

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: P163557

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163557
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-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) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10090.7 lumens
Efficiency: N/A
Efficacy: 67.0 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

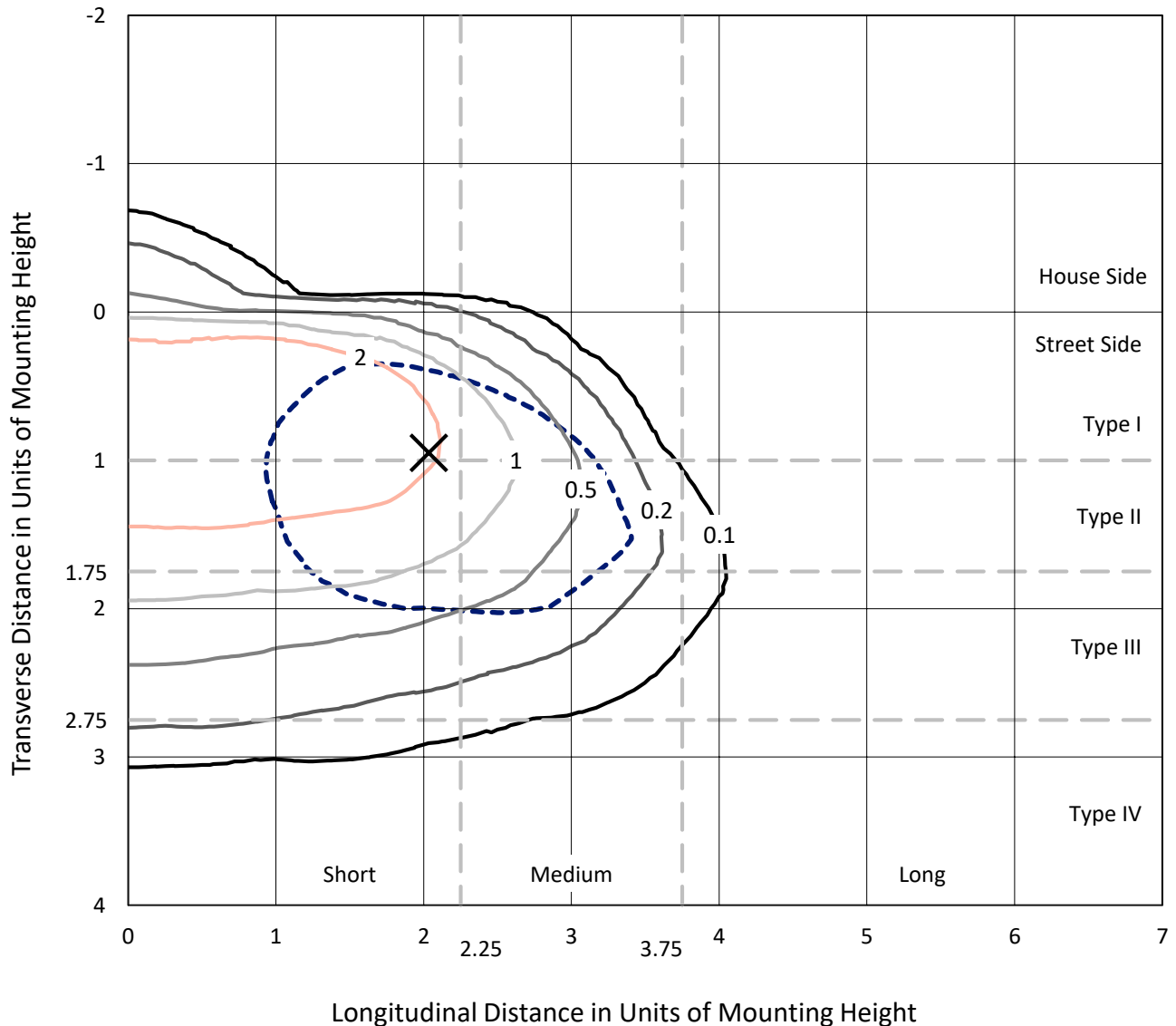
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

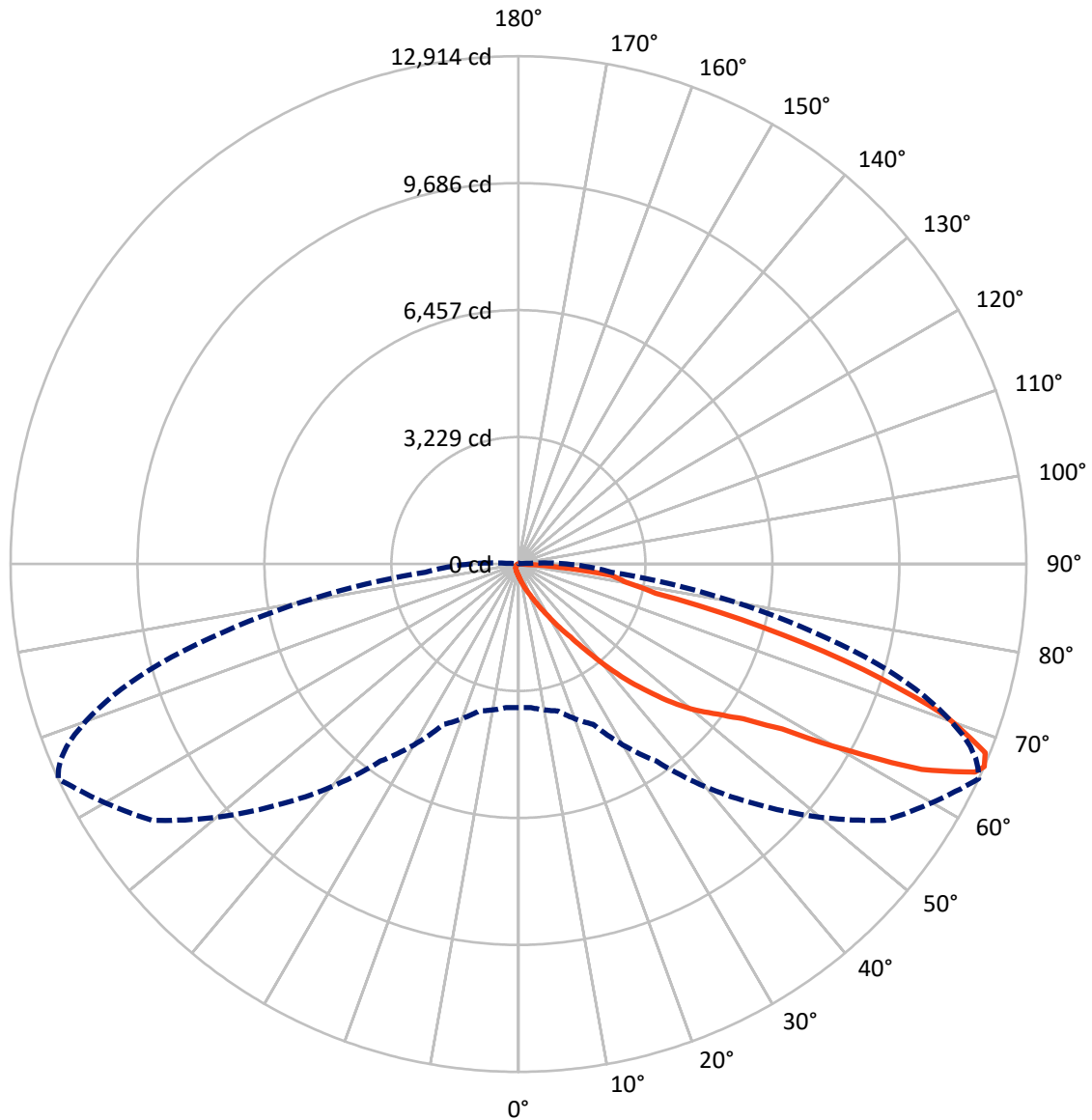
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.2 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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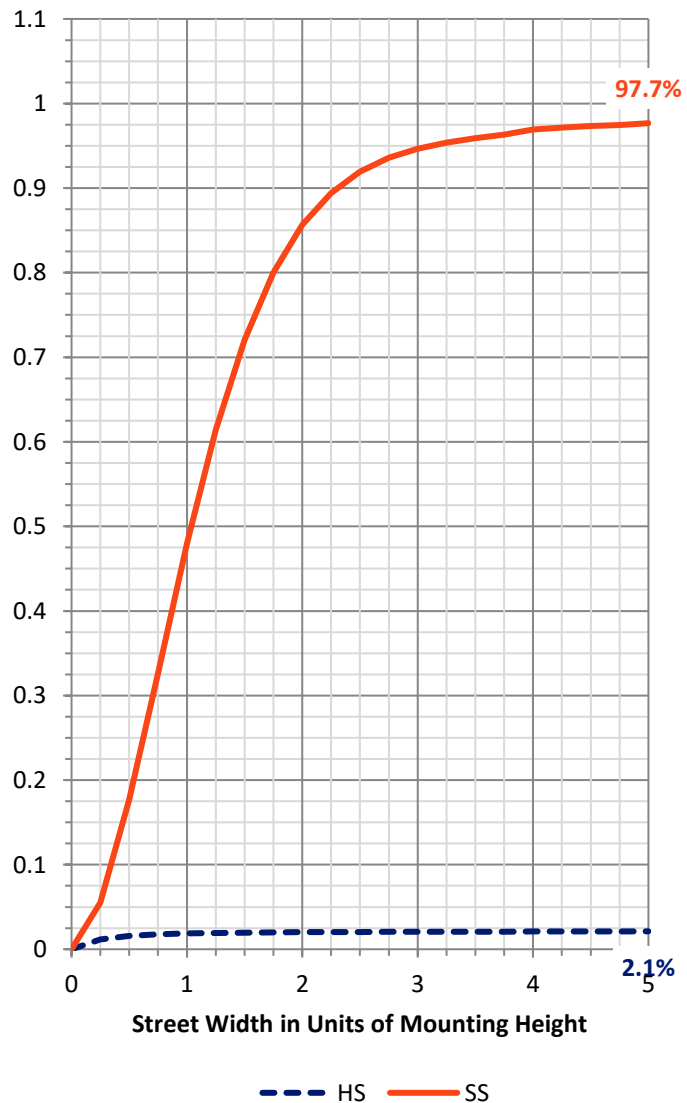
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	218.6	0.0	218.6
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	9872.1	0.0	9872.1
	% Fixture	97.8	0.0	97.8
Total	Lumens	10090.7	0.0	10090.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.1	0.3
10°-20°	144.6	1.4
20°-30°	311.8	3.1
30°-40°	665.9	6.6
40°-50°	1472.6	14.6
50°-60°	2495.6	24.7
60°-70°	3330.2	33.0
70°-80°	1466.9	14.5
80°-90°	169.0	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°	10090.7	100.0
0°-180°	10090.7	100.0



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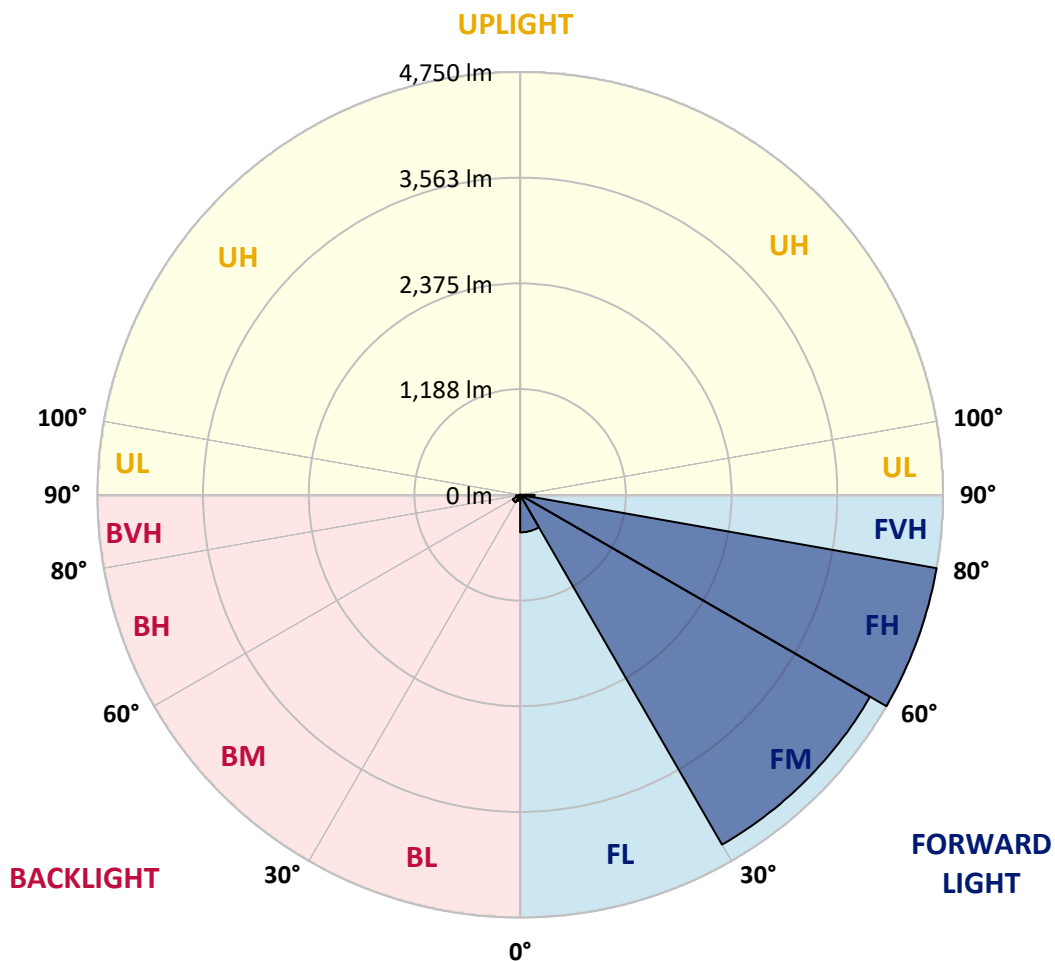
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	421.5	4.2			
FM	(30°-60°)	4538.1	45.0			
