

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: P884500

Luminaire Tested: **NAV-SB5B-830-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884500
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5B-830-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18930 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

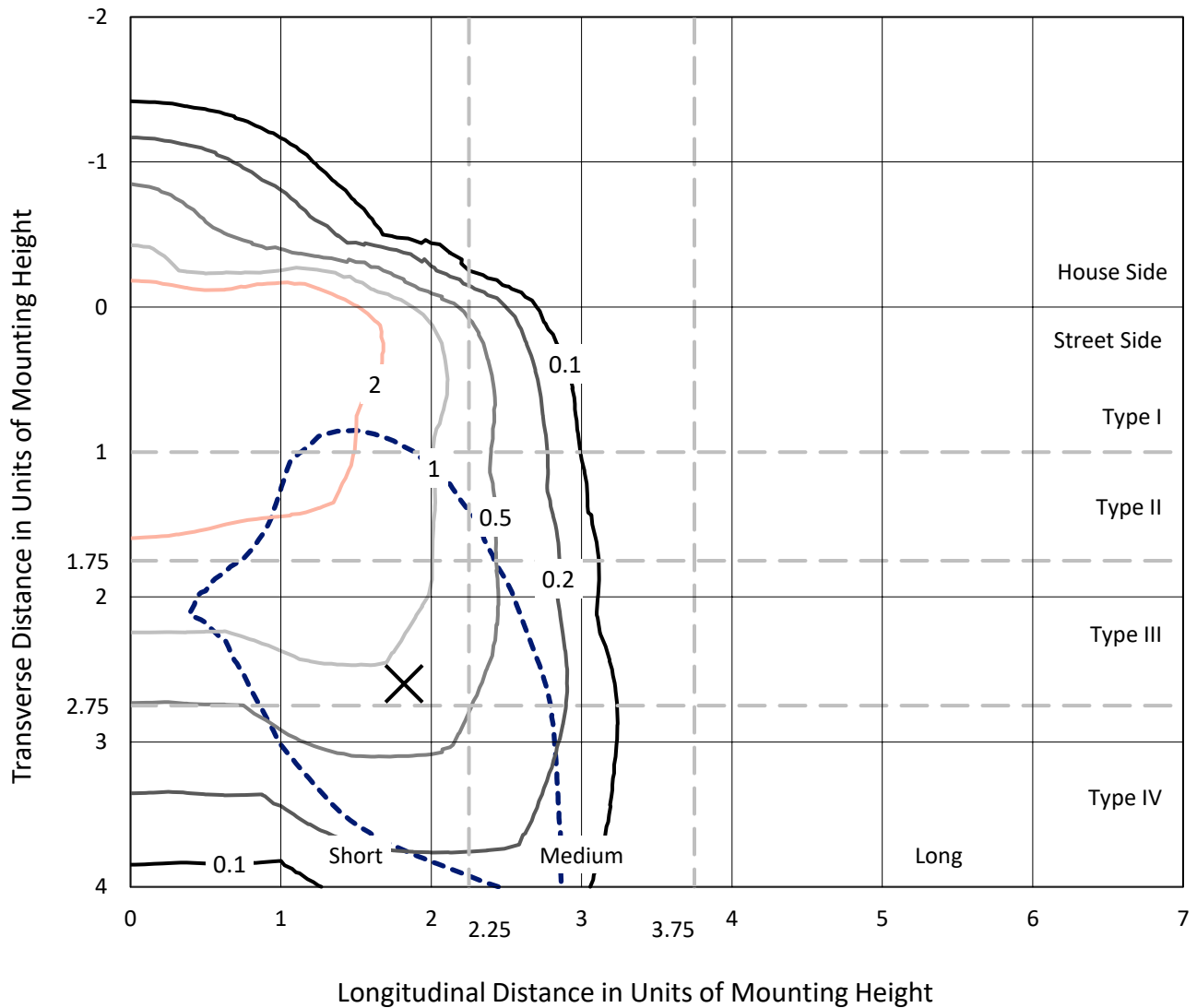
Input Watts (W): 182.7
Input Voltage (V): 120.0
Input Current (Ain): 1.547
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 11.125
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

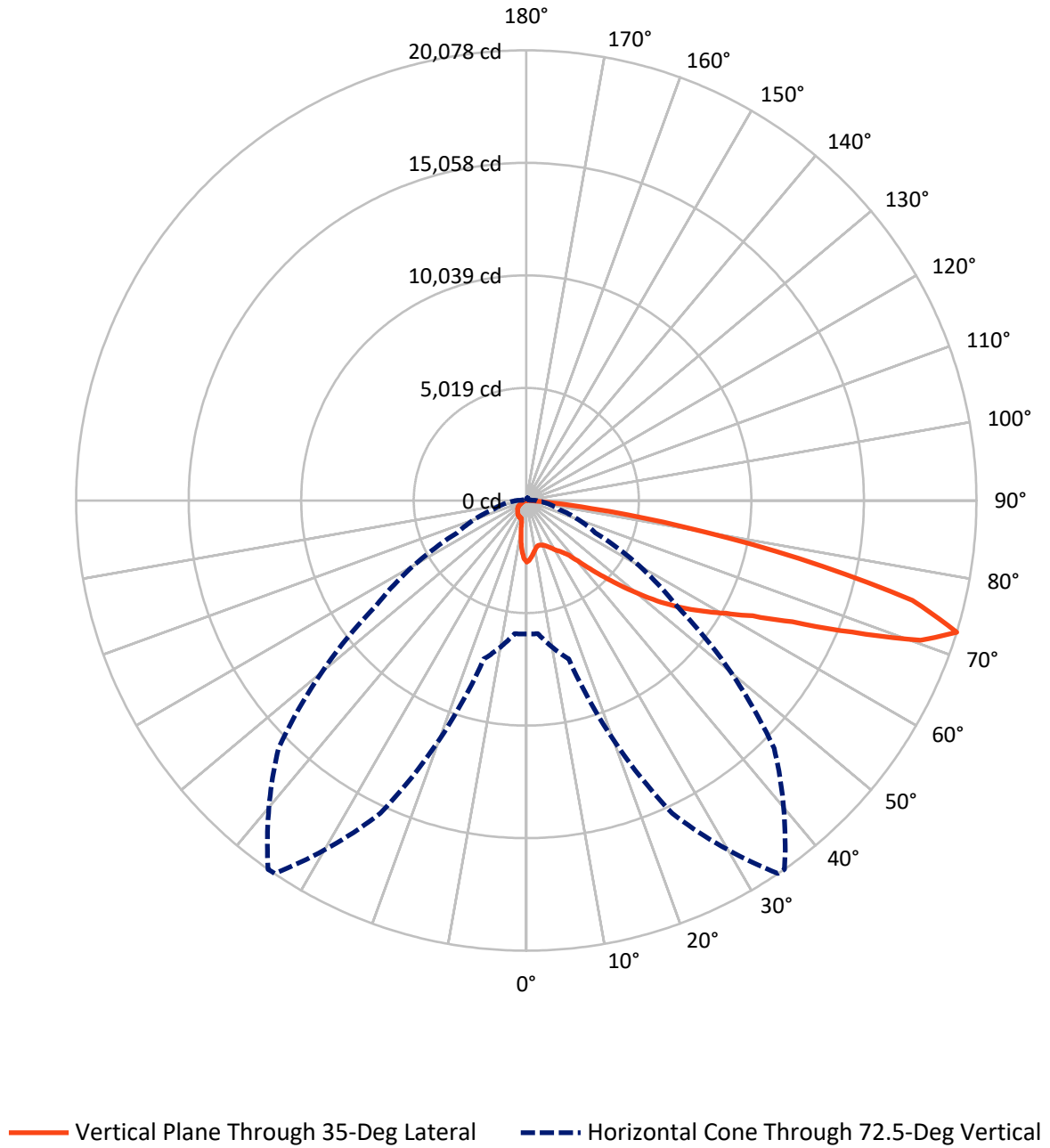
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 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	2130.5	0.0	2130.5
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	16799.5	0.0	16799.5
	% Fixture	88.7	0.0	88.7
Total	Lumens	18930.0	0.0	18930.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.4	1.2
10°-20°	527.4	2.8
20°-30°	856.8	4.5
30°-40°	1429.5	7.6
40°-50°	2704.7	14.3
50°-60°	4297.7	22.7
60°-70°	5316.6	28.1
70°-80°	3304.8	17.5
80°-90°	267.1	1.4
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°	18930.0	100.0
0°-180°	18930.0	100.0

Coefficient of Utilization



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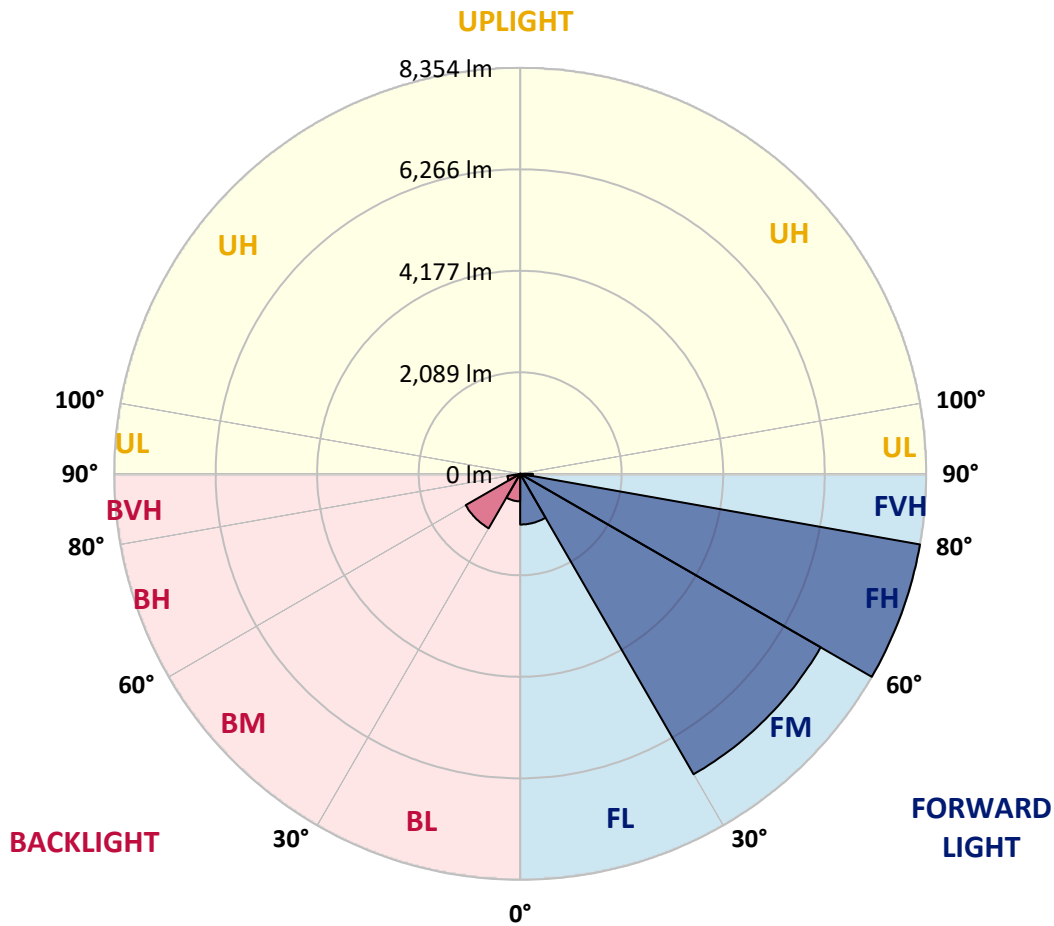
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1043.5	5.5			
FM (30°-60°)	7138.5	37.7			
FH (60°-80°)	8354.0	44.1			G4/12000
