

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: P966159

Luminaire Tested: **NAV-SB4B-735-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966159
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-735-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22863.7 lumens
Efficiency: N/A
Efficacy: 155.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 147
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

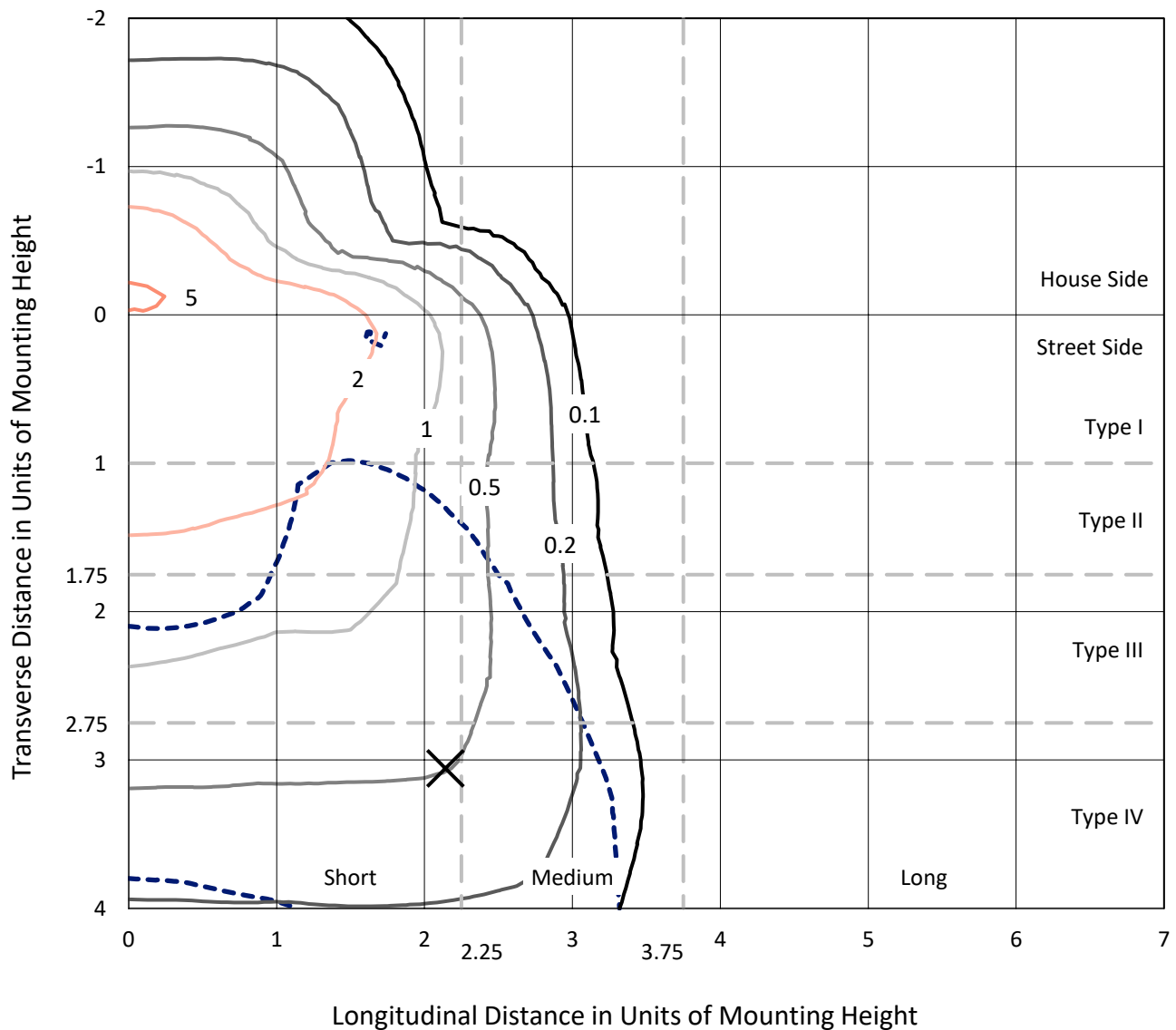


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Iso-Footcandle Lines of Horizontal Illumination

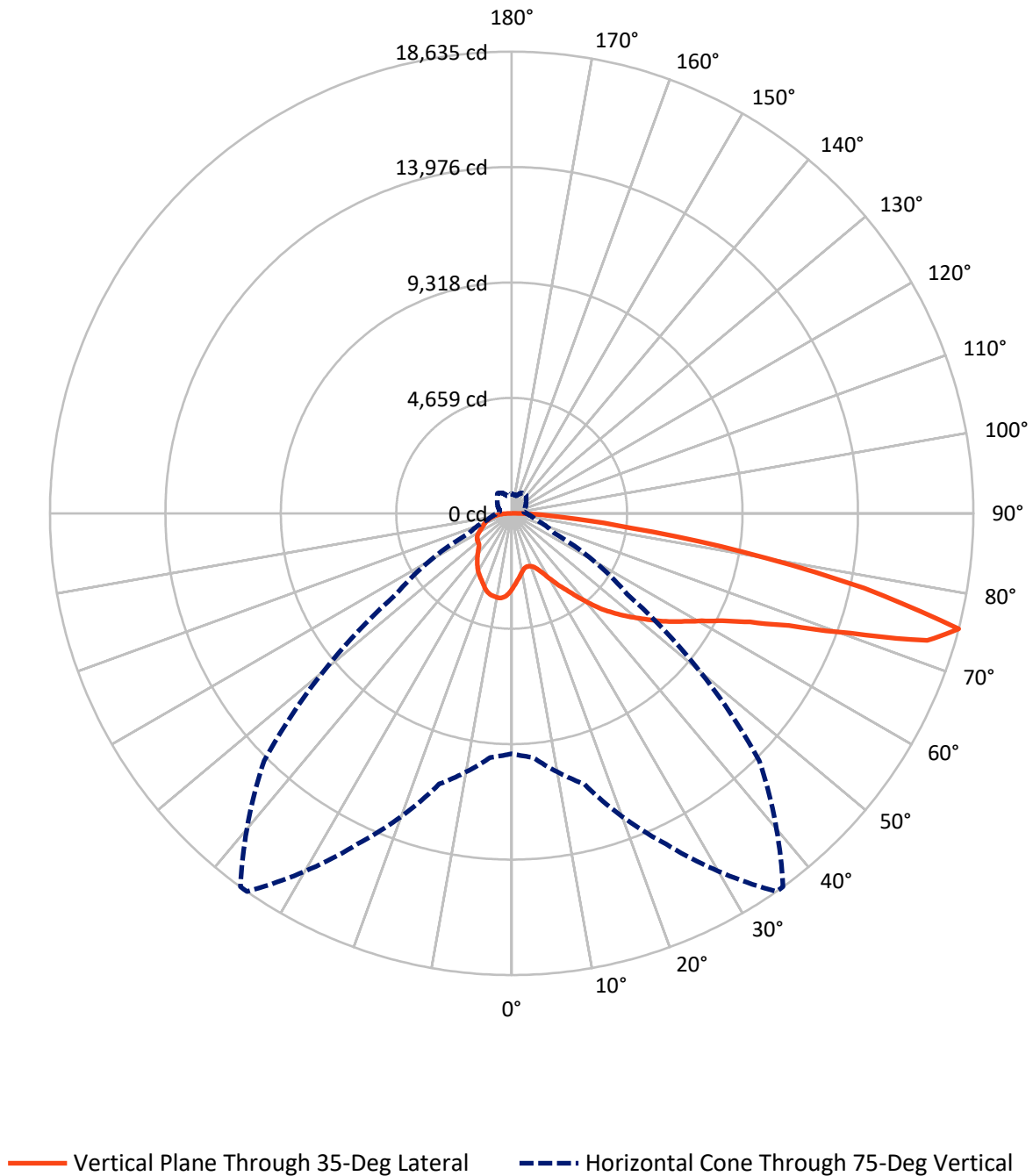
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 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	5441.0	0.0	5441.0
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	17422.7	0.0	17422.7
	% Fixture	76.2	0.0	76.2
Total	Lumens	22863.7	0.0	22863.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.5	1.3
10°-20°	832.1	3.6
20°-30°	1397.2	6.1
30°-40°	2171.5	9.5
40°-50°	3223.1	14.1
50°-60°	4449.7	19.5
60°-70°	5398.5	23.6
70°-80°	4461.4	19.5
80°-90°	641.7	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°	22863.7	100.0
0°-180°	22863.7	100.0

Coefficient of Utilization



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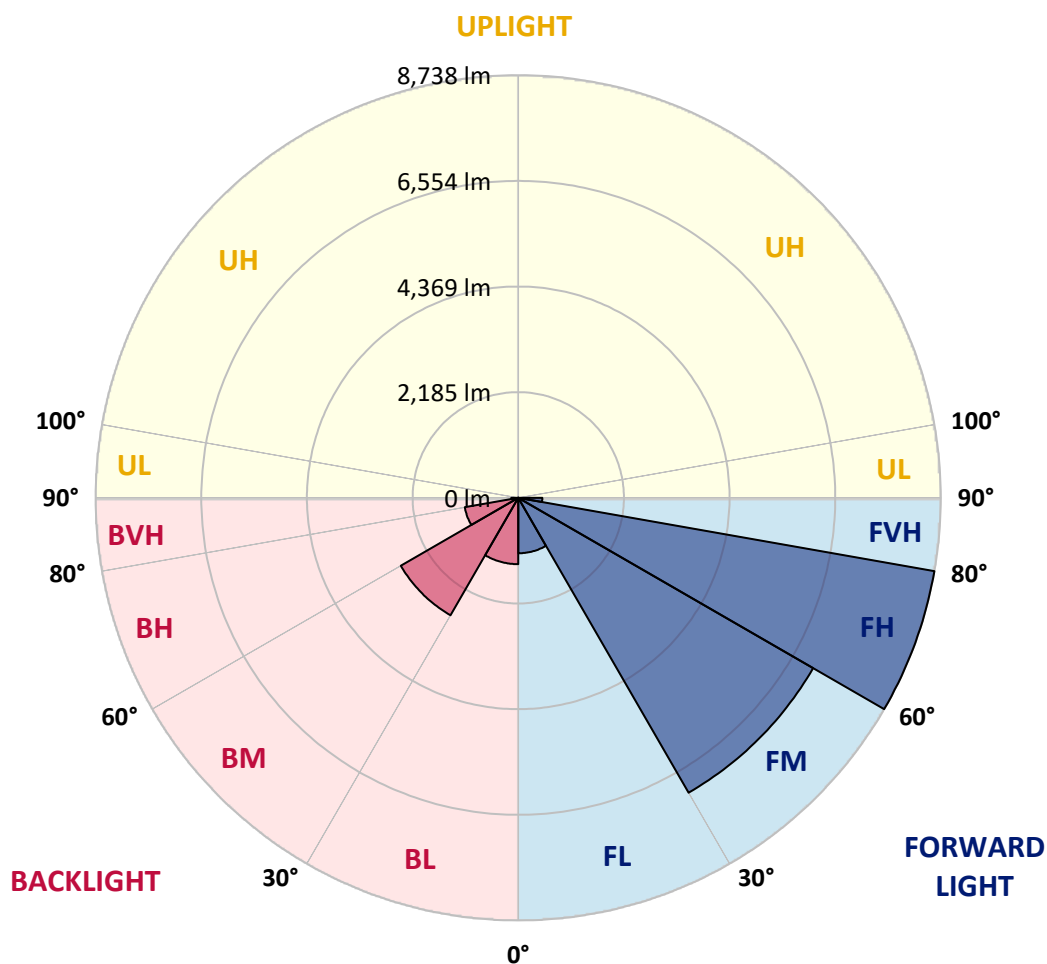
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1146.6	5.0			
FM	(30°-60°)	7040.8	30.8			
FH	(60°-80°)	8738.1	38.2			G4/12000
FVH	(80°-90°)	497.2	2.2			G3/500
BL	(0°-30°)	1371.2	6.0	B3/2500		
