

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: P963147

Luminaire Tested: **NAV-SB2D-830-U-T3-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963147
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-830-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14699.5 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 147.6
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



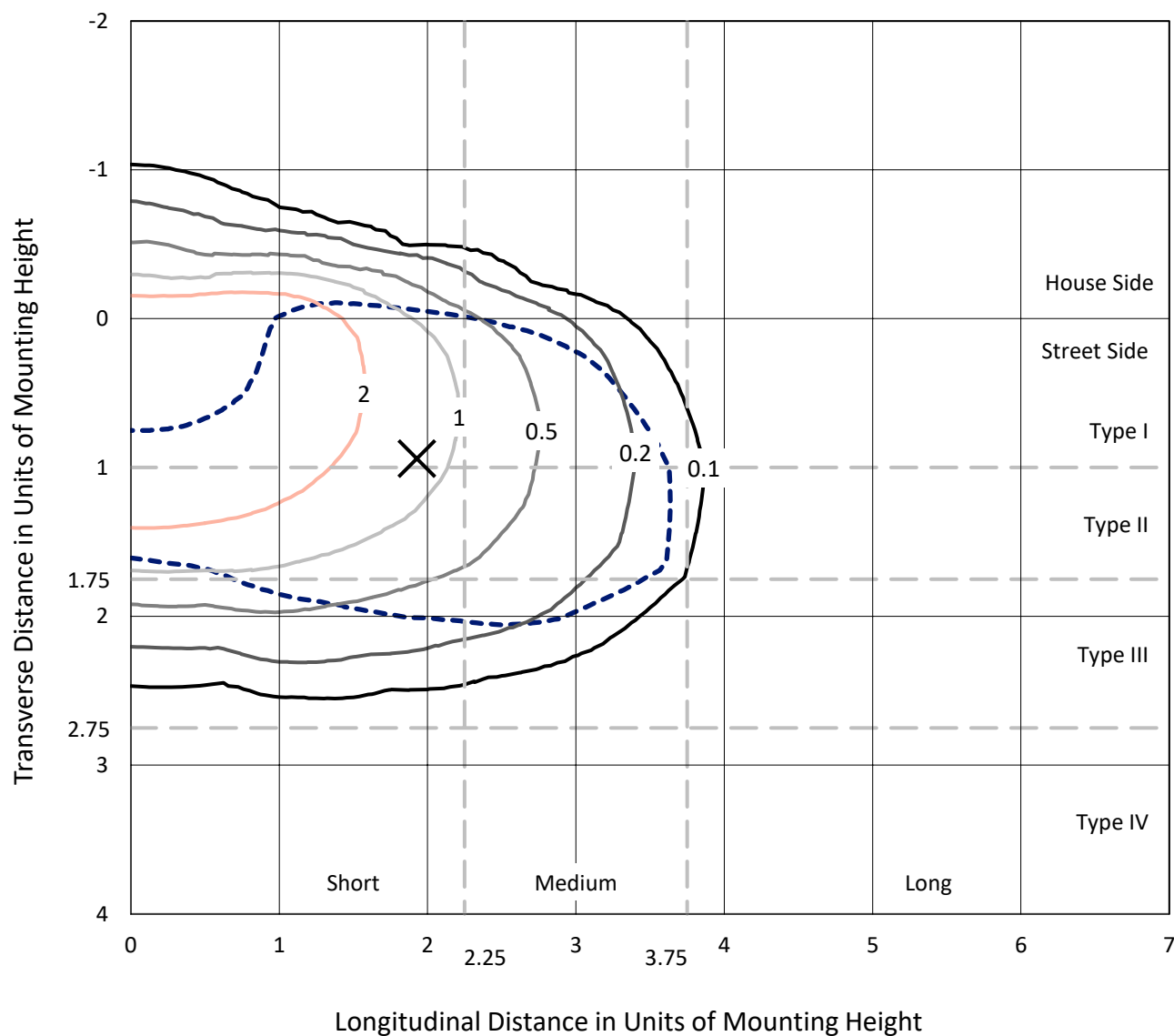
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd



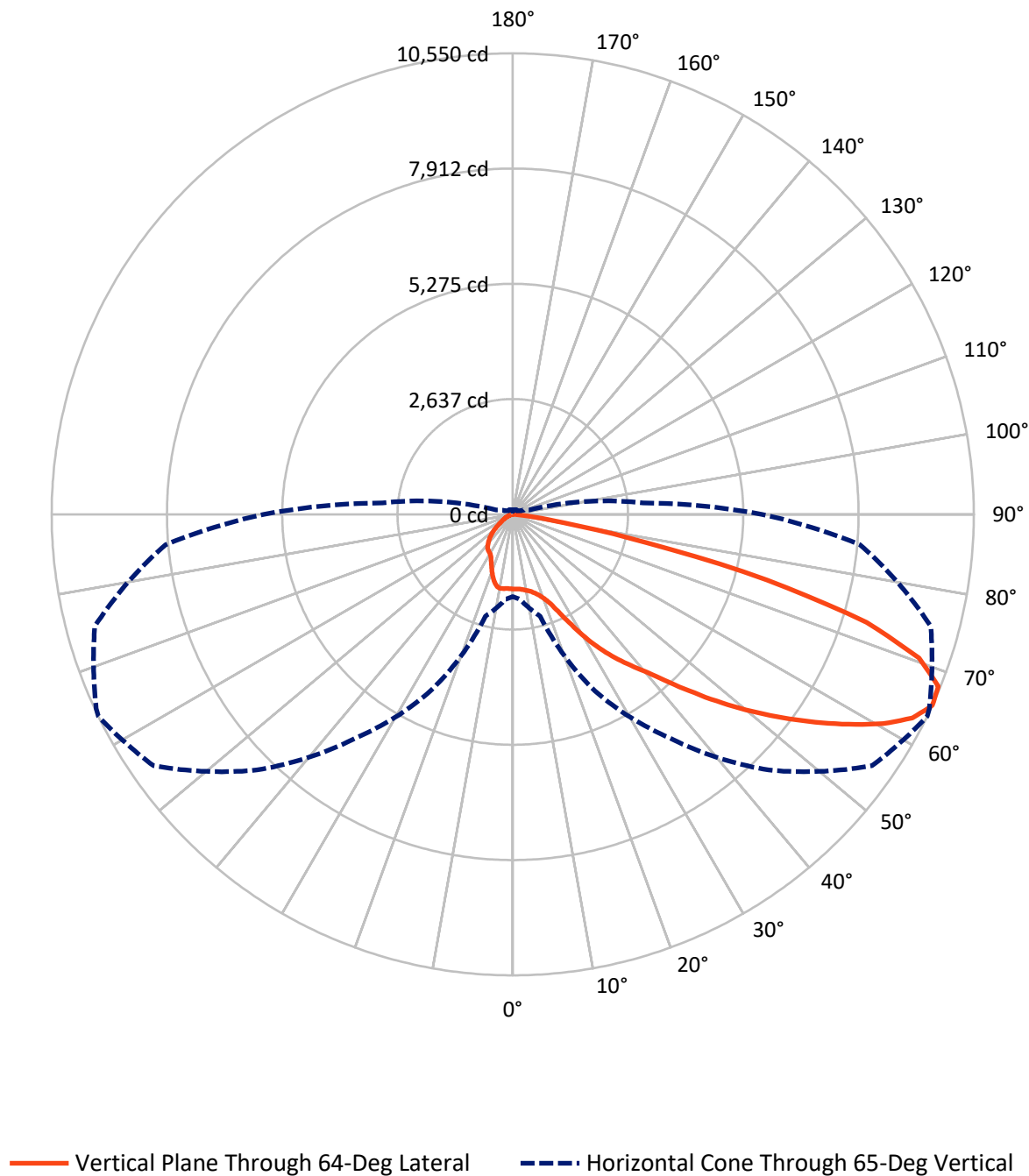
Based on 25 foot mounting height. Maximum calculated value = 4.3 fc

Type III - Short - N/A

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Luminous Intensity Polar Plot



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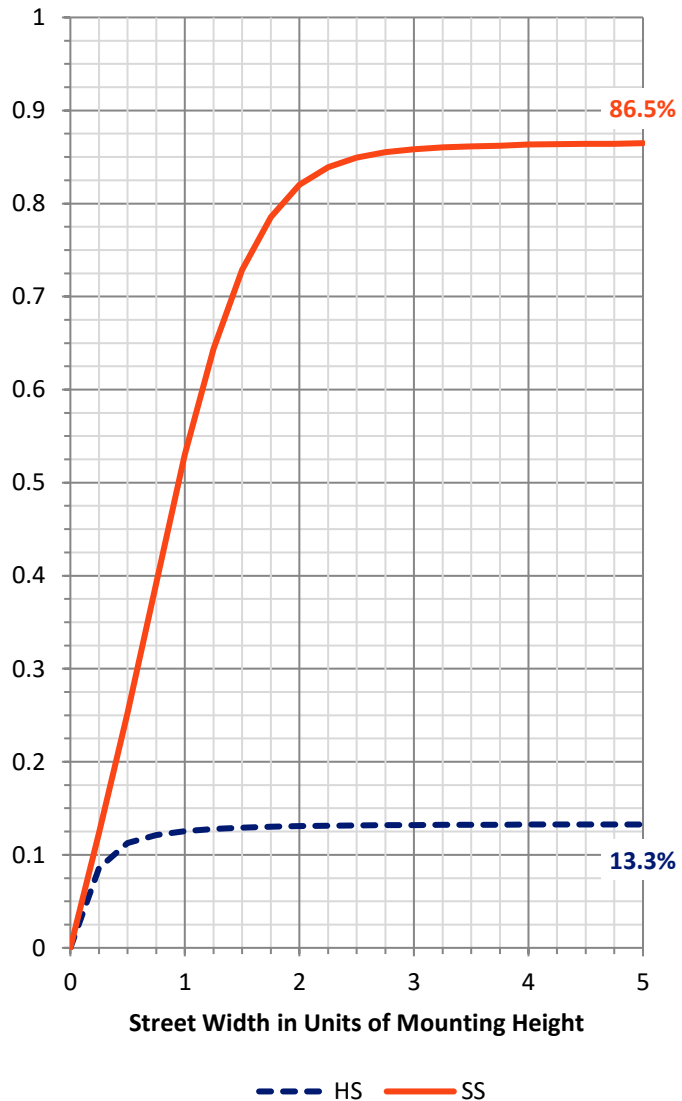
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1965.8	0.0	1965.8
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	12733.8	0.0	12733.8
	% Fixture	86.6	0.0	86.6
Total	Lumens	14699.5	0.0	14699.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.7	1.1
10°-20°	427.8	2.9
20°-30°	810.7	5.5
30°-40°	1640.5	11.2
40°-50°	2794.6	19.0
50°-60°	3800.4	25.9
60°-70°	3568.8	24.3
