

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: P882803

Luminaire Tested: **NAV-SB2D-835-U-SL4-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882803
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-10)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-SL4-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12215 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

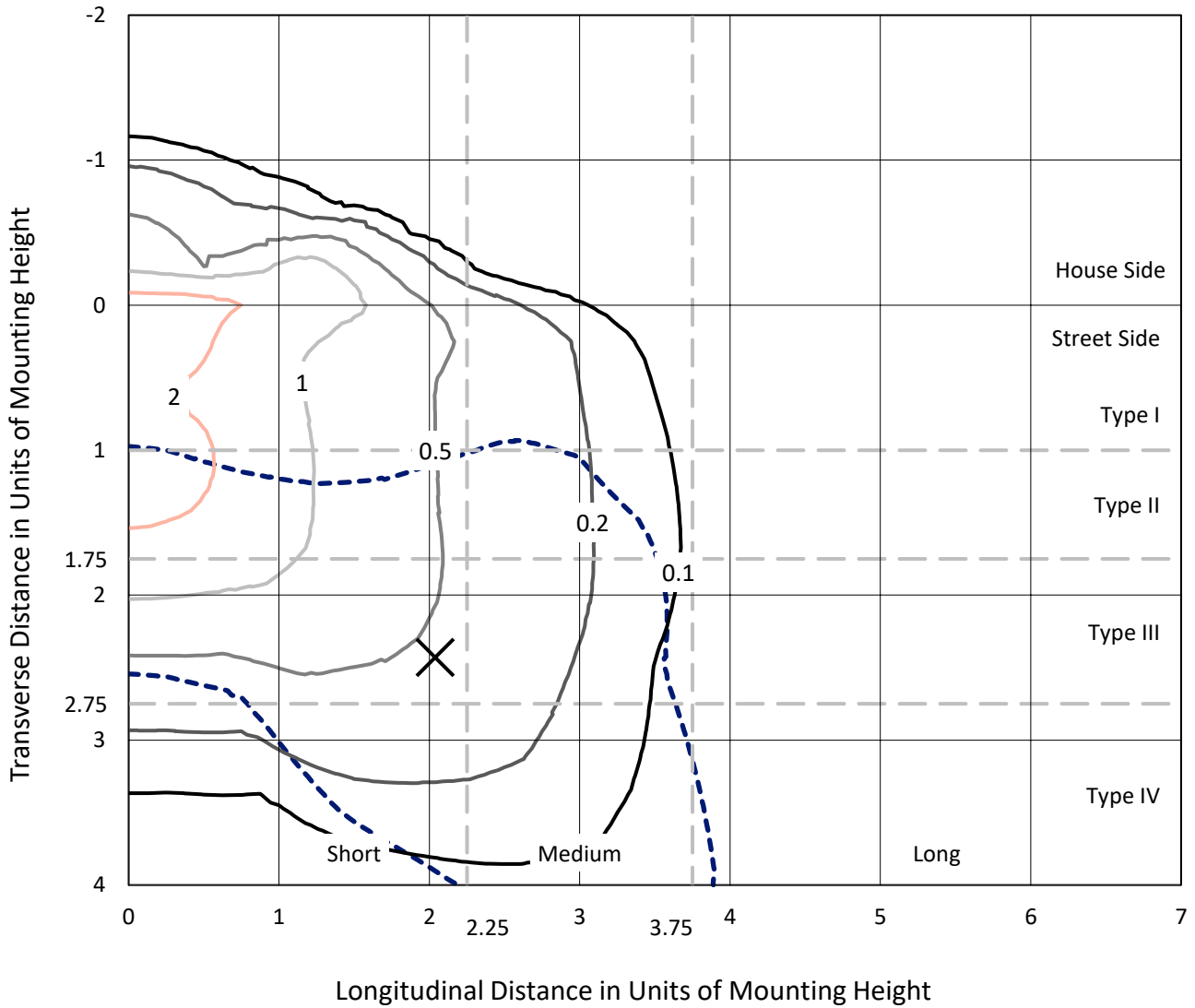
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

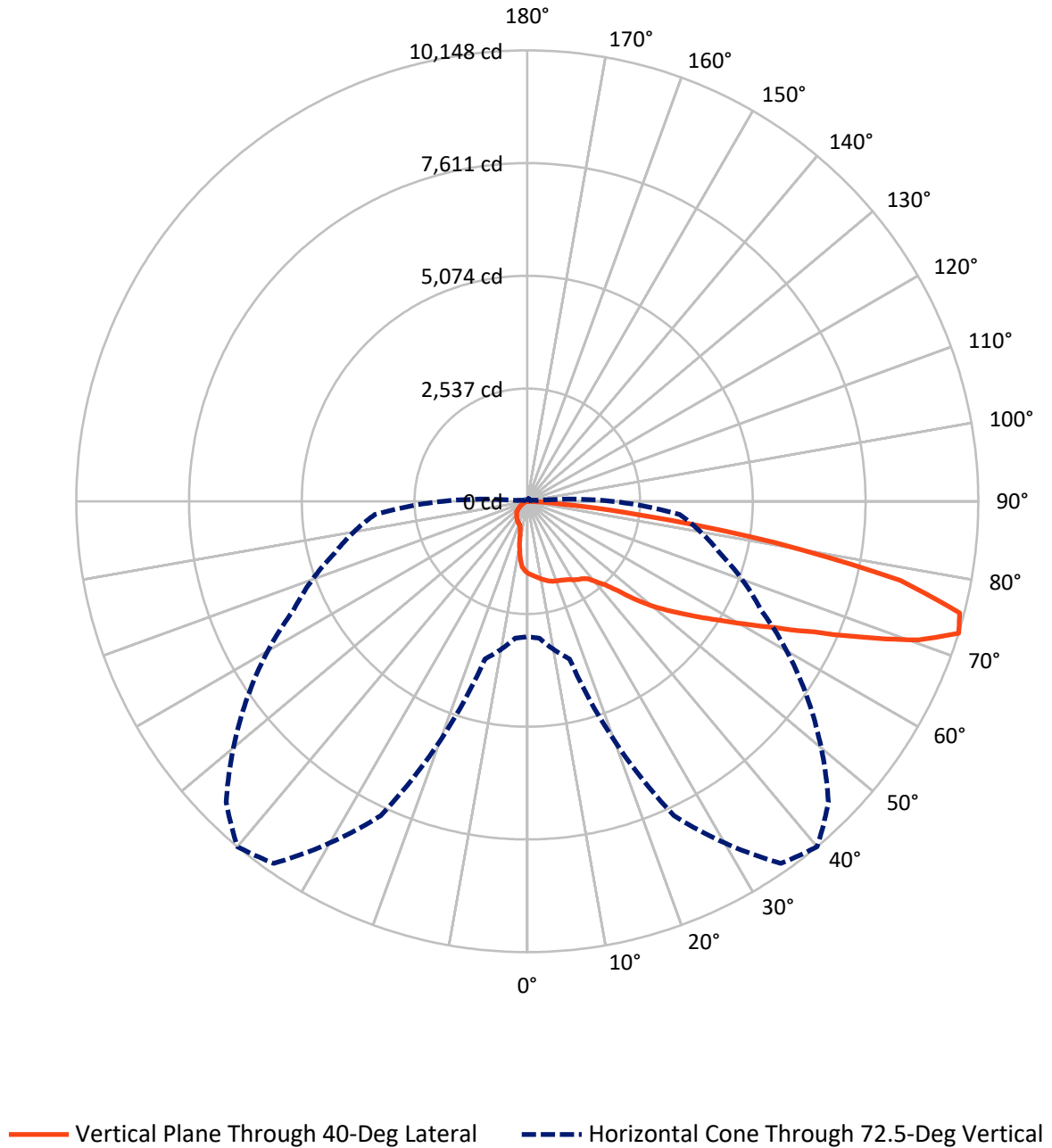
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	1577.4	0.0	1577.4
	% Fixture	12.9	0.0	12.9
Street Side	Lumens	10637.6	0.0	10637.6
	% Fixture	87.1	0.0	87.1
Total	Lumens	12215.0	0.0	12215.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.7	1.2
10°-20°	401.1	3.3
20°-30°	649.1	5.3
30°-40°	958.2	7.8
40°-50°	1612.7	13.2
50°-60°	2504.1	20.5
60°-70°	3133.4	25.7
70°-80°	2565.3	21.0
80°-90°	243.3	2.0
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°	12215.0	100.0
0°-180°	12215.0	100.0

Coefficient of Utilization



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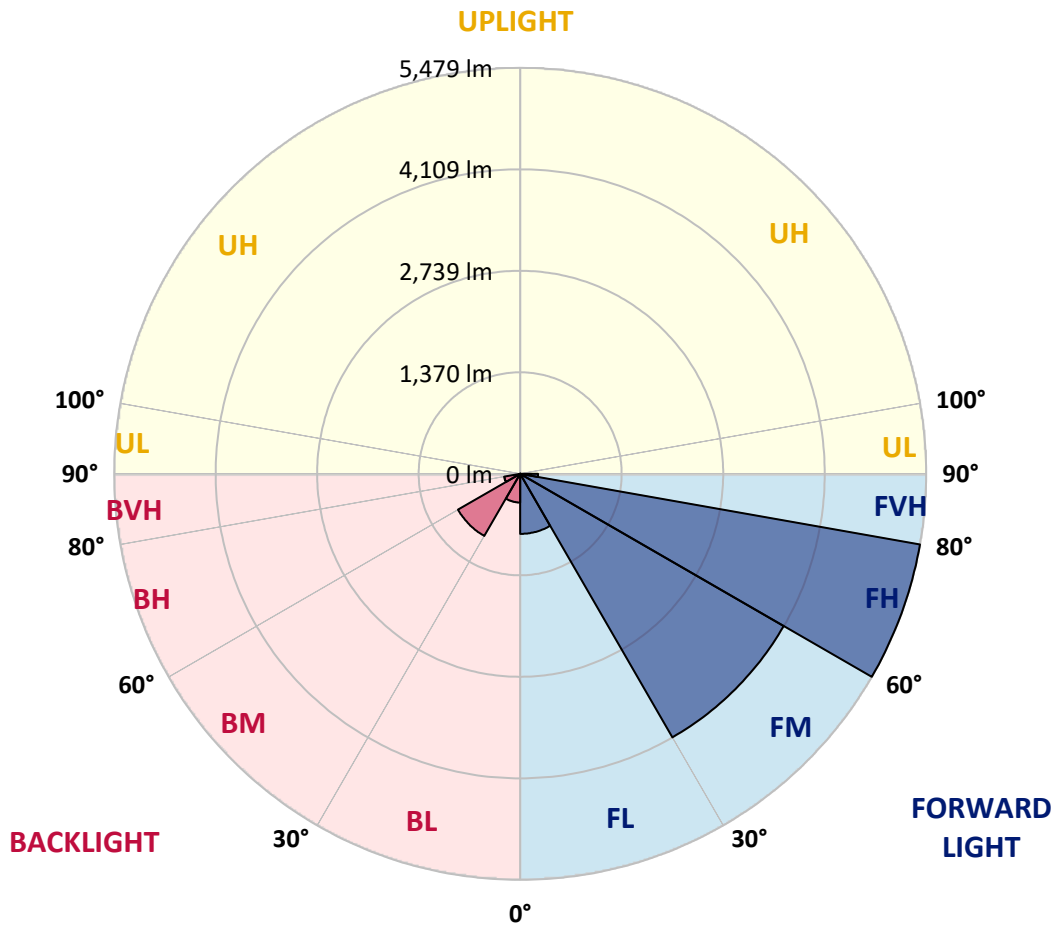
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	810.7	6.6			
FM (30°-60°)	4106.5	33.6			
FH (60°-80°)	5479.0	44.9			G3/7500
FVH (80°-90°)	241.4	2.0			G3/500
BL (0°-30°)	387.2	3.2	B1/500		
BM (30°-60°)	968.7	7.9	B1/1000		
BH (60°-80°)	219.8	1.8	B1/500		G1/500