FH	(60°-80°)	4750.2	47.1			G2/5000
FVH	(80°-90°)	162.2	1.6			G2/225
BL	(0°-30°)	69.0	0.7	B0/110		
BM	(30°-60°)	96.0	1.0	B0/220		
BH	(60°-80°)	46.9	0.5	B0/110		G0/110
BVH	(80°-90°)	6.7	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°	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6
2.5°	384.1	382.2	374.4	374.4	362.8	355.0	345.4	335.6	335.6	333.7	331.7
5°	508.3	496.7	494.6	473.4	455.9	430.7	407.4	376.3	372.5	368.6	366.6
7.5°	646.0	644.0	626.6	601.4	566.5	520.0	473.4	422.9	415.2	411.2	403.6
10°	824.5	814.8	791.5	748.8	696.5	634.3	558.7	479.2	469.4	461.8	457.8
12.5°	995.2	977.8	964.2	909.8	843.8	752.8	661.6	547.1	539.3	529.6	514.1
15°	1154.3	1138.8	1115.5	1069.0	995.2	880.8	774.0	634.3	615.0	601.4	589.8
17.5°	1278.5	1268.8	1241.6	1189.2	1109.6	1008.8	880.8	723.6	708.1	690.6	669.2
20°	1396.8	1383.2	1340.5	1268.8	1183.4	1105.8	1006.8	840.0	818.6	797.3	774.0
22.5°	1509.4	1495.7	1425.8	1307.5	1216.3	1183.4	1148.5	971.9	939.0	921.5	898.2
25°	1666.4	1637.4	1528.7	1340.5	1218.4	1243.6	1303.7	1142.6	1111.6	1086.4	1049.5
27.5°	1877.9	1839.1	1668.4	1389.0	1226.0	1309.4	1482.1	1350.2	1317.2	1288.2	1247.4
30°	2116.6	2091.2	1887.6	1505.4	1282.3	1406.5	1681.9	1614.1	1575.2	1540.3	1491.8
32.5°	2357.0	2322.1	2120.4	1726.6	1433.6	1594.7	1932.2	1920.6	1870.2	1837.2	1784.8
35°	2568.5	2551.1	2401.7	2089.3	1779.0	1924.4	2265.8	2279.5	2234.9	2200.0	2141.8
