

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: P965773

Luminaire Tested: **NAV-SB4A-830-U-SLR-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965773
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-SB4A-830-U-SLR-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 350mA 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: 12637.2 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

Input Watts (W): 114
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

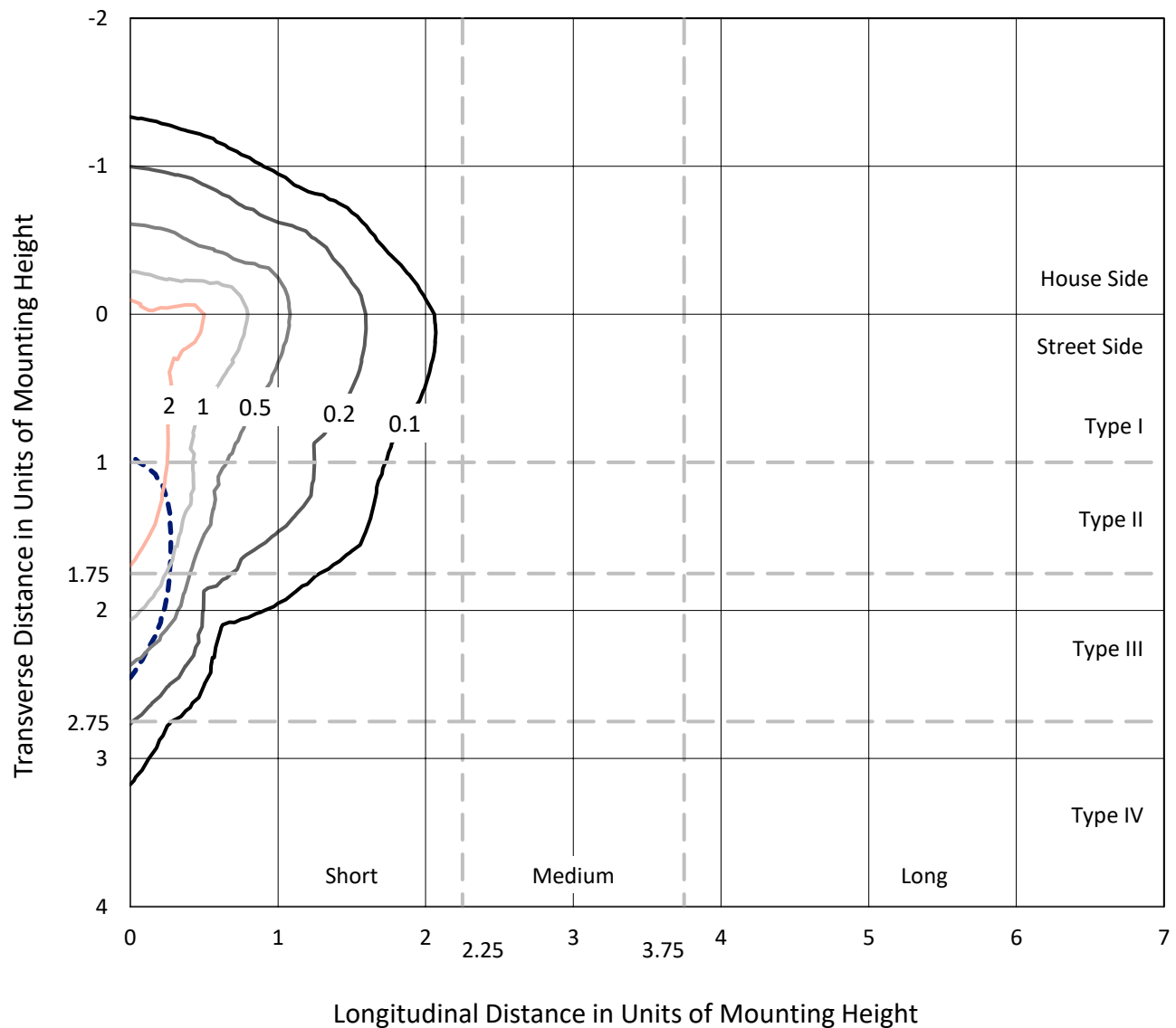


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Iso-Footcandle Lines of Horizontal Illumination

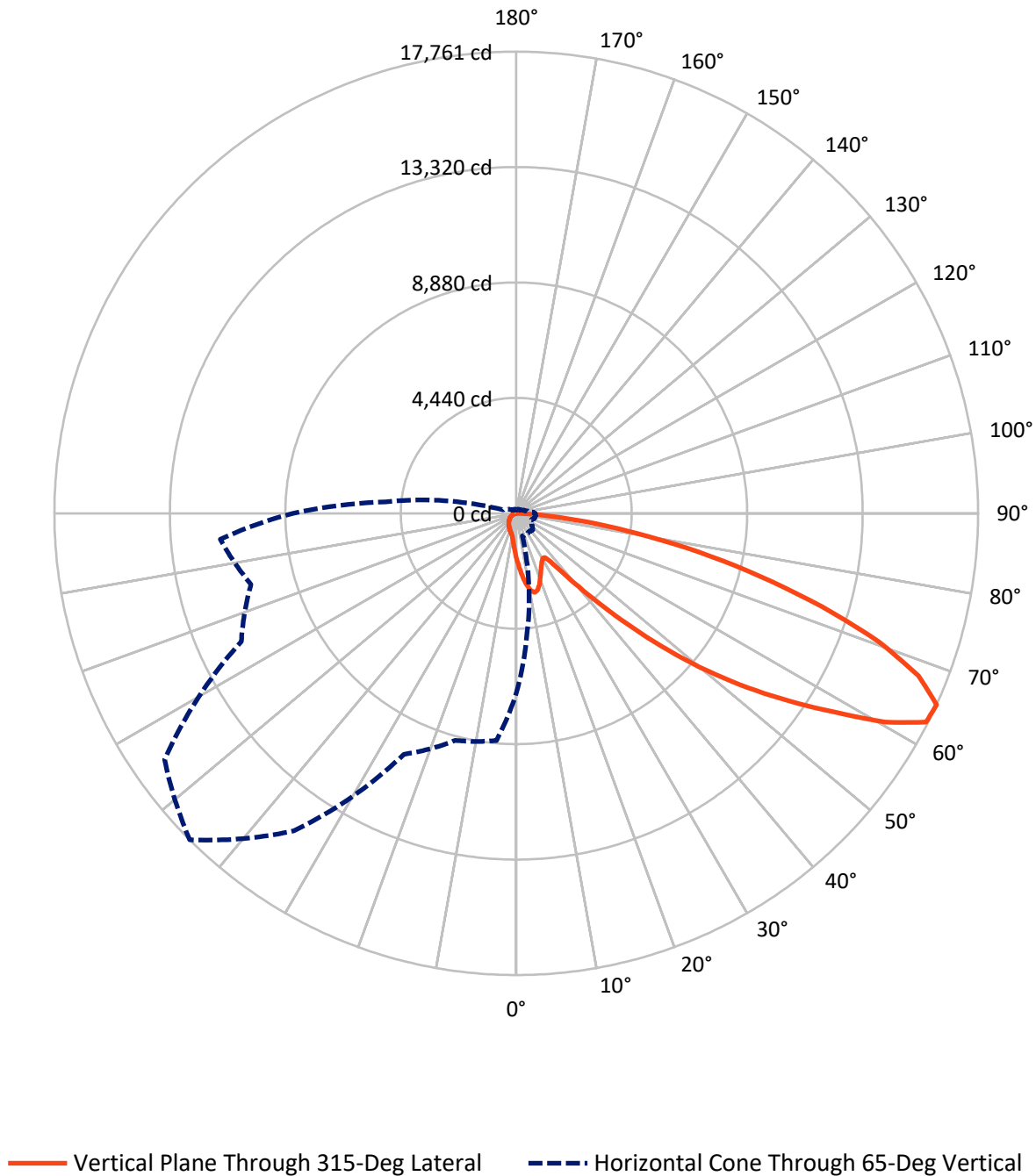
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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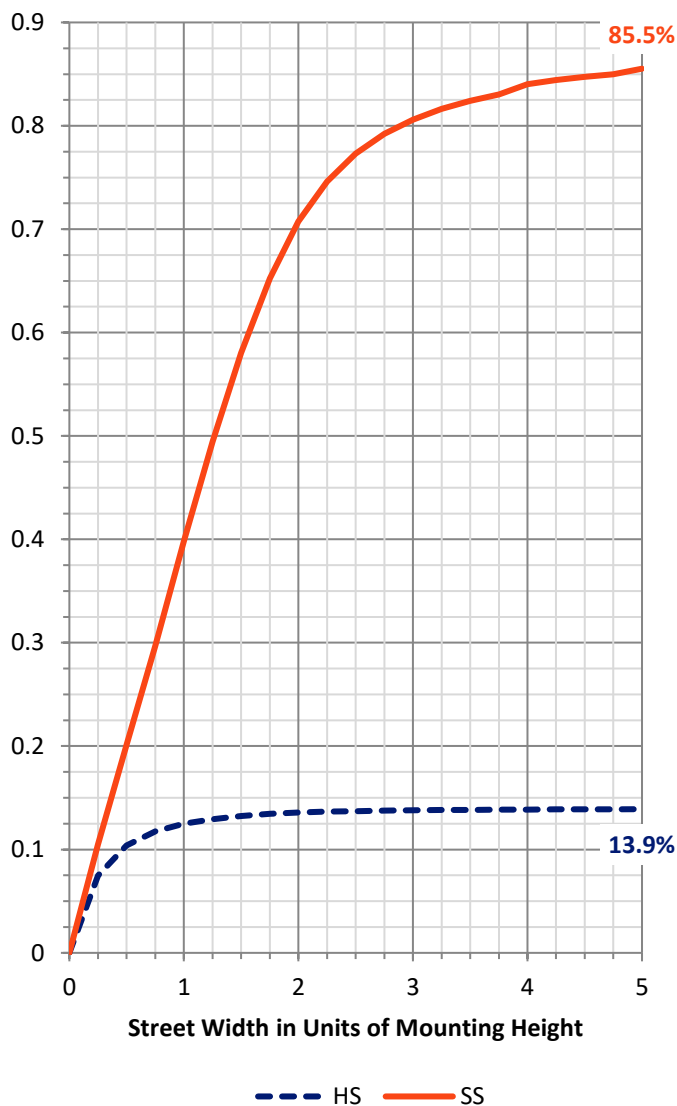
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1769.7	0.0	1769.7
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	10867.5	0.0	10867.5
	% Fixture	86.0	0.0	86.0
Total	Lumens	12637.2	0.0	12637.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.3	1.4
10°-20°	516.4	4.1
20°-30°	760.8	6.0
30°-40°	977.4	7.7
40°-50°	1580.8	12.5
50°-60°	2772.1	21.9
60°-70°	3468.7	27.4
70°-80°	2026.9	16.0
80°-90°	361.6	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°	12637.2	100.0
0°-180°	12637.2	100.0

Coefficient of Utilization



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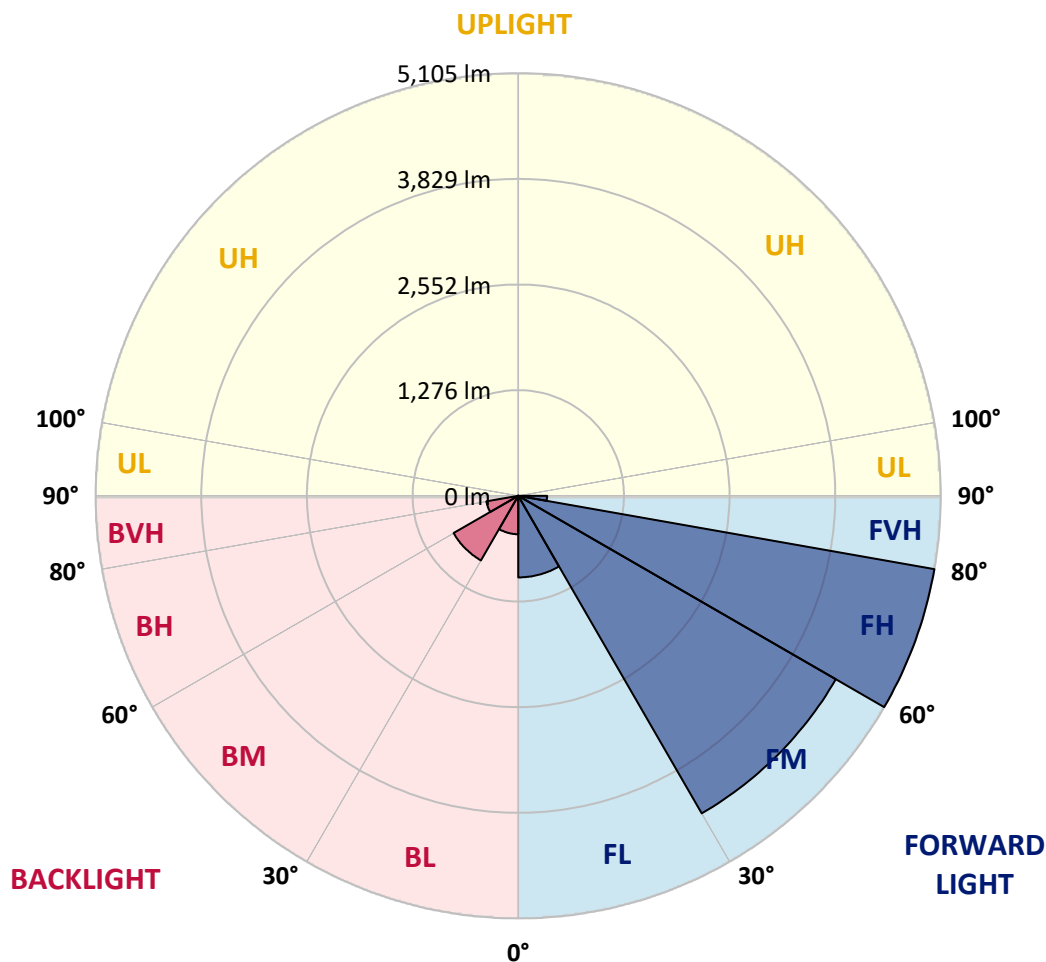
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	985.7	7.8			
