

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: P966281

Luminaire Tested: **NAV-SB4B-827-U-T3**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966281
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-827-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20128.9 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

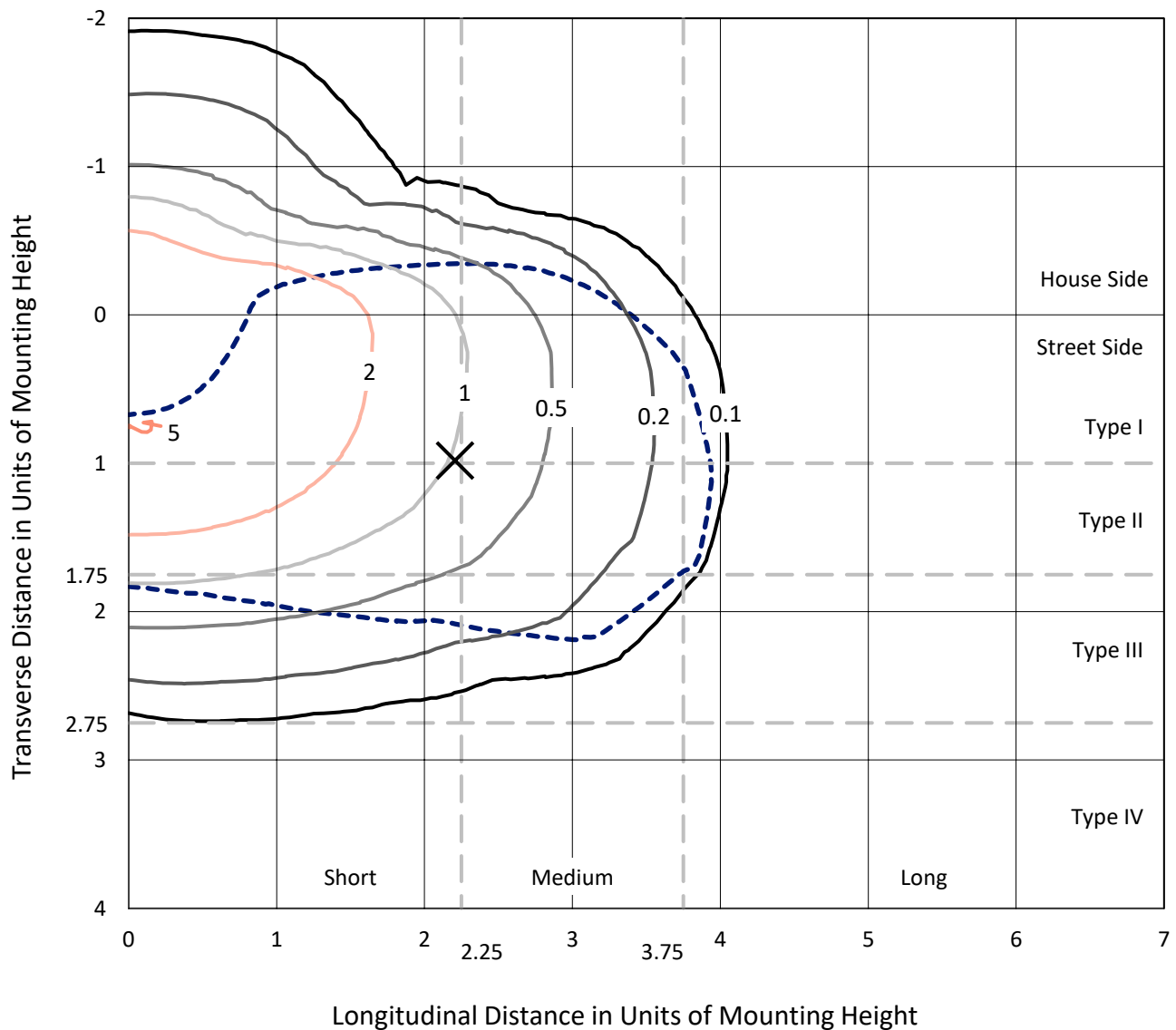
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P966281
CATALOG NUMBER: NAV-SB4B-827-U-T3

