

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: P163811

Luminaire Tested: **LDRL-SL4-F03-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163811
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-F03-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (21) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4464.6 lumens
Efficiency: N/A
Efficacy: 57.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

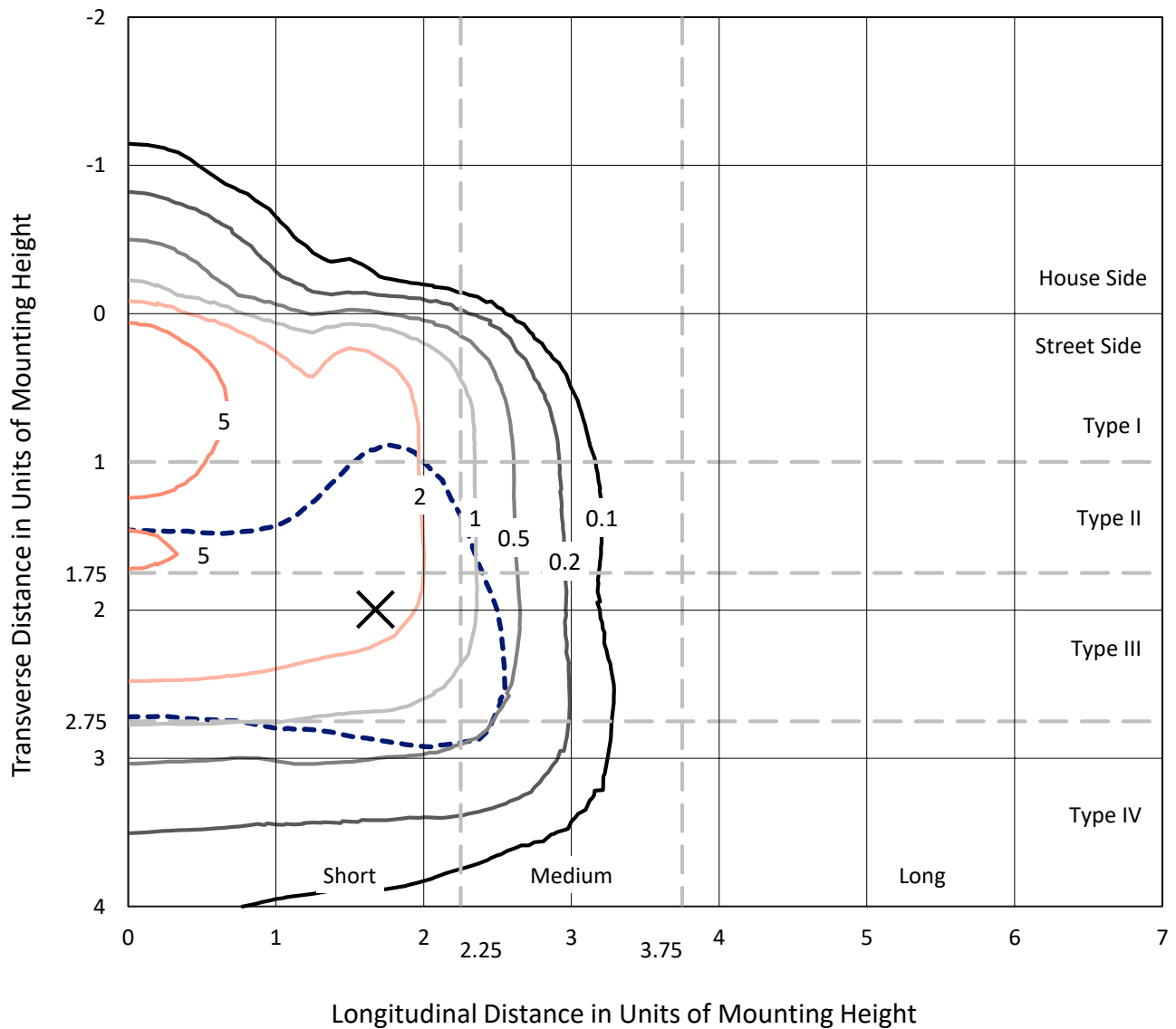
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

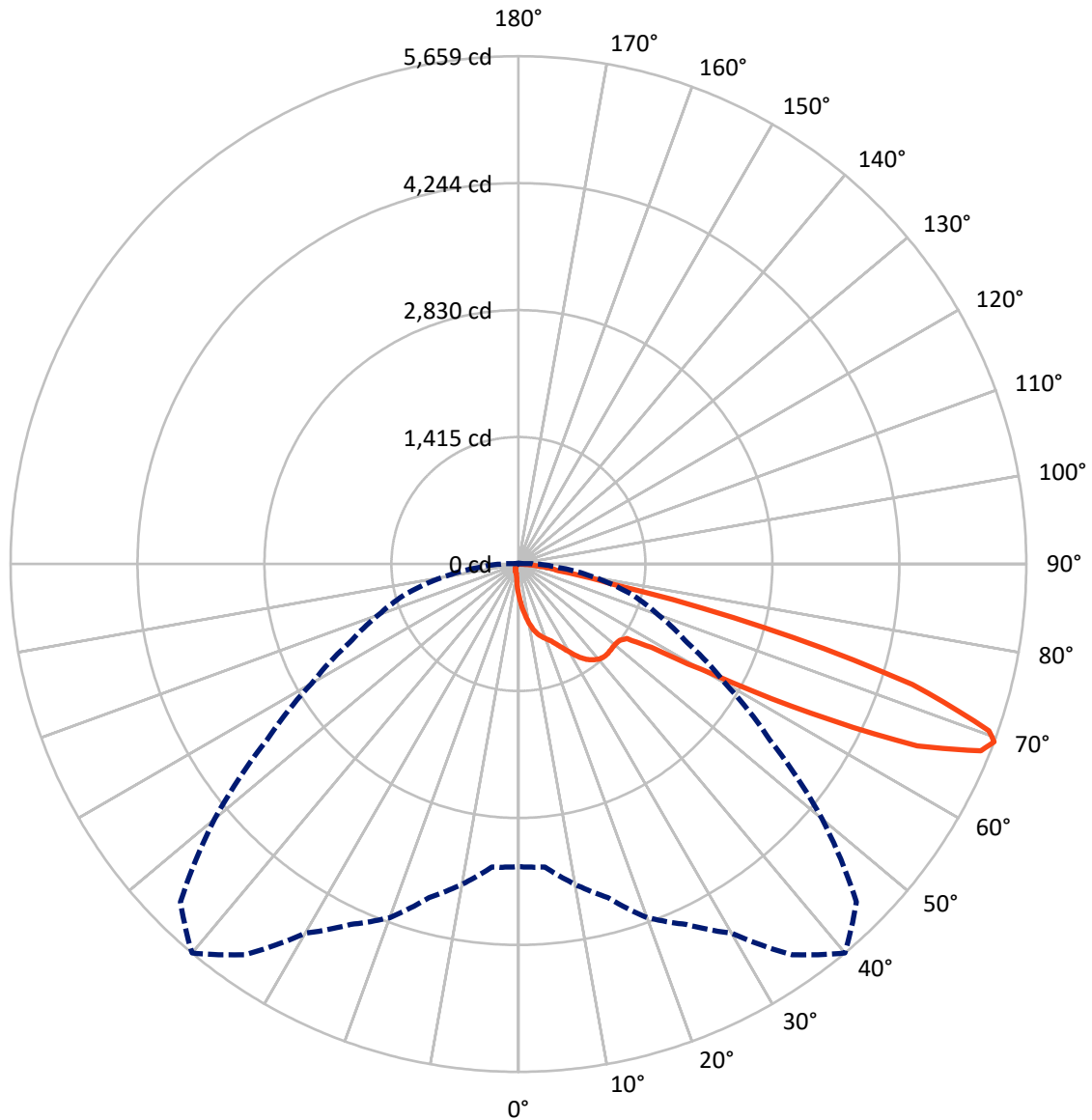


Based on 10 foot mounting height. Maximum calculated value = 10 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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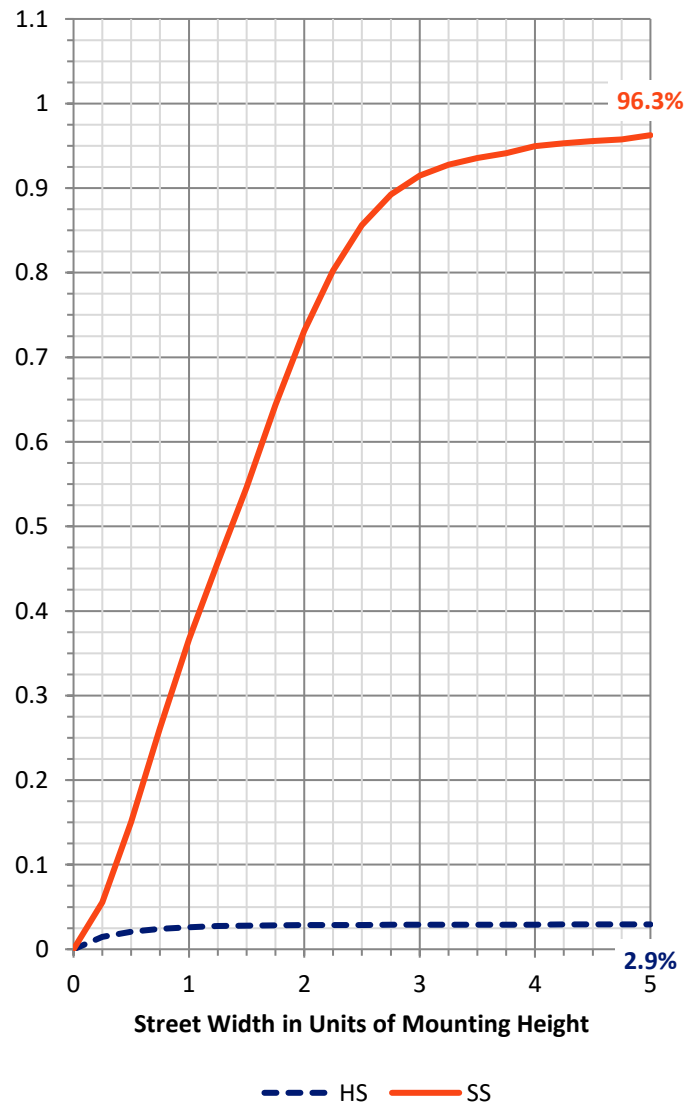
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	132.9	0.0	132.9
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	4331.6	0.0	4331.6
	% Fixture	97.0	0.0	97.0
Total	Lumens	4464.6	0.0	4464.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.7	0.8
10°-20°	119.5	2.7
20°-30°	228.7	5.1
30°-40°	380.3	8.5
40°-50°	514.6	11.5
50°-60°	804.8	18.0
60°-70°	1654.6	37.1
70°-80°	665.8	14.9
80°-90°	61.6	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°	4464.6	100.0
0°-180°	4464.6	100.0

Coefficient of Utilization



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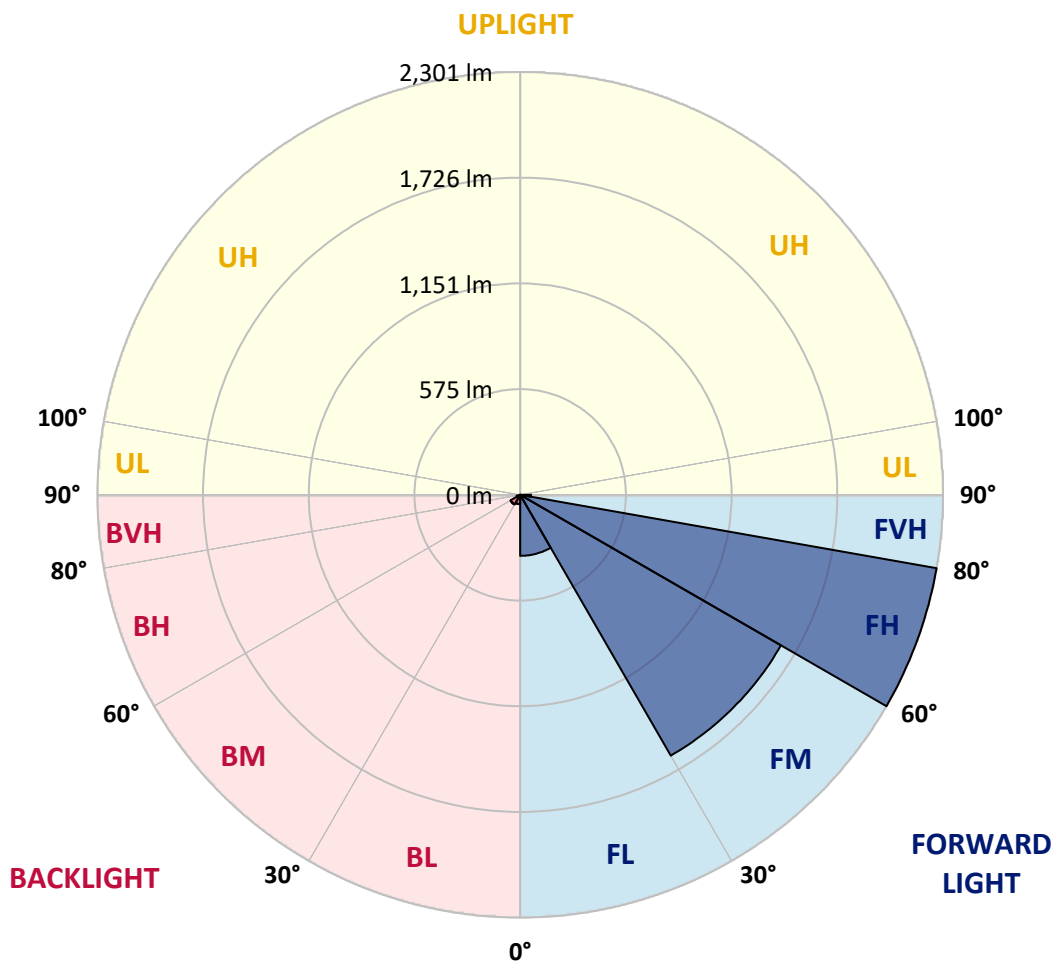
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	332.3	7.4			
FM (30°-60°)	1639.0	36.7			
