

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: P884491

Luminaire Tested: **NAV-SB5B-827-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884491
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-SB5B-827-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 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: 22946 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

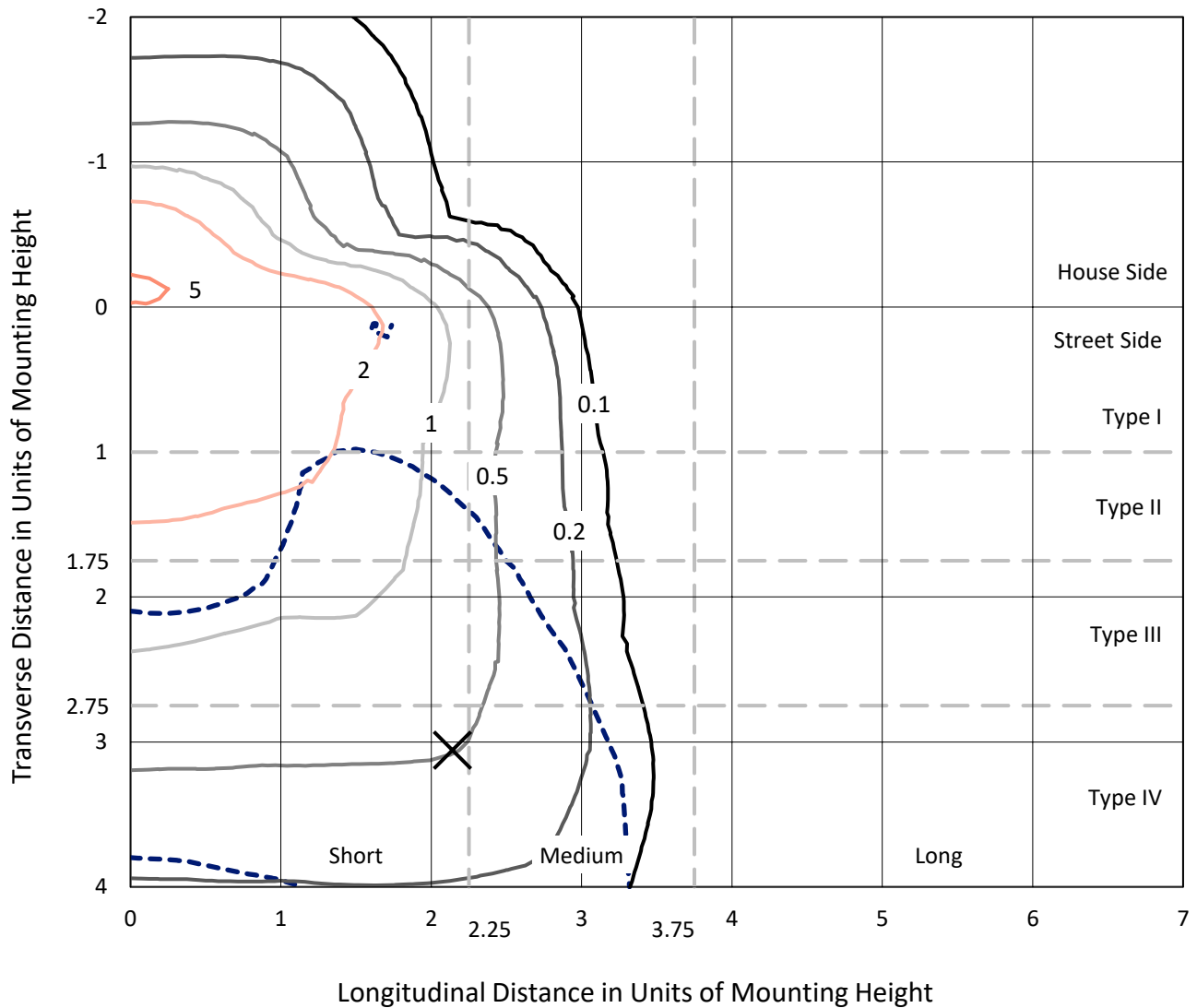
Input Watts (W): 182.7
Input Voltage (V): 120.0
Input Current (Ain): 1.547
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 11.125
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

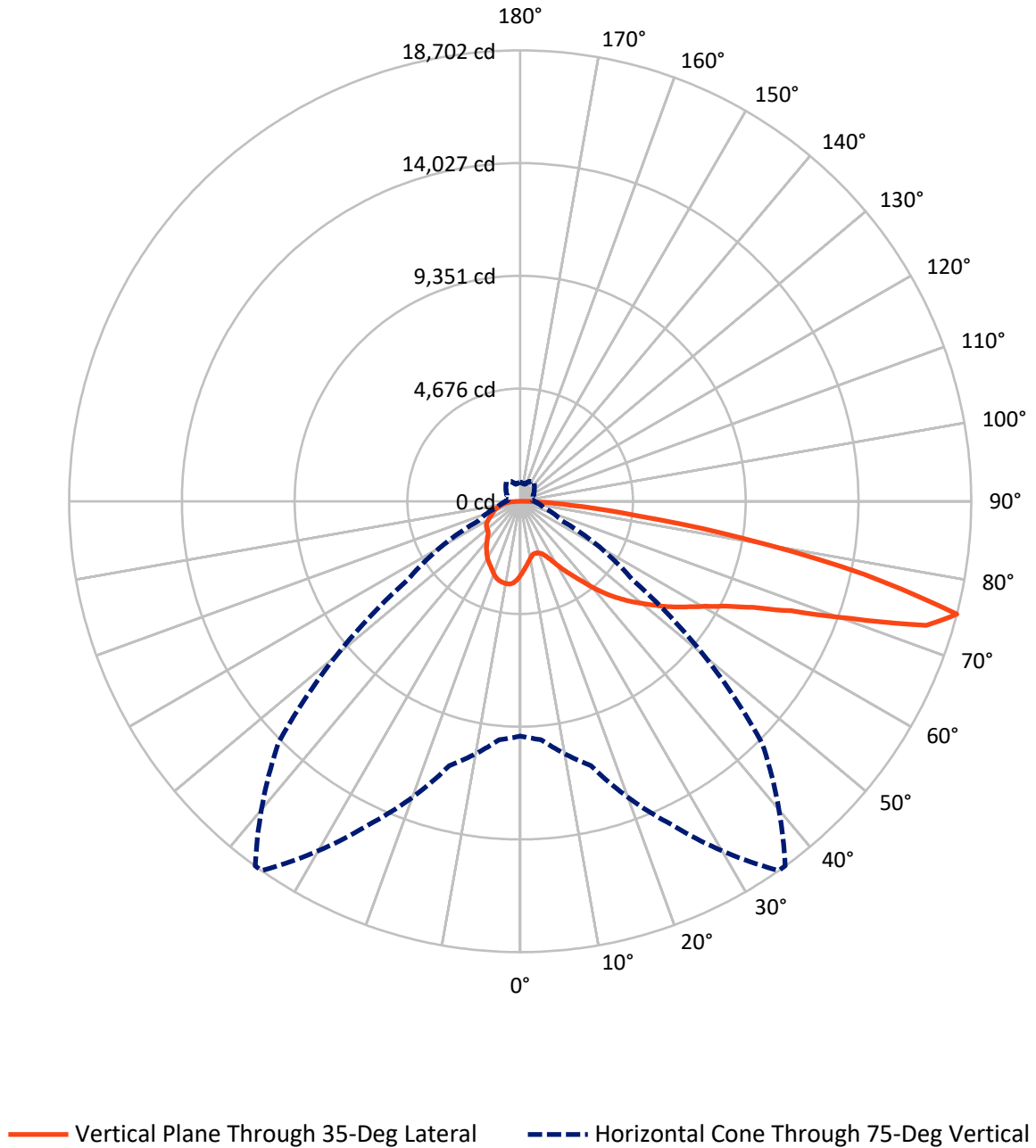
× Max cd
 - - - 1/2 Max cd



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	5460.6	0.0	5460.6
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	17485.4	0.0	17485.4
	% Fixture	76.2	0.0	76.2
Total	Lumens	22946.0	0.0	22946.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.5	1.3
10°-20°	835.1	3.6
20°-30°	1402.3	6.1
30°-40°	2179.3	9.5
40°-50°	3234.7	14.1
50°-60°	4465.7	19.5
60°-70°	5417.9	23.6
70°-80°	4477.5	19.5
80°-90°	644.0	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°	22946.0	100.0
0°-180°	22946.0	100.0

Coefficient of Utilization



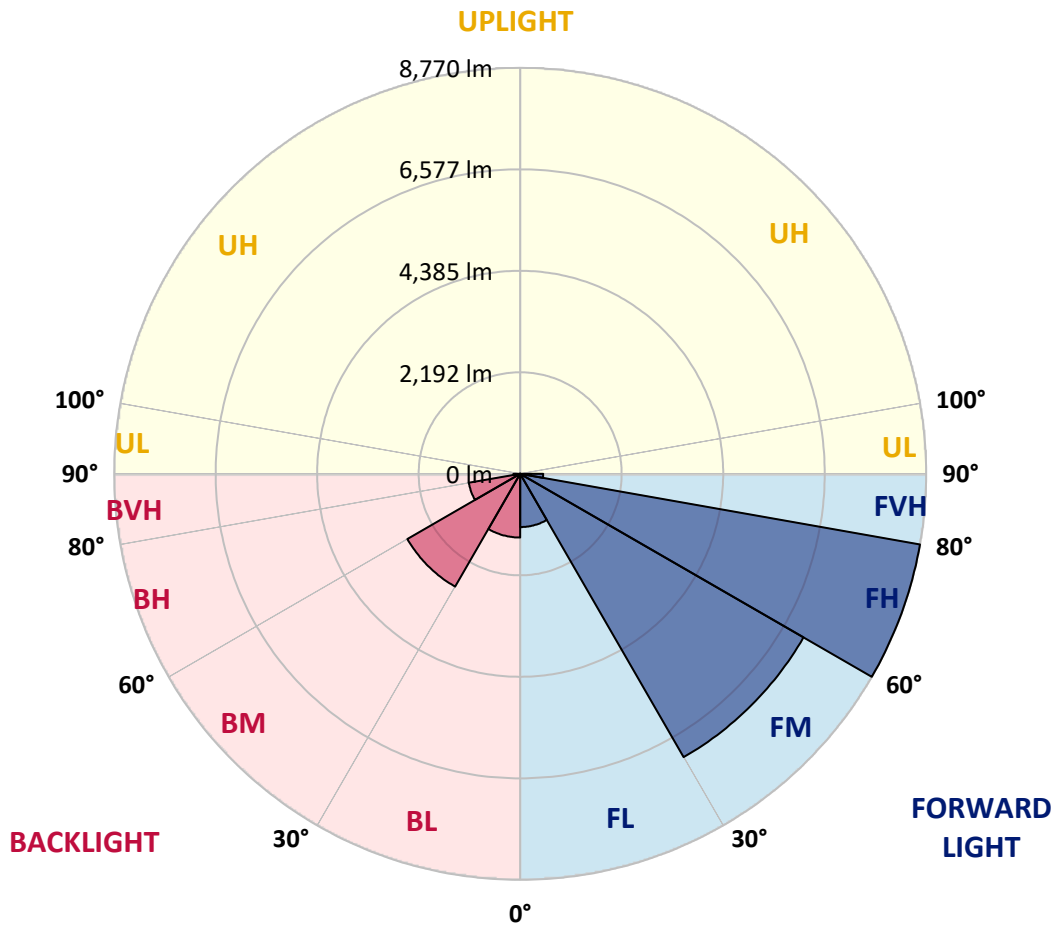
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1150.7	5.0			
FM (30°-60°)	7066.1	30.8			
FH (60°-80°)	8769.6	38.2			G4/12000
FVH (80°-90°)	499.0	2.2			G3/500
BL (0°-30°)	1376.1	6.0	B3/2500		
BM (30°-60°)	2813.6	12.3	B3/5000		