FVH (80°-90°)	263.5	1.4			G3/500
BL (0°-30°)	566.1	3.0	B2/1000		
BM (30°-60°)	1293.4	6.8	B2/2500		
BH (60°-80°)	267.3	1.4	B1/500		G1/500
BVH (80°-90°)	3.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6
2.5°	2621.5	2643.7	2647.9	2654.8	2654.8	2663.1	2677.0	2696.4	2728.3	2745.0	2756.1
5°	2416.2	2432.9	2453.7	2470.3	2502.2	2506.4	2560.5	2613.2	2686.7	2742.2	2781.0
7.5°	2209.6	2229.0	2256.7	2297.0	2338.6	2351.1	2432.9	2521.7	2638.2	2742.2	2807.4
10°	2063.9	2065.3	2090.3	2130.5	2197.1	2212.4	2312.2	2438.4	2584.1	2725.6	2832.4
12.5°	1982.1	1991.8	2002.9	2033.4	2097.2	2106.9	2213.7	2362.2	2530.0	2715.9	2861.5
15°	1982.1	1989.0	1996.0	2011.2	2062.5	2070.9	2165.2	2313.6	2502.2	2720.0	2908.7
17.5°	2002.9	2014.0	2008.5	2026.5	2080.6	2086.1	2169.4	2299.7	2500.9	2746.4	2980.8
20°	2052.8	2061.2	2050.1	2061.2	2115.3	2126.4	2212.4	2326.1	2524.4	2792.1	3070.9
22.5°	2131.9	2136.1	2109.7	2118.0	2173.5	2187.4	2287.3	2401.0	2581.3	2865.7	3191.6
25°	2231.8	2240.1	2199.9	2209.6	2262.3	2278.9	2394.1	2513.3	2671.5	2966.9	3345.6
27.5°	2346.9	2351.1	2316.4	2315.0	2383.0	2406.5	2523.1	2652.0	2792.1	3094.5	3539.8
30°	2478.7	2491.1	2457.9	2452.3	2538.3	2557.7	2672.9	2822.7	2969.7	3285.9	3815.8
32.5°	2582.7	2592.4	2573.0	2586.9	2674.2	2689.5	2854.6	3064.0	3248.5	3557.8	4191.7
35°	2732.5	2738.0	2693.7	2718.6	2818.5	2857.3	3102.8	3402.4	3599.4	3899.0	4682.7
37.5°	3274.8	3274.8	3086.2	2962.7	3058.5	3093.1	3442.7	3828.3	4032.2	4356.7	5301.3