FM	(30°-60°)	4429.2	35.0			
FH	(60°-80°)	5104.9	40.4			G3/7500
FVH	(80°-90°)	347.7	2.8			G3/500
BL	(0°-30°)	463.9	3.7	B1/500		
BM	(30°-60°)	901.2	7.1	B1/1000		
BH	(60°-80°)	390.8	3.1	B1/500		G1/500
BVH	(80°-90°)	13.9	0.1			G1/100
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°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9
2.5°	1977.0	1943.1	1923.1	1873.5	1823.9	1783.8	1729.8	1694.1	1651.5	1610.6	1574.0
5°	2203.4	2148.6	2082.4	1991.9	1909.2	1824.7	1742.9	1661.9	1576.7	1498.2	1450.4
7.5°	2394.9	2315.7	2199.0	2078.9	1973.6	1871.8	1776.0	1668.9	1565.3	1442.6	1377.3
10°	2541.2	2440.2	2287.0	2129.4	2008.4	1905.7	1812.5	1722.0	1617.6	1469.5	1387.6
12.5°	2630.0	2522.0	2340.1	2155.6	2017.1	1902.2	1829.9	1789.9	1749.0	1601.9	1506.1
15°	2695.3	2578.6	2377.5	2173.8	1997.1	1856.1	1803.0	1843.1	1890.0	1796.0	1685.4
17.5°	2763.2	2640.4	2426.3	2181.6	1943.1	1766.4	1743.7	1847.4	1956.2	1951.8	1842.1
20°	2827.7	2705.7	2468.9	2176.4	1856.1	1657.5	1677.6	1809.9	1936.1	1989.2	1930.1
22.5°	2901.6	2772.7	2509.8	2156.4	1742.9	1555.7	1618.4	1750.7	1861.3	1923.9	1905.7
25°	2992.2	2857.2	2567.3	2126.8	1621.0	1471.3	1558.3	1681.9	1771.6	1815.2	1814.2
27.5°	3089.7	2958.3	2643.9	2111.1	1522.6	1411.2	1490.5	1600.1	1680.2	1710.7	1710.7
30°	3210.7	3075.7	2734.5	2093.8	1458.2	1376.4	1419.9	1505.2	1583.5	1614.1	1614.1
32.5°	3343.0	3206.3	2821.5	2051.9	1419.0	1350.2	1351.2	1405.1	1476.5	1513.1	1518.2
35°	3508.4	3363.0	2914.7	1960.5	1387.6	1319.8	1284.1	1310.3	1369.4	1413.0	1424.2