FH (60°-80°)	2301.1	51.5			G2/5000
FVH (80°-90°)	59.3	1.3			G1/100
BL (0°-30°)	50.6	1.1	B0/110		
BM (30°-60°)	60.7	1.4	B0/220		
BH (60°-80°)	19.4	0.4	B0/110		G0/110
BVH (80°-90°)	2.3	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°	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2
2.5°	449.8	444.7	438.8	438.8	431.5	431.5	427.1	415.4	413.9	407.4	400.8
5°	574.1	569.7	562.4	555.9	550.0	539.8	532.4	518.5	503.2	488.5	475.4
7.5°	695.5	693.3	680.2	678.0	668.5	651.6	637.0	616.5	590.2	569.7	545.6
10°	808.2	803.0	800.1	787.7	773.8	755.5	732.8	708.0	677.2	645.1	610.7
12.5°	897.4	894.5	881.3	876.2	861.5	843.3	814.7	782.6	751.8	710.2	670.0
15°	963.9	958.8	950.0	942.0	924.4	908.4	882.0	846.9	809.6	764.3	716.0
17.5°	1019.5	1010.0	1007.8	995.4	977.1	958.1	928.8	896.6	852.8	807.4	754.8
20°	1094.1	1081.0	1076.6	1058.3	1037.1	1010.7	977.1	936.9	890.8	841.0	786.9
22.5°	1181.9	1172.4	1162.9	1146.8	1119.7	1082.4	1033.4	989.5	931.0	876.2	817.7
25°	1306.2	1298.2	1282.8	1260.9	1227.2	1182.6	1123.4	1059.0	990.2	920.0	851.3
27.5°	1426.9	1419.6	1408.6	1391.8	1353.8	1304.8	1231.6	1149.7	1062.7	977.9	901.8
30°	1540.3	1533.7	1522.7	1505.9	1472.2	1424.0	1341.3	1253.5	1145.3	1046.6	955.1
32.5°	1662.4	1660.2	1647.8	1623.6	1594.4	1529.3	1439.3	1345.0	1235.3	1121.2	1014.4
35°	1800.6	1783.8	1772.1	1748.0	1698.2	1628.8	1523.4	1420.3	1304.8	1187.7	1068.5
37.5°	1917.7	1901.6	1886.9	1856.2	1795.5	1707.0	1587.8	1474.4	1355.2	1236.0	1114.6