70°-80°	1429.8	9.7
80°-90°	69.3	0.5
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°	14699.5	100.0
0°-180°	14699.5	100.0

Coefficient of Utilization



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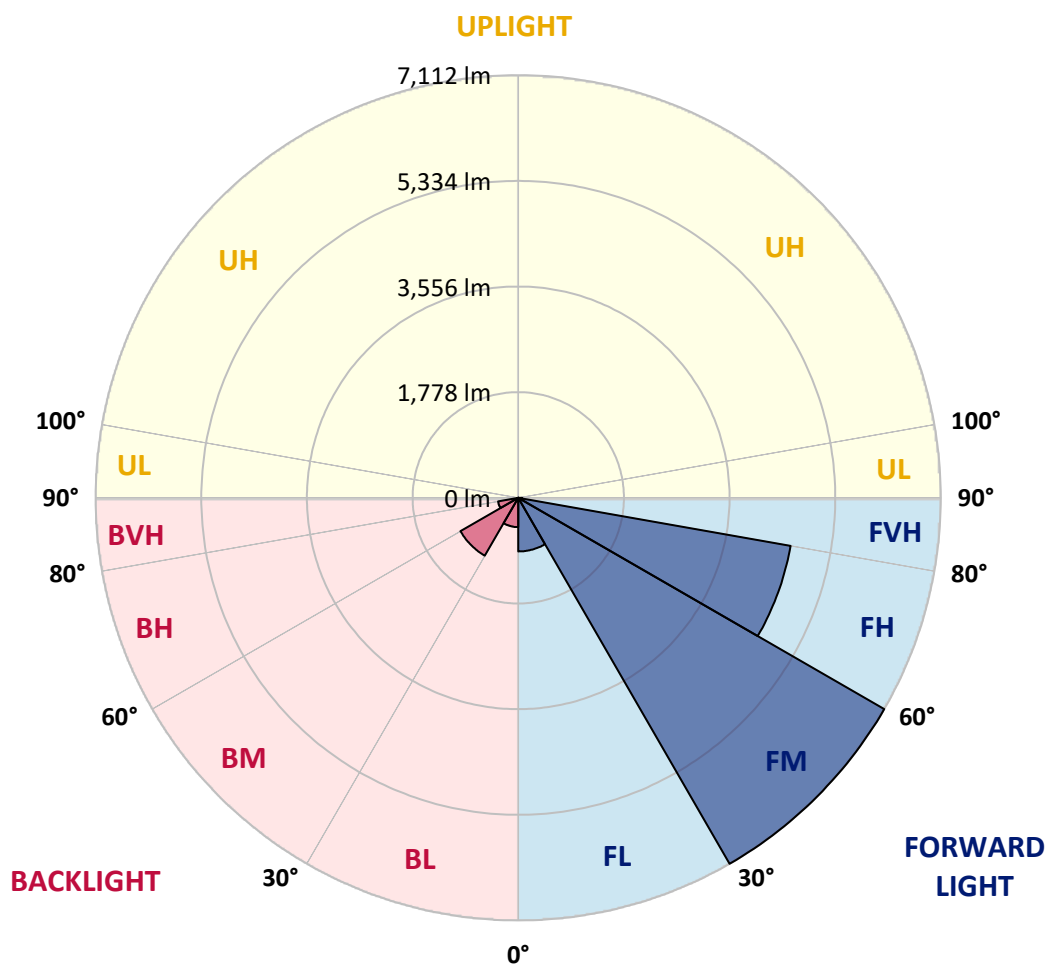
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	902.7	6.1			
FM	(30°-60°)	7111.6	48.4			
FH	(60°-80°)	4653.5	31.7			G2/5000
FVH	(80°-90°)	65.9	0.4			G1/100
BL	(0°-30°)	493.5	3.4	B1/500		
BM	(30°-60°)	1123.8	7.6	B2/2500		
BH	(60°-80°)	345.0	2.3	B1/500		G1/500
BVH	(80°-90°)	3.4	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7
2.5°	1703.8	1715.6	1712.7	1709.7	1708.7	1710.7	1711.6	1710.7	1710.7	1710.7	1711.6
5°	1671.3	1681.1	1681.1	1688.1	1697.9	1709.7	1718.6	1720.6	1722.5	1725.5	1724.5
7.5°	1609.1	1617.0	1623.0	1645.6	1670.3	1701.8	1728.5	1742.2	1744.2	1755.0	1759.0
10°	1566.8	1576.7	1586.5	1610.2	1645.6	1693.0	1738.3	1771.8	1776.7	1802.4	1814.1
12.5°	1564.9	1574.7	1587.5	1613.1	1654.6	1704.8	1759.9	1808.2	1817.1	1854.5	1879.2
15°	1585.6	1597.4	1609.1	1640.7	1685.1	1746.2	1805.3	1865.4	1874.3	1927.5	1954.1
17.5°	1627.9	1643.7	1652.5	1684.1	1731.4	1799.4	1877.2	1946.2	1954.1	2016.2	2049.7