37.5°	3744.3	3568.4	3028.8	1829.9	1341.5	1272.7	1213.6	1219.6	1265.0	1312.8	1330.2
40°	4070.0	3844.5	3162.7	1694.1	1275.4	1206.6	1136.1	1133.4	1166.6	1213.6	1232.8
42.5°	4510.4	4209.3	3323.9	1564.5	1211.9	1126.5	1054.2	1049.9	1076.0	1116.9	1136.9
45°	5092.0	4675.8	3521.5	1452.9	1162.2	1048.2	976.8	975.1	996.8	1032.5	1053.4
47.5°	5836.3	5324.5	3719.1	1377.3	1136.1	986.4	913.3	916.8	935.8	968.1	982.9
50°	6800.1	6169.8	3779.2	1339.0	1136.1	953.2	856.6	874.0	889.7	914.1	922.8
52.5°	7955.3	6981.2	3580.6	1304.1	1143.1	957.7	808.7	846.2	857.5	878.4	881.9
55°	9026.0	7379.0	3078.4	1256.2	1144.8	984.6	767.8	823.6	844.5	852.3	851.5
57.5°	9647.7	7242.3	2489.0	1175.3	1137.9	1002.9	741.7	795.7	835.8	841.0	833.1
60°	9529.3	6762.6	1832.6	1113.5	1086.5	995.9	733.9	753.1	816.6	824.4	814.0
62.5°	8617.0	5958.2	1271.9	1065.6	973.3	965.4	731.2	686.0	774.8	794.0	779.2
65°	6926.2	4690.6	898.4	917.6	853.2	899.3	717.4	616.3	724.4	750.4	727.7
67.5°	5025.0	3174.1	648.6	743.4	773.1	792.2	686.0	565.9	666.9	701.7	672.1
70°	3224.6	1714.1	455.3	491.0	651.2	672.9	632.0	520.6	608.5	648.6	616.3
72.5°	2292.2	1012.5	327.4	343.9	523.3	560.7	556.3	470.1	540.6	589.4	551.0
75°	1581.8	558.0	221.1	245.5	379.6	455.3	429.2	404.0	458.0	507.6	470.1
77.5°	991.6	249.9	132.3	170.7	249.0	357.8	294.3	312.5	356.9	403.0	363.9
80°	552.0	96.7	74.0	113.2	135.8	260.3	162.8	201.1	262.9	296.0	264.7
82.5°	120.1	12.2	33.1	48.8	53.1	151.5	86.2	116.6	165.4	162.8	141.0
