

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: P882761

Luminaire Tested: **NAV-SB2D-740-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882761
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-SB2D-740-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 4000K, 900mA 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: 22100 lumens
Efficiency: N/A
Efficacy: 149.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

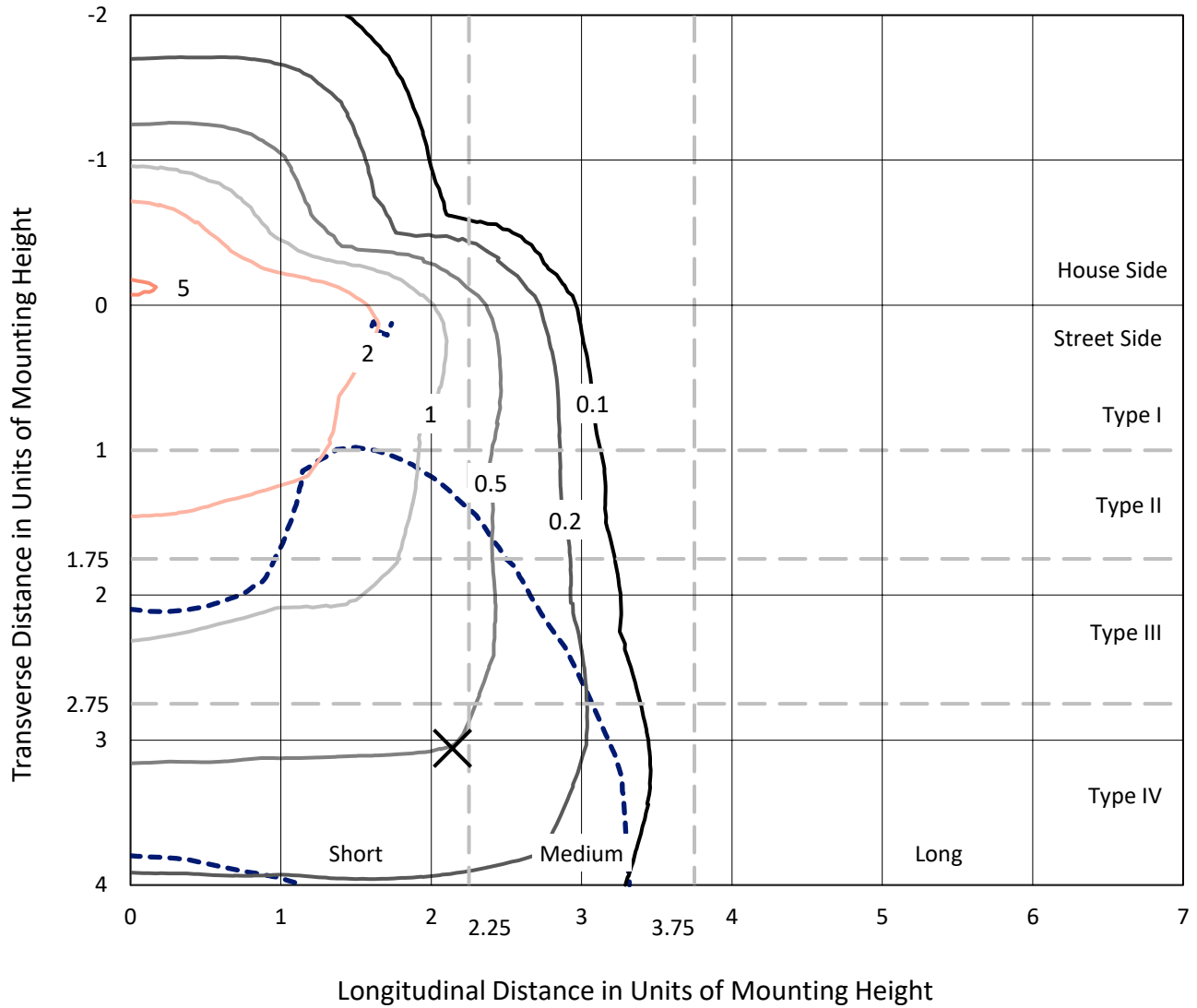
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

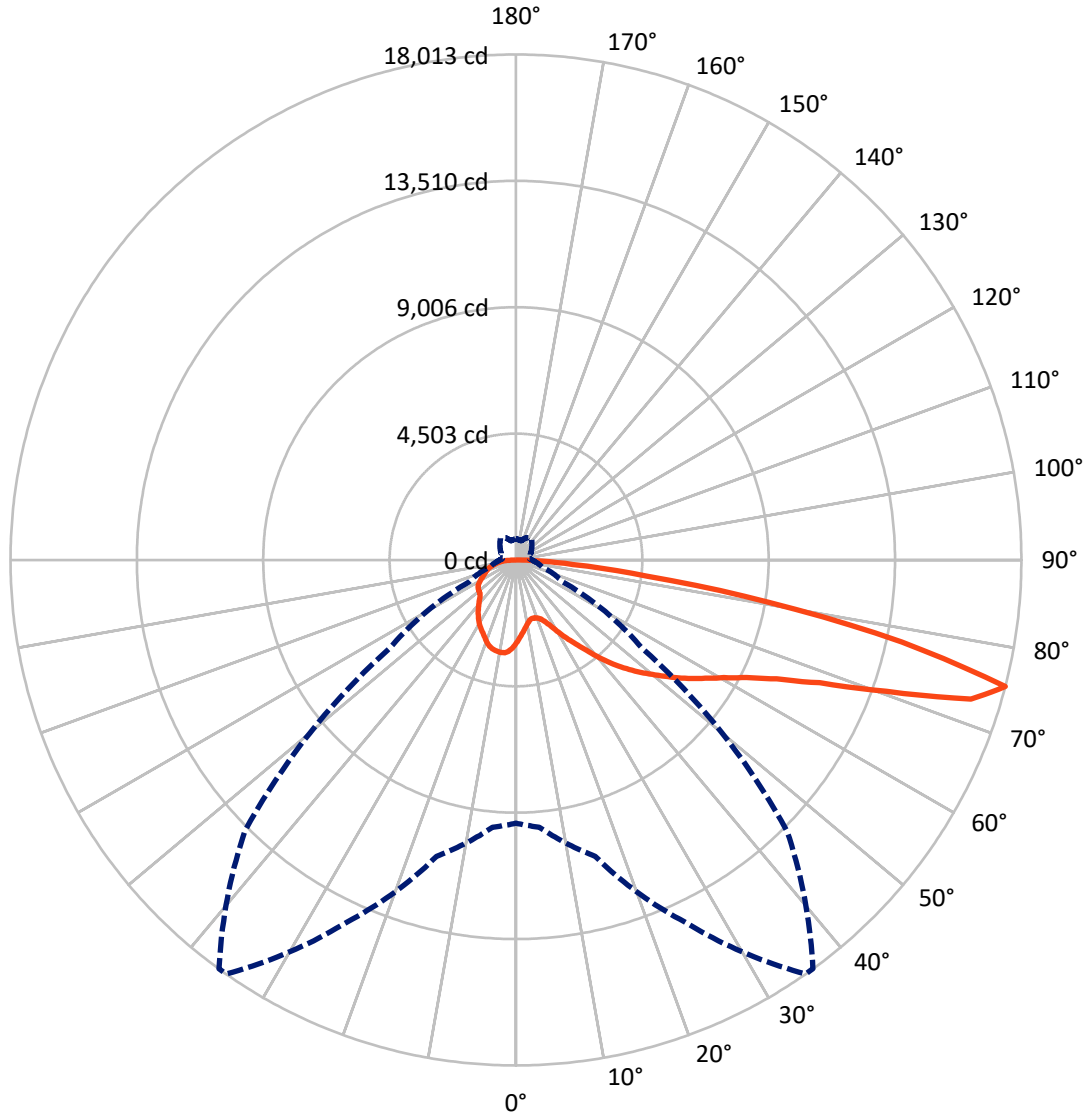
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 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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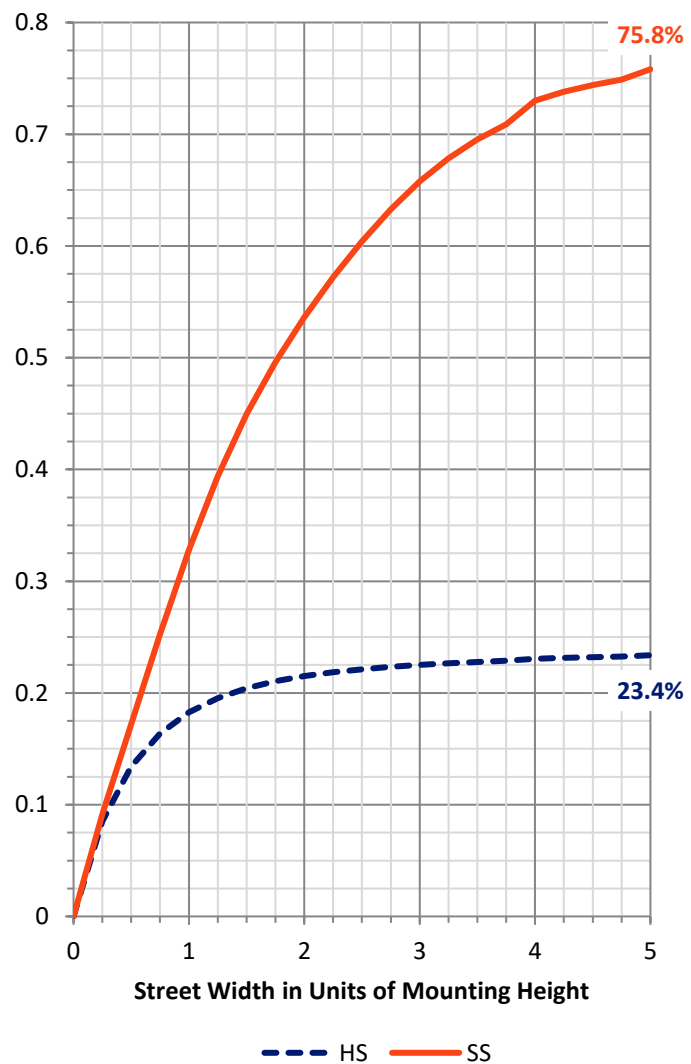
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5259.2	0.0	5259.2
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	16840.7	0.0	16840.7
	% Fixture	76.2	0.0	76.2
Total	Lumens	22100.0	0.0	22100.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.8	1.3
10°-20°	804.3	3.6
20°-30°	1350.6	6.1
30°-40°	2099.0	9.5
40°-50°	3115.4	14.1
50°-60°	4301.1	19.5
60°-70°	5218.2	23.6
70°-80°	4312.4	19.5
80°-90°	620.3	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°	22100.0	100.0