40°	4025.2	4012.7	3736.7	3484.3	3471.8	3539.8	3926.7	4365.1	4591.1	4906.0	5997.6
42.5°	4825.6	4806.1	4430.2	4180.6	4139.0	4162.5	4485.7	5026.7	5256.9	5576.0	6746.6
45°	5535.7	5530.2	5186.2	4850.5	4775.6	4850.5	5183.4	5800.7	5965.7	6301.4	7494.2
47.5°	6130.8	6130.8	5879.7	5660.6	5621.7	5666.1	6128.0	6659.2	6644.0	7074.0	8222.5
50°	6816.0	6810.4	6571.9	6477.5	6517.8	6580.2	7215.5	7563.6	7345.8	7832.7	8873.0
52.5°	7295.9	7329.2	7247.4	7232.1	7437.4	7545.6	8319.5	8448.5	7974.2	8552.6	9359.8
55°	7676.0	7714.8	7809.1	7915.9	8311.2	8452.7	9389.0	9287.7	8499.9	9176.7	9640.0
57.5°	8214.1	8158.6	8304.3	8515.1	9154.6	9325.2	10425.1	10079.7	8922.9	9683.0	9670.5
60°	8867.4	8875.8	8900.7	9167.0	9996.5	10215.6	11446.0	10828.7	9194.8	9993.7	9332.1
62.5°	9652.5	9665.0	9716.3	10125.5	11126.9	11333.6	12533.4	11441.8	9319.6	9906.3	8458.3
65°	9598.4	9651.1	10224.0	11623.5	12845.5	13049.4	13802.6	11871.8	9131.0	9107.4	6886.7
67.5°	8744.0	8830.0	9788.4	13412.8	15436.5	15664.0	15336.6	11956.4	8316.8	7082.3	4492.7
70°	7623.2	7653.8	8806.4	15021.8	18436.7	18667.0	16709.8	11025.7	6311.1	3950.3	2012.6
72.5°	5953.2	5960.2	7312.5	15394.9	20065.1	20077.6	15632.1	8185.0	3394.1	1517.4	699.1
75°	4252.7	4211.1	4897.7	12484.9	17653.0	17794.5	11719.2	3839.4	1296.9	717.1	348.2
77.5°	2280.3	2326.1	2771.3	7404.1	12195.0	12436.3	6394.3	1106.9	660.2	488.2	230.3
80°	704.6	743.5	1136.0	3390.0	6907.5	7053.2	2370.5	492.4	460.5	348.2	151.2