85°	0.0	0.0	6.0	7.0	3.5	65.3	31.4	38.3	54.0	50.5	38.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	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°	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9
2.5°	1567.0	1524.4	1493.0	1477.3	1464.3	1476.5	1483.5	1483.5	1513.1	1530.4	1537.4
5°	1419.9	1343.3	1284.9	1245.8	1222.3	1230.1	1238.8	1248.4	1285.9	1311.1	1327.6
7.5°	1318.0	1200.5	1111.7	1056.9	1028.2	1032.5	1038.6	1046.4	1083.0	1108.2	1130.0
10°	1298.9	1130.0	1004.6	932.3	897.6	891.4	888.0	885.4	907.1	926.3	943.7
12.5°	1377.3	1133.4	958.5	870.5	827.9	809.6	788.7	772.2	775.7	787.9	809.6
15°	1517.4	1177.9	943.7	838.3	785.3	754.8	730.4	710.4	706.0	710.4	713.9
17.5°	1677.6	1238.0	942.0	810.5	744.4	713.0	693.0	674.7	668.6	669.4	673.8
20°	1783.8	1285.9	936.7	779.2	705.2	677.3	659.9	641.6	635.5	637.2	638.2
22.5°	1794.3	1311.1	928.9	744.4	665.9	642.5	625.0	608.5	607.6	607.6	612.8
25°	1737.7	1311.1	912.4	713.0	628.5	607.6	592.0	571.9	575.4	577.2	584.1
27.5°	1649.7	1279.7	881.0	687.8	596.3	574.6	558.9	540.6	545.0	547.6	555.4
30°	1562.7	1239.7	843.6	659.0	565.9	540.6	529.3	513.6	515.4	518.9	527.6
32.5°	1481.7	1197.0	799.2	635.5	535.4	510.1	501.4	484.0	486.7	490.2	499.7
35°	1401.6	1150.0	746.9	607.6	507.6	482.3	475.3	455.3	457.0	462.3	472.7
37.5°	1315.5	1100.4	704.3	579.8	480.5	454.5	447.5	426.6	428.3	434.4	446.6
40°	1224.9	1051.6	662.5	550.2	451.8	425.7	419.6	397.0	398.7	405.7	418.7
42.5°	1133.4	998.6	630.3	511.9	422.2	394.4	388.3	367.4	370.0	377.8	390.9
45°	1049.1	935.0	609.4	469.2	394.4	363.1	356.9	337.7	343.0	351.7	364.8
47.5°	976.8	869.7	600.6	433.6	364.8	330.8	325.6	310.0	318.7	328.2	338.7