40°	2003.2	1995.2	1977.6	1937.4	1869.4	1764.1	1635.3	1511.7	1391.8	1271.9	1151.9
42.5°	2066.9	2054.4	2034.7	1993.0	1912.5	1792.6	1654.4	1527.1	1408.6	1293.8	1176.0
45°	2090.3	2080.0	2061.7	2016.4	1929.3	1800.6	1653.6	1522.7	1409.3	1300.4	1192.1
47.5°	2076.4	2066.1	2050.0	2007.6	1922.0	1791.1	1640.4	1510.3	1402.0	1302.6	1206.8
50°	2030.3	2024.4	2012.0	1976.2	1899.3	1772.8	1628.8	1503.7	1400.6	1313.5	1227.2
52.5°	2025.9	2022.2	2006.9	1971.0	1892.8	1767.0	1627.3	1507.3	1413.0	1327.4	1241.9
55°	2475.7	2423.8	2307.4	2208.7	2046.4	1853.3	1701.1	1566.6	1465.7	1382.3	1322.3
57.5°	3518.6	3441.1	3288.2	3100.3	2727.3	2360.8	2067.6	1855.5	1750.9	1712.9	1735.5
60°	4007.1	3993.3	3969.1	3879.9	3689.0	3373.8	3022.7	2643.2	2491.0	2477.9	2524.0
62.5°	4239.0	4230.2	4237.5	4226.6	4167.3	4075.2	3974.3	3810.4	3659.7	3562.5	3356.2
65°	4345.8	4351.6	4393.3	4426.2	4433.5	4457.7	4531.6	4735.6	4884.8	4633.9	4061.3
67.5°	4074.5	4108.8	4204.6	4324.6	4465.0	4601.0	4820.4	5250.5	5556.9	5262.2	4448.9
69°	3373.1	3389.9	3623.9	3849.9	4192.9	4432.8	4751.0	5314.8	5659.3	5326.6	4418.2
70°	2655.6	2670.9	2921.8	3229.0	3808.9	4117.6	4533.7	5205.9	5563.5	5241.0	4260.2
72.5°	1198.0	1176.0	1264.5	1429.1	2059.5	2549.5	3277.2	4217.8	4590.1	4198.8	3187.3
75°	836.7	827.2	836.7	837.4	935.4	1206.8	1522.7	2286.2	2827.5	2439.8	1522.7
77.5°	648.0	641.4	634.8	627.5	639.2	716.0	746.7	811.1	1053.2	996.1	580.7
80°	512.7	506.8	522.9	517.8	517.8	526.6	520.8	496.6	451.3	418.3	374.4
82.5°	238.4	239.9	239.9	260.4	313.7	366.4	383.2	359.1	318.9	271.3	218.7