37.5°	2712.1	2712.1	2683.0	2479.3	2328.0	2436.6	2756.8	2758.7	2714.0	2634.5	2605.4
40°	2785.8	2807.2	2911.9	2950.7	2943.0	3082.7	3400.8	3365.9	3329.0	3288.2	3191.3
42.5°	2937.1	2956.6	3179.6	3447.4	3622.0	3806.3	4025.4	4013.8	3969.2	3895.4	3806.3
45°	3193.2	3218.4	3484.2	3909.0	4267.9	4529.9	4669.6	4615.2	4570.6	4500.7	4454.2
47.5°	3519.1	3567.6	3868.3	4394.0	4826.6	5259.2	5404.8	5261.3	5222.4	5168.2	5092.4
50°	3866.4	3913.0	4233.0	4834.4	5323.3	5839.3	6081.8	5839.3	5783.0	5765.6	5680.3
52.5°	4167.1	4205.9	4514.3	5173.9	5703.6	6308.8	6661.9	6341.8	6301.1	6242.9	6180.7
55°	4345.6	4376.6	4665.6	5336.9	5961.6	6731.8	7222.6	6941.3	6881.2	6857.9	6768.6
57.5°	4405.7	4436.8	4696.7	5358.2	6101.3	7117.8	7903.4	7913.2	7841.4	7758.0	7730.9
60°	4405.7	4440.6	4659.8	5305.8	6237.0	7529.0	8811.4	9620.4	9465.1	9449.6	9350.8
62.5°	4223.3	4256.3	4477.4	5144.9	6419.4	8083.9	10076.3	11504.0	11459.5	11358.6	11195.6
65°	3827.6	3847.0	4064.3	4733.5	6349.6	8594.2	11172.4	12757.3	12685.6	12487.7	12278.2
66°	3649.1	3664.7	3868.3	4498.8	6120.6	8664.0	11366.4	12914.4	12796.1	12629.3	12392.6
67.5°	3391.1	3418.2	3561.8	4062.4	5571.6	8421.5	11244.1	12803.9	12701.0	12499.3	12262.6
70°	2263.9	2244.6	2750.9	3117.6	4244.6	6861.7	10087.9	11496.4	11498.3	11403.2	11308.2
72.5°	1074.7	1086.4	1233.8	1918.7	2778.0	4584.1	8029.6	9176.2	9308.0	9137.3	9019.0
75°	772.1	789.6	878.8	1173.7	1656.7	2750.9	5205.0	6417.5	6421.3	6118.7	5849.0