50°	915.0	807.0	589.4	397.0	336.9	303.0	297.8	287.3	298.6	308.2	317.8
52.5°	870.5	735.6	565.0	363.9	312.5	279.4	277.7	272.4	282.9	291.6	300.3
55°	832.3	661.6	525.8	335.2	290.8	259.4	261.2	258.6	267.2	274.2	282.1
57.5°	797.4	597.2	476.2	312.5	267.2	242.0	247.2	243.7	248.2	252.5	262.1
60°	755.6	531.9	417.0	287.3	239.4	224.6	230.7	221.1	220.3	222.0	224.6
62.5°	693.8	444.0	355.2	255.9	215.0	205.4	208.1	189.8	175.9	175.9	178.5
65°	607.6	356.9	297.8	221.1	187.2	179.4	177.6	151.5	132.3	130.6	138.4
67.5°	507.6	293.4	247.2	186.3	155.8	150.6	152.3	133.1	114.1	112.3	121.1
70°	413.5	242.9	199.4	148.8	120.1	125.4	133.1	114.1	95.7	93.2	101.0
72.5°	336.0	193.3	155.8	114.1	88.8	103.6	113.2	93.2	75.7	74.0	81.0
75°	259.4	141.9	111.4	77.5	64.5	80.1	88.8	67.9	54.0	51.4	57.5
77.5°	173.2	87.9	62.7	48.8	38.3	54.8	59.2	35.7	31.4	30.4	34.8
80°	105.4	40.9	27.0	23.5	13.0	20.0	23.5	14.8	16.5	17.4	20.9
82.5°	53.1	11.3	4.3	0.8	0.0	0.0	7.0	3.5	7.0	8.7	13.0
85°	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.3	7.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9
2.5°	1586.2	1622.8	1657.5	1713.3	1770.8	1827.4	1884.8	1940.5	1960.5	1975.4	2008.4
5°	1403.3	1472.1	1552.3	1662.8	1781.1	1903.1	2026.7	2139.9	2191.2	2226.1	2304.4
7.5°	1214.4	1304.1	1419.0	1585.3	1770.8	1964.9	2159.1	2337.5	2420.2	2487.3	2606.5
10°	1027.3	1124.7	1270.2	1459.9	1710.7	1989.2	2257.4	2502.9	2610.0	2694.4	2856.4
12.5°	862.7	954.2	1106.5	1316.3	1616.6	1970.2	2313.9	2609.1	2735.3	2830.2	3007.9