BH (60°-80°)	1125.8	4.9	B3/2500		G3/2500
BVH (80°-90°)	145.0	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°	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7
2.5°	2819.5	2836.9	2844.4	2840.6	2859.2	2856.8	2882.8	2915.1	2959.7	3003.1	3066.4
5°	2602.5	2621.1	2637.2	2652.1	2688.1	2699.2	2740.2	2802.2	2884.0	2967.2	3071.4
7.5°	2400.3	2416.4	2441.2	2468.5	2529.3	2540.4	2608.7	2705.4	2819.5	2941.1	3085.0
10°	2235.3	2251.4	2277.5	2308.5	2384.1	2397.8	2484.6	2613.6	2762.5	2916.3	3099.9
12.5°	2164.6	2169.5	2184.4	2215.4	2281.2	2289.9	2385.4	2533.0	2706.7	2897.7	3122.2
15°	2160.9	2170.8	2172.0	2188.2	2242.7	2246.5	2334.5	2480.9	2671.9	2894.0	3155.7
17.5°	2198.1	2205.5	2194.4	2204.3	2250.2	2256.4	2325.8	2456.1	2660.8	2910.1	3212.8
20°	2297.3	2303.5	2270.0	2256.4	2289.9	2294.8	2363.1	2472.2	2671.9	2943.6	3290.9
22.5°	2508.2	2511.9	2430.0	2374.2	2376.7	2379.2	2438.7	2538.0	2715.3	3004.4	3390.2
25°	2836.9	2834.4	2704.2	2596.3	2534.2	2520.6	2560.3	2644.6	2788.5	3085.0	3517.9
27.5°	3221.4	3202.8	3072.6	2911.3	2776.1	2756.3	2747.6	2783.6	2892.7	3191.7	3674.2
30°	3655.6	3638.2	3498.1	3287.2	3099.9	3067.6	2985.8	2967.2	3047.8	3336.8	3891.3
32.5°	4131.9	4120.8	3953.3	3697.8	3447.2	3410.0	3272.3	3222.7	3286.0	3556.4	4194.0
35°	4531.4	4521.4	4382.5	4119.5	3813.1	3767.2	3627.1	3571.3	3603.5	3838.0	4589.7
37.5°	4892.3	4887.4	4768.3	4561.1	4244.8	4189.0	4031.5	4012.9	4006.7	4208.8	5069.7
40°	5227.3	5214.9	5090.8	4981.6	4747.2	4696.3	4557.4	4541.3	4494.2	4665.3	5613.0
