

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: P967199

Luminaire Tested: **NAV-SB4D-735-U-SLR-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967199
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-SB4D-735-U-SLR-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 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: 31903.1 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

Input Watts (W): 293.6
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

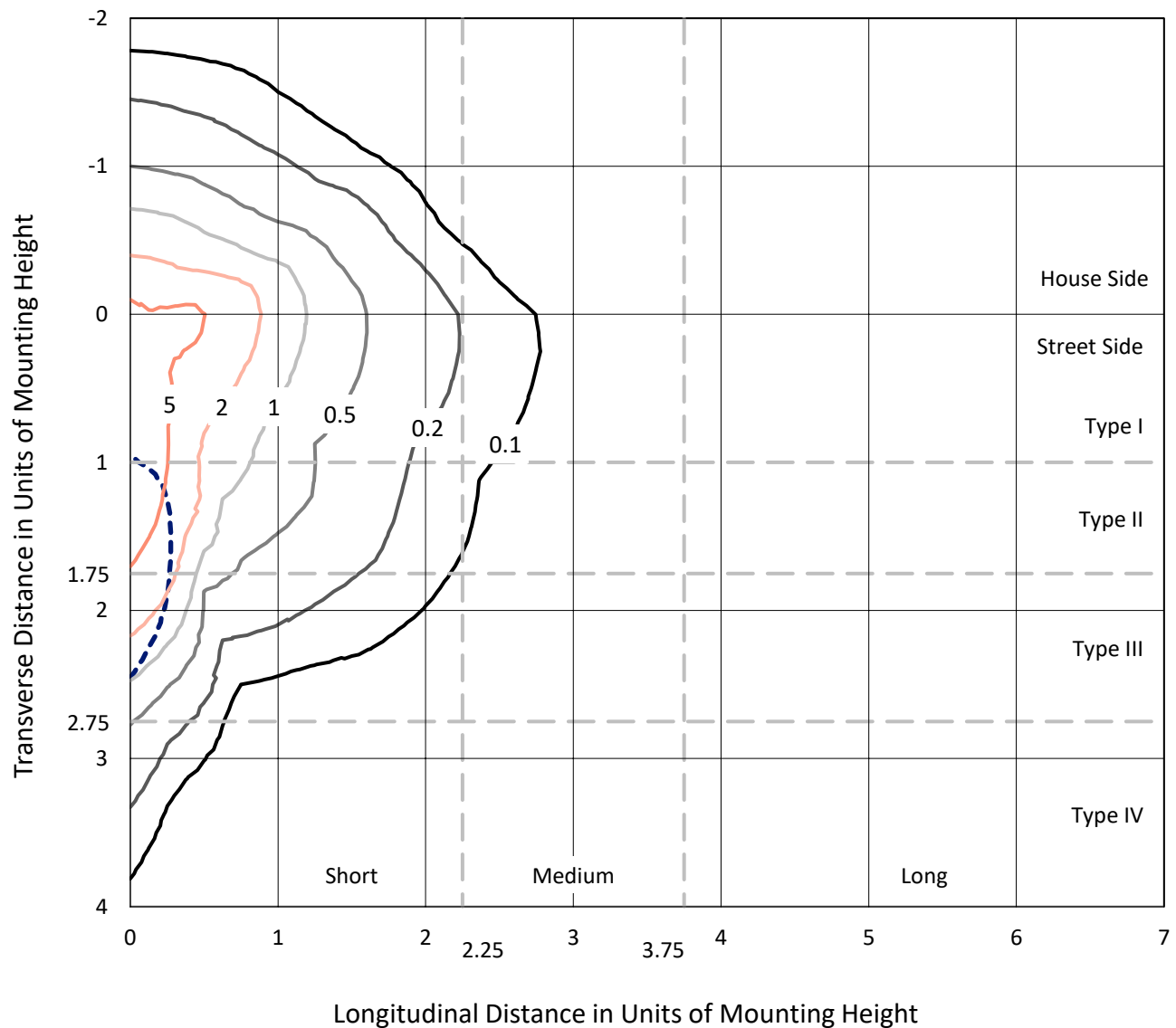


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

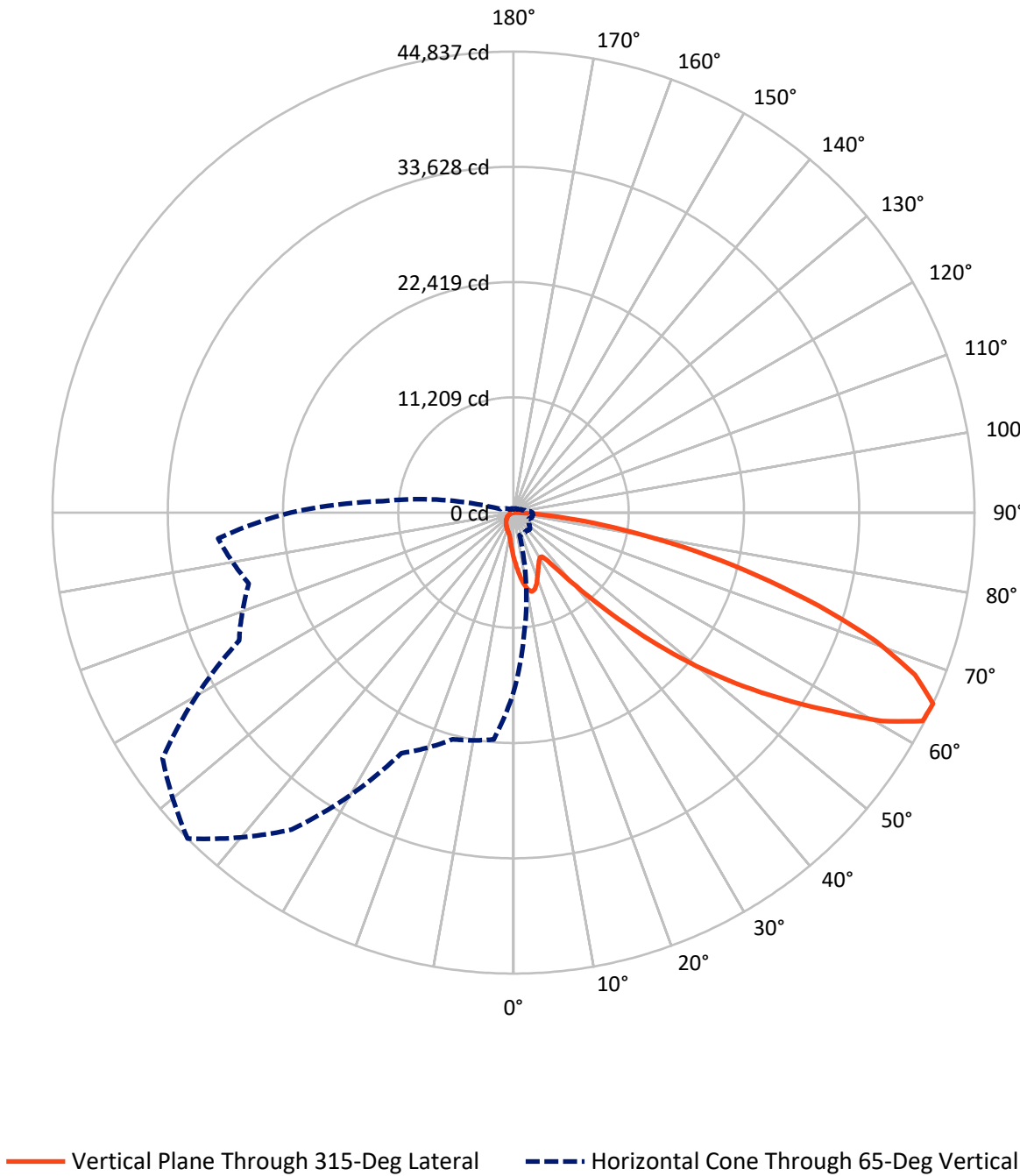


Based on 25 foot mounting height. Maximum calculated value = 9.8 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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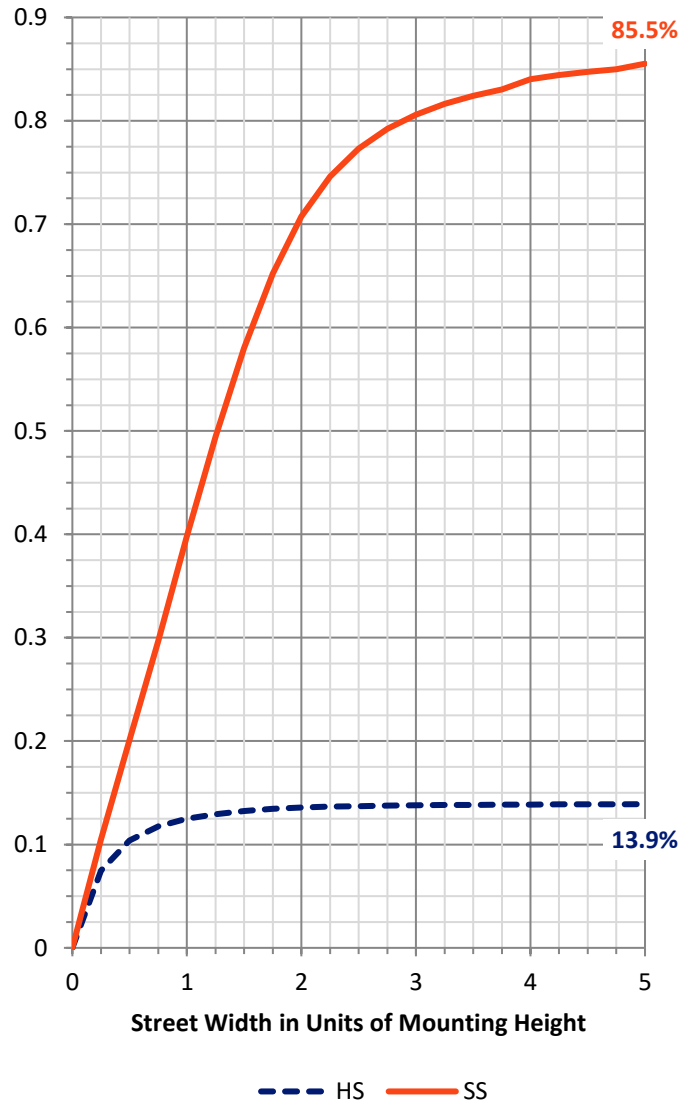
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4467.8	0.0	4467.8
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	27435.3	0.0	27435.3
	% Fixture	86.0	0.0	86.0
Total	Lumens	31903.1	0.0	31903.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	434.9	1.4
10°-20°	1303.8	4.1
20°-30°	1920.7	6.0
30°-40°	2467.6	7.7
40°-50°	3990.9	12.5
50°-60°	6998.3	21.9
60°-70°	8756.8	27.4
70°-80°	5117.1	16.0
80°-90°	913.0	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°	31903.1	100.0
0°-180°	31903.1	100.0

Coefficient of Utilization



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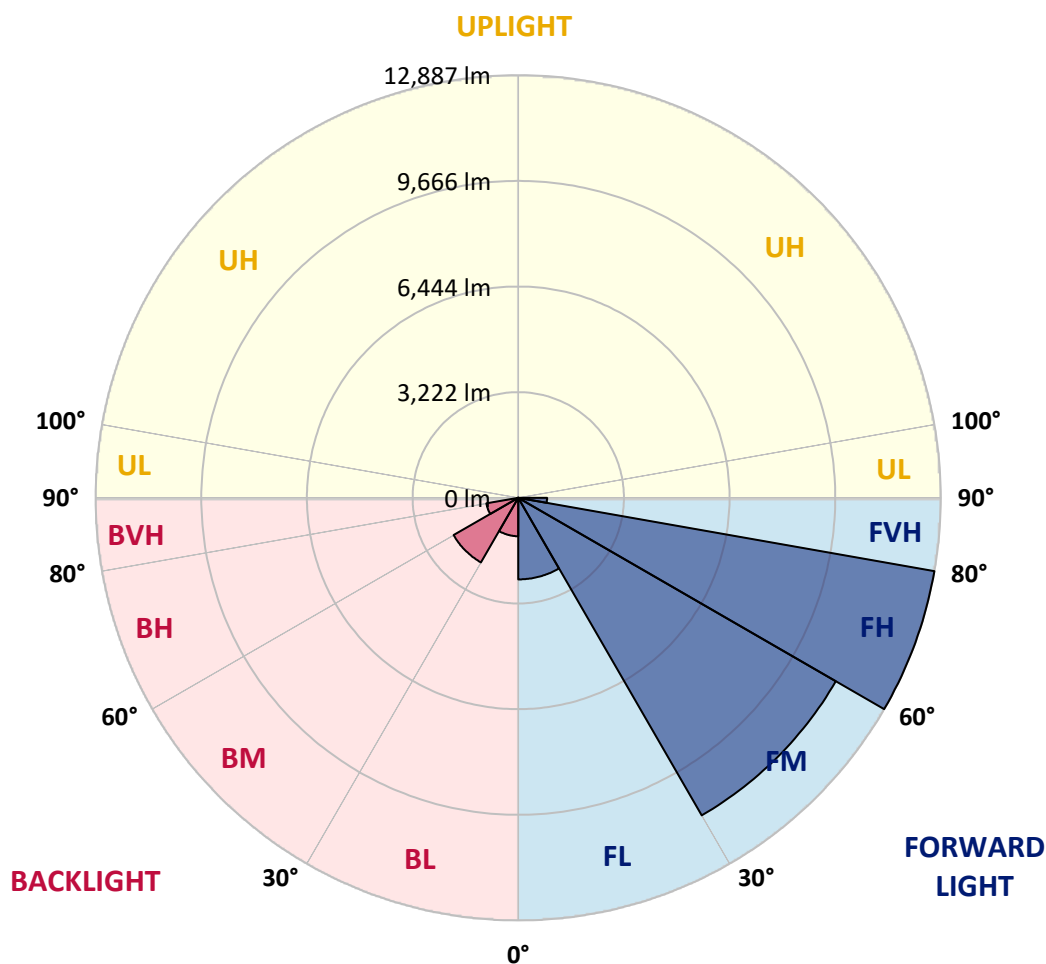
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2488.3	7.8			
FM	(30°-60°)	11181.7	35.0			