15°	746.9	811.4	946.3	1172.7	1505.2	1908.3	2317.4	2659.6	2798.0	2897.3	3051.3
17.5°	682.5	704.3	792.2	1026.4	1381.6	1827.4	2285.2	2677.0	2825.0	2917.3	3024.4
20°	647.7	651.2	675.6	836.6	1223.1	1751.6	2254.8	2694.4	2850.2	2927.7	2960.0
22.5°	619.8	619.8	626.0	684.3	1018.5	1661.0	2245.2	2724.9	2885.1	2932.9	2866.8
25°	594.6	594.6	596.3	612.0	807.0	1522.6	2239.1	2771.9	2932.9	2946.1	2764.1
27.5°	568.5	569.4	569.4	578.1	650.4	1334.6	2213.0	2832.9	2990.4	2963.5	2665.7
30°	542.3	544.1	544.1	550.2	575.4	1114.4	2161.6	2906.0	3065.3	2986.0	2568.2
32.5°	516.3	518.0	518.0	523.3	541.5	889.7	2097.3	2973.0	3141.0	2995.7	2477.6
35°	489.2	491.9	490.2	497.1	516.3	707.8	2015.4	3040.0	3222.9	3026.1	2433.2
37.5°	462.3	464.0	463.1	470.1	491.9	611.1	1920.4	3090.6	3334.3	3094.1	2486.3
40°	435.3	434.4	434.4	442.3	465.8	583.3	1801.2	3170.6	3494.4	3213.3	2717.9
42.5°	407.4	407.4	405.7	414.4	443.1	562.4	1687.2	3314.2	3727.8	3403.1	3128.8
45°	382.2	381.3	377.8	385.7	421.4	525.8	1647.1	3582.4	4072.5	3710.4	3625.9
47.5°	357.8	356.9	348.2	355.2	395.2	492.7	1796.8	4021.2	4550.5	4162.2	4091.7
50°	336.0	336.9	320.4	326.5	369.1	467.5	2121.5	4590.6	5185.2	4770.8	4533.1
52.5°	316.0	316.0	294.3	297.8	336.9	444.8	2430.7	5207.7	6022.6	5619.6	5047.6
55°	296.0	294.3	269.9	271.6	304.7	412.7	2476.8	5810.2	7164.9	6896.7	5751.0
57.5°	273.4	269.9	247.2	247.2	275.1	389.2	2146.9	6273.3	8582.1	8773.6	6765.2
60°	245.5	242.9	228.1	223.8	251.6	410.0	1514.8	6327.3	9496.2	11269.6	8707.5
62.5°	209.8	213.3	205.4	199.4	229.0	425.7	897.6	5892.9	9275.1	12063.5	11033.6
