

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: P883818

Luminaire Tested: **NAV-SB4B-830-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883818
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15660 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

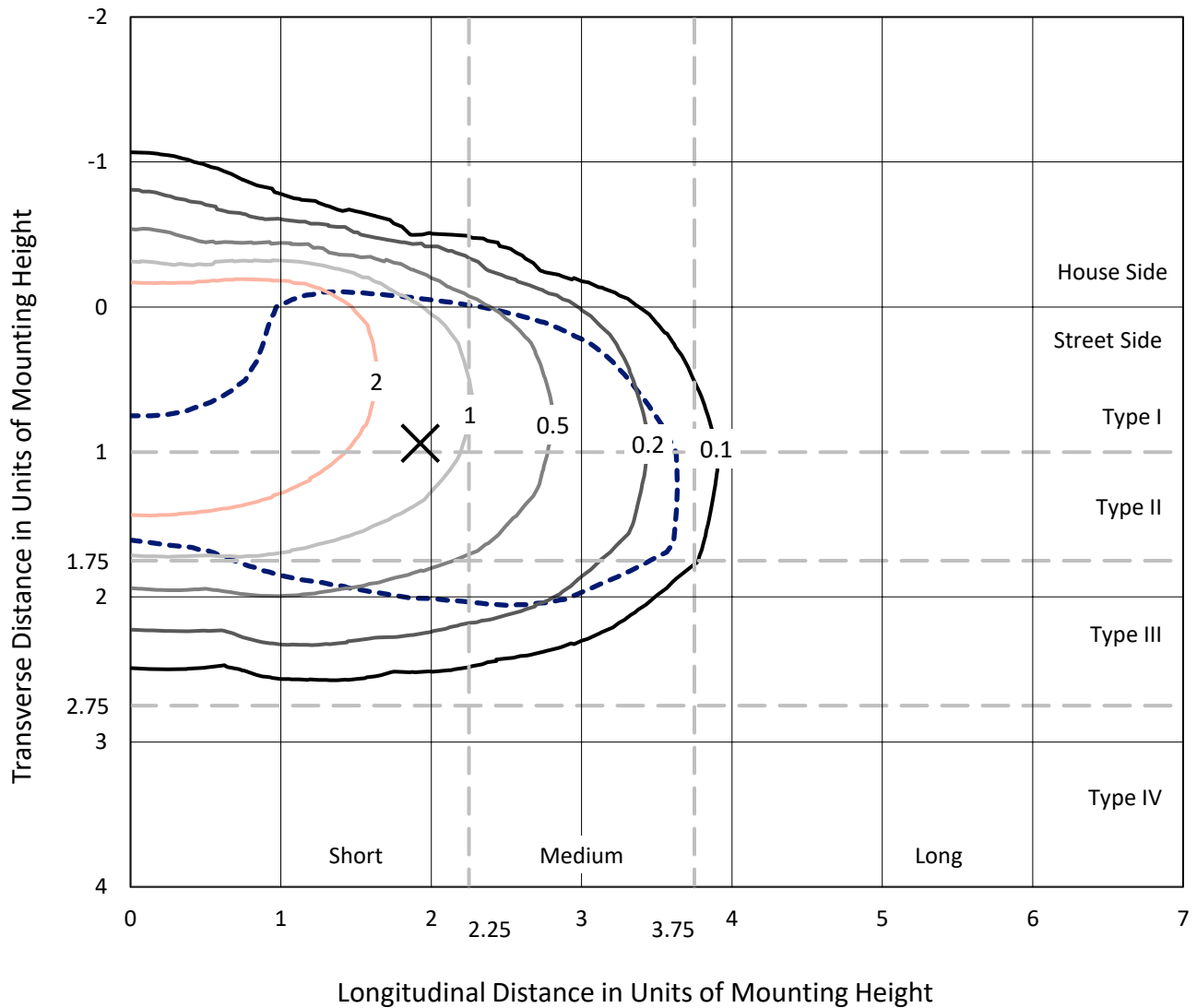
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

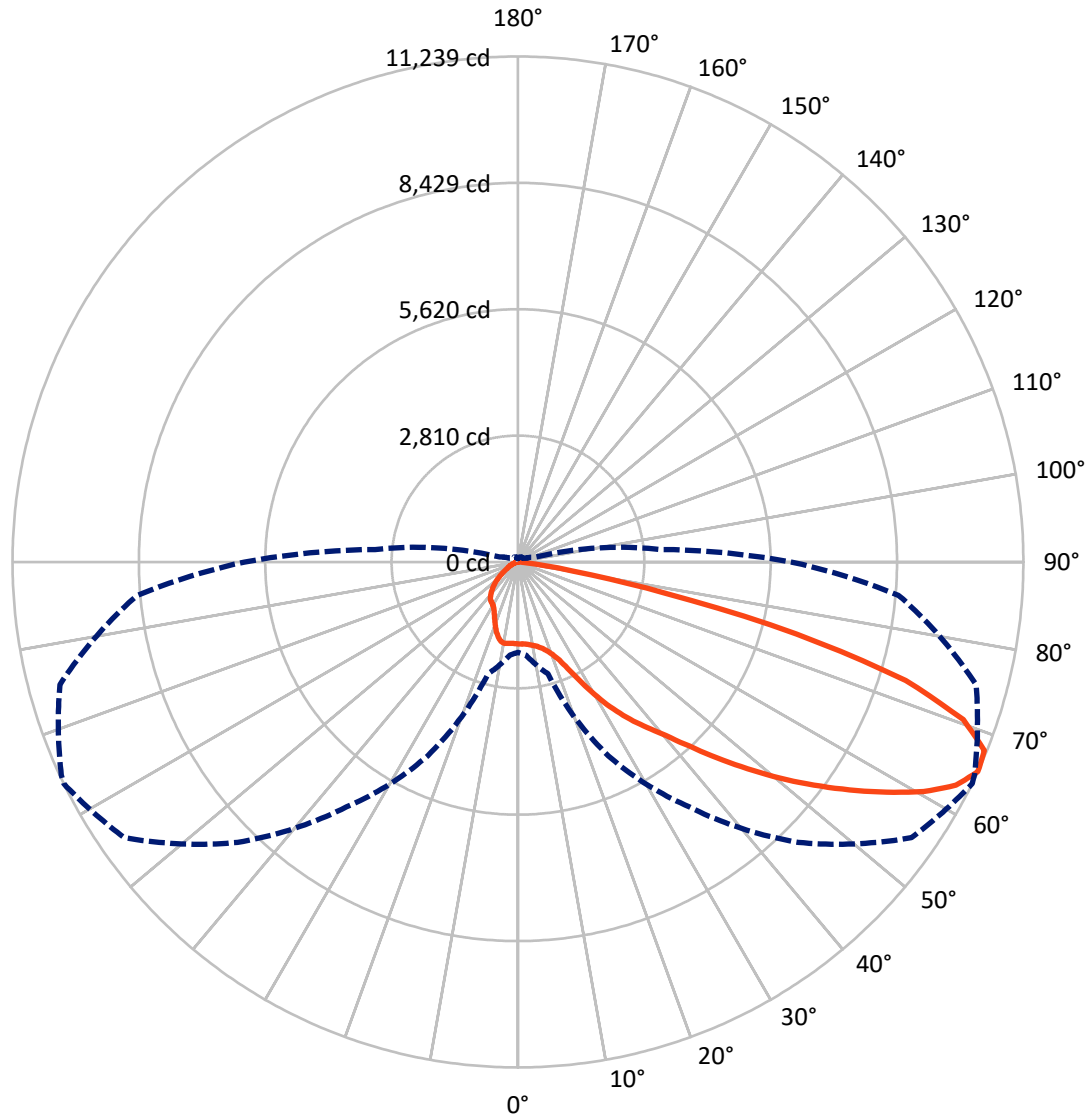
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2094.2	0.0	2094.2
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	13565.8	0.0	13565.8
	% Fixture	86.6	0.0	86.6
Total	Lumens	15660.0	0.0	15660.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.0	1.1
10°-20°	455.8	2.9
20°-30°	863.7	5.5
30°-40°	1747.7	11.2
40°-50°	2977.2	19.0
50°-60°	4048.7	25.9
60°-70°	3801.9	24.3
70°-80°	1523.2	9.7
80°-90°	73.8	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°	15660.0	100.0
0°-180°	15660.0	100.0

Coefficient of Utilization



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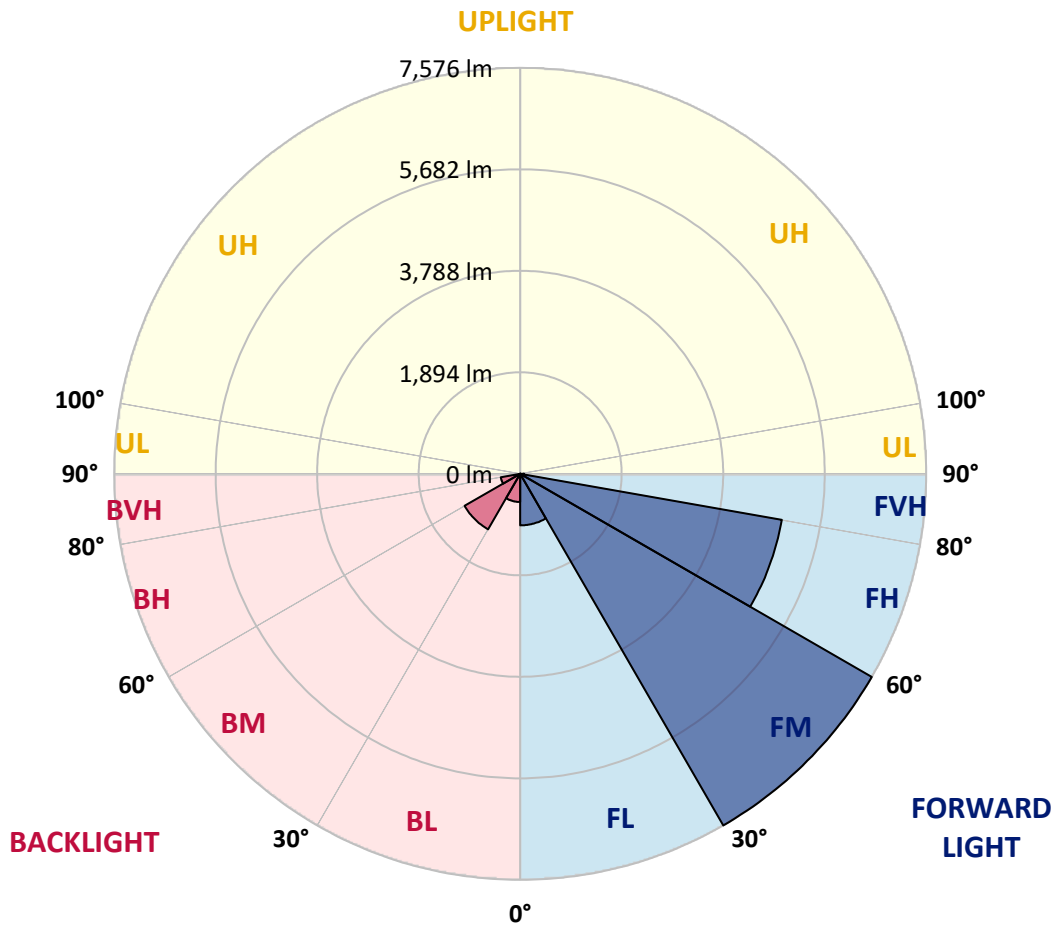
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	961.7	6.1			
FM (30°-60°)	7576.3	48.4			
FH (60°-80°)	4957.6	31.7			G2/5000
FVH (80°-90°)	70.2	0.4			G1/100
BL (0°-30°)	525.8	3.4	B2/1000		
BM (30°-60°)	1197.3	7.6	B2/2500		
BH (60°-80°)	367.6	2.3	B1/500		G1/500
BVH (80°-90°)	3.6	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°	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4