BM	(30°-60°)	2803.5	12.3	B3/5000		
BH	(60°-80°)	1121.8	4.9	B3/2500		G3/2500
BVH	(80°-90°)	144.5	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7
2.5°	2809.4	2826.7	2834.1	2830.4	2849.0	2846.5	2872.5	2904.6	2949.1	2992.4	3055.4
5°	2593.1	2611.7	2627.7	2642.6	2678.4	2689.5	2730.3	2792.1	2873.7	2956.5	3060.3
7.5°	2391.6	2407.7	2432.4	2459.6	2520.2	2531.3	2599.3	2695.7	2809.4	2930.6	3074.0
10°	2227.2	2243.3	2269.2	2300.2	2375.5	2389.2	2475.7	2604.2	2752.5	2905.9	3088.7
12.5°	2156.8	2161.7	2176.6	2207.5	2273.0	2281.6	2376.9	2523.9	2697.0	2887.3	3111.0
15°	2153.1	2163.0	2164.2	2180.3	2234.7	2238.4	2326.1	2472.0	2662.3	2883.6	3144.4
17.5°	2190.2	2197.6	2186.5	2196.4	2242.1	2248.2	2317.5	2447.3	2651.3	2899.6	3201.3
20°	2289.0	2295.3	2261.9	2248.2	2281.6	2286.6	2354.5	2463.4	2662.3	2933.0	3279.1
22.5°	2499.2	2502.9	2421.4	2365.7	2368.2	2370.6	2430.0	2528.9	2705.6	2993.6	3378.0
25°	2826.7	2824.3	2694.5	2586.9	2525.2	2511.6	2551.1	2635.2	2778.6	3074.0	3505.3
27.5°	3209.9	3191.3	3061.6	2900.9	2766.2	2746.4	2737.8	2773.5	2882.3	3180.3	3661.0
30°	3642.4	3625.2	3485.5	3275.4	3088.7	3056.7	2975.1	2956.5	3036.9	3324.8	3877.4
32.5°	4117.1	4105.9	3939.2	3684.5	3434.9	3397.8	3260.5	3211.1	3274.2	3543.6	4178.9
35°	4515.1	4505.2	4366.8	4104.7	3799.5	3753.8	3614.0	3558.4	3590.6	3824.2	4573.2
37.5°	4874.8	4869.9	4751.2	4544.7	4229.6	4174.0	4017.0	3998.4	3992.3	4193.8	5051.5
40°	5208.5	5196.1	5072.5	4963.8	4730.2	4679.5	4541.1	4525.0	4478.0	4648.6	5592.9