77.5°	225.0	234.7	329.8	723.6	1241.6	1856.5	2989.6	3567.6	3484.2	3266.9	3063.2
80°	93.1	93.1	97.0	230.9	498.6	1261.0	2091.2	2747.0	2737.3	2653.9	2533.6
82.5°	34.9	36.8	46.6	95.0	118.3	310.4	1394.9	2384.3	2378.4	2260.1	2174.8
85°	3.8	3.8	11.6	40.7	44.6	58.2	279.4	1051.4	1045.7	1051.4	921.5
87.5°	0.0	0.0	1.9	3.8	5.8	7.8	11.6	40.7	44.6	42.7	38.8
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°	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6
2.5°	331.7	327.8	327.8	325.9	325.9	325.9	324.0	322.1	322.1	320.0	318.1
5°	362.8	358.9	357.0	353.0	351.1	349.2	345.4	343.3	339.5	337.6	335.6
7.5°	399.6	391.9	389.9	384.1	378.2	374.4	370.6	364.7	360.8	353.0	351.1
10°	446.2	436.4	428.8	421.0	415.2	405.5	399.6	391.9	384.1	378.2	372.5
12.5°	506.3	492.7	481.1	473.4	459.7	448.1	436.4	430.7	415.2	407.4	397.7
15°	572.3	556.8	543.2	527.6	517.9	498.6	483.0	465.6	457.8	444.2	428.8
17.5°	657.6	632.4	611.0	595.6	576.1	556.8	539.3	521.9	498.6	483.0	463.7
20°	748.8	727.4	698.4	671.3	648.0	624.7	599.4	576.1	554.9	529.6	506.3
22.5°	865.2	834.2	799.3	772.1	741.1	715.8	680.9	649.9	615.0	582.0	554.9
25°	1012.7	971.9	939.0	900.1	863.3	824.5	781.8	743.0	698.4	667.3	620.8
27.5°	1195.1	1156.2	1111.6	1061.2	1024.3	966.1	909.8	861.4	808.9	760.4	708.1
30°	1427.9	1371.6	1325.0	1276.6	1202.8	1146.5	1080.6	1014.6	942.8	894.4	814.8
32.5°	1707.2	1647.0	1577.2	1507.3	1439.5	1360.0	1278.5	1197.0	1117.4	1028.2	946.7
35°	2048.6	1976.9	1897.3	1821.6	1716.8	1631.5	1528.7	1416.2	1327.0	1224.1	1121.3