65°	165.4	179.4	177.6	173.2	251.6	358.6	530.1	5058.9	8596.9	11422.8	10559.1
67.5°	141.0	150.6	148.0	148.0	263.7	272.4	333.4	3952.4	7663.6	10662.8	9431.7
70°	120.1	129.8	120.1	120.1	199.4	165.4	230.7	2759.7	6656.4	9821.8	8691.8
72.5°	99.2	108.9	98.4	91.4	159.3	123.6	168.9	1724.6	5700.5	8946.0	8185.1
75°	75.7	87.0	79.2	70.5	105.4	92.2	128.0	1002.0	4722.9	7654.1	7463.4
77.5°	47.9	62.7	59.2	49.6	77.5	67.0	92.2	596.3	3644.2	5980.9	6419.6
80°	29.6	32.2	33.1	31.4	44.4	45.3	62.7	339.5	2494.2	4168.3	5015.3
82.5°	19.2	19.2	14.8	16.5	21.7	26.1	35.7	128.0	1466.1	2537.7	3491.0
85°	13.9	12.2	7.8	7.8	10.5	13.0	13.9	39.2	594.6	1002.0	1365.1
87.5°	7.0	6.0	2.6	3.5	5.2	4.3	3.5	1.7	149.8	320.4	224.6
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9	1749.9
2.5°	2025.8	2052.8	2054.5	2054.5	2031.0	2030.2	1982.2	1977.0
5°	2385.4	2402.8	2407.1	2398.4	2351.5	2316.6	2223.4	2203.4
7.5°	2714.4	2749.3	2749.3	2728.3	2651.8	2580.3	2445.4	2394.9
10°	2977.3	3017.4	3008.7	2966.0	2869.4	2771.0	2607.4	2541.2
12.5°	3105.3	3146.2	3123.6	3074.9	2980.8	2877.3	2704.9	2630.0
15°	3102.7	3091.4	3067.9	3061.8	3016.6	2938.2	2777.1	2695.3
17.5°	2992.2	2896.4	2878.1	2939.1	2996.5	2977.3	2839.8	2763.2
20°	2817.2	2650.0	2633.5	2750.2	2913.8	2997.4	2898.2	2827.7
22.5°	2632.6	2452.4	2414.1	2542.9	2789.3	3003.5	2972.1	2901.6
25°	2457.6	2276.5	2238.3	2358.4	2650.9	2993.0	3052.2	2992.2
27.5°	2311.4	2136.4	2100.7	2220.9	2517.7	2963.5	3132.3	3089.7
30°	2198.2	2036.3	2010.1	2126.0	2402.8	2926.9	3234.2	3210.7