BVH (80°-90°)	1.9	0.0			G0/10
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°	40°	45°	55°	65°	75°	85°
0°	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4
2.5°	1666.1	1672.6	1668.9	1661.5	1659.7	1656.0	1651.4	1649.6	1643.1	1637.6	1631.2
5°	1713.0	1719.5	1714.9	1704.8	1700.2	1695.6	1689.1	1683.6	1670.7	1658.8	1644.0
7.5°	1764.6	1770.1	1764.6	1749.8	1742.5	1737.0	1727.8	1719.5	1704.8	1687.3	1668.9
10°	1821.6	1826.2	1817.9	1798.6	1786.6	1778.4	1770.1	1760.9	1747.1	1727.8	1705.7
12.5°	1875.0	1880.5	1867.6	1844.6	1830.8	1822.5	1813.3	1806.0	1792.2	1773.8	1750.8
15°	1923.7	1932.0	1909.9	1885.1	1869.4	1863.0	1853.8	1849.2	1840.0	1827.1	1806.0
17.5°	1960.5	1966.0	1943.0	1913.6	1896.1	1891.5	1885.1	1887.8	1886.0	1879.6	1865.8
20°	1991.8	1995.5	1965.1	1929.2	1909.9	1910.8	1909.0	1918.2	1921.9	1921.9	1921.0
22.5°	2030.4	2031.4	1992.7	1947.6	1924.6	1931.1	1933.8	1944.0	1951.3	1958.7	1975.2
25°	2081.0	2079.2	2033.2	1971.6	1951.3	1960.5	1967.0	1970.6	1978.9	1990.9	2028.6
27.5°	2156.5	2151.0	2092.1	2010.2	1986.3	1994.6	2006.5	2004.7	2001.0	2010.2	2073.7
30°	2252.2	2244.8	2166.6	2064.5	2042.4	2049.8	2053.4	2036.9	2010.2	2018.5	2113.2
32.5°	2404.0	2391.1	2282.5	2125.2	2091.2	2099.4	2094.8	2060.8	2021.2	2029.5	2152.8
35°	2668.0	2636.7	2483.1	2252.2	2146.4	2137.2	2126.1	2093.0	2044.2	2036.0	2185.9
37.5°	3229.2	3174.0	2911.8	2499.6	2271.5	2211.7	2177.6	2144.5	2069.1	2036.0	2223.6
