

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: P883811

Luminaire Tested: **NAV-SB4B-827-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883811
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-827-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18326 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

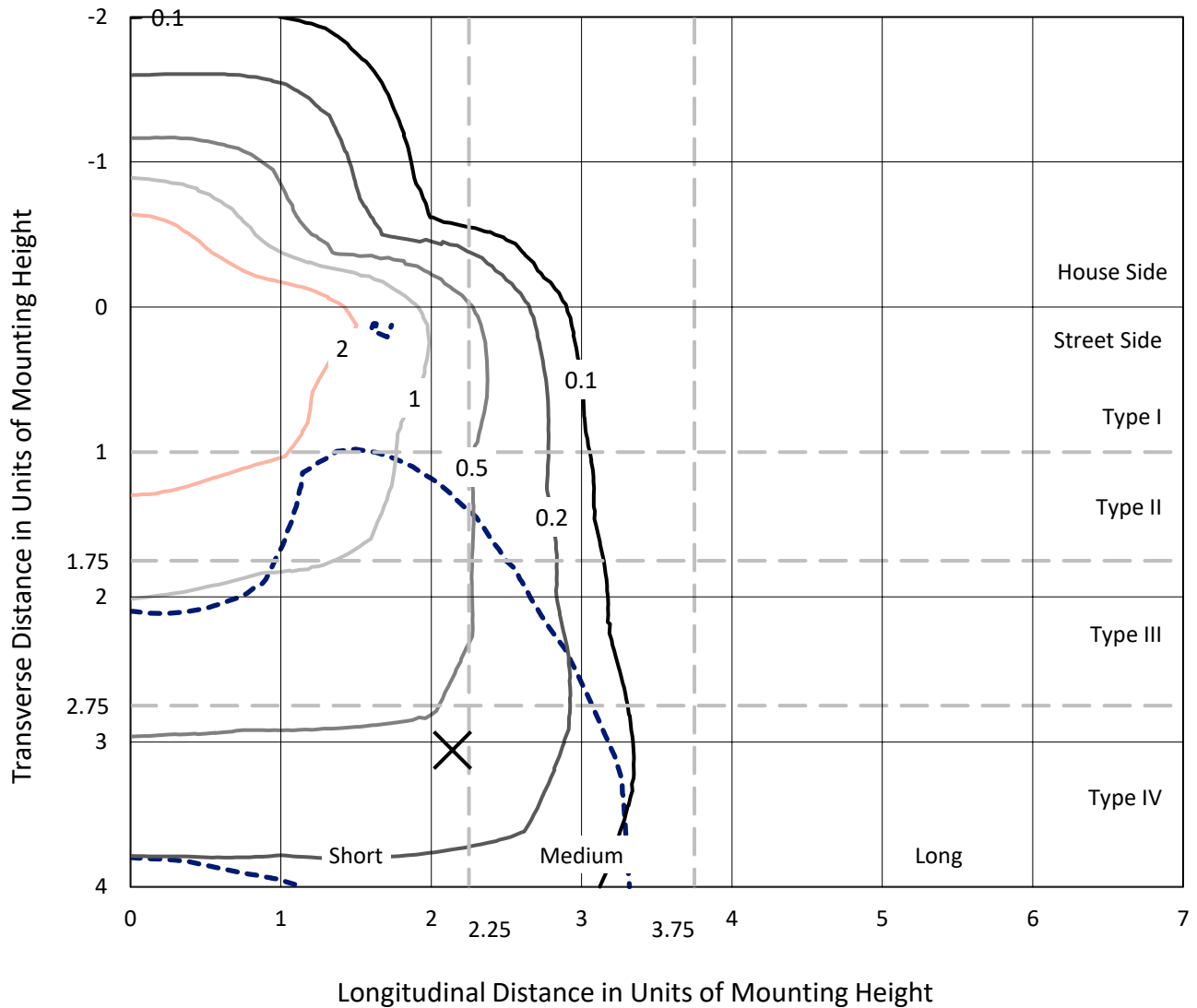
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

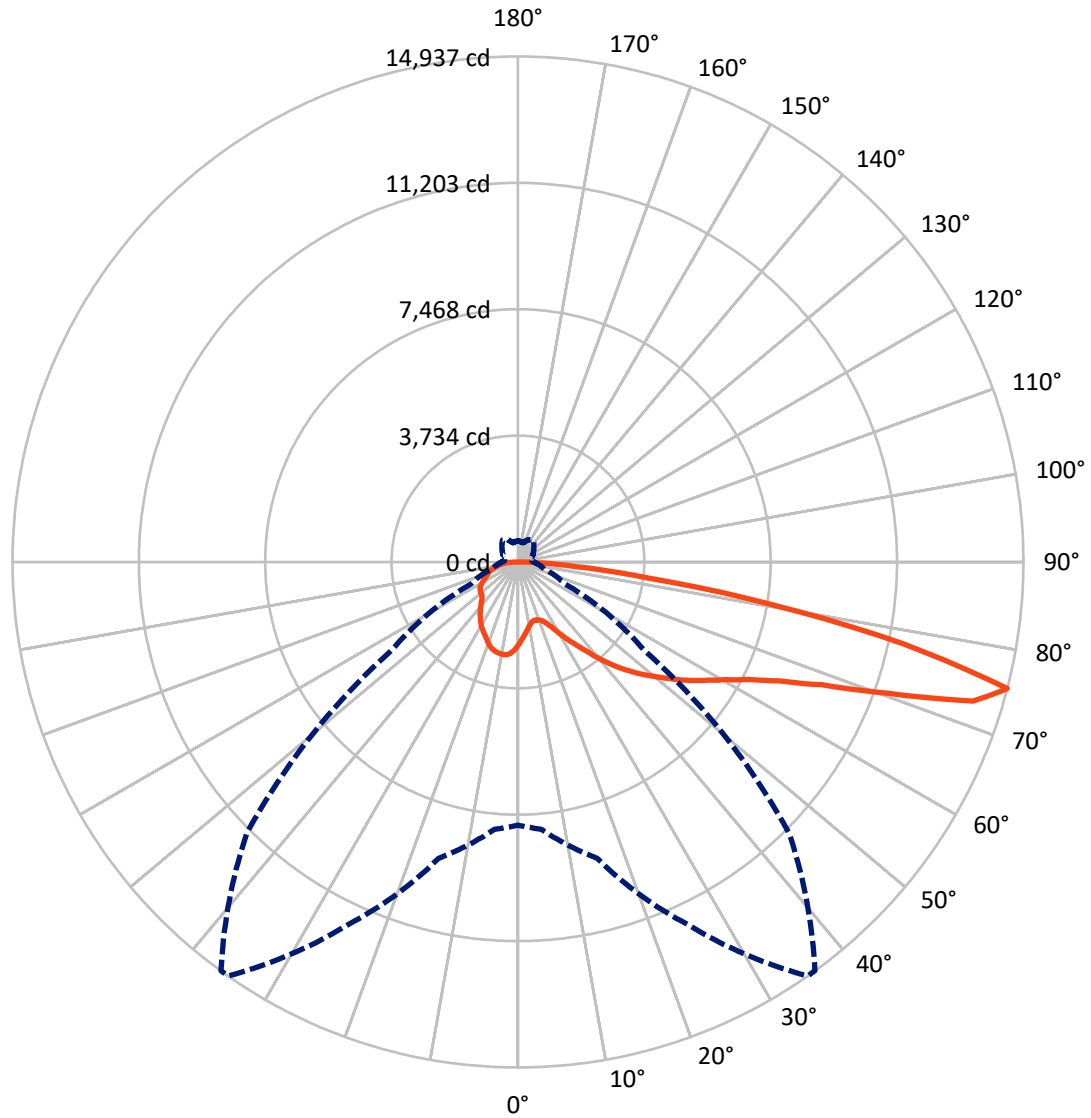
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4361.1	0.0	4361.1
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	13964.9	0.0	13964.9
	% Fixture	76.2	0.0	76.2
Total	Lumens	18326.0	0.0	18326.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.2	1.3
10°-20°	666.9	3.6
20°-30°	1119.9	6.1
30°-40°	1740.5	9.5
40°-50°	2583.4	14.1
50°-60°	3566.6	19.5
60°-70°	4327.1	23.6
70°-80°	3576.0	19.5
80°-90°	514.3	2.8
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°	18326.0	100.0
0°-180°	18326.0	100.0

Coefficient of Utilization



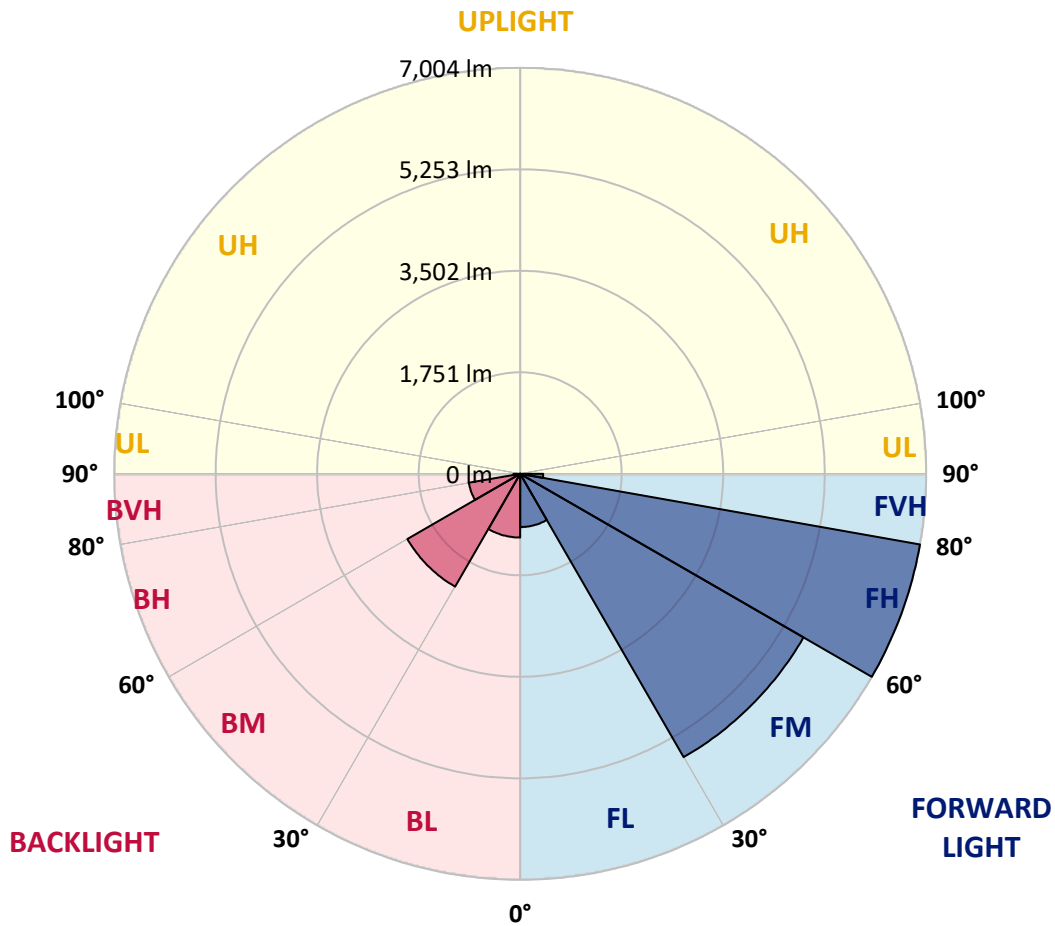
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	919.0	5.0			
FM (30°-60°)	5643.4	30.8			
FH (60°-80°)	7003.9	38.2			G3/7500
FVH (80°-90°)	398.5	2.2			G3/500
BL (0°-30°)	1099.1	6.0	B3/2500		
BM (30°-60°)	2247.1	12.3	B2/2500		
BH (60°-80°)	899.1	4.9	B2/1000		G2/1000
BVH (80°-90°)	115.8	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1