42.5°	5578.0	5546.0	5366.7	5316.1	5253.0	5211.0	5128.2	5130.6	5026.8	5161.5	6166.4
45°	5879.6	5861.2	5677.0	5647.2	5715.3	5698.0	5769.6	5788.2	5586.8	5699.2	6762.1
47.5°	6203.5	6186.2	6030.5	6009.5	6193.6	6198.5	6451.9	6458.1	6133.0	6257.8	7359.1
50°	6602.7	6577.9	6423.5	6449.4	6655.8	6674.4	7137.9	7095.9	6636.1	6825.2	7951.1
52.5°	6866.0	6880.8	6847.4	6889.4	7171.3	7188.5	7812.8	7705.2	7134.2	7385.1	8532.1
55°	7060.0	7089.7	7193.6	7289.9	7715.1	7732.4	8449.3	8284.9	7547.0	7904.2	9078.4
57.5°	7309.7	7267.7	7461.7	7649.6	8231.8	8277.5	9068.5	8843.6	7912.9	8351.6	9453.0
60°	7668.1	7638.5	7789.3	8067.4	8810.2	8883.2	9723.6	9346.7	8181.0	8706.3	9525.8
62.5°	8394.9	8320.7	8344.2	8590.2	9539.5	9635.8	10462.7	9785.4	8314.6	8844.8	9135.3
65°	9481.4	9354.0	9235.4	9405.9	10566.5	10661.7	11297.0	10130.3	8265.1	8576.6	8098.2
67.5°	10849.6	10723.6	10577.7	10738.3	12079.4	12154.8	12326.6	10324.3	7875.8	7543.3	6265.3
70°	11978.0	11931.1	12105.4	12766.6	14495.8	14498.2	13646.6	10163.6	6809.1	5348.1	3625.2
72.5°	11828.5	11800.1	12718.4	14762.8	17541.3	17475.7	14896.2	8947.4	4586.8	2412.6	1358.3
75°	9703.8	9888.0	11310.7	14726.9	18635.1	18626.5	14131.2	5688.0	1897.3	999.9	702.0
77.5°	5203.5	5495.2	7343.1	10873.1	14547.7	14766.5	9934.9	1989.9	814.6	640.2	485.7
80°	1697.0	1951.6	2926.9	5536.0	9453.0	9412.2	4258.1	781.2	557.4	453.6	336.2
82.5°	720.6	750.3	1307.7	2614.2	4851.3	4775.9	1355.9	448.6	391.9	310.3	207.7
85°	281.8	315.2	577.2	1208.8	2101.1	2055.4	489.4	222.5	250.9	202.7	123.6