FH	(60°-80°)	12887.4	40.4			G5
FVH	(80°-90°)	877.9	2.8			G5
BL	(0°-30°)	1171.1	3.7	B3/2500		
BM	(30°-60°)	2275.1	7.1	B2/2500		
BH	(60°-80°)	986.5	3.1	B2/1000		G2/1000
BVH	(80°-90°)	35.1	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°	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5
2.5°	4991.1	4905.4	4854.9	4729.7	4604.4	4503.2	4367.0	4276.9	4169.2	4065.9	3973.6
5°	5562.6	5424.2	5257.1	5028.5	4819.8	4606.6	4400.0	4195.6	3980.2	3782.4	3661.5
7.5°	6046.2	5846.1	5551.6	5248.3	4982.4	4725.2	4483.5	4213.2	3951.6	3641.7	3476.9
10°	6415.4	6160.5	5773.6	5375.8	5070.3	4810.9	4575.8	4347.2	4083.5	3709.9	3503.2
12.5°	6639.5	6367.0	5907.7	5441.7	5092.3	4802.1	4619.8	4518.6	4415.4	4043.9	3802.1
15°	6804.4	6509.9	6002.2	5487.8	5041.8	4685.7	4551.6	4652.7	4771.4	4534.1	4254.9
17.5°	6975.8	6665.9	6125.3	5507.6	4905.4	4459.4	4402.2	4663.8	4938.4	4927.5	4650.5
20°	7138.4	6830.7	6232.9	5494.5	4685.7	4184.6	4235.1	4569.2	4887.9	5022.0	4872.5
22.5°	7325.3	6999.9	6336.2	5444.0	4400.0	3927.5	4085.6	4419.8	4698.9	4857.2	4810.9
25°	7553.8	7213.1	6481.3	5369.2	4092.3	3714.3	3934.1	4246.2	4472.5	4582.4	4580.2
27.5°	7799.9	7468.0	6674.7	5329.7	3844.0	3562.6	3762.6	4039.5	4241.8	4318.6	4318.6
30°	8105.5	7764.8	6903.3	5285.7	3681.3	3474.7	3584.6	3800.0	3997.8	4074.7	4074.7
32.5°	8439.5	8094.4	7123.0	5180.1	3582.4	3408.7	3411.0	3547.2	3727.4	3819.8	3833.0
35°	8857.1	8490.1	7358.2	4949.4	3503.2	3331.9	3241.8	3307.7	3457.1	3567.0	3595.6
37.5°	9452.7	9008.7	7646.1	4619.8	3386.8	3213.2	3063.7	3079.1	3193.4	3314.2	3358.2