42.5°	5598.2	5565.9	5386.0	5335.2	5271.9	5229.7	5146.6	5149.1	5044.9	5180.1	6188.6
45°	5900.8	5882.2	5697.4	5667.6	5735.8	5718.5	5790.4	5809.0	5606.8	5719.7	6786.5
47.5°	6225.8	6208.5	6052.2	6031.1	6215.9	6220.9	6475.2	6481.4	6155.1	6280.4	7385.6
50°	6626.5	6601.7	6446.6	6472.7	6679.8	6698.4	7163.6	7121.4	6660.0	6849.8	7979.8
52.5°	6890.7	6905.6	6872.1	6914.3	7197.1	7214.5	7840.9	7733.0	7159.9	7411.7	8562.8
55°	7085.5	7115.2	7219.4	7316.2	7742.9	7760.3	8479.7	8314.7	7574.2	7932.7	9111.1
57.5°	7336.0	7293.8	7488.6	7677.1	8261.4	8307.3	9101.2	8875.4	7941.4	8381.7	9487.0
60°	7695.8	7666.0	7817.3	8096.4	8841.9	8915.1	9758.6	9380.3	8210.5	8737.7	9560.1
62.5°	8425.1	8350.7	8374.3	8621.1	9573.8	9670.5	10500.4	9820.6	8344.5	8876.7	9168.2
65°	9515.5	9387.7	9268.6	9439.8	10604.6	10700.1	11337.7	10166.7	8294.9	8607.5	8127.4
67.5°	10888.7	10762.1	10615.8	10777.0	12122.9	12198.6	12371.0	10361.5	7904.1	7570.5	6287.8
70°	12021.2	11974.1	12149.0	12812.6	14548.0	14550.5	13695.8	10200.2	6833.6	5367.4	3638.2
72.5°	11871.1	11842.6	12764.2	14815.9	17604.5	17538.7	14949.9	8979.6	4603.3	2421.4	1363.3
75°	9738.8	9923.6	11351.4	14780.0	18702.3	18693.6	14182.1	5708.6	1904.1	1003.5	704.6
77.5°	5222.3	5515.0	7369.5	10912.2	14600.1	14819.7	9970.7	1997.1	817.5	642.6	487.5
80°	1703.1	1958.7	2937.4	5556.0	9487.0	9446.0	4273.4	784.0	559.4	455.2	337.4
82.5°	723.2	753.0	1312.4	2623.6	4868.8	4793.1	1360.8	450.3	393.2	311.4	208.4
85°	282.8	316.3	579.3	1213.2	2108.8	2062.9	491.2	223.3	251.8	203.4	124.0
