17.5°	1903.0	1729.9	1554.7	1375.5	1204.4	1029.1	873.9	736.6	611.1	507.6	423.9
20°	1982.7	1801.6	1612.4	1411.3	1216.3	1027.2	852.0	696.7	567.3	457.8	376.2
22.5°	2056.3	1875.2	1672.1	1457.2	1234.2	1025.2	832.1	666.9	529.5	420.0	338.4
25°	2139.9	1948.8	1735.8	1504.9	1266.0	1033.1	820.2	643.0	495.6	384.2	308.6
27.5°	2233.5	2032.4	1811.5	1564.6	1307.8	1049.1	816.1	617.1	465.8	350.3	284.7
30°	2364.9	2131.9	1887.1	1624.4	1345.7	1066.9	812.2	601.1	435.9	324.5	260.8
32.5°	2480.3	2229.4	1970.7	1686.1	1387.5	1084.9	810.2	579.2	408.1	298.6	242.8
35°	2601.8	2319.1	2042.4	1745.8	1423.3	1104.7	808.2	563.3	382.2	272.7	225.0
37.5°	2707.2	2394.7	2098.1	1797.5	1463.1	1122.7	810.2	549.4	358.3	250.8	209.0
40°	2796.8	2472.4	2159.9	1845.3	1504.9	1150.6	812.2	535.5	334.4	230.9	195.0
42.5°	2876.5	2546.0	2225.5	1899.1	1552.7	1182.4	824.1	523.6	314.5	213.0	181.1
45°	2938.2	2613.7	2297.2	1974.7	1630.3	1234.2	846.0	515.6	294.7	197.0	169.2
47.5°	3001.9	2713.2	2418.6	2094.1	1743.8	1315.8	883.8	513.6	278.6	185.1	159.2
50°	3089.4	2812.7	2526.1	2215.5	1847.4	1399.4	929.7	515.6	258.8	173.1	149.2
52.5°	3153.2	2914.3	2665.5	2426.6	2094.1	1654.2	1106.8	551.4	248.9	163.3	137.3
55°	3529.4	3487.6	3493.5	3533.4	3276.6	2814.7	1851.3	796.3	292.6	185.1	135.3
57.5°	4976.5	5123.9	5209.5	5207.5	4783.5	3967.3	2486.3	1023.2	326.4	215.0	161.2
60°	6879.5	6768.1	6610.9	6222.6	5659.3	4528.7	2781.0	1100.8	282.7	171.2	147.3
62.5°	8561.7	7908.8	7329.5	6700.4	5962.0	4723.7	2840.7	1094.9	246.9	129.4	103.6
65°	9610.7	8436.3	7500.6	6712.3	5842.5	4560.5	2687.4	1005.3	209.0	105.5	85.6
67.5°	9861.6	8151.6	6827.8	5822.6	4881.0	3549.3	1972.7	756.4	163.3	87.5	75.6
69°	9314.1	7245.9	5657.3	4516.8	3551.3	2354.9	1220.2	477.8	125.3	79.7	69.7
70°	8567.7	6302.3	4608.2	3624.9	2629.6	1654.2	853.9	336.4	101.5	73.6	63.7
72.5°	5512.0	3310.4	2265.3	1576.6	1084.9	658.9	334.4	151.3	77.6	61.7	51.7
75°	2138.0	1224.2	887.8	674.8	527.5	366.3	203.0	97.5	65.6	51.7	39.8
77.5°	1053.0	806.1	658.9	451.9	262.8	163.3	109.5	75.6	53.7	37.8	25.9
80°	832.1	553.4	330.5	205.0	155.3	117.5	83.6	61.7	39.8	23.9	17.9
82.5°	426.0	232.8	171.2	139.4	115.5	91.6	67.7	43.8	25.9	15.9	13.9
85°	133.4	97.5	87.5	85.6	79.7	65.6	47.8	27.8	15.9	10.0	10.0
87.5°	10.0	13.9	17.9	13.9	15.9	13.9	17.9	11.9	8.0	8.0	5.9
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7	917.7
2.5°	836.1	812.2	790.3	776.4	750.5	740.5	730.5	726.6	708.6	712.7	696.7
5°	730.5	688.8	656.9	625.0	595.2	573.3	555.3	533.5	515.6	507.6	491.7
7.5°	635.0	581.3	539.4	505.6	469.8	441.9	418.0	402.2	386.1	370.3	362.3
10°	551.4	493.6	445.9	412.0	378.3	354.4	336.4	324.5	314.5	308.6	306.6
12.5°	473.8	418.0	374.2	344.4	318.5	306.6	298.6	292.6	290.6	288.6	288.6
15°	414.1	358.3	324.5	302.5	290.6	284.7	282.7	278.6	274.7	272.7	272.7
17.5°	358.3	316.5	292.6	280.6	274.7	270.8	266.7	262.8	258.8	256.7	256.7
20°	320.5	286.7	274.7	266.7	260.8	256.7	250.8	246.9	244.8	242.8	240.8
22.5°	290.6	268.7	260.8	254.8	246.9	240.8	236.9	232.8	228.9	226.9	225.0