40°	10274.7	9705.4	7984.5	4276.9	3219.7	3046.1	2868.2	2861.5	2945.0	3063.7	3112.1
42.5°	11386.7	10626.3	8391.2	3949.4	3059.3	2844.0	2661.5	2650.5	2716.5	2819.8	2870.3
45°	12854.9	11804.3	8890.0	3668.1	2934.1	2646.1	2465.9	2461.5	2516.5	2606.6	2659.4
47.5°	14734.0	13441.6	9389.0	3476.9	2868.2	2490.1	2305.5	2314.2	2362.6	2443.9	2481.3
50°	17166.9	15575.8	9540.6	3380.2	2868.2	2406.6	2162.6	2206.6	2246.2	2307.7	2329.6
52.5°	20083.4	17624.1	9039.5	3292.3	2885.7	2417.6	2041.8	2136.3	2164.8	2217.6	2226.4
55°	22786.7	18628.5	7771.3	3171.5	2890.1	2485.7	1938.5	2079.1	2131.9	2151.7	2149.4
57.5°	24355.9	18283.4	6283.5	2967.1	2872.6	2531.9	1872.5	2008.8	2109.9	2123.1	2103.3
60°	24057.1	17072.4	4626.3	2811.0	2742.8	2514.3	1852.7	1901.1	2061.5	2081.3	2054.9
62.5°	21753.8	15041.7	3211.0	2690.1	2457.1	2437.3	1846.1	1731.8	1956.0	2004.4	1967.0
65°	17485.7	11841.7	2268.1	2316.5	2153.8	2270.3	1811.0	1556.1	1828.6	1894.5	1837.3
67.5°	12685.6	8013.1	1637.3	1876.9	1951.6	2000.0	1731.8	1428.5	1683.5	1771.4	1696.7
70°	8140.7	4327.4	1149.4	1239.5	1644.0	1698.9	1595.6	1314.3	1536.3	1637.3	1556.1
72.5°	5786.7	2556.0	826.4	868.2	1320.9	1415.4	1404.4	1186.8	1364.8	1487.9	1391.2
75°	3993.4	1408.8	558.2	619.8	958.3	1149.4	1083.5	1019.8	1156.0	1281.4	1186.8
77.5°	2503.3	630.8	334.0	430.8	628.5	903.3	742.8	789.0	901.1	1017.6	918.7
80°	1393.4	244.0	186.9	285.7	342.9	657.1	411.0	507.7	663.7	747.2	668.1
82.5°	303.3	30.7	83.5	123.1	134.1	382.4	217.6	294.5	417.6	411.0	356.1
85°	0.0	0.0	15.4	17.6	8.8	164.8	79.1	96.7	136.2	127.5	96.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	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°	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5