Iso-Footcandle Lines of Horizontal Illumination

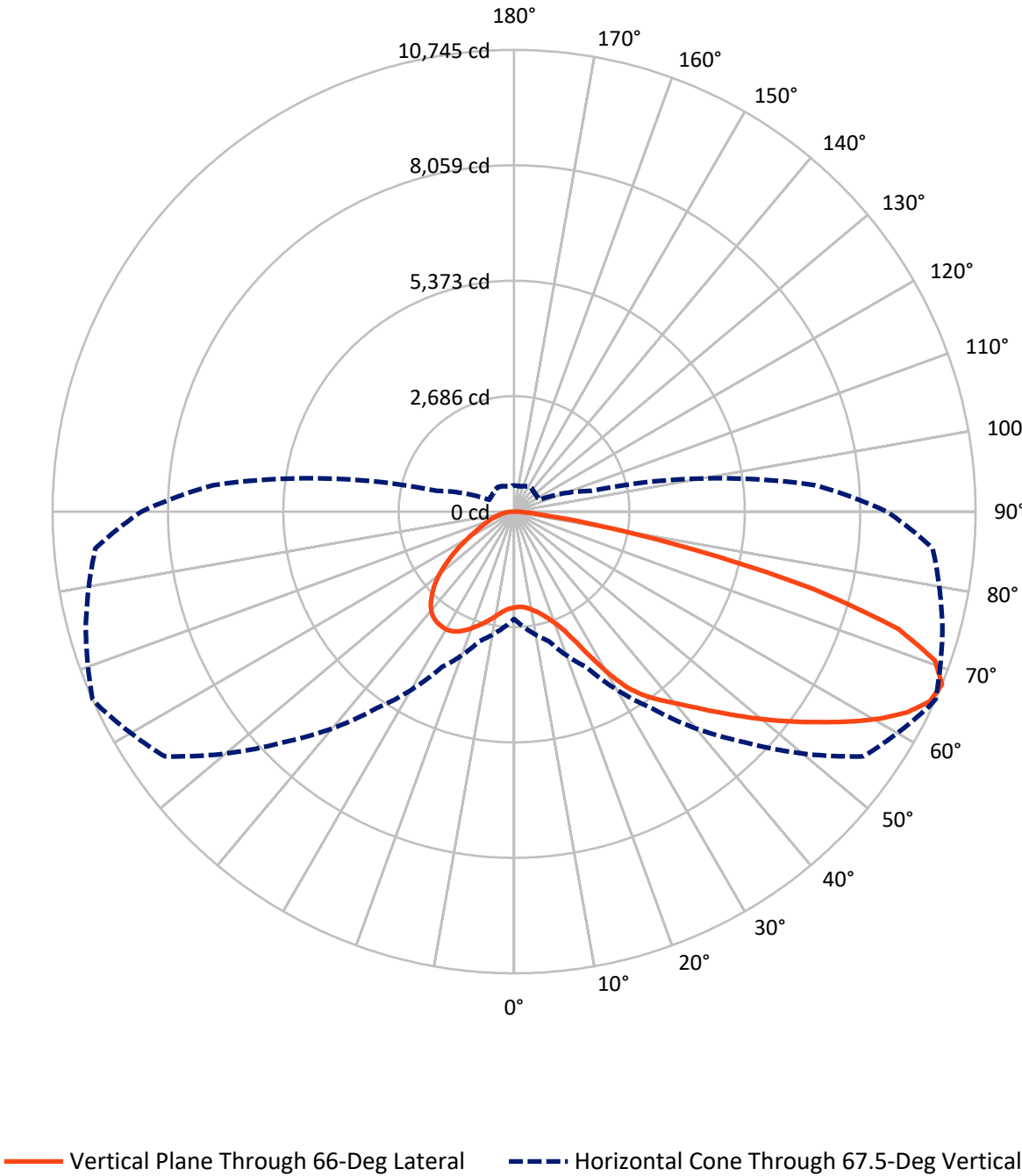
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
Type III - Short - N/A