85°	22.7	25.6	43.2	66.5	132.4	149.2	149.9	124.3	124.3	98.0	79.0
87.5°	0.0	0.7	0.7	0.7	6.6	18.3	15.3	4.4	2.2	2.2	3.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2
2.5°	389.1	386.9	378.1	369.3	361.3	352.5	344.5	336.4	327.7	321.1	313.0
5°	454.9	438.8	420.5	403.0	385.4	367.2	348.1	331.3	313.7	297.7	282.3
7.5°	521.5	490.0	465.2	433.7	405.2	376.7	350.3	323.3	298.4	275.0	253.1
10°	577.8	539.8	501.0	460.8	419.8	381.8	345.2	313.0	280.1	251.6	224.5
12.5°	623.9	575.6	528.0	477.6	431.5	383.2	337.9	299.1	260.4	228.2	200.4
15°	665.6	610.0	552.9	494.4	435.9	381.1	330.6	282.3	242.8	206.2	174.8
17.5°	699.2	635.6	571.2	505.4	442.5	378.1	321.1	270.6	224.5	186.5	155.8
20°	728.4	661.9	592.4	518.5	446.9	377.4	313.0	256.0	208.4	168.2	138.2
22.5°	755.5	689.0	614.4	535.4	453.4	376.7	305.7	245.0	194.5	154.3	124.3
25°	786.2	716.0	637.7	552.9	465.2	379.6	301.3	236.2	182.1	141.1	113.4
27.5°	820.6	746.7	665.6	574.9	480.5	385.4	299.8	226.7	171.1	128.7	104.6
30°	868.9	783.3	693.3	596.8	494.4	392.0	298.4	220.9	160.1	119.2	95.8
32.5°	911.3	819.1	724.1	619.5	509.8	398.6	297.7	212.8	149.9	109.7	89.2
35°	955.9	852.0	750.4	641.4	522.9	405.9	297.0	207.0	140.4	100.2	82.7
37.5°	994.6	879.8	770.8	660.4	537.5	412.5	297.7	201.9	131.6	92.2	76.8
40°	1027.6	908.4	793.5	678.0	552.9	422.7	298.4	196.7	122.9	84.8	71.7
42.5°	1056.8	935.4	817.7	697.7	570.5	434.4	302.8	192.4	115.5	78.3	66.5
45°	1079.5	960.3	844.0	725.5	599.0	453.4	310.8	189.4	108.3	72.4	62.2
