

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: P969462

Luminaire Tested: **NAV-SB5D-830-U-SLR-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P969462
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-830-U-SLR-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36132.3 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

Input Watts (W): 364.9
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: 24 FT



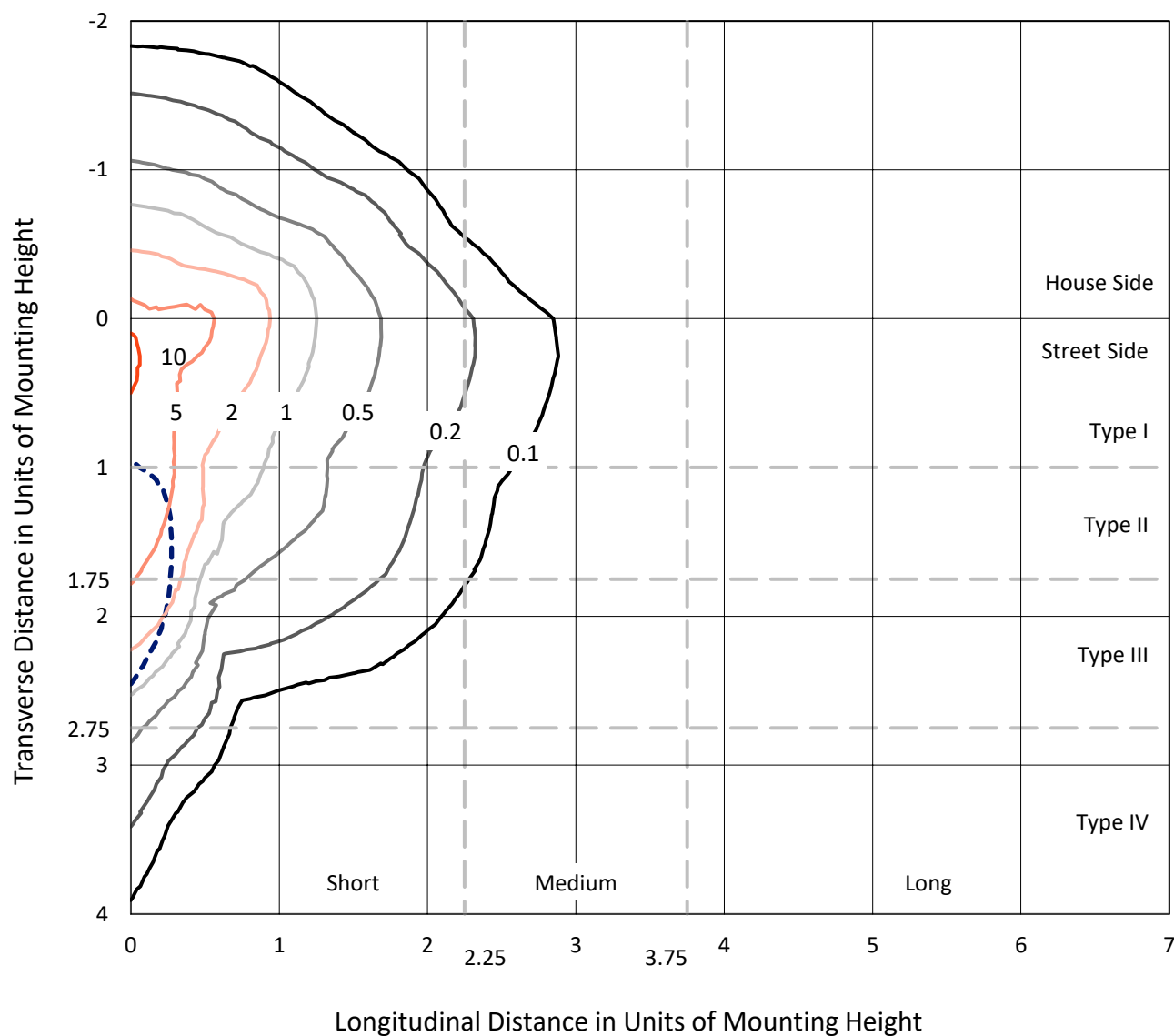
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

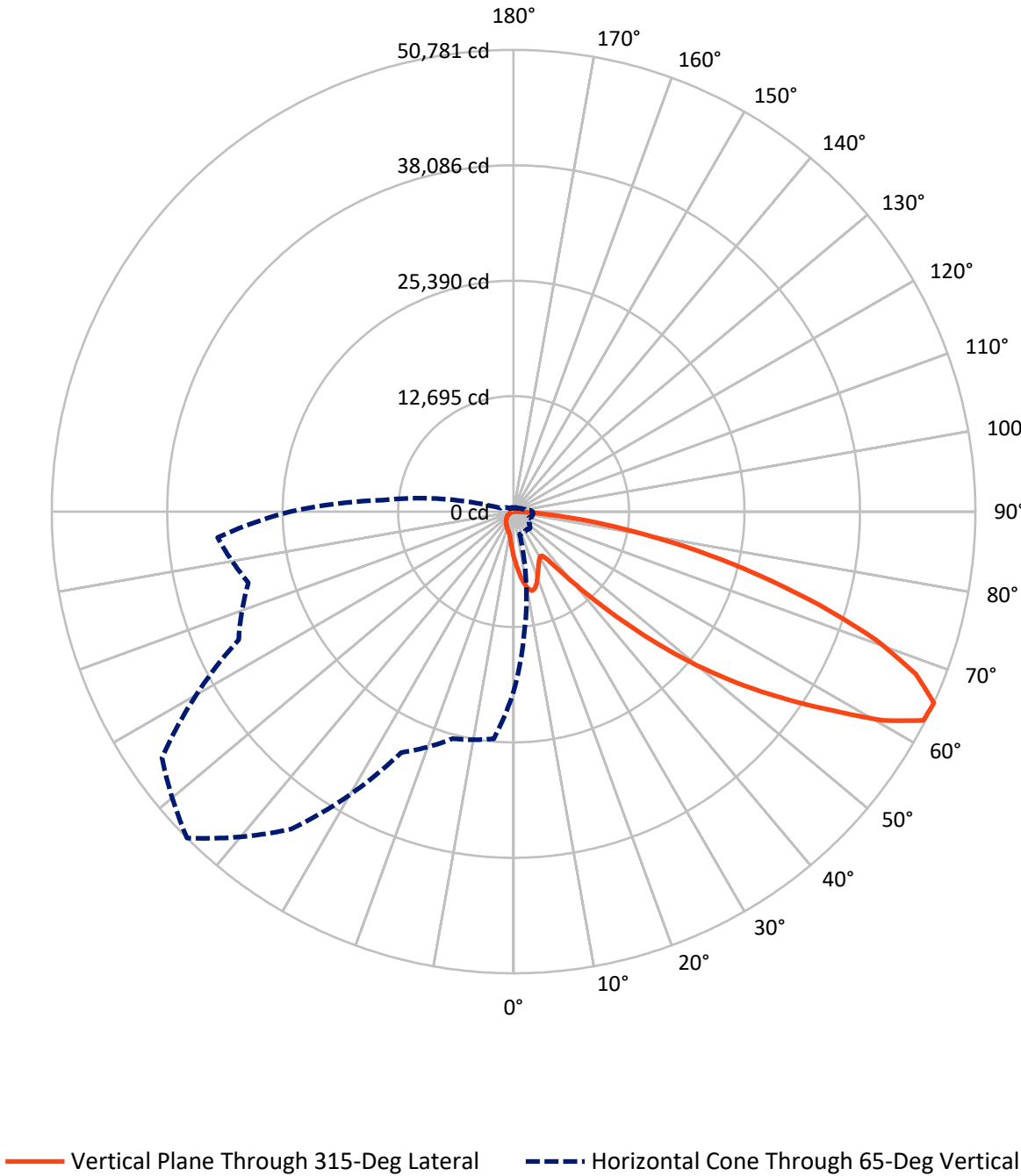


Based on 25 foot mounting height. Maximum calculated value = 11.2 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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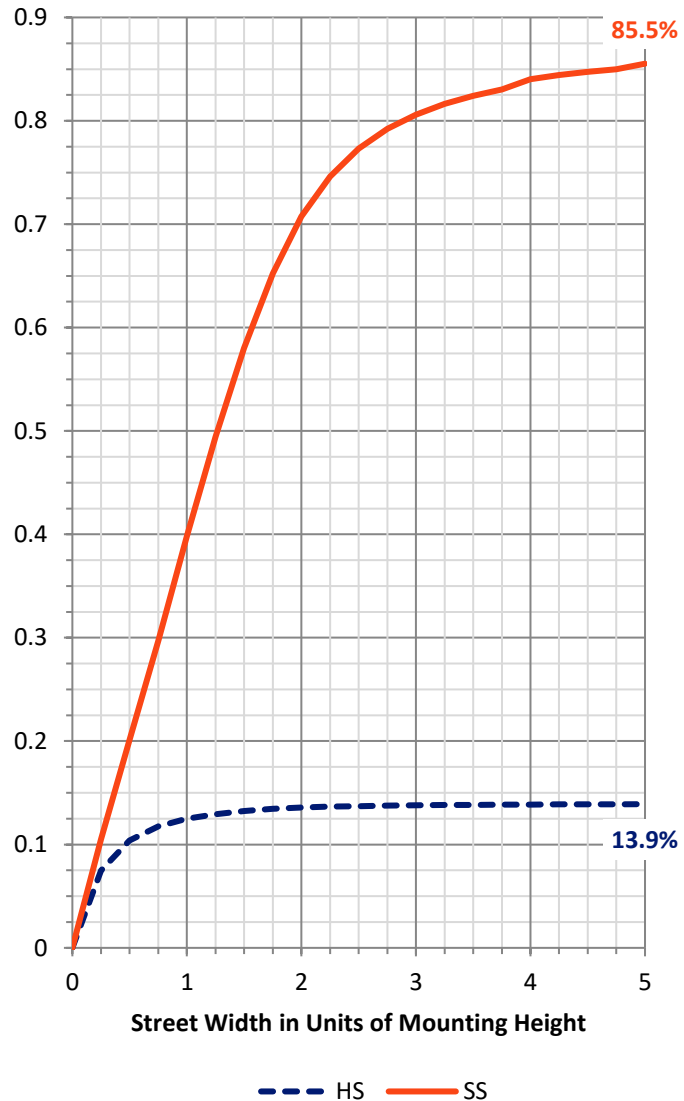
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5060.0	0.0	5060.0
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	31072.2	0.0	31072.2
	% Fixture	86.0	0.0	86.0
Total	Lumens	36132.3	0.0	36132.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	492.6	1.4
10°-20°	1476.6	4.1
20°-30°	2175.3	6.0
30°-40°	2794.7	7.7
40°-50°	4519.9	12.5
50°-60°	7926.1	21.9
60°-70°	9917.7	27.4
70°-80°	5795.4	16.0
80°-90°	1034.0	2.9
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°	36132.3	100.0
0°-180°	36132.3	100.0

Coefficient of Utilization



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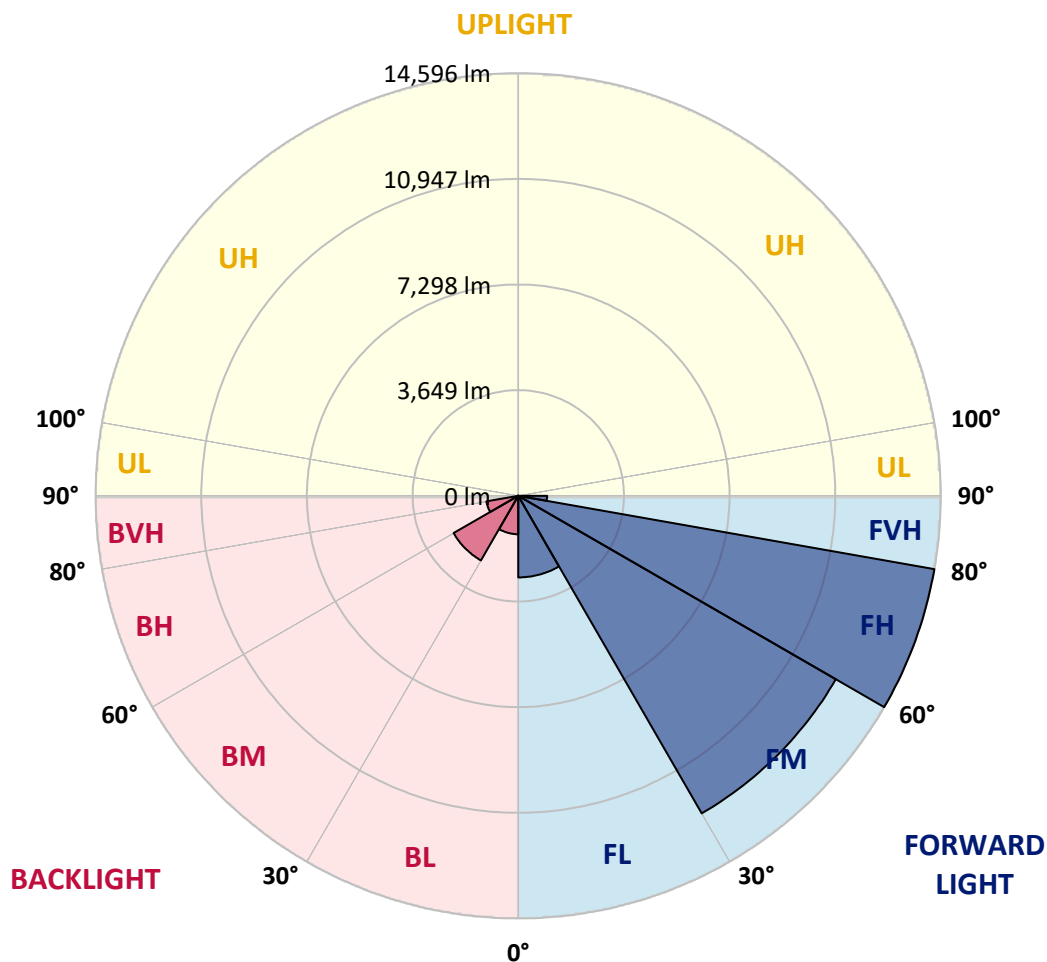
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2818.2	7.8			
FM	(30°-60°)	12664.0	35.0			
FH	(60°-80°)	14595.8	40.4			G5