20°	1711.6	1730.4	1733.4	1759.0	1805.3	1878.2	1970.9	2056.6	2066.4	2137.3	2174.8
22.5°	1885.1	1911.7	1888.0	1900.9	1942.3	2015.2	2115.7	2224.1	2237.9	2318.7	2352.2
25°	2190.6	2228.0	2167.0	2145.2	2163.0	2238.9	2365.0	2502.0	2517.7	2582.8	2599.5
27.5°	2790.7	2742.4	2649.8	2559.1	2505.9	2549.3	2691.1	2860.7	2880.4	2943.5	2923.7
30°	3449.9	3407.6	3282.5	3081.5	2955.3	2948.4	3079.4	3268.6	3291.3	3351.4	3291.3
32.5°	4110.1	4069.8	3933.8	3686.5	3467.7	3359.3	3449.9	3659.9	3671.7	3710.1	3621.4
35°	4759.6	4718.2	4582.3	4329.0	4059.9	3813.6	3795.9	4032.3	4036.2	4076.7	3944.6
37.5°	5412.9	5378.5	5233.5	4985.3	4720.1	4380.2	4215.6	4385.2	4390.1	4429.4	4292.5
40°	5879.0	5893.9	5794.3	5602.1	5374.5	5003.0	4686.7	4760.6	4731.0	4797.0	4715.2
42.5°	6279.2	6308.7	6222.0	6125.4	5993.4	5666.2	5270.0	5257.2	5210.0	5245.4	5160.7
45°	6625.0	6649.6	6571.8	6549.1	6546.2	6316.6	5907.6	5830.7	5764.7	5757.8	5656.4
47.5°	6752.1	6799.4	6833.0	6908.8	7056.6	6960.1	6566.9	6447.7	6373.8	6319.5	6158.9
50°	6800.4	6850.7	6965.0	7185.7	7535.5	7576.9	7223.2	7089.1	6998.5	6899.9	6663.4
52.5°	6735.4	6825.1	6978.7	7350.3	7857.8	8071.6	7852.8	7735.6	7632.0	7471.4	7120.7
55°	6352.0	6441.7	6756.1	7348.3	8018.4	8418.4	8448.0	8395.8	8279.5	8026.3	7490.2