2.5°	2251.9	2265.7	2271.7	2268.7	2283.6	2281.6	2302.4	2328.1	2363.8	2398.5	2449.0
5°	2078.5	2093.3	2106.2	2118.1	2146.8	2155.8	2188.4	2238.0	2303.4	2369.7	2453.0
7.5°	1917.0	1929.9	1949.7	1971.5	2020.0	2028.9	2083.4	2160.7	2251.9	2348.9	2463.9
10°	1785.2	1798.1	1818.9	1843.7	1904.1	1915.0	1984.4	2087.4	2206.3	2329.1	2475.7
12.5°	1728.8	1732.7	1744.6	1769.4	1821.9	1828.8	1905.1	2023.0	2161.7	2314.3	2493.6
15°	1725.8	1733.7	1734.7	1747.6	1791.2	1794.1	1864.5	1981.4	2134.0	2311.3	2520.3
17.5°	1755.5	1761.5	1752.5	1760.5	1797.1	1802.1	1857.6	1961.6	2125.0	2324.2	2565.9
20°	1834.8	1839.7	1813.0	1802.1	1828.8	1832.8	1887.3	1974.5	2134.0	2350.9	2628.3
22.5°	2003.2	2006.2	1940.8	1896.2	1898.2	1900.2	1947.7	2027.0	2168.6	2399.5	2707.6
25°	2265.7	2263.7	2159.7	2073.5	2024.0	2013.1	2044.8	2112.2	2227.1	2463.9	2809.6
27.5°	2572.8	2558.0	2454.0	2325.2	2217.2	2201.3	2194.4	2223.1	2310.3	2549.1	2934.4
30°	2919.6	2905.7	2793.8	2625.3	2475.7	2450.0	2384.6	2369.7	2434.1	2665.0	3107.8
32.5°	3300.0	3291.1	3157.3	2953.3	2753.1	2723.4	2613.5	2573.8	2624.4	2840.3	3349.5
35°	3619.0	3611.1	3500.1	3290.1	3045.4	3008.7	2896.8	2852.2	2878.0	3065.2	3665.6
37.5°	3907.3	3903.3	3808.2	3642.8	3390.2	3345.6	3219.8	3204.9	3199.9	3361.4	4049.0
40°	4174.8	4164.9	4065.8	3978.6	3791.4	3750.8	3639.8	3626.9	3589.3	3726.0	4482.9
42.5°	4471.0	4445.2	4301.6	4261.0	4210.5	4176.8	4110.4	4112.4	4029.2	4137.1	4942.6
45°	4712.7	4697.9	4550.3	4526.5	4581.0	4567.1	4624.6	4639.4	4477.9	4568.1	5420.1