2.5°	3956.0	3848.4	3769.2	3729.7	3696.7	3727.4	3745.0	3745.0	3819.8	3863.7	3881.3
5°	3584.6	3391.2	3243.9	3145.0	3085.7	3105.4	3127.5	3151.7	3246.2	3309.8	3351.6
7.5°	3327.5	3030.7	2806.6	2668.1	2595.6	2606.6	2622.0	2641.7	2734.1	2797.8	2852.8
10°	3279.1	2852.8	2536.3	2353.8	2266.0	2250.5	2241.8	2235.1	2290.1	2338.4	2382.4
12.5°	3476.9	2861.5	2419.8	2197.8	2090.1	2044.0	1991.2	1949.4	1958.3	1989.0	2044.0
15°	3830.7	2973.6	2382.4	2116.5	1982.5	1905.5	1844.0	1793.4	1782.4	1793.4	1802.2
17.5°	4235.1	3125.2	2378.0	2046.1	1879.1	1800.0	1749.5	1703.2	1687.9	1690.1	1701.1
20°	4503.2	3246.2	2364.8	1967.0	1780.2	1709.9	1665.9	1619.8	1604.4	1608.7	1611.0
22.5°	4529.7	3309.8	2345.0	1879.1	1681.3	1622.0	1578.0	1536.3	1534.0	1534.0	1547.2
25°	4386.8	3309.8	2303.3	1800.0	1586.8	1534.0	1494.4	1443.9	1452.7	1457.1	1474.7
27.5°	4164.8	3230.8	2224.1	1736.2	1505.5	1450.6	1411.0	1364.8	1375.9	1382.4	1402.2
30°	3945.0	3129.6	2129.6	1663.7	1428.5	1364.8	1336.3	1296.7	1301.1	1309.8	1331.9
32.5°	3740.6	3022.0	2017.6	1604.4	1351.7	1287.9	1266.0	1222.0	1228.6	1237.4	1261.6
35°	3538.4	2903.3	1885.7	1534.0	1281.4	1217.6	1200.0	1149.4	1153.8	1167.1	1193.4
37.5°	3320.9	2778.1	1778.0	1463.7	1213.2	1147.3	1129.7	1077.0	1081.3	1096.6	1127.5
40°	3092.3	2655.0	1672.5	1389.0	1140.6	1074.7	1059.3	1002.1	1006.6	1024.2	1057.2
42.5°	2861.5	2520.9	1591.2	1292.3	1065.9	995.6	980.2	927.4	934.1	953.9	986.8
45°	2648.3	2360.5	1538.4	1184.6	995.6	916.5	901.1	852.7	865.9	888.0	920.9