REPORT NUMBER: P966281
CATALOG NUMBER: NAV-SB4B-827-U-T3

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5005.0	0.0	5005.0
	% Fixture	24.9	0.0	24.9
Street Side	Lumens	15123.9	0.0	15123.9
	% Fixture	75.1	0.0	75.1
Total	Lumens	20128.9	0.0	20128.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.3	1.1
10°-20°	731.3	3.6
20°-30°	1409.6	7.0
30°-40°	2471.5	12.3
40°-50°	3674.3	18.3
50°-60°	4657.5	23.1
60°-70°	4557.3	22.6
70°-80°	2173.9	10.8
80°-90°	232.3	1.2
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°	20128.9	100.0
0°-180°	20128.9	100.0

Coefficient of Utilization



REPORT NUMBER: P966281

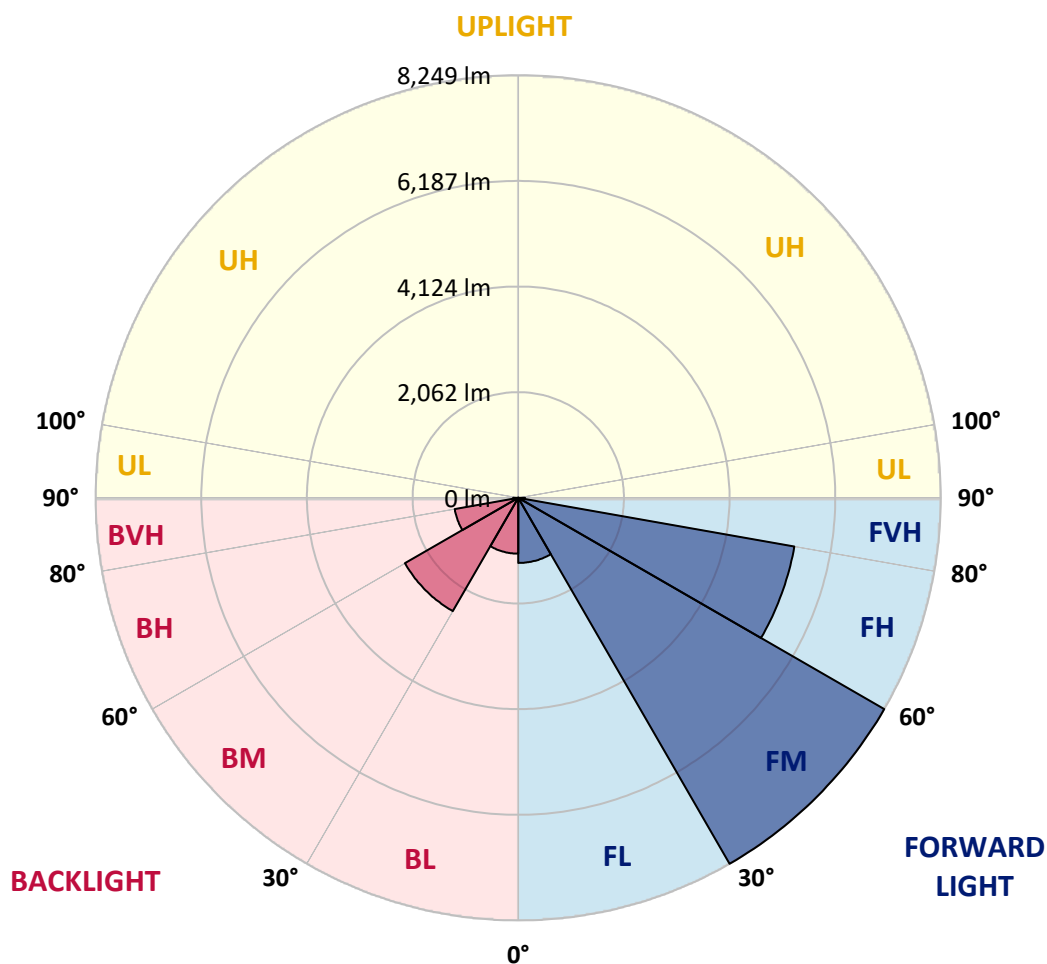
CATALOG NUMBER: NAV-SB4B-827-U-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1272.0	6.3			
FM	(30°-60°)	8248.7	41.0			
FH	(60°-80°)	5471.6	27.2			G3/7500
FVH	(80°-90°)	131.7	0.7			G2/225
BL	(0°-30°)	1090.3	5.4	B3/2500		
BM	(30°-60°)	2554.6	12.7	B3/5000		
BH	(60°-80°)	1259.5	6.3	B3/2500		G3/2500
BVH	(80°-90°)	100.6	0.5			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 III Short