57.5°	5544.0	5677.1	6174.7	7098.0	8015.4	8717.0	9031.4	9068.8	8938.7	8576.2	7780.9
60°	4424.5	4604.9	5211.9	6543.2	7768.1	8878.7	9542.9	9730.0	9592.1	9118.1	8016.4
62.5°	3087.3	3296.2	3870.7	5674.1	7202.5	8762.4	9916.3	10262.2	10157.8	9602.9	8107.0
65°	1883.1	1950.2	2413.3	4464.9	6240.7	8275.5	10031.6	10549.9	10515.5	9899.6	7973.1
67.5°	1254.4	1310.6	1443.6	3061.7	4844.4	7302.9	9755.6	10499.7	10509.5	9851.3	7482.3
70°	755.8	804.1	890.8	1780.6	3139.6	5780.5	8901.3	9859.2	9916.3	9205.8	6552.1
72.5°	311.4	343.9	422.7	807.1	1626.0	3668.7	7088.2	8464.8	8597.8	7740.5	5028.6
75°	176.4	193.1	248.4	405.0	705.6	1709.7	4293.5	6009.1	6205.2	5335.1	3025.3
77.5°	117.3	125.2	160.6	262.1	397.1	583.3	1834.9	3130.7	3505.2	2913.9	1309.6
80°	78.8	85.7	110.4	175.4	258.2	250.3	584.4	1159.9	1426.9	1001.2	319.3
82.5°	53.2	54.2	78.8	115.3	163.6	121.3	172.4	360.7	453.3	289.7	121.3
85°	30.5	29.5	58.1	67.0	72.9	50.2	52.3	108.4	141.9	122.2	69.0
87.5°	3.9	5.9	22.7	17.7	9.8	10.9	10.9	18.8	27.6	29.5	14.8
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7	1709.7
2.5°	1711.6	1710.7	1707.8	1704.8	1697.9	1693.9	1695.9	1693.9	1693.0	1693.9	1697.9
5°	1724.5	1721.5	1713.7	1703.8	1690.0	1673.2	1662.4	1646.7	1631.9	1623.0	1624.9