37.5°	2500.7	2382.2	2312.4	2233.0	2091.2	1974.8	1860.5	1747.9	1590.8	1482.1	1336.7
40°	3067.1	2997.2	2882.8	2754.7	2626.7	2473.4	2318.3	2168.9	1986.5	1835.3	1666.4
42.5°	3732.5	3629.8	3513.4	3329.0	3199.1	3018.6	2842.1	2644.2	2421.1	2227.1	2029.2
45°	4357.2	4234.9	4145.8	3961.4	3825.6	3612.2	3398.9	3189.4	2931.4	2681.0	2452.1
47.5°	5032.3	4931.4	4784.0	4634.6	4496.9	4256.3	4025.4	3771.4	3499.7	3202.9	2906.0
50°	5626.0	5546.4	5445.5	5265.1	5111.9	4910.0	4638.5	4361.0	4017.7	3722.9	3385.3
52.5°	6130.3	6068.3	5926.7	5798.6	5660.9	5470.8	5228.3	4962.5	4591.9	4267.9	3883.8
55°	6725.9	6681.2	6557.2	6477.6	6355.3	6173.0	5946.0	5699.6	5307.8	4954.7	4520.2
57.5°	7701.7	7666.8	7558.2	7525.2	7405.0	7245.8	6966.5	6702.6	6244.8	5806.3	5309.8
60°	9317.8	9247.9	9088.8	9007.3	8753.2	8539.8	8177.0	7814.3	7261.3	6702.6	6105.1
62.5°	11048.2	10852.2	10549.6	10289.6	9928.8	9558.2	9073.3	8518.4	7870.4	7207.1	6520.3
65°	11981.3	11647.7	11265.5	10852.2	10384.7	9839.5	9228.5	8563.1	7866.6	7166.3	6440.8
66°	12088.0	11711.6	11306.2	10846.4	10326.5	9746.4	9125.6	8427.2	7703.6	7020.8	6295.2
67.5°	11954.2	11560.3	11131.6	10621.4	10058.8	9457.4	8805.6	8080.0	7383.6	6691.0	5984.9
70°	11017.2	10625.3	10243.1	9705.7	9106.3	8501.0	7884.1	7073.2	6413.5	5777.3	5148.7
72.5°	8797.8	8532.0	8153.8	7693.9	7110.0	6400.0	5885.9	5160.4	4588.1	3971.2	3484.2
75°	5497.9	5123.5	4656.0	4070.0	3623.9	3047.8	2747.0	2196.0	1870.2	1585.0	1309.4