0°-180°	22100.0	100.0

Coefficient of Utilization



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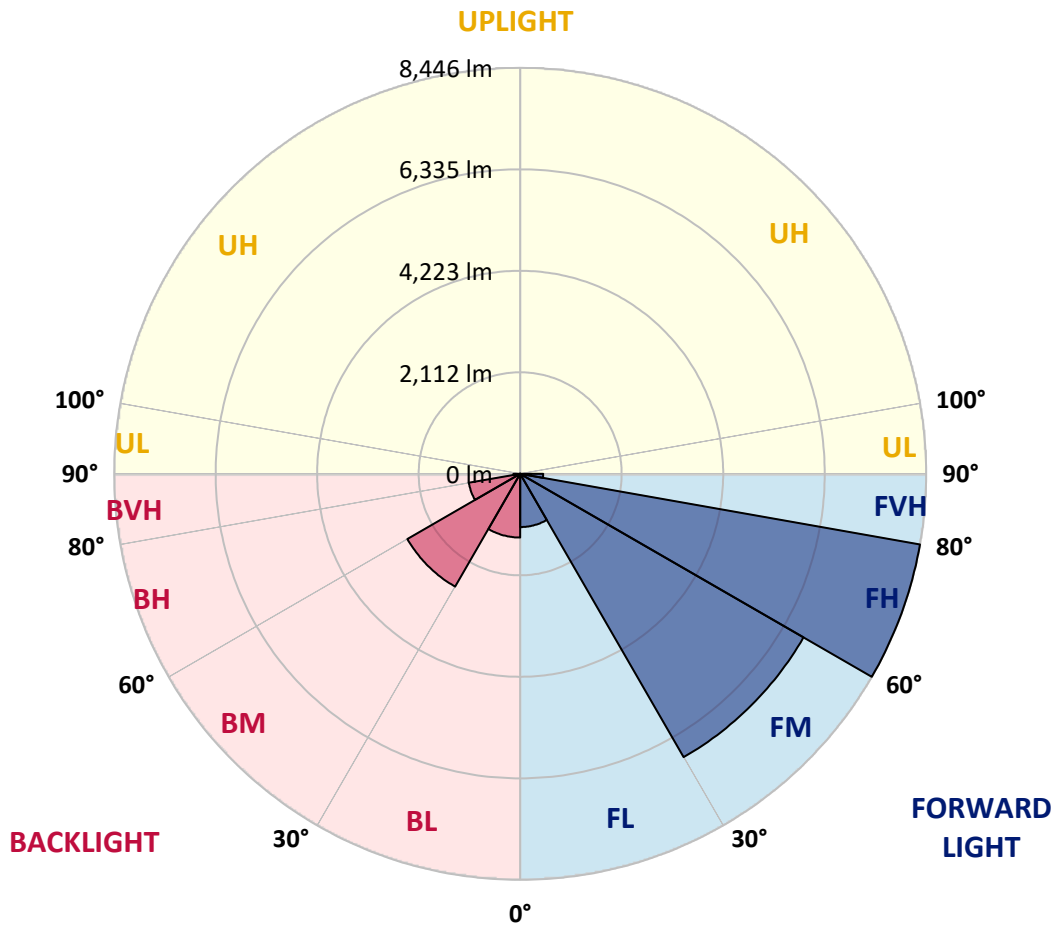
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1108.3	5.0			
FM (30°-60°)	6805.6	30.8			
FH (60°-80°)	8446.3	38.2			G4/12000
FVH (80°-90°)	480.6	2.2			G3/500
BL (0°-30°)	1325.4	6.0	B3/2500		
BM (30°-60°)	2709.9	12.3	B3/5000		
BH (60°-80°)	1084.3	4.9	B3/2500		G3/2500
BVH (80°-90°)	139.7	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°	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0
2.5°	2715.6	2732.3	2739.5	2735.9	2753.8	2751.4	2776.5	2807.6	2850.6	2892.4	2953.3
5°	2506.5	2524.4	2540.0	2554.3	2588.9	2599.7	2639.1	2698.9	2777.7	2857.8	2958.1
7.5°	2311.8	2327.3	2351.2	2377.5	2436.0	2446.8	2512.5	2605.7	2715.6	2832.7	2971.3
10°	2152.9	2168.4	2193.5	2223.4	2296.2	2309.4	2393.0	2517.3	2660.6	2808.8	2985.6
12.5°	2084.8	2089.6	2103.9	2133.8	2197.1	2205.4	2297.4	2439.6	2606.9	2790.9	3007.1
15°	2081.2	2090.8	2091.9	2107.5	2160.0	2163.6	2248.5	2389.4	2573.4	2787.3	3039.4
17.5°	2117.0	2124.2	2113.5	2123.0	2167.2	2173.2	2240.1	2365.5	2562.7	2802.8	3094.3
20°	2212.6	2218.6	2186.3	2173.2	2205.4	2210.2	2275.9	2381.1	2573.4	2835.1	3169.6
22.5°	2415.7	2419.3	2340.4	2286.7	2289.1	2291.5	2348.8	2444.4	2615.2	2893.6	3265.2