47.5°	2465.9	2195.5	1516.5	1094.5	920.9	835.2	821.9	782.4	804.4	828.6	855.0
50°	2309.8	2037.4	1487.9	1002.1	850.5	764.9	751.6	725.3	753.9	778.0	802.2
52.5°	2197.8	1857.1	1426.4	918.7	789.0	705.5	701.1	687.9	714.3	736.3	758.2
55°	2101.0	1670.3	1327.5	846.1	734.1	655.0	659.4	652.7	674.8	692.3	712.1
57.5°	2013.2	1507.7	1202.2	789.0	674.8	611.0	624.1	615.4	626.4	637.3	661.5
60°	1907.7	1342.9	1052.8	725.3	604.4	567.0	582.4	558.2	556.1	560.5	567.0
62.5°	1751.6	1120.8	896.7	646.2	542.8	518.6	525.3	479.1	443.9	443.9	450.6
65°	1534.0	901.1	751.6	558.2	472.5	452.7	448.3	382.4	334.0	329.6	349.4
67.5°	1281.4	740.7	624.1	470.4	393.4	380.2	384.6	336.3	287.9	283.5	305.4
70°	1044.0	613.2	503.3	375.9	303.3	316.5	336.3	287.9	241.8	235.1	254.9
72.5°	848.4	487.9	393.4	287.9	224.2	261.6	285.7	235.1	191.2	186.9	204.4
75°	655.0	358.2	281.4	195.6	162.7	202.2	224.2	171.4	136.2	129.7	145.0
77.5°	437.4	222.0	158.3	123.1	96.7	138.5	149.4	90.1	79.1	76.9	87.9
80°	265.9	103.3	68.2	59.3	33.0	50.5	59.3	37.4	41.7	44.0	52.8
82.5°	134.1	28.6	11.0	2.2	0.0	0.0	17.6	8.8	17.6	21.9	33.0
85°	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	11.0	19.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5
2.5°	4004.4	4096.7	4184.6	4325.3	4470.3	4613.1	4758.3	4898.9	4949.4	4986.8	5070.3
5°	3542.8	3716.4	3918.7	4197.8	4496.7	4804.4	5116.5	5402.2	5531.8	5619.8	5817.6
7.5°	3065.9	3292.3	3582.4	4002.2	4470.3	4960.4	5450.5	5901.0	6109.8	6279.0	6580.2
10°	2593.4	2839.6	3206.6	3685.7	4318.6	5022.0	5698.9	6318.6	6589.0	6802.2	7211.0
12.5°	2178.0	2408.8	2793.4	3323.0	4081.3	4973.6	5841.7	6586.8	6905.4	7145.1	7593.4