87.5°	93.0	112.9	207.2	415.6	656.2	632.6	120.3	76.9	109.2	93.0	44.7
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°	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7	3057.7
2.5°	3083.8	3103.6	3127.2	3161.9	3191.7	3216.5	3242.5	3258.7	3264.9	3283.5	3282.2
5°	3106.1	3149.5	3207.8	3264.9	3320.7	3354.2	3383.9	3398.8	3412.5	3422.4	3424.9
7.5°	3143.3	3199.1	3290.9	3365.3	3412.5	3439.8	3459.6	3454.7	3459.6	3462.1	3465.8
10°	3175.6	3253.7	3362.9	3433.6	3469.5	3470.8	3465.8	3448.5	3439.8	3441.0	3443.5
12.5°	3214.0	3300.8	3418.7	3478.2	3488.1	3460.9	3439.8	3410.0	3398.8	3393.9	3391.4
15°	3266.1	3365.3	3479.5	3501.8	3477.0	3442.2	3406.3	3357.9	3333.1	3313.2	3319.4
17.5°	3329.4	3438.5	3526.6	3510.5	3457.1	3400.1	3341.8	3268.6	3217.7	3196.6	3197.9
20°	3417.4	3515.4	3562.6	3491.9	3411.2	3324.4	3225.2	3135.9	3088.7	3067.6	3065.2
22.5°	3524.1	3618.4	3597.3	3459.6	3345.5	3206.6	3082.5	3016.8	2993.2	2978.3	2980.8
25°	3651.9	3732.5	3622.1	3412.5	3237.6	3050.3	2954.8	2933.7	2922.5	2911.3	2911.3
27.5°	3818.1	3861.5	3640.7	3343.0	3068.9	2884.0	2849.3	2853.0	2849.3	2830.7	2834.4
30°	4037.7	4029.0	3658.1	3230.1	2875.4	2734.0	2736.4	2752.6	2755.0	2742.6	2748.8
32.5°	4326.7	4238.6	3666.8	3083.8	2690.5	2602.5	2604.9	2622.3	2634.7	2613.6	2623.6
35°	4676.5	4483.0	3653.1	2900.2	2547.9	2477.2	2458.6	2463.5	2467.3	2447.4	2461.1
37.5°	5084.6	4757.1	3592.3	2696.7	2430.0	2354.4	2314.7	2281.2	2261.3	2242.7	2255.1
40°	5532.4	5056.1	3480.7	2498.3	2298.6	2224.1	2164.6	2101.3	2034.3	2009.5	2020.7