25°	2732.3	2729.9	2604.5	2500.5	2440.8	2427.7	2465.9	2547.1	2685.7	2971.3	3388.2
27.5°	3102.7	3084.8	2959.3	2804.0	2673.8	2654.7	2646.3	2680.9	2786.1	3074.0	3538.7
30°	3520.8	3504.1	3369.1	3166.0	2985.6	2954.5	2875.7	2857.8	2935.4	3213.8	3747.8
32.5°	3979.6	3968.8	3807.6	3561.4	3320.1	3284.3	3151.7	3103.9	3164.8	3425.3	4039.3
35°	4364.3	4354.7	4220.9	3967.7	3672.6	3628.4	3493.3	3439.6	3470.6	3696.5	4420.4
37.5°	4712.0	4707.2	4592.5	4393.0	4088.3	4034.6	3882.8	3864.9	3858.9	4053.7	4882.8
40°	5034.5	5022.6	4903.1	4798.0	4572.2	4523.2	4389.4	4373.9	4328.5	4493.3	5406.1
42.5°	5391.8	5360.7	5187.5	5138.5	5077.5	5036.9	4956.9	4959.3	4858.9	4989.1	5960.4
45°	5683.3	5665.3	5487.3	5458.7	5524.4	5507.6	5576.9	5594.9	5400.1	5508.8	6536.3
47.5°	5996.3	5979.6	5829.0	5808.7	5986.7	5991.5	6236.4	6242.4	5928.2	6048.8	7113.3
50°	6382.2	6358.3	6208.9	6234.0	6433.5	6451.5	6899.5	6858.9	6414.4	6597.2	7685.6
52.5°	6636.6	6651.0	6618.7	6659.3	6931.7	6948.5	7551.8	7447.9	6895.9	7138.4	8247.1
55°	6824.2	6852.9	6953.2	7046.4	7457.4	7474.1	8167.1	8008.2	7294.9	7640.2	8775.2
57.5°	7065.5	7024.9	7212.5	7394.1	7956.8	8001.0	8765.6	8548.2	7648.6	8072.7	9137.2
60°	7412.0	7383.3	7529.1	7797.9	8515.9	8586.4	9398.8	9034.4	7907.8	8415.6	9207.7