FVH	(80°-90°)	994.3	2.8			G5
BL	(0°-30°)	1326.3	3.7	B3/2500		
BM	(30°-60°)	2576.7	7.1	B3/5000		
BH	(60°-80°)	1117.3	3.1	B3/2500		G3/2500
BVH	(80°-90°)	39.7	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1
2.5°	5652.9	5555.7	5498.5	5356.6	5214.8	5100.2	4945.9	4843.8	4721.9	4604.9	4500.4
5°	6300.0	6143.2	5954.0	5695.1	5458.6	5217.2	4983.2	4751.8	4507.8	4283.8	4146.9
7.5°	6847.6	6621.1	6287.6	5944.1	5642.8	5351.6	5077.8	4771.7	4475.5	4124.5	3937.8
10°	7265.8	6977.1	6539.0	6088.4	5742.5	5448.7	5182.4	4923.5	4624.8	4201.7	3967.7
12.5°	7519.7	7211.0	6690.8	6163.1	5767.4	5438.8	5232.2	5117.6	5000.7	4580.0	4306.2
15°	7706.4	7372.8	6797.8	6215.4	5710.1	5306.8	5155.0	5269.5	5403.9	5135.0	4818.9
17.5°	7900.5	7549.5	6937.2	6237.7	5555.7	5050.5	4985.7	5281.9	5593.1	5580.6	5267.0
20°	8084.7	7736.2	7059.2	6222.9	5306.8	4739.3	4796.6	5174.9	5535.8	5687.7	5518.4
22.5°	8296.2	7927.9	7176.2	6165.6	4983.2	4448.1	4627.3	5005.7	5321.8	5501.0	5448.7
25°	8555.2	8169.4	7340.4	6080.9	4634.7	4206.6	4455.6	4809.0	5065.3	5189.9	5187.3
27.5°	8834.0	8458.1	7559.5	6036.1	4353.5	4034.9	4261.4	4575.0	4804.1	4891.2	4891.2
30°	9179.9	8794.1	7818.4	5986.4	4169.3	3935.3	4059.8	4303.7	4527.7	4614.9	4614.9
32.5°	9558.3	9167.5	8067.3	5866.9	4057.3	3860.7	3863.1	4017.5	4221.6	4326.1	4341.1
35°	10031.3	9615.5	8333.7	5605.5	3967.7	3773.5	3671.4	3746.2	3915.4	4039.8	4072.2
37.5°	10705.8	10203.0	8659.7	5232.2	3835.8	3639.2	3469.8	3487.3	3616.7	3753.7	3803.4
40°	11636.7	10992.0	9043.1	4843.8	3646.5	3449.9	3248.3	3240.8	3335.5	3469.8	3524.7