87.5°	92.7	112.4	206.4	414.1	653.8	630.4	119.9	76.7	108.8	92.7	44.5
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°	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7	3046.7
2.5°	3072.6	3092.4	3116.0	3150.5	3180.3	3205.0	3230.9	3247.0	3253.1	3271.7	3270.5
5°	3095.0	3138.2	3196.3	3253.1	3308.8	3342.1	3371.8	3386.6	3400.2	3410.1	3412.6
7.5°	3132.0	3187.6	3279.1	3353.3	3400.2	3427.4	3447.2	3442.3	3447.2	3449.6	3453.4
10°	3164.2	3242.1	3350.8	3421.2	3457.1	3458.4	3453.4	3436.1	3427.4	3428.6	3431.1
12.5°	3202.5	3289.0	3406.4	3465.7	3475.7	3448.4	3427.4	3397.8	3386.6	3381.7	3379.2
15°	3254.4	3353.3	3467.0	3489.2	3464.5	3429.9	3394.1	3345.8	3321.1	3301.3	3307.6
17.5°	3317.4	3426.2	3513.9	3497.9	3444.7	3387.8	3329.8	3256.8	3206.2	3185.2	3186.4
20°	3405.2	3502.8	3549.8	3479.4	3399.0	3312.5	3213.6	3124.6	3077.7	3056.7	3054.2
22.5°	3511.4	3605.4	3584.4	3447.2	3333.5	3195.0	3071.4	3005.9	2982.4	2967.7	2970.1
25°	3638.7	3719.1	3609.1	3400.2	3226.0	3039.3	2944.1	2923.1	2912.0	2900.9	2900.9
27.5°	3804.4	3847.6	3627.7	3331.0	3057.9	2873.7	2839.0	2842.8	2839.0	2820.6	2824.3
30°	4023.1	4014.5	3645.0	3218.5	2865.1	2724.1	2726.6	2742.7	2745.2	2732.8	2739.0
32.5°	4311.2	4223.4	3653.6	3072.6	2680.9	2593.1	2595.6	2612.9	2625.2	2604.2	2614.2
35°	4659.8	4466.8	3640.0	2889.8	2538.7	2468.3	2449.8	2454.7	2458.4	2438.6	2452.2
37.5°	5066.4	4740.0	3579.4	2687.0	2421.4	2345.9	2306.4	2273.0	2253.3	2234.7	2247.0
40°	5512.6	5038.0	3468.2	2489.3	2290.3	2216.2	2156.8	2093.8	2027.0	2002.3	2013.4