40°	3862.2	3806.1	3503.4	2913.6	2479.4	2378.2	2297.2	2205.2	2094.8	2047.9	2282.5
42.5°	4522.7	4461.1	4150.1	3427.0	2776.6	2568.6	2417.8	2254.0	2137.2	2084.7	2360.7
45°	5260.6	5183.3	4776.7	3962.5	3208.1	2885.1	2611.9	2354.3	2210.8	2150.0	2467.4
47.5°	6038.9	5938.6	5401.3	4482.3	3672.7	3323.1	2967.0	2533.7	2319.3	2247.6	2611.9
50°	6728.9	6629.5	6046.3	5026.0	4106.9	3739.8	3371.8	2782.1	2482.2	2385.6	2806.0
52.5°	7224.8	7149.3	6633.2	5587.2	4558.6	4130.8	3738.9	3071.0	2688.2	2562.2	3035.1
55°	7556.9	7487.9	7049.1	6118.9	5083.9	4561.4	4100.5	3384.7	2936.6	2773.8	3288.1
57.5°	7758.4	7718.8	7349.9	6593.7	5604.7	5032.4	4514.5	3729.7	3229.2	3023.1	3570.5
60°	7830.1	7797.9	7536.7	7046.3	6233.9	5598.2	5001.1	4118.9	3584.3	3306.5	3860.3
62.5°	7638.8	7645.2	7671.0	7582.7	6897.3	6260.6	5584.4	4586.2	3978.1	3627.6	4132.7
65°	6738.1	6791.5	7280.9	8177.0	7775.9	7090.5	6326.9	5156.6	4428.9	3992.8	4348.9
67.5°	5578.9	5656.2	6265.2	8524.7	8712.4	8167.8	7360.9	5883.4	4966.2	4364.5	4430.7
70°	4270.7	4353.5	5091.3	8452.1	9589.2	9345.4	8639.7	6808.0	5522.8	4622.1	4221.9
72.5°	3048.0	3090.3	3671.7	7805.3	9948.9	10147.6	9581.8	7683.9	5807.1	4479.5	3443.6
75°	2141.8	2134.4	2519.9	6285.5	9388.6	10050.1	9251.5	7210.1	5255.1	3558.6	2123.4
77.5°	932.9	934.7	1258.6	3817.1	7493.4	8583.6	7690.3	4516.3	3663.5	1886.0	896.1
80°	242.0	249.3	461.8	1519.8	4511.7	5665.4	4690.2	1985.4	1692.8	460.0	171.1