15°	1885.7	2048.4	2389.0	2960.4	3800.0	4817.6	5850.5	6714.3	7063.7	7314.3	7703.3
17.5°	1723.0	1778.0	2000.0	2591.2	3487.9	4613.1	5769.2	6758.2	7131.8	7364.8	7635.1
20°	1635.2	1644.0	1705.5	2112.1	3087.9	4422.0	5692.2	6802.2	7195.6	7391.2	7472.5
22.5°	1564.9	1564.9	1580.2	1727.4	2571.4	4193.4	5668.1	6879.1	7283.4	7404.4	7237.3
25°	1501.1	1501.1	1505.5	1545.1	2037.4	3844.0	5652.7	6997.8	7404.4	7437.3	6978.0
27.5°	1435.2	1437.4	1437.4	1459.3	1641.7	3369.2	5586.8	7151.6	7549.4	7481.3	6729.6
30°	1369.2	1373.6	1373.6	1389.0	1452.7	2813.2	5457.1	7336.2	7738.4	7538.5	6483.5
32.5°	1303.3	1307.7	1307.7	1320.9	1367.0	2246.2	5294.4	7505.5	7929.6	7562.6	6255.0
35°	1235.1	1241.8	1237.4	1254.9	1303.3	1786.8	5087.9	7674.7	8136.2	7639.5	6142.8
37.5°	1167.1	1171.5	1169.2	1186.8	1241.8	1542.8	4848.4	7802.2	8417.5	7810.9	6276.9
40°	1098.9	1096.6	1096.6	1116.4	1175.8	1472.5	4547.2	8004.3	8822.0	8112.1	6861.6
42.5°	1028.6	1028.6	1024.2	1046.1	1118.7	1419.7	4259.3	8367.0	9410.9	8591.1	7898.9
45°	964.8	962.7	953.9	973.6	1063.7	1327.5	4158.2	9043.9	10281.3	9367.0	9153.8
47.5°	903.3	901.1	879.1	896.7	997.8	1243.9	4536.2	10151.6	11487.9	10507.7	10329.6
50°	848.4	850.5	808.8	824.2	931.8	1180.2	5356.0	11589.0	13090.1	12043.9	11443.9
52.5°	797.8	797.8	742.8	751.6	850.5	1123.1	6136.3	13147.2	15204.3	14186.7	12742.8
55°	747.2	742.8	681.3	685.7	769.3	1041.7	6252.7	14668.1	18087.9	17411.0	14518.6
57.5°	690.1	681.3	624.1	624.1	694.5	982.5	5419.8	15837.3	21665.8	22149.3	17079.1
60°	619.8	613.2	575.8	564.9	635.2	1035.1	3824.2	15973.6	23973.5	28450.4	21982.4