42.5°	5979.7	5344.5	3333.5	2300.2	2139.5	2078.9	2015.9	1924.4	1824.3	1773.7	1779.8
45°	6464.3	5658.4	3201.3	2113.5	1985.0	1959.1	1886.1	1776.1	1667.4	1603.1	1598.2
47.5°	6938.9	5955.0	3007.1	1925.7	1840.4	1868.8	1812.0	1710.6	1589.5	1488.1	1477.0
50°	7392.5	6233.1	2689.5	1735.3	1723.0	1841.6	1787.3	1641.4	1503.0	1373.2	1362.0
52.5°	7842.4	6458.1	2282.9	1562.3	1660.0	1834.2	1755.1	1594.4	1425.1	1289.1	1274.3
55°	8224.3	6574.2	1891.1	1414.0	1568.5	1771.2	1716.8	1538.8	1315.1	1170.4	1158.1
57.5°	8441.9	6480.4	1564.8	1268.1	1442.4	1667.4	1651.3	1420.1	1184.1	1072.9	1058.0
60°	8347.9	6099.7	1297.8	1140.8	1322.6	1554.9	1537.6	1302.8	1083.9	978.9	964.1
62.5°	7830.1	5374.1	1086.4	1029.6	1213.7	1439.9	1423.8	1212.5	1007.4	906.0	889.9
65°	6786.8	4371.7	922.1	936.8	1103.7	1301.5	1325.0	1137.1	946.8	847.9	831.8
67.5°	5176.4	3166.6	793.6	856.6	996.2	1165.5	1233.5	1082.7	896.1	802.2	787.3
70°	2950.4	1798.4	684.7	778.7	901.1	1039.5	1163.1	1039.5	841.7	763.8	754.0
72.5°	1118.6	825.6	592.0	700.8	809.5	933.2	1085.2	971.5	778.7	720.6	710.7
75°	597.0	503.1	498.2	609.4	704.5	829.3	987.6	904.8	731.7	761.4	786.1
77.5°	406.6	356.0	416.6	521.6	589.6	714.4	883.8	803.4	634.1	631.6	582.2
80°	281.8	252.2	338.7	420.2	456.1	600.6	771.3	689.7	516.6	482.1	461.0
82.5°	169.3	164.4	253.4	314.0	322.6	463.5	639.0	578.4	422.7	368.3	370.8
85°	92.7	97.7	162.0	184.2	187.9	323.8	500.6	447.4	325.0	273.2	275.6
87.5°	25.9	33.4	59.3	72.9	90.2	168.1	297.9	265.8	163.2	113.7	113.7
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)