82.5°	85.6	91.1	212.5	477.5	1664.3	2598.1	2088.4	634.8	441.6	131.6	46.0
85°	24.8	29.4	114.1	146.3	344.1	734.2	506.9	123.3	108.6	68.1	12.0
87.5°	0.0	3.7	23.0	20.2	20.2	13.8	25.8	13.8	17.5	8.3	3.7
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°	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4	1617.4
2.5°	1625.6	1619.2	1605.4	1590.7	1576.9	1564.0	1560.3	1546.5	1540.1	1541.0	1540.1
5°	1633.9	1622.0	1595.3	1563.1	1530.0	1492.2	1461.0	1416.8	1379.1	1374.5	1371.7
7.5°	1656.0	1636.7	1593.4	1530.9	1448.1	1344.1	1247.5	1151.8	1097.6	1068.1	1066.3
10°	1690.0	1664.3	1598.0	1478.4	1302.7	1116.9	970.6	850.1	788.4	759.9	754.4
12.5°	1730.5	1702.0	1605.4	1389.2	1115.0	871.2	713.0	639.4	626.5	624.7	623.8
15°	1787.6	1756.3	1613.7	1268.7	911.7	663.3	590.6	591.6	601.7	607.2	606.3
17.5°	1851.0	1819.8	1601.7	1121.5	711.2	566.7	564.9	573.2	587.9	593.4	592.5
20°	1915.4	1886.0	1559.4	948.5	575.0	540.0	547.4	556.6	571.3	578.7	578.7
22.5°	1981.7	1955.9	1492.2	764.5	518.9	520.7	529.9	539.1	555.7	564.0	564.0
25°	2052.5	2030.4	1403.0	612.7	495.0	500.5	512.4	523.5	541.0	551.1	551.1
27.5°	2124.3	2107.7	1301.8	511.5	472.9	479.3	493.1	507.8	525.3	537.3	538.2
30°	2202.5	2193.3	1220.8	473.8	451.7	457.2	472.9	489.4	508.8	523.5	525.3
32.5°	2282.5	2280.7	1181.3	501.4	432.4	436.1	449.9	466.4	490.4	508.8	510.6
35°	2361.6	2365.3	1158.3	579.6	426.0	415.8	425.0	439.8	468.3	491.3	495.0
37.5°	2462.8	2472.0	1157.4	664.2	441.6	395.6	402.0	412.2	437.0	463.7	468.3