77.5°	2811.0	2529.7	2201.9	1872.1	1555.9	1241.6	960.2	679.0	457.8	318.1	236.6
80°	2322.1	2073.8	1802.3	1501.6	1222.2	948.6	682.9	465.6	296.8	194.0	151.3
82.5°	1918.7	1709.2	1466.6	1187.3	944.8	745.0	517.9	337.6	209.5	135.8	106.7
85°	816.7	741.1	572.3	454.0	341.4	252.2	176.5	118.3	83.4	67.9	62.0
87.5°	34.9	38.8	36.8	29.0	21.4	21.4	19.4	15.5	15.5	15.5	15.5
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6	304.6
2.5°	318.1	316.2	314.3	314.3	312.4	310.4	298.8	289.1	277.4	269.6	261.8
5°	331.7	329.8	325.9	324.0	320.0	318.1	292.9	271.6	254.2	240.6	230.9
7.5°	345.4	343.3	337.6	331.7	329.8	325.9	285.1	258.0	234.7	219.2	209.5
10°	362.8	357.0	351.1	343.3	337.6	331.7	277.4	242.5	217.3	203.6	194.0
12.5°	388.0	378.2	368.6	358.9	351.1	341.4	273.5	229.0	203.6	188.2	178.4
15°	417.1	403.6	391.9	380.3	366.6	357.0	265.8	217.3	192.0	176.5	164.9
17.5°	444.2	428.8	411.2	393.8	380.3	366.6	258.0	205.7	180.4	164.9	153.2
20°	483.0	459.7	438.5	417.1	397.7	380.3	246.4	194.0	170.8	153.2	141.6
22.5°	525.7	498.6	471.4	442.3	417.1	393.8	236.6	184.3	161.0	143.5	130.0
25°	580.1	547.1	510.2	473.4	444.2	413.2	226.9	174.6	151.3	133.8	120.2
27.5°	655.7	609.1	568.4	521.9	477.2	442.3	219.2	166.8	141.6	124.2	110.5
30°	758.5	690.6	626.6	576.1	523.8	473.4	211.4	157.1	133.8	114.5	98.9
32.5°	873.0	793.4	719.8	644.0	578.2	520.0	203.6	149.4	124.2	104.8	91.2
35°	1014.6	913.7	814.8	727.4	648.0	570.4	196.0	141.6	116.4	95.0	81.5