42.5°	12896.2	12034.9	9503.5	4473.0	3464.9	3221.0	3014.3	3001.9	3076.5	3193.6	3250.8
45°	14559.0	13369.2	10068.6	4154.3	3322.9	2996.9	2792.8	2787.8	2850.0	2952.1	3011.9
47.5°	16687.2	15223.6	10633.6	3937.8	3248.3	2820.2	2611.1	2621.0	2675.9	2767.9	2810.2
50°	19442.6	17640.6	10805.3	3828.3	3248.3	2725.6	2449.3	2499.1	2543.9	2613.5	2638.5
52.5°	22745.8	19960.3	10237.8	3728.7	3268.2	2738.1	2312.4	2419.4	2451.8	2511.6	2521.5
55°	25807.3	21097.9	8801.6	3591.8	3273.2	2815.2	2195.4	2354.7	2414.5	2436.8	2434.4
57.5°	27584.6	20707.2	7116.5	3360.4	3253.4	2867.4	2120.7	2275.1	2389.6	2404.5	2382.1
60°	27246.0	19335.6	5239.6	3183.6	3106.5	2847.6	2098.4	2153.1	2334.8	2357.2	2327.4
62.5°	24637.5	17035.6	3636.6	3046.7	2782.9	2760.4	2090.9	1961.4	2215.3	2270.1	2227.7
65°	19803.6	13411.5	2568.8	2623.6	2439.4	2571.3	2051.0	1762.3	2071.0	2145.6	2081.0
67.5°	14367.3	9075.3	1854.4	2125.7	2210.3	2265.1	1961.4	1618.0	1906.7	2006.2	1921.6
70°	9219.8	4901.1	1301.9	1403.8	1861.9	1924.1	1807.1	1488.5	1739.9	1854.4	1762.3
72.5°	6553.8	2894.9	935.9	983.2	1496.0	1603.0	1590.6	1344.1	1545.8	1685.1	1575.6
75°	4522.7	1595.5	632.2	701.9	1085.3	1301.9	1227.1	1155.0	1309.3	1451.2	1344.1
77.5°	2835.1	714.4	378.3	487.9	711.9	1023.1	841.3	893.6	1020.6	1152.5	1040.5
80°	1578.1	276.3	211.6	323.6	388.3	744.3	465.5	575.0	751.7	846.3	756.7
82.5°	343.5	34.8	94.6	139.4	151.8	433.1	246.4	333.5	472.9	465.5	403.2
85°	0.0	0.0	17.4	19.9	9.9	186.7	89.6	109.6	154.4	144.3	109.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1
2.5°	4480.5	4358.5	4268.8	4224.0	4186.7	4221.6	4241.4	4241.4	4326.1	4375.9	4395.8