40°	2613.7	2662.5	1216.2	736.9	469.2	377.2	379.0	380.9	393.8	415.8	423.2
42.5°	2814.3	2956.9	1428.8	786.6	480.2	360.6	354.2	344.1	342.2	354.2	360.6
45°	3063.6	3312.9	1802.3	814.2	469.2	342.2	324.8	298.1	288.0	296.2	296.2
47.5°	3357.1	3703.0	2244.8	820.6	450.8	319.2	288.0	253.0	244.7	247.5	246.6
50°	3643.2	3995.6	2634.0	767.3	420.4	289.8	247.5	218.0	212.5	213.4	213.4
52.5°	3896.2	4095.9	2744.4	641.2	380.0	253.9	212.5	192.3	188.6	188.6	187.7
55°	4063.7	3987.3	2447.2	490.4	329.4	217.1	182.2	172.0	170.2	169.3	167.4
57.5°	4098.6	3634.0	1848.3	354.2	257.6	183.1	161.9	156.4	152.7	149.0	147.2
60°	3973.5	3045.2	1176.7	247.5	193.2	156.4	143.5	139.8	132.5	125.1	122.4
62.5°	3703.0	2300.0	651.4	172.0	155.5	133.4	127.0	122.4	108.6	96.6	92.9
65°	3339.6	1529.0	288.0	134.3	127.0	112.2	108.6	102.1	85.6	71.8	69.0
67.5°	2974.4	880.4	129.7	107.6	102.1	92.0	89.2	84.6	72.7	59.8	58.0
70°	2557.6	446.2	89.2	85.6	79.1	69.9	72.7	71.8	59.8	48.8	46.9
72.5°	1904.4	221.7	67.2	64.4	57.0	49.7	59.8	58.9	46.9	36.8	35.0
75°	1078.2	109.5	48.8	45.1	34.0	36.8	47.8	45.1	32.2	23.9	22.1
77.5°	427.8	56.1	32.2	27.6	20.2	24.8	35.0	30.4	16.6	10.1	9.2
80°	98.4	27.6	16.6	12.0	9.2	14.7	18.4	11.0	4.6	0.9	0.0
82.5°	27.6	12.0	5.5	4.6	4.6	5.5	4.6	1.8	0.0	0.0	0.0
85°	9.2	5.5	1.8	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0
87.5°	3.7	1.8	0.0	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)