47.5°	4972.3	4958.4	4833.6	4816.8	4964.4	4968.3	5171.4	5176.4	4915.8	5015.9	5898.6
50°	5292.3	5272.5	5148.6	5169.4	5334.9	5349.8	5721.3	5687.6	5319.0	5470.6	6373.1
52.5°	5503.3	5515.2	5488.5	5522.1	5748.0	5761.9	6262.2	6176.0	5718.3	5919.4	6838.8
55°	5658.9	5682.6	5765.8	5843.1	6183.9	6197.8	6772.4	6640.6	6049.2	6335.5	7276.7
57.5°	5859.0	5825.3	5980.8	6131.4	6598.0	6634.7	7268.7	7088.4	6342.4	6694.1	7576.8
60°	6146.3	6122.5	6243.4	6466.3	7061.7	7120.1	7793.8	7491.6	6557.4	6978.5	7635.3
62.5°	6728.8	6669.4	6688.2	6885.3	7646.2	7723.5	8386.2	7843.3	6664.4	7089.4	7322.2
65°	7599.6	7497.6	7402.5	7539.2	8469.5	8545.7	9055.0	8119.7	6624.8	6874.4	6491.0
67.5°	8696.3	8595.3	8478.4	8607.2	9682.1	9742.5	9880.2	8275.3	6312.7	6046.2	5021.8
70°	9600.8	9563.2	9702.9	10232.9	11618.9	11620.9	10938.3	8146.5	5457.7	4286.7	2905.7
72.5°	9481.0	9458.2	10194.3	11832.9	14059.9	14007.4	11939.9	7171.6	3676.5	1933.8	1088.8
75°	7777.9	7925.6	9065.9	11804.1	14936.7	14929.8	11326.6	4559.2	1520.7	801.5	562.7
77.5°	4170.8	4404.6	5885.7	8715.1	11660.5	11835.8	7963.2	1595.0	652.9	513.2	389.3
80°	1360.2	1564.3	2346.0	4437.3	7576.8	7544.1	3412.9	626.1	446.8	363.6	269.5
82.5°	577.6	601.4	1048.2	2095.3	3888.5	3828.0	1086.8	359.6	314.1	248.7	166.4
85°	225.9	252.6	462.7	968.9	1684.2	1647.5	392.3	178.3	201.1	162.5	99.1
87.5°	74.3	90.2	165.4	331.9	524.1	505.3	96.1	61.4	87.2	74.3	35.7