5°	4059.8	3840.8	3674.0	3562.0	3494.7	3517.2	3542.0	3569.5	3676.5	3748.6	3795.9
7.5°	3768.5	3432.5	3178.6	3021.8	2939.7	2952.1	2969.5	2992.0	3096.5	3168.7	3230.9
10°	3713.8	3230.9	2872.5	2665.8	2566.3	2548.9	2538.9	2531.4	2593.7	2648.4	2698.2
12.5°	3937.8	3240.8	2740.5	2489.1	2367.1	2314.9	2255.2	2207.8	2217.8	2252.6	2314.9
15°	4338.5	3367.8	2698.2	2397.1	2245.2	2158.0	2088.3	2031.1	2018.7	2031.1	2041.1
17.5°	4796.6	3539.5	2693.3	2317.4	2128.2	2038.6	1981.3	1929.0	1911.6	1914.2	1926.6
20°	5100.2	3676.5	2678.3	2227.7	2016.2	1936.5	1886.7	1834.4	1817.1	1822.0	1824.5
22.5°	5130.1	3748.6	2655.9	2128.2	1904.1	1837.0	1787.2	1739.9	1737.4	1737.4	1752.3
25°	4968.3	3748.6	2608.6	2038.6	1797.1	1737.4	1692.6	1635.4	1645.3	1650.2	1670.2
27.5°	4716.9	3659.0	2519.0	1966.5	1705.1	1642.9	1598.0	1545.8	1558.2	1565.7	1588.0
30°	4468.0	3544.6	2411.9	1884.3	1618.0	1545.8	1513.4	1468.6	1473.5	1483.5	1508.4
32.5°	4236.5	3422.6	2285.0	1817.1	1530.8	1458.7	1433.8	1384.0	1391.4	1401.4	1428.7
35°	4007.5	3288.2	2135.7	1737.4	1451.2	1378.9	1359.0	1301.9	1306.8	1321.7	1351.6
37.5°	3761.1	3146.2	2013.7	1657.7	1374.0	1299.3	1279.4	1219.6	1224.7	1242.1	1276.9
40°	3502.2	3006.8	1894.2	1573.2	1291.9	1217.2	1199.8	1135.1	1140.0	1159.9	1197.3
42.5°	3240.8	2855.0	1802.2	1463.6	1207.2	1127.6	1110.2	1050.4	1057.9	1080.2	1117.7
45°	2999.5	2673.3	1742.4	1341.6	1127.6	1038.0	1020.6	965.8	980.7	1005.6	1042.9
47.5°	2792.8	2486.6	1717.5	1239.6	1042.9	945.9	930.9	886.1	911.0	938.4	968.3
50°	2616.1	2307.5	1685.1	1135.1	963.3	866.2	851.3	821.4	853.7	881.2	908.6