47.5°	1102.9	996.9	888.6	769.4	640.7	483.4	324.7	188.7	102.4	68.0	58.5
50°	1135.1	1033.4	928.1	814.0	678.7	514.1	341.6	189.4	95.1	63.6	54.8
52.5°	1158.5	1070.7	979.3	891.5	769.4	607.7	406.7	202.6	91.4	60.0	50.4
55°	1296.7	1281.4	1283.5	1298.2	1203.8	1034.1	680.2	292.6	107.5	68.0	49.7
57.5°	1828.4	1882.6	1914.0	1913.3	1757.5	1457.6	913.5	375.9	119.9	79.0	59.2
60°	2527.6	2486.6	2428.9	2286.2	2079.3	1663.9	1021.7	404.4	103.9	62.9	54.1
62.5°	3145.6	2905.7	2692.9	2461.8	2190.5	1735.5	1043.7	402.3	90.7	47.5	38.0
65°	3531.0	3099.5	2755.8	2466.1	2146.6	1675.5	987.4	369.3	76.8	38.8	31.4
67.5°	3623.2	2995.0	2508.6	2139.2	1793.3	1304.0	724.8	277.9	60.0	32.2	27.8
69°	3422.1	2662.2	2078.5	1659.5	1304.8	865.2	448.3	175.5	46.1	29.3	25.6
70°	3147.8	2315.5	1693.1	1331.8	966.1	607.7	313.7	123.6	37.3	27.1	23.4
72.5°	2025.2	1216.3	832.3	579.2	398.6	242.1	122.9	55.6	28.5	22.7	19.0
75°	785.5	449.8	326.2	247.9	193.8	134.6	74.6	35.8	24.1	19.0	14.6
77.5°	386.9	296.2	242.1	166.0	96.5	60.0	40.2	27.8	19.7	13.9	9.5
80°	305.7	203.3	121.4	75.3	57.0	43.2	30.7	22.7	14.6	8.8	6.6
82.5°	156.5	85.5	62.9	51.2	42.4	33.7	24.9	16.1	9.5	5.8	5.1
85°	49.0	35.8	32.2	31.4	29.3	24.1	17.6	10.2	5.8	3.7	3.7
87.5°	3.7	5.1	6.6	5.1	5.8	5.1	6.6	4.4	2.9	2.9	2.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2	337.2
2.5°	307.2	298.4	290.3	285.2	275.7	272.1	268.4	267.0	260.4	261.8	256.0
5°	268.4	253.1	241.4	229.6	218.7	210.6	204.0	196.0	189.4	186.5	180.6
7.5°	233.3	213.6	198.2	185.8	172.6	162.4	153.6	147.8	141.9	136.0	133.1