37.5°	1218.4	1092.2	962.3	849.7	746.9	644.0	190.1	133.8	106.7	85.3	71.8
40°	1497.7	1334.8	1175.6	1022.4	888.5	760.4	182.4	126.1	98.9	77.6	64.0
42.5°	1800.4	1602.5	1393.0	1220.3	1036.0	874.9	174.6	118.3	91.2	69.8	56.3
45°	2176.7	1930.3	1676.2	1441.4	1216.3	1008.8	166.8	110.5	81.5	62.0	48.5
47.5°	2587.9	2273.6	1986.5	1691.6	1423.9	1175.6	157.1	104.8	73.7	54.4	42.7
50°	3010.8	2679.1	2316.4	1980.7	1662.6	1342.4	147.5	95.0	66.0	48.5	34.9
52.5°	3466.8	3074.9	2704.3	2287.2	1916.8	1561.7	137.8	87.2	60.1	42.7	29.0
55°	4046.8	3608.4	3173.8	2706.2	2260.1	1815.8	128.0	77.6	52.3	36.8	23.3
57.5°	4776.2	4256.3	3722.9	3195.1	2653.9	2149.4	120.2	67.9	44.6	31.1	19.4
60°	5464.9	4857.7	4211.6	3604.4	2993.4	2405.5	108.6	60.1	38.8	25.2	19.4
62.5°	5821.9	5129.3	4432.8	3763.6	3111.7	2496.7	97.0	50.4	33.0	21.4	17.4
65°	5734.6	5028.5	4353.4	3678.2	3040.0	2438.5	85.3	44.6	29.0	19.4	17.4
66°	5608.4	4910.0	4231.1	3589.0	2979.8	2376.5	79.6	42.7	27.1	19.4	15.5
67.5°	5333.0	4657.9	4009.9	3412.4	2815.0	2258.2	71.8	38.8	25.2	17.4	15.5
70°	4555.1	3942.0	3424.1	2892.5	2405.5	1903.1	58.2	33.0	21.4	15.5	15.5
72.5°	3014.8	2597.6	2252.3	1938.0	1619.9	1257.1	48.5	27.1	17.4	15.5	13.6
75°	1136.9	1028.2	882.7	793.4	692.5	607.2	38.8	17.4	13.6	13.6	13.6
77.5°	201.7	186.2	164.9	151.3	139.7	128.0	31.1	11.6	11.6	13.6	13.6
80°	135.8	126.1	114.5	104.8	97.0	87.2	21.4	9.7	11.6	11.6	13.6