52.5°	2489.1	2103.3	1615.4	1040.5	893.6	799.0	794.1	779.1	808.9	833.8	858.7
55°	2379.6	1891.7	1503.5	958.3	831.4	741.8	746.7	739.2	764.1	784.1	806.5
57.5°	2280.0	1707.5	1361.5	893.6	764.1	692.0	706.9	697.0	709.4	721.8	749.3
60°	2160.6	1520.9	1192.3	821.4	684.5	642.2	659.6	632.2	629.8	634.7	642.2
62.5°	1983.9	1269.5	1015.6	731.8	614.8	587.4	594.9	542.6	502.8	502.8	510.2
65°	1737.4	1020.6	851.3	632.2	535.2	512.8	507.8	433.1	378.3	373.4	395.8
67.5°	1451.2	838.9	706.9	532.7	445.6	430.6	435.6	380.8	326.1	321.1	346.0
70°	1182.3	694.4	570.0	425.7	343.5	358.4	380.8	326.1	273.8	266.3	288.7
72.5°	960.8	552.6	445.6	326.1	253.9	296.2	323.6	266.3	216.6	211.6	231.4
75°	741.8	405.7	318.6	221.5	184.2	229.0	253.9	194.1	154.4	146.9	164.3
77.5°	495.4	251.4	179.2	139.4	109.6	156.8	169.2	102.1	89.6	87.1	99.5
80°	301.1	117.0	77.2	67.2	37.3	57.3	67.2	42.3	47.3	49.8	59.8
82.5°	151.8	32.4	12.4	2.5	0.0	0.0	19.9	9.9	19.9	24.9	37.3
85°	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	12.4	22.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1
2.5°	4535.2	4639.8	4739.3	4898.6	5062.9	5224.7	5388.9	5548.3	5605.5	5647.9	5742.5
5°	4012.5	4209.2	4438.1	4754.3	5092.8	5441.2	5794.7	6118.3	6265.1	6364.7	6588.7
7.5°	3472.4	3728.7	4057.3	4532.8	5062.9	5618.0	6173.1	6683.3	6919.8	7111.4	7452.5
10°	2937.1	3215.9	3631.7	4174.3	4891.2	5687.7	6454.3	7156.2	7462.4	7703.9	8166.9
12.5°	2466.8	2728.1	3163.7	3763.6	4622.3	5632.9	6616.2	7459.9	7820.9	8092.2	8600.0
15°	2135.7	2319.9	2705.7	3352.9	4303.7	5456.2	6626.1	7604.3	8000.1	8283.8	8724.4