42.5°	6001.3	5363.7	3345.5	2308.5	2147.2	2086.4	2023.2	1931.4	1830.9	1780.0	1786.2
45°	6487.6	5678.8	3212.8	2121.2	1992.2	1966.1	1892.9	1782.5	1673.4	1608.9	1603.9
47.5°	6963.9	5976.5	3018.0	1932.6	1847.0	1875.6	1818.5	1716.8	1595.2	1493.5	1482.3
50°	7419.1	6255.6	2699.2	1741.6	1729.2	1848.3	1793.7	1647.3	1508.4	1378.1	1367.0
52.5°	7870.7	6481.4	2291.1	1567.9	1665.9	1840.8	1761.4	1600.2	1430.2	1293.8	1278.9
55°	8254.0	6598.0	1897.9	1419.1	1574.1	1777.6	1723.0	1544.4	1319.8	1174.7	1162.3
57.5°	8472.3	6503.7	1570.4	1272.7	1447.6	1673.4	1657.2	1425.3	1188.4	1076.7	1061.8
60°	8378.0	6121.6	1302.5	1144.9	1327.3	1560.5	1543.1	1307.4	1087.9	982.4	967.6
62.5°	7858.3	5393.5	1090.4	1033.3	1218.1	1445.1	1429.0	1216.9	1011.0	909.2	893.1
65°	6811.3	4387.5	925.4	940.3	1107.7	1306.2	1329.8	1141.2	950.2	850.9	834.8
67.5°	5195.0	3178.0	796.4	859.6	999.8	1169.7	1238.0	1086.6	899.3	805.1	790.2
70°	2961.0	1804.9	687.2	781.5	904.3	1043.2	1167.3	1043.2	844.7	766.6	756.7
72.5°	1122.6	828.6	594.2	703.3	812.5	936.5	1089.1	975.0	781.5	723.2	713.3
75°	599.1	504.9	499.9	611.5	707.1	832.3	991.1	908.0	734.3	764.1	788.9
77.5°	408.1	357.2	418.0	523.5	591.7	717.0	886.9	806.3	636.4	633.9	584.3
80°	282.8	253.1	339.9	421.8	457.7	602.9	774.0	692.2	518.5	483.8	462.7
82.5°	169.9	165.0	254.3	315.1	323.8	465.2	641.3	580.5	424.2	369.7	372.1
85°	93.0	98.0	162.5	184.8	188.5	325.0	502.4	449.0	326.2	274.1	276.6
87.5°	26.0	33.5	59.5	73.2	90.6	168.7	298.9	266.7	163.7	114.1	114.1
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)