2.5°	1815.1	1827.7	1824.6	1821.4	1820.4	1822.5	1823.5	1822.5	1822.5	1822.5	1823.5
5°	1780.5	1791.0	1791.0	1798.3	1808.8	1821.4	1830.9	1833.0	1835.1	1838.2	1837.2
7.5°	1714.3	1722.7	1729.0	1753.2	1779.4	1813.0	1841.4	1856.1	1858.2	1869.7	1873.9
10°	1669.2	1679.7	1690.2	1715.4	1753.2	1803.6	1851.9	1887.6	1892.8	1920.1	1932.7
12.5°	1667.1	1677.6	1691.2	1718.5	1762.6	1816.2	1875.0	1926.4	1935.8	1975.7	2002.0
15°	1689.1	1701.7	1714.3	1747.9	1795.2	1860.3	1923.3	1987.3	1996.7	2053.4	2081.8
17.5°	1734.3	1751.1	1760.5	1794.1	1844.5	1917.0	1999.9	2073.4	2081.8	2147.9	2183.6
20°	1823.5	1843.5	1846.6	1873.9	1923.3	2000.9	2099.6	2191.0	2201.5	2277.0	2316.9
22.5°	2008.3	2036.6	2011.4	2025.1	2069.2	2146.9	2253.9	2369.4	2384.1	2470.2	2505.9
25°	2333.7	2373.6	2308.5	2285.4	2304.3	2385.2	2519.5	2665.5	2682.3	2751.6	2769.4
27.5°	2973.1	2921.6	2822.9	2726.4	2669.7	2715.9	2867.0	3047.6	3068.6	3135.8	3114.8
30°	3675.4	3630.2	3496.9	3282.8	3148.4	3141.0	3280.7	3482.2	3506.4	3570.4	3506.4
32.5°	4378.8	4335.7	4190.8	3927.3	3694.3	3578.8	3675.4	3899.0	3911.6	3952.5	3858.1
35°	5070.6	5026.5	4881.6	4611.8	4325.2	4062.8	4043.9	4295.8	4300.0	4343.1	4202.4
37.5°	5766.6	5729.9	5575.5	5311.0	5028.6	4666.4	4491.1	4671.7	4676.9	4718.9	4573.0
40°	6263.2	6278.9	6172.9	5968.2	5725.7	5329.9	4992.9	5071.6	5040.1	5110.5	5023.3