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°	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1	2442.1
2.5°	2462.9	2478.7	2497.5	2525.3	2549.1	2568.9	2589.7	2602.6	2607.5	2622.4	2621.4
5°	2480.7	2515.4	2561.9	2607.5	2652.1	2678.8	2702.6	2714.5	2725.4	2733.3	2735.3
7.5°	2510.4	2555.0	2628.3	2687.8	2725.4	2747.2	2763.0	2759.1	2763.0	2765.0	2768.0
10°	2536.2	2598.6	2685.8	2742.2	2771.0	2772.0	2768.0	2754.1	2747.2	2748.2	2750.2
12.5°	2566.9	2636.2	2730.4	2777.9	2785.8	2764.0	2747.2	2723.4	2714.5	2710.5	2708.6
15°	2608.5	2687.8	2778.9	2796.7	2776.9	2749.2	2720.4	2681.8	2662.0	2646.1	2651.1
17.5°	2659.0	2746.2	2816.5	2803.7	2761.1	2715.5	2668.9	2610.5	2569.9	2553.0	2554.0
20°	2729.4	2807.6	2845.3	2788.8	2724.4	2655.1	2575.8	2504.5	2466.8	2450.0	2448.0
22.5°	2814.6	2889.9	2873.0	2763.0	2671.9	2560.9	2461.9	2409.4	2390.5	2378.7	2380.6
25°	2916.6	2981.0	2892.8	2725.4	2585.7	2436.1	2359.8	2343.0	2334.1	2325.2	2325.2
27.5°	3049.4	3084.0	2907.7	2669.9	2451.0	2303.4	2275.6	2278.6	2275.6	2260.8	2263.7
30°	3224.7	3217.8	2921.6	2579.8	2296.4	2183.5	2185.5	2198.4	2200.3	2190.4	2195.4
32.5°	3455.5	3385.2	2928.5	2462.9	2148.8	2078.5	2080.5	2094.3	2104.2	2087.4	2095.3
35°	3734.9	3580.4	2917.6	2316.2	2034.9	1978.4	1963.6	1967.5	1970.5	1954.6	1965.5
37.5°	4060.9	3799.3	2869.1	2153.8	1940.8	1880.3	1848.6	1821.9	1806.0	1791.2	1801.1
40°	4418.5	4038.1	2779.9	1995.3	1835.8	1776.3	1728.8	1678.2	1624.7	1604.9	1613.8
42.5°	4793.0	4283.8	2671.9	1843.7	1714.9	1666.3	1615.8	1542.5	1462.3	1421.6	1426.6