10°	202.6	181.4	163.8	151.4	139.0	130.2	123.6	119.2	115.5	113.4	112.6
12.5°	174.1	153.6	137.5	126.5	117.0	112.6	109.7	107.5	106.8	106.0	106.0
15°	152.1	131.6	119.2	111.2	106.8	104.6	103.9	102.4	100.9	100.2	100.2
17.5°	131.6	116.3	107.5	103.1	100.9	99.5	98.0	96.5	95.1	94.3	94.3
20°	117.8	105.3	100.9	98.0	95.8	94.3	92.2	90.7	89.9	89.2	88.5
22.5°	106.8	98.7	95.8	93.6	90.7	88.5	87.0	85.5	84.1	83.4	82.7
25°	98.7	93.6	91.4	88.5	85.5	83.4	81.2	79.0	77.5	76.8	75.3
27.5°	92.9	89.2	86.3	82.7	79.7	77.5	75.3	73.2	71.7	70.2	69.5
30°	87.8	84.1	80.4	77.5	73.9	71.7	68.8	66.5	65.8	64.4	62.9
32.5°	82.7	79.0	75.3	71.7	68.0	65.1	63.6	60.7	59.2	58.5	57.0
35°	76.8	73.2	68.8	65.8	62.2	59.2	57.0	54.8	53.4	51.9	51.2
37.5°	71.7	67.3	62.9	59.2	56.3	53.4	51.2	49.0	47.5	46.1	45.3
40°	65.8	61.4	57.0	53.4	50.4	48.3	46.1	43.9	42.4	41.7	41.7
42.5°	60.7	55.6	51.2	48.3	46.1	43.2	40.9	38.8	38.0	37.3	38.0
45°	55.6	50.4	46.8	43.9	41.7	38.8	36.6	35.1	34.4	35.1	35.8
47.5°	51.2	46.1	42.4	40.2	38.0	35.8	33.7	32.2	32.2	33.7	35.1
50°	46.8	41.7	38.8	37.3	35.1	32.9	30.0	29.3	30.0	31.4	32.9
52.5°	42.4	36.6	34.4	33.7	31.4	29.3	27.1	26.3	27.1	28.5	27.8
55°	38.0	32.2	31.4	30.7	28.5	25.6	23.4	23.4	23.4	22.7	21.2
57.5°	36.6	28.5	27.8	27.1	24.9	21.9	20.5	19.0	18.3	16.1	15.3
60°	38.0	25.6	25.6	24.1	21.9	19.0	16.8	14.6	13.2	11.7	11.7
62.5°	30.7	23.4	22.7	21.2	18.3	15.3	13.2	10.9	10.2	9.5	9.5
65°	24.9	21.2	19.7	17.6	15.3	12.4	10.2	8.8	8.1	8.1	8.8
67.5°	22.7	19.0	16.8	14.6	12.4	9.5	8.1	7.3	7.3	8.1	8.1