17.5°	1951.5	2013.7	2265.1	2934.7	3950.2	5224.7	6534.0	7654.1	8077.2	8341.1	8647.3
20°	1851.9	1861.9	1931.6	2392.0	3497.2	5008.2	6446.8	7703.9	8149.5	8371.0	8463.0
22.5°	1772.2	1772.2	1789.6	1956.4	2912.3	4749.2	6419.5	7791.0	8249.0	8385.9	8196.7
25°	1700.1	1700.1	1705.1	1749.9	2307.5	4353.5	6402.0	7925.4	8385.9	8423.2	7903.1
27.5°	1625.4	1627.9	1627.9	1652.8	1859.4	3815.9	6327.4	8099.7	8550.1	8473.1	7621.7
30°	1550.7	1555.7	1555.7	1573.2	1645.3	3186.1	6180.5	8308.8	8764.3	8537.7	7343.0
32.5°	1476.1	1481.0	1481.0	1496.0	1548.3	2543.9	5996.4	8500.4	8980.8	8565.1	7084.1
35°	1398.9	1406.4	1401.4	1421.3	1476.1	2023.7	5762.3	8692.1	9214.8	8652.2	6957.1
37.5°	1321.7	1326.8	1324.2	1344.1	1406.4	1747.4	5491.0	8836.4	9533.4	8846.4	7109.0
40°	1244.6	1242.1	1242.1	1264.4	1331.7	1667.7	5150.0	9065.4	9991.4	9187.4	7771.0
42.5°	1164.9	1164.9	1159.9	1184.8	1267.0	1608.0	4824.0	9476.1	10658.5	9730.0	8946.0
45°	1092.8	1090.3	1080.2	1102.7	1204.8	1503.5	4709.5	10242.8	11644.2	10608.7	10367.3
47.5°	1023.1	1020.6	995.7	1015.6	1130.1	1408.9	5137.6	11497.3	13010.7	11900.6	11698.9
50°	960.8	963.3	916.0	933.5	1055.4	1336.7	6066.1	13125.2	14825.3	13640.5	12960.9
52.5°	903.5	903.5	841.3	851.3	963.3	1271.9	6949.7	14890.0	17219.8	16067.4	14432.0
55°	846.3	841.3	771.6	776.6	871.1	1179.9	7081.6	16612.5	20485.5	19718.9	16443.3
57.5°	781.6	771.6	706.9	706.9	786.6	1112.6	6138.2	17936.7	24537.9	25085.5	19343.1
60°	701.9	694.4	652.1	639.7	719.3	1172.4	4331.1	18091.0	27151.5	32221.9	24896.3
62.5°	599.9	609.9	587.4	570.0	654.7	1217.2	2566.3	16848.9	26519.2	34492.0	31547.3