42.5°	6689.4	6720.9	6628.5	6525.6	6384.9	6036.4	5614.4	5600.7	5550.3	5588.1	5497.9
45°	7057.9	7084.1	7001.2	6977.0	6973.9	6729.3	6293.6	6211.7	6141.4	6134.0	6025.9
47.5°	7193.3	7243.7	7279.4	7360.2	7517.7	7414.8	6995.9	6868.9	6790.2	6732.4	6561.3
50°	7244.7	7298.3	7420.1	7655.2	8027.9	8072.0	7695.1	7552.3	7455.8	7350.8	7098.8
52.5°	7175.5	7271.0	7434.8	7830.5	8371.2	8599.0	8365.9	8241.0	8130.8	7959.7	7585.9
55°	6767.1	6862.6	7197.5	7828.4	8542.3	8968.5	9000.0	8944.4	8820.5	8550.7	7979.6
57.5°	5906.2	6048.0	6578.1	7561.8	8539.2	9286.6	9621.5	9661.4	9522.8	9136.5	8289.3
60°	4713.6	4905.8	5552.4	6970.7	8275.7	9458.8	10166.4	10365.8	10218.9	9713.9	8540.2
62.5°	3289.1	3511.6	4123.7	6044.8	7673.1	9334.9	10564.2	10932.7	10821.4	10230.4	8636.8
65°	2006.2	2077.6	2571.0	4756.7	6648.4	8816.3	10687.1	11239.3	11202.5	10546.4	8494.0
67.5°	1336.4	1396.2	1538.0	3261.8	5160.9	7780.1	10393.1	11185.7	11196.2	10495.0	7971.2
70°	805.2	856.6	949.0	1897.0	3344.7	6158.2	9482.9	10503.4	10564.2	9807.3	6980.2
72.5°	331.7	366.4	450.4	859.8	1732.2	3908.4	7551.3	9017.9	9159.6	8246.3	5357.2
75°	187.9	205.8	264.6	431.5	751.7	1821.4	4574.0	6401.7	6610.7	5683.7	3222.9
77.5°	124.9	133.3	171.1	279.2	423.1	621.5	1954.7	3335.2	3734.2	3104.3	1395.2
80°	84.0	91.3	117.6	186.9	275.1	266.7	622.5	1235.6	1520.1	1066.6	340.1
82.5°	56.7	57.7	84.0	122.8	174.3	129.1	183.7	384.2	482.9	308.6	129.1