82.5°	221.9	230.3	529.9	1424.5	2867.0	2933.6	686.6	278.8	314.9	230.3	88.8
85°	63.8	65.2	235.8	531.2	708.8	722.7	192.8	108.2	180.3	142.9	45.8
87.5°	6.9	22.2	88.8	88.8	62.4	61.0	20.8	23.6	51.3	18.0	8.3
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°	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6	2743.6
2.5°	2749.1	2750.5	2732.5	2702.0	2668.7	2640.9	2606.3	2578.5	2559.1	2553.6	2563.3
5°	2768.6	2758.8	2707.5	2614.6	2503.6	2407.9	2301.1	2216.5	2161.0	2137.4	2145.8
7.5°	2797.7	2769.9	2657.6	2474.5	2262.3	2073.6	1882.2	1733.8	1639.5	1592.3	1599.3
10°	2822.7	2767.2	2574.4	2272.0	1947.4	1661.7	1403.7	1224.8	1124.9	1077.7	1079.1
12.5°	2846.2	2765.8	2466.2	2032.0	1592.3	1242.8	1002.8	914.1	886.3	876.6	873.8
15°	2890.6	2769.9	2330.2	1757.4	1238.6	939.0	851.7	850.3	855.8	853.0	851.7
17.5°	2951.6	2774.1	2176.3	1466.1	955.7	828.1	823.9	836.4	844.7	840.6	839.2
20°	3030.7	2790.8	2012.6	1177.6	821.1	800.3	810.0	821.1	828.1	821.1	819.7
22.5°	3141.7	2819.9	1833.7	946.0	778.1	783.7	792.0	804.5	811.4	801.7	800.3
25°	3277.6	2865.7	1657.5	822.5	757.3	764.3	776.7	790.6	798.9	789.2	787.8
27.5°	3453.8	2939.2	1495.2	794.8	736.5	740.7	758.7	779.5	790.6	778.1	778.1
30°	3709.0	3059.8	1355.2	807.3	724.0	714.3	739.3	768.4	780.9	769.8	768.4
32.5°	4047.4	3230.4	1269.2	826.7	718.5	683.8	707.4	744.8	765.7	758.7	758.7
35°	4491.3	3489.8	1235.9	848.9	714.3	651.9	668.6	708.8	744.8	751.8	751.8