65°	472.9	512.8	507.8	495.4	719.3	1025.5	1515.9	14464.4	24580.2	32660.0	30190.8
67.5°	403.2	430.6	423.1	423.1	754.2	779.1	953.4	11300.7	21911.8	30487.0	26967.3
70°	343.5	370.8	343.5	343.5	570.0	472.9	659.6	7890.6	19031.9	28082.4	24851.5
72.5°	283.7	311.2	281.3	261.4	455.5	353.4	482.9	4931.0	16298.8	25578.4	23402.9
75°	216.6	248.9	226.5	201.6	301.1	263.8	365.9	2865.0	13503.6	21884.5	21339.4
77.5°	136.9	179.2	169.2	141.9	221.5	191.7	263.8	1705.1	10419.5	17100.4	18354.9
80°	84.7	92.1	94.6	89.6	126.9	129.5	179.2	970.8	7131.3	11918.0	14340.0
82.5°	54.7	54.7	42.3	47.3	62.2	74.7	102.1	365.9	4191.7	7255.9	9981.4
85°	39.9	34.8	22.4	22.4	29.8	37.3	39.9	112.0	1700.1	2865.0	3903.0
87.5°	19.9	17.4	7.5	9.9	15.0	12.4	9.9	5.0	428.1	916.0	642.2
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1	5003.1
2.5°	5792.2	5869.4	5874.4	5874.4	5807.1	5804.7	5667.7	5652.9
5°	6820.2	6870.1	6882.5	6857.6	6723.2	6623.6	6357.3	6300.0
7.5°	7761.1	7860.7	7860.7	7801.0	7581.9	7377.8	6991.9	6847.6
10°	8512.8	8627.3	8602.4	8480.4	8204.2	7922.9	7454.9	7265.8
12.5°	8878.8	8995.7	8931.0	8791.6	8522.8	8226.5	7733.7	7519.7
15°	8871.3	8838.9	8771.7	8754.3	8624.9	8400.8	7940.4	7706.4
17.5°	8555.2	8281.4	8229.1	8403.4	8567.6	8512.8	8119.5	7900.5
20°	8054.9	7576.9	7529.6	7863.2	8331.1	8570.1	8286.3	8084.7
22.5°	7527.2	7011.9	6902.4	7270.7	7975.2	8587.6	8497.9	8296.2
25°	7026.8	6509.1	6399.6	6743.1	7579.5	8557.6	8727.0	8555.2
27.5°	6608.7	6108.4	6006.3	6349.8	7198.6	8473.1	8955.9	8834.0
30°	6285.1	5822.1	5747.4	6078.5	6870.1	8368.5	9247.1	9179.9
32.5°	6095.9	5757.3	5784.8	6056.1	6693.2	8254.0	9525.9	9558.3