62.5°	8114.5	8042.8	8065.5	8303.3	9220.8	9314.0	10113.3	9458.6	8036.9	8549.4	8830.1
65°	9164.7	9041.6	8926.9	9091.8	10213.6	10305.6	10919.7	9791.9	7989.1	8290.1	7827.8
67.5°	10487.2	10365.4	10224.4	10379.7	11676.0	11748.8	11914.9	9979.5	7612.7	7291.4	6056.0
70°	11578.0	11532.6	11701.0	12340.2	14011.6	14014.0	13190.9	9824.1	6581.7	5169.5	3504.1
72.5°	11433.4	11406.0	12293.6	14269.7	16955.4	16892.1	14398.7	8648.5	4433.6	2332.1	1313.0
75°	9379.7	9557.7	10932.8	14235.0	18012.7	18004.4	13659.2	5498.1	1833.9	966.5	678.6
77.5°	5029.8	5311.7	7097.8	10509.9	14061.8	14273.3	9603.1	1923.5	787.3	618.9	469.5
80°	1640.3	1886.5	2829.1	5351.1	9137.2	9097.8	4115.8	755.1	538.8	438.5	325.0
82.5°	696.5	725.2	1264.0	2526.8	4689.3	4616.4	1310.6	433.7	378.7	299.9	200.7
85°	272.4	304.7	557.9	1168.4	2031.0	1986.8	473.1	215.0	242.5	195.9	119.5
87.5°	89.6	108.7	199.5	400.2	632.0	609.3	115.9	74.1	105.1	89.6	43.0
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°	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0	2945.0
2.5°	2970.1	2989.2	3011.9	3045.3	3074.0	3097.9	3123.0	3138.5	3144.5	3162.4	3161.2
5°	2991.6	3033.4	3089.5	3144.5	3198.3	3230.5	3259.2	3273.5	3286.7	3296.2	3298.6
7.5°	3027.4	3081.2	3169.6	3241.3	3286.7	3312.9	3332.1	3327.3	3332.1	3334.5	3338.0