37.5°	5029.5	3850.5	1245.6	858.6	701.8	625.6	633.9	668.6	715.7	737.9	743.5
40°	5641.1	4270.7	1301.1	848.9	688.0	603.4	604.8	631.1	672.7	706.0	717.1
42.5°	6272.3	4761.8	1403.7	812.8	675.5	583.9	579.8	597.8	625.6	649.1	658.9
45°	6872.8	5266.6	1505.0	762.9	660.2	564.5	554.8	561.8	567.3	577.0	582.6
47.5°	7397.2	5621.7	1475.8	717.1	639.4	542.3	525.7	522.9	506.3	504.9	503.5
50°	7759.2	5699.4	1310.8	671.3	608.9	517.4	491.0	474.4	445.2	431.4	432.8
52.5°	7874.3	5392.9	1070.8	625.6	559.0	484.1	446.6	420.3	384.2	371.7	370.3
55°	7721.7	4792.3	855.8	570.1	489.6	439.7	398.1	363.4	334.3	319.0	319.0
57.5°	7348.6	4028.0	676.9	504.9	416.1	389.8	348.2	313.5	288.5	273.2	270.5
60°	6730.0	3198.5	535.4	427.2	355.1	335.7	292.7	270.5	248.3	230.3	226.1
62.5°	5790.9	2283.1	420.3	338.4	296.8	274.6	249.7	233.0	206.7	181.7	177.5
65°	4519.0	1396.8	324.6	248.3	238.6	227.5	212.2	197.0	165.1	140.1	135.9
67.5°	2850.4	661.6	231.6	187.3	188.6	183.1	176.2	163.7	140.1	117.9	115.1
70°	1255.3	320.4	152.6	142.9	140.1	140.1	145.6	141.5	119.3	98.5	94.3
72.5°	427.2	172.0	113.7	108.2	101.3	99.9	122.1	117.9	95.7	76.3	72.1
75°	223.3	115.1	83.2	77.7	61.0	73.5	97.1	91.5	68.0	49.9	45.8
77.5°	145.6	81.8	56.9	49.9	34.7	48.5	72.1	63.8	40.2	25.0	22.2
80°	91.5	54.1	33.3	23.6	16.6	26.4	38.8	27.7	15.3	5.5	4.2
82.5°	48.5	27.7	12.5	8.3	6.9	8.3	9.7	6.9	2.8	0.0	0.0
85°	19.4	9.7	4.2	2.8	1.4	0.0	2.8	1.4	0.0	0.0	0.0
87.5°	6.9	1.4	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)