25°	268.7	254.8	248.9	240.8	232.8	226.9	220.9	215.0	211.0	209.0	205.0
27.5°	252.8	242.8	234.9	225.0	217.0	211.0	205.0	199.1	195.0	191.1	189.1
30°	238.9	228.9	218.9	211.0	201.1	195.0	187.2	181.1	179.2	175.2	171.2
32.5°	225.0	215.0	205.0	195.0	185.1	177.2	173.1	165.2	161.2	159.2	155.3
35°	209.0	199.1	187.2	179.2	169.2	161.2	155.3	149.2	145.3	141.4	139.4
37.5°	195.0	183.1	171.2	161.2	153.3	145.3	139.4	133.4	129.4	125.3	123.4
40°	179.2	167.2	155.3	145.3	137.3	131.4	125.3	119.4	115.5	113.4	113.4
42.5°	165.2	151.3	139.4	131.4	125.3	117.5	111.4	105.5	103.6	101.5	103.6
45°	151.3	137.3	127.4	119.4	113.4	105.5	99.5	95.6	93.6	95.6	97.5
47.5°	139.4	125.3	115.5	109.5	103.6	97.5	91.6	87.5	87.5	91.6	95.6
50°	127.4	113.4	105.5	101.5	95.6	89.5	81.6	79.7	81.6	85.6	89.5
52.5°	115.5	99.5	93.6	91.6	85.6	79.7	73.6	71.7	73.6	77.6	75.6
55°	103.6	87.5	85.6	83.6	77.6	69.7	63.7	63.7	63.7	61.7	57.7
57.5°	99.5	77.6	75.6	73.6	67.7	59.7	55.8	51.7	49.7	43.8	41.7
60°	103.6	69.7	69.7	65.6	59.7	51.7	45.8	39.8	35.8	31.9	31.9
62.5°	83.6	63.7	61.7	57.7	49.7	41.7	35.8	29.8	27.8	25.9	25.9
65°	67.7	57.7	53.7	47.8	41.7	33.9	27.8	23.9	21.9	21.9	23.9
67.5°	61.7	51.7	45.8	39.8	33.9	25.9	21.9	19.9	19.9	21.9	21.9
69°	57.7	47.8	41.7	35.8	29.8	23.9	19.9	19.9	19.9	19.9	21.9
70°	53.7	45.8	39.8	33.9	25.9	19.9	17.9	17.9	19.9	19.9	21.9
72.5°	41.7	35.8	33.9	27.8	19.9	17.9	15.9	17.9	17.9	19.9	19.9
75°	31.9	25.9	25.9	21.9	15.9	13.9	13.9	15.9	15.9	17.9	17.9
77.5°	21.9	17.9	17.9	15.9	13.9	11.9	11.9	13.9	15.9	15.9	17.9
80°	15.9	13.9	11.9	13.9	11.9	10.0	11.9	13.9	13.9	15.9	15.9
82.5°	11.9	11.9	11.9	11.9	10.0	10.0	11.9	11.9	13.9	15.9	15.9
85°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.9	11.9	13.9	13.9
87.5°	5.9	5.9	5.9	8.0	8.0	10.0	10.0	10.0	10.0	11.9	11.9
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):

	165°	170°	175°	180°
0°	917.7	917.7	917.7	917.7
2.5°	692.7	690.8	682.8	684.7
5°	485.8	473.8	481.7	479.7
7.5°	356.3	354.4	352.3	356.3
10°	304.5	304.5	302.5	304.5
12.5°	286.7	286.7	286.7	286.7
15°	272.7	272.7	270.8	270.8
17.5°	256.7	256.7	256.7	254.8
20°	240.8	238.9	238.9	238.9
22.5°	223.0	220.9	220.9	220.9
25°	205.0	203.0	203.0	203.0
27.5°	187.2	185.1	183.1	183.1
30°	169.2	167.2	165.2	165.2
32.5°	151.3	149.2	147.3	147.3
35°	135.3	135.3	133.4	131.4
37.5°	121.4	121.4	121.4	121.4
40°	111.4	113.4	113.4	113.4
42.5°	105.5	107.5	109.5	111.4
45°	101.5	105.5	107.5	107.5
47.5°	99.5	101.5	103.6	103.6
50°	91.6	89.5	89.5	89.5
52.5°	73.6	69.7	67.7	65.6
55°	53.7	51.7	47.8	47.8
57.5°	37.8	37.8	35.8	35.8
60°	29.8	29.8	27.8	29.8
62.5°	25.9	25.9	25.9	25.9
65°	23.9	23.9	23.9	23.9
67.5°	23.9	23.9	23.9	23.9
69°	21.9	21.9	21.9	21.9
70°	21.9	21.9	21.9	21.9
72.5°	19.9	19.9	19.9	19.9
75°	17.9	19.9	19.9	19.9
77.5°	17.9	17.9	17.9	17.9
80°	15.9	15.9	17.9	17.9
82.5°	15.9	15.9	15.9	15.9
85°	13.9	13.9	15.9	15.9
87.5°	11.9	11.9	13.9	13.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)