35°	6282.5	6297.5	6536.4	6648.5	6857.6	8236.6	9904.3	10031.3
37.5°	7211.0	7728.8	8224.1	8132.0	7661.6	8438.2	10469.3	10705.8
40°	8791.6	9854.5	10658.5	10307.5	9122.7	9055.5	11283.3	11636.7
42.5°	10723.2	12525.3	13849.6	12908.6	11007.0	10135.7	12445.7	12896.2
45°	12761.8	15818.4	17904.4	15947.9	13015.7	11649.1	14205.5	14559.0
47.5°	14910.0	19821.0	22519.2	19318.2	14877.6	13371.6	16605.0	16687.2
50°	17259.7	24209.4	27223.7	22686.0	16674.7	15345.5	19537.2	19442.6
52.5°	19497.4	28722.1	31828.6	26068.7	18252.8	17794.8	22939.9	22745.8
55°	21633.0	33232.4	36460.9	29319.5	19741.3	21030.7	26982.2	25807.3
57.5°	24109.7	37287.2	41235.0	32585.3	21822.2	25232.4	31502.6	27584.6
60°	27771.2	41894.6	46634.0	37060.7	25780.0	29648.1	33123.0	27246.0
62.5°	32445.9	46131.1	50559.4	41446.6	29755.1	30479.5	30735.9	24637.5
65°	33354.4	47204.0	50780.9	42619.0	29242.3	25854.7	25093.0	19803.6
67.5°	30945.0	45264.9	47684.4	40436.0	25867.1	19980.3	18830.3	14367.3
70°	28241.7	41568.6	42287.9	36724.7	22750.7	14695.8	12717.0	9219.8
72.5°	25471.4	36637.6	35149.1	31893.3	19995.2	10700.8	9172.4	6553.8
75°	22180.7	30153.3	27686.7	26499.3	16555.3	8398.3	6636.1	4522.7
77.5°	17762.4	21224.9	20565.3	20540.4	12440.7	6135.8	4428.2	2835.1
80°	12530.3	13774.9	13438.9	15470.0	8346.1	4450.5	2665.8	1578.1
82.5°	6066.1	7616.8	7818.4	9212.3	4059.8	2618.6	614.8	343.5
85°	2374.6	3674.0	3099.0	3497.2	1140.0	729.3	15.0	0.0
87.5°	266.3	425.7	390.8	308.6	139.4	29.8	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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