7.5°	1759.0	1756.0	1745.2	1717.6	1673.2	1603.3	1539.2	1483.1	1440.6	1416.0	1417.1
10°	1814.1	1809.2	1792.5	1731.4	1615.1	1462.4	1335.3	1229.8	1160.8	1128.3	1125.3
12.5°	1879.2	1873.3	1843.8	1718.6	1504.7	1266.3	1090.9	973.6	909.6	881.0	878.0
15°	1956.1	1948.2	1890.0	1657.5	1344.1	1049.5	888.9	801.1	759.7	734.1	735.1
17.5°	2051.6	2037.8	1924.5	1565.8	1169.7	884.0	764.6	698.6	662.3	637.6	635.6
20°	2175.8	2153.1	1952.1	1456.4	1009.1	779.5	680.9	625.8	598.2	576.5	572.6
22.5°	2349.2	2316.7	1985.6	1338.2	895.7	707.6	618.9	578.4	555.8	531.2	527.2
25°	2564.0	2525.6	2027.0	1228.9	817.9	645.4	573.5	540.0	513.4	484.8	481.9
27.5°	2864.7	2795.7	2076.2	1139.2	750.9	592.2	532.1	494.7	464.1	440.4	435.5
30°	3199.6	3086.4	2119.6	1085.0	689.8	542.9	478.0	440.4	411.9	395.1	392.2
32.5°	3517.0	3363.2	2148.2	1061.3	634.6	486.8	418.8	378.4	356.7	351.8	354.8
35°	3816.6	3613.5	2145.2	1038.6	585.4	430.6	360.7	319.3	302.5	305.4	305.4
37.5°	4161.4	3880.5	2124.6	1003.2	544.9	379.4	310.4	274.0	259.1	260.1	264.1
40°	4562.5	4189.1	2111.8	936.1	500.6	332.1	269.1	239.4	228.6	224.7	223.7
42.5°	4990.2	4487.7	2113.8	860.3	445.4	289.7	240.5	215.8	205.9	203.0	202.0
45°	5419.8	4772.4	2116.7	781.5	387.2	257.2	219.8	199.1	193.1	189.2	189.2