10°	3058.5	3133.7	3238.9	3307.0	3341.6	3342.8	3338.0	3321.3	3312.9	3314.1	3316.5
12.5°	3095.5	3179.1	3292.6	3350.0	3359.5	3333.3	3312.9	3284.3	3273.5	3268.7	3266.4
15°	3145.7	3241.3	3351.2	3372.7	3348.8	3315.3	3280.7	3234.1	3210.2	3191.1	3197.1
17.5°	3206.6	3311.8	3396.6	3381.0	3329.7	3274.7	3218.6	3148.1	3099.1	3078.8	3080.0
20°	3291.4	3385.8	3431.2	3363.1	3285.5	3201.8	3106.3	3020.2	2974.8	2954.5	2952.1
22.5°	3394.2	3485.0	3464.7	3332.1	3222.1	3088.3	2968.9	2905.5	2882.8	2868.5	2870.9
25°	3517.2	3594.9	3488.6	3286.7	3118.2	2937.8	2845.8	2825.5	2814.8	2804.0	2804.0
27.5°	3677.3	3719.2	3506.5	3219.8	2955.7	2777.7	2744.3	2747.8	2744.3	2726.3	2729.9
30°	3888.8	3880.4	3523.2	3111.0	2769.4	2633.2	2635.5	2651.1	2653.5	2641.5	2647.5
32.5°	4167.2	4082.3	3531.6	2970.1	2591.3	2506.5	2508.9	2525.6	2537.6	2517.3	2526.8
35°	4504.1	4317.7	3518.4	2793.2	2453.9	2385.8	2367.9	2372.7	2376.3	2357.2	2370.3
37.5°	4897.1	4581.7	3459.9	2597.3	2340.4	2267.6	2229.3	2197.1	2178.0	2160.0	2172.0
40°	5328.4	4869.7	3352.4	2406.2	2213.8	2142.1	2084.8	2023.8	1959.3	1935.4	1946.2
42.5°	5780.0	5166.0	3222.1	2223.4	2068.1	2009.5	1948.6	1860.2	1763.4	1714.4	1720.4
45°	6248.4	5469.4	3094.3	2043.0	1918.7	1893.6	1823.1	1716.8	1611.7	1549.5	1544.8
47.5°	6707.1	5756.1	2906.7	1861.4	1778.9	1806.4	1751.5	1653.5	1536.4	1438.4	1427.7