69°	21.2	17.6	15.3	13.2	10.9	8.8	7.3	7.3	7.3	7.3	8.1
70°	19.7	16.8	14.6	12.4	9.5	7.3	6.6	6.6	7.3	7.3	8.1
72.5°	15.3	13.2	12.4	10.2	7.3	6.6	5.8	6.6	6.6	7.3	7.3
75°	11.7	9.5	9.5	8.1	5.8	5.1	5.1	5.8	5.8	6.6	6.6
77.5°	8.1	6.6	6.6	5.8	5.1	4.4	4.4	5.1	5.8	5.8	6.6
80°	5.8	5.1	4.4	5.1	4.4	3.7	4.4	5.1	5.1	5.8	5.8
82.5°	4.4	4.4	4.4	4.4	3.7	3.7	4.4	4.4	5.1	5.8	5.8
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.4	4.4	5.1	5.1
87.5°	2.2	2.2	2.2	2.9	2.9	3.7	3.7	3.7	3.7	4.4	4.4
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°	337.2	337.2	337.2	337.2
2.5°	254.5	253.8	250.9	251.6
5°	178.5	174.1	177.0	176.3
7.5°	130.9	130.2	129.4	130.9
10°	111.9	111.9	111.2	111.9
12.5°	105.3	105.3	105.3	105.3
15°	100.2	100.2	99.5	99.5
17.5°	94.3	94.3	94.3	93.6
20°	88.5	87.8	87.8	87.8
22.5°	81.9	81.2	81.2	81.2
25°	75.3	74.6	74.6	74.6
27.5°	68.8	68.0	67.3	67.3
30°	62.2	61.4	60.7	60.7
32.5°	55.6	54.8	54.1	54.1
35°	49.7	49.7	49.0	48.3
37.5°	44.6	44.6	44.6	44.6
40°	40.9	41.7	41.7	41.7
42.5°	38.8	39.5	40.2	40.9
45°	37.3	38.8	39.5	39.5
47.5°	36.6	37.3	38.0	38.0
50°	33.7	32.9	32.9	32.9
52.5°	27.1	25.6	24.9	24.1
55°	19.7	19.0	17.6	17.6
57.5°	13.9	13.9	13.2	13.2
60°	10.9	10.9	10.2	10.9
62.5°	9.5	9.5	9.5	9.5
65°	8.8	8.8	8.8	8.8
67.5°	8.8	8.8	8.8	8.8
69°	8.1	8.1	8.1	8.1
70°	8.1	8.1	8.1	8.1
72.5°	7.3	7.3	7.3	7.3
75°	6.6	7.3	7.3	7.3
77.5°	6.6	6.6	6.6	6.6
80°	5.8	5.8	6.6	6.6
82.5°	5.8	5.8	5.8	5.8
85°	5.1	5.1	5.8	5.8
87.5°	4.4	4.4	5.1	5.1
90°	0.0	0.0	0.0	0.0

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