85°	32.5	31.5	61.9	71.4	77.7	53.5	55.6	115.5	151.2	130.2	73.5
87.5°	4.2	6.3	24.1	18.9	10.5	11.5	11.5	19.9	29.4	31.5	15.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4	1821.4
2.5°	1823.5	1822.5	1819.3	1816.2	1808.8	1804.6	1806.7	1804.6	1803.6	1804.6	1808.8
5°	1837.2	1834.0	1825.6	1815.1	1800.4	1782.6	1771.0	1754.2	1738.5	1729.0	1731.1
7.5°	1873.9	1870.8	1859.2	1829.8	1782.6	1708.0	1639.8	1580.0	1534.8	1508.6	1509.6
10°	1932.7	1927.5	1909.6	1844.5	1720.6	1557.9	1422.5	1310.2	1236.7	1202.0	1198.9
12.5°	2002.0	1995.7	1964.2	1830.9	1603.1	1349.0	1162.1	1037.2	969.0	938.5	935.4
15°	2083.9	2075.5	2013.5	1765.8	1431.9	1118.0	946.9	853.5	809.4	782.1	783.2
17.5°	2185.7	2171.0	2050.3	1668.1	1246.1	941.7	814.7	744.3	705.5	679.2	677.1
20°	2318.0	2293.8	2079.7	1551.6	1075.0	830.4	725.4	666.6	637.2	614.1	609.9
22.5°	2502.7	2468.1	2115.4	1425.6	954.3	753.8	659.3	616.2	592.1	565.8	561.6
25°	2731.6	2690.7	2159.5	1309.1	871.3	687.6	611.0	575.3	547.0	516.5	513.4
27.5°	3051.8	2978.3	2211.9	1213.6	800.0	630.9	566.9	527.0	494.5	469.3	464.0
30°	3408.7	3288.0	2258.1	1155.8	734.9	578.4	509.2	469.3	438.8	421.0	417.8
32.5°	3746.8	3583.0	2288.6	1130.6	676.1	518.6	446.2	403.1	380.0	374.8	377.9
35°	4065.9	3849.7	2285.4	1106.5	623.6	458.8	384.2	340.1	322.3	325.4	325.4
37.5°	4433.3	4134.2	2263.4	1068.7	580.5	404.2	330.7	291.8	276.1	277.1	281.3