45°	5181.3	4535.4	2565.9	1694.1	1591.1	1570.3	1511.8	1423.6	1336.4	1284.9	1281.0
47.5°	5561.8	4773.2	2410.4	1543.5	1475.1	1497.9	1452.4	1371.1	1274.0	1192.8	1183.9
50°	5925.3	4996.1	2155.8	1390.9	1381.0	1476.1	1432.5	1315.6	1204.7	1100.7	1091.7
52.5°	6286.0	5176.4	1829.8	1252.2	1330.5	1470.2	1406.8	1278.0	1142.3	1033.3	1021.4
55°	6592.1	5269.5	1515.8	1133.4	1257.2	1419.7	1376.1	1233.4	1054.1	938.2	928.3
57.5°	6766.4	5194.2	1254.2	1016.5	1156.1	1336.4	1323.6	1138.3	949.1	859.9	848.0
60°	6691.2	4889.1	1040.2	914.4	1060.0	1246.3	1232.4	1044.2	868.8	784.6	772.7
62.5°	6276.1	4307.5	870.8	825.2	972.9	1154.2	1141.3	971.9	807.4	726.2	713.3
65°	5439.9	3504.1	739.1	750.9	884.7	1043.2	1062.0	911.4	758.9	679.6	666.7
67.5°	4149.0	2538.2	636.0	686.6	798.5	934.2	988.7	867.8	718.3	643.0	631.1
70°	2364.8	1441.5	548.8	624.1	722.2	833.2	932.2	833.2	674.7	612.2	604.3
72.5°	896.6	661.8	474.5	561.7	648.9	748.0	869.8	778.7	624.1	577.6	569.6
75°	478.5	403.2	399.3	488.4	564.7	664.8	791.6	725.2	586.5	610.3	630.1
77.5°	325.9	285.3	333.9	418.1	472.6	572.6	708.3	644.0	508.2	506.2	466.6
80°	225.9	202.1	271.5	336.8	365.6	481.5	618.2	552.8	414.1	386.4	369.5
82.5°	135.7	131.8	203.1	251.6	258.6	371.5	512.2	463.6	338.8	295.2	297.2
85°	74.3	78.3	129.8	147.6	150.6	259.6	401.2	358.6	260.6	218.9	220.9
87.5°	20.8	26.7	47.6	58.5	72.3	134.7	238.8	213.0	130.8	91.1	91.1
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)