82.5°	97.0	91.2	85.3	77.6	71.8	64.0	13.6	9.7	11.6	11.6	11.6
85°	58.2	54.4	50.4	46.6	40.7	38.8	9.7	9.7	9.7	11.6	11.6
87.5°	15.5	13.6	15.5	15.5	11.6	13.6	7.8	7.8	7.8	9.7	9.7
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°	304.6	304.6	304.6	304.6	304.6
2.5°	258.0	258.0	254.2	259.9	259.9
5°	223.1	223.1	221.2	223.1	223.1
7.5°	203.6	201.7	201.7	201.7	203.6
10°	186.2	184.3	184.3	184.3	184.3
12.5°	170.8	168.7	166.8	168.7	168.7
15°	157.1	153.2	153.2	153.2	153.2
17.5°	145.4	141.6	139.7	139.7	139.7
20°	133.8	128.0	128.0	128.0	128.0
22.5°	122.2	116.4	116.4	116.4	116.4
25°	110.5	104.8	104.8	104.8	104.8
27.5°	100.9	95.0	95.0	95.0	95.0
30°	89.3	85.3	85.3	87.2	85.3
32.5°	81.5	75.6	75.6	77.6	77.6
35°	71.8	67.9	67.9	67.9	67.9
37.5°	62.0	58.2	58.2	58.2	58.2
40°	54.4	50.4	48.5	50.4	50.4
42.5°	46.6	42.7	40.7	40.7	40.7
45°	40.7	34.9	33.0	34.9	34.9
47.5°	33.0	29.0	29.0	31.1	31.1
50°	25.2	25.2	27.1	31.1	31.1
52.5°	23.3	23.3	27.1	31.1	31.1
55°	21.4	23.3	27.1	29.0	31.1
57.5°	19.4	23.3	27.1	29.0	29.0
60°	19.4	21.4	25.2	29.0	29.0
62.5°	17.4	19.4	23.3	27.1	27.1
65°	17.4	19.4	23.3	27.1	27.1
66°	17.4	19.4	23.3	27.1	27.1
67.5°	17.4	19.4	23.3	27.1	27.1
70°	17.4	19.4	23.3	25.2	25.2
72.5°	15.5	17.4	21.4	25.2	25.2
75°	15.5	17.4	21.4	25.2	25.2
77.5°	15.5	17.4	21.4	25.2	25.2
80°	15.5	17.4	21.4	23.3	25.2
82.5°	13.6	17.4	19.4	23.3	23.3
85°	13.6	15.5	19.4	21.4	23.3
87.5°	11.6	13.6	15.5	19.4	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)