62.5°	529.6	538.4	518.6	503.3	578.0	1074.7	2266.0	14876.8	23415.3	30454.8	27854.8
65°	417.6	452.7	448.3	437.4	635.2	905.5	1338.4	12771.4	21703.2	28837.2	26657.0
67.5°	356.1	380.2	373.6	373.6	665.9	687.9	841.7	9978.0	19347.2	26918.6	23810.9
70°	303.3	327.5	303.3	303.3	503.3	417.6	582.4	6967.0	16804.4	24795.5	21942.8
72.5°	250.5	274.7	248.4	230.7	402.2	312.1	426.4	4353.8	14391.1	22584.5	20663.6
75°	191.2	219.8	200.0	178.0	265.9	233.0	323.1	2529.7	11923.0	19323.0	18841.7
77.5°	120.8	158.3	149.4	125.3	195.6	169.2	233.0	1505.5	9200.0	15098.9	16206.5
80°	74.7	81.3	83.5	79.1	112.1	114.3	158.3	857.1	6296.7	10523.1	12661.5
82.5°	48.4	48.4	37.4	41.7	54.9	65.9	90.1	323.1	3701.1	6406.6	8813.2
85°	35.2	30.7	19.8	19.8	26.3	33.0	35.2	98.9	1501.1	2529.7	3446.2
87.5°	17.6	15.4	6.6	8.8	13.2	11.0	8.8	4.4	378.0	808.8	567.0
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5	4417.5
2.5°	5114.2	5182.4	5186.8	5186.8	5127.5	5125.2	5004.4	4991.1
5°	6022.0	6066.0	6076.9	6054.9	5936.3	5848.3	5613.2	5562.6
7.5°	6852.7	6940.6	6940.6	6887.9	6694.5	6514.3	6173.6	6046.2
10°	7516.4	7617.6	7595.6	7487.8	7243.9	6995.5	6582.3	6415.4
12.5°	7839.5	7942.8	7885.6	7762.6	7525.2	7263.7	6828.6	6639.5
15°	7832.9	7804.4	7745.0	7729.6	7615.3	7417.5	7011.0	6804.4
17.5°	7553.8	7312.0	7265.9	7419.8	7564.8	7516.4	7169.2	6975.8
20°	7112.1	6690.1	6648.4	6942.8	7356.0	7567.0	7316.4	7138.4
22.5°	6646.1	6191.2	6094.4	6419.8	7041.7	7582.3	7503.3	7325.3
25°	6204.3	5747.2	5650.5	5953.8	6692.3	7556.0	7705.4	7553.8
27.5°	5835.1	5393.3	5303.2	5606.5	6356.0	7481.3	7907.7	7799.9
30°	5549.5	5140.7	5074.7	5367.0	6066.0	7389.0	8164.8	8105.5