47.5°	5823.8	5014.8	2061.5	696.7	330.2	232.6	203.0	189.2	184.3	179.4	179.4
50°	6200.2	5176.5	1928.4	598.2	284.7	212.9	190.1	180.3	175.4	170.5	170.5
52.5°	6493.0	5202.1	1708.7	496.6	253.3	198.0	182.3	173.4	167.5	162.6	161.6
55°	6623.0	5041.5	1396.4	402.0	228.6	185.2	174.5	165.5	158.7	153.8	152.7
57.5°	6589.5	4703.4	1088.9	323.2	205.0	172.4	164.6	158.7	150.8	142.9	141.9
60°	6424.9	4251.1	820.8	269.1	183.3	158.7	153.8	148.8	138.0	126.2	124.1
62.5°	6140.2	3682.5	585.4	222.7	159.6	142.9	140.9	136.9	121.3	99.5	97.6
65°	5704.6	2991.8	394.2	185.2	136.9	125.2	126.2	119.2	98.5	73.9	72.0
67.5°	5068.0	2187.7	252.3	151.8	114.3	104.4	105.5	101.5	83.7	63.0	60.1
70°	4257.0	1448.5	164.6	115.3	91.6	80.8	86.7	87.7	70.9	51.2	49.3
72.5°	3120.8	855.4	115.3	85.7	67.0	56.2	70.9	72.9	57.2	38.4	36.5
75°	1778.7	406.0	86.7	62.1	41.4	39.5	55.1	55.1	39.5	25.6	23.7
77.5°	746.9	169.5	61.1	40.4	23.7	22.7	37.4	34.4	19.7	11.8	11.8
80°	215.8	75.8	32.5	19.7	9.8	8.9	14.8	10.9	4.9	1.9	1.9
82.5°	84.8	33.5	12.8	7.9	3.9	3.9	1.9	0.0	0.0	0.0	0.0
85°	50.2	13.8	5.9	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	12.8	3.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

(END OF REPORT)