32.5°	2132.0	2013.6	2023.2	2118.1	2341.0	2886.8	3331.7	3343.0
35°	2197.3	2202.5	2286.2	2325.3	2398.4	2880.8	3464.0	3508.4
37.5°	2522.0	2703.1	2876.4	2844.2	2679.7	2951.3	3661.6	3744.3
40°	3074.9	3446.6	3727.8	3605.0	3190.6	3167.1	3946.4	4070.0
42.5°	3750.5	4380.7	4843.8	4514.8	3849.7	3545.0	4352.9	4510.4
45°	4463.5	5532.5	6262.0	5577.7	4552.2	4074.3	4968.4	5092.0
47.5°	5214.7	6932.4	7876.1	6756.5	5203.4	4676.8	5807.5	5836.3
50°	6036.5	8467.2	9521.4	7934.4	5831.9	5367.1	6833.2	6800.1
52.5°	6819.2	10045.5	11132.0	9117.5	6383.9	6223.7	8023.2	7955.3
55°	7566.1	11623.0	12752.1	10254.5	6904.5	7355.5	9437.0	9026.0
57.5°	8432.4	13041.2	14422.0	11396.7	7632.4	8825.0	11017.9	9647.7
60°	9713.0	14652.6	16310.2	12961.9	9016.5	10369.4	11584.8	9529.3
62.5°	11347.9	16134.3	17683.1	14495.9	10406.8	10660.2	10749.8	8617.0
65°	11665.6	16509.6	17760.6	14906.0	10227.4	9042.7	8776.3	6926.2
67.5°	10823.0	15831.3	16677.6	14142.4	9047.0	6988.0	6585.9	5025.0
70°	9877.5	14538.6	14790.1	12844.5	7957.1	5139.9	4447.8	3224.6
72.5°	8908.6	12813.9	12293.3	11154.7	6993.3	3742.6	3208.0	2292.2
75°	7757.7	10546.1	9683.4	9268.2	5790.2	2937.3	2320.9	1581.8
77.5°	6212.4	7423.4	7192.6	7183.9	4351.1	2145.9	1548.8	991.6
80°	4382.5	4817.7	4700.2	5410.6	2919.0	1556.6	932.3	552.0
82.5°	2121.5	2664.0	2734.5	3222.0	1419.9	915.8	215.0	120.1
85°	830.6	1284.9	1083.8	1223.1	398.7	255.1	5.2	0.0
87.5°	93.2	148.8	136.6	107.9	48.8	10.5	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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