40°	4860.6	4462.7	2249.7	997.3	533.3	353.8	286.6	255.1	243.6	239.4	238.3
42.5°	5316.2	4780.8	2251.8	916.5	474.5	308.6	256.2	229.9	219.4	216.3	215.2
45°	5774.0	5084.2	2255.0	832.5	412.6	274.0	234.1	212.1	205.8	201.6	201.6
47.5°	6204.4	5342.5	2196.2	742.2	351.7	247.8	216.3	201.6	196.3	191.1	191.1
50°	6605.4	5514.7	2054.5	637.2	303.4	226.8	202.6	192.1	186.9	181.6	181.6
52.5°	6917.2	5541.9	1820.4	529.1	269.8	211.0	194.2	184.8	178.5	173.2	172.2
55°	7055.8	5370.8	1487.6	428.3	243.6	197.4	185.8	176.4	169.0	163.8	162.7
57.5°	7020.1	5010.7	1160.0	344.3	218.4	183.7	175.3	169.0	160.6	152.2	151.2
60°	6844.8	4528.9	874.5	286.6	195.3	169.0	163.8	158.5	147.0	134.4	132.3
62.5°	6541.4	3923.1	623.6	237.3	170.1	152.2	150.1	145.9	129.1	106.0	103.9
65°	6077.4	3187.2	419.9	197.4	145.9	133.3	134.4	127.0	105.0	78.7	76.6
67.5°	5399.2	2330.6	268.8	161.7	121.8	111.3	112.3	108.1	89.2	67.2	64.0
70°	4535.2	1543.2	175.3	122.8	97.6	86.1	92.4	93.4	75.6	54.6	52.5
72.5°	3324.7	911.2	122.8	91.3	71.4	59.8	75.6	77.7	60.9	40.9	38.8
75°	1894.9	432.5	92.4	66.1	44.1	42.0	58.8	58.8	42.0	27.3	25.2
77.5°	795.8	180.6	65.1	43.0	25.2	24.1	39.9	36.7	21.0	12.6	12.6
80°	229.9	80.8	34.6	21.0	10.5	9.4	15.7	11.5	5.2	2.1	2.1
82.5°	90.3	35.7	13.6	8.4	4.2	4.2	2.1	0.0	0.0	0.0	0.0
85°	53.5	14.7	6.3	3.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	13.6	3.1	2.1	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)