50°	7145.6	6025.0	2599.7	1677.4	1665.4	1780.1	1727.6	1586.6	1452.8	1327.3	1316.6
52.5°	7580.5	6242.4	2206.6	1510.1	1604.5	1773.0	1696.5	1541.2	1377.5	1246.1	1231.8
55°	7949.6	6354.7	1827.9	1366.8	1516.1	1712.0	1659.5	1487.4	1271.2	1131.4	1119.4
57.5°	8159.9	6263.9	1512.5	1225.8	1394.2	1611.7	1596.1	1372.7	1144.5	1037.0	1022.7
60°	8069.1	5895.9	1254.5	1102.7	1278.3	1503.0	1486.2	1259.2	1047.8	946.2	931.9
62.5°	7568.5	5194.6	1050.2	995.2	1173.2	1391.8	1376.3	1172.0	973.7	875.7	860.2
65°	6560.2	4225.7	891.3	905.6	1066.9	1258.0	1280.7	1099.1	915.2	819.6	804.0
67.5°	5003.5	3060.9	767.0	827.9	962.9	1126.6	1192.3	1046.6	866.2	775.4	761.0
70°	2851.8	1738.3	661.9	752.7	870.9	1004.8	1124.2	1004.8	813.6	738.3	728.8
72.5°	1081.2	798.1	572.3	677.4	782.5	902.0	1049.0	939.0	752.7	696.5	687.0
75°	577.0	486.2	481.5	589.0	681.0	801.7	954.6	874.5	707.3	735.9	759.8
77.5°	393.1	344.1	402.6	504.2	569.9	690.5	854.2	776.6	612.9	610.5	562.7
80°	272.4	243.7	327.4	406.2	440.9	580.6	745.5	666.7	499.4	465.9	445.6
82.5°	163.7	158.9	244.9	303.5	311.8	448.0	617.7	559.1	408.6	356.0	358.4
85°	89.6	94.4	156.5	178.0	181.6	313.0	483.9	432.5	314.2	264.0	266.4
87.5°	25.1	32.3	57.3	70.5	87.2	162.5	287.9	256.9	157.7	109.9	109.9
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)