32.5°	5382.4	5083.5	5107.7	5347.2	5909.8	7287.9	8410.9	8439.5
35°	5547.2	5560.4	5771.4	5870.3	6054.9	7272.5	8745.0	8857.1
37.5°	6367.0	6824.1	7261.5	7180.2	6764.8	7450.5	9244.0	9452.7
40°	7762.6	8701.0	9410.9	9101.1	8054.9	7995.6	9962.6	10274.7
42.5°	9468.1	11059.3	12228.6	11397.8	9718.6	8949.4	10988.9	11386.7
45°	11268.0	13967.0	15808.7	14081.2	11492.3	10285.7	12542.8	12854.9
47.5°	13164.8	17501.1	19883.5	17057.0	13136.2	11806.6	14661.5	14734.0
50°	15239.5	21375.8	24037.3	20030.7	14723.0	13549.4	17250.4	17166.9
52.5°	17215.3	25360.3	28103.1	23017.5	16116.4	15712.0	20254.8	20083.4
55°	19101.0	29342.7	32193.3	25887.8	17430.6	18569.1	23824.1	22786.7
57.5°	21287.8	32922.9	36408.6	28771.3	19268.1	22279.0	27815.2	24355.9
60°	24520.8	36991.0	41175.7	32722.9	22762.5	26177.9	29246.0	24057.1
62.5°	28648.2	40731.7	44641.5	36595.5	26272.4	26912.0	27138.3	21753.8
65°	29450.4	41679.0	44837.2	37630.6	25819.6	22828.5	22156.0	17485.7
67.5°	27322.9	39966.8	42103.1	35703.1	22839.5	17641.7	16626.3	12685.6
70°	24936.1	36703.1	37338.3	32426.2	20087.8	12975.8	11228.6	8140.7
72.5°	22490.0	32349.3	31035.1	28160.3	17654.9	9448.3	8098.8	5786.7
75°	19584.6	26624.1	24446.0	23397.7	14617.5	7415.4	5859.3	3993.4
77.5°	15683.4	18740.6	18158.2	18136.1	10984.5	5417.5	3909.9	2503.3
80°	11063.6	12162.5	11865.9	13659.3	7369.2	3929.6	2353.8	1393.4
82.5°	5356.0	6725.2	6903.3	8134.0	3584.6	2312.1	542.8	303.3
85°	2096.7	3243.9	2736.2	3087.9	1006.6	643.9	13.2	0.0
87.5°	235.1	375.9	345.0	272.5	123.1	26.3	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)