REPORT NUMBER: P966281

CATALOG NUMBER: NAV-SB4B-827-U-T3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6
2.5°	2209.3	2222.0	2218.8	2213.5	2212.5	2214.6	2217.8	2221.0	2219.8	2225.2	2233.6
5°	2202.9	2215.6	2214.6	2214.6	2218.8	2227.3	2232.6	2237.9	2232.6	2238.9	2250.6
7.5°	2207.2	2216.7	2221.0	2225.2	2235.7	2251.6	2264.3	2275.9	2269.6	2276.9	2291.8
10°	2261.1	2268.5	2272.7	2272.7	2280.1	2298.2	2310.9	2332.0	2326.6	2338.3	2357.4
12.5°	2359.4	2366.9	2366.9	2362.6	2368.0	2379.5	2383.8	2407.1	2397.6	2416.5	2435.6
15°	2480.1	2494.8	2483.2	2475.8	2477.9	2489.5	2488.5	2506.4	2497.0	2512.8	2529.7
17.5°	2613.3	2632.3	2613.3	2612.2	2608.0	2620.7	2621.7	2637.6	2620.7	2632.3	2644.0
20°	2770.9	2797.3	2781.4	2786.8	2777.2	2782.5	2787.8	2811.1	2784.6	2793.1	2789.9
22.5°	2993.0	3024.7	3007.8	3027.8	3021.5	3017.3	3016.3	3057.5	3016.3	3019.4	2988.7
25°	3316.6	3354.6	3325.1	3352.6	3352.6	3366.3	3382.2	3435.1	3366.3	3346.2	3266.9
27.5°	3794.7	3832.7	3774.6	3791.5	3786.1	3820.0	3803.1	3934.3	3860.2	3827.5	3667.8
30°	4370.0	4437.6	4327.7	4323.4	4318.1	4372.0	4396.4	4483.1	4408.0	4375.2	4182.7
32.5°	4991.9	5062.7	4931.5	4893.5	4873.4	4906.2	4886.1	4955.9	4904.0	4853.3	4615.3
35°	5649.6	5719.4	5594.7	5520.6	5440.2	5371.5	5299.6	5317.6	5268.9	5191.7	4945.3
37.5°	6271.5	6399.5	6267.3	6187.9	6039.9	5905.5	5704.6	5621.1	5575.6	5504.8	5256.2
40°	6905.0	6978.0	6877.4	6809.8	6649.1	6438.6	6117.1	5940.5	5879.1	5810.4	5599.9
42.5°	7371.4	7441.2	7387.3	7340.7	7214.9	6970.5	6554.9	6333.9	6245.0	6167.8	5989.1
45°	7741.5	7793.4	7759.6	7776.5	7722.5	7485.6	7008.6	6755.9	6663.8	6569.7	6429.1
47.5°	7890.7	7945.7	7999.6	8100.1	8192.1	8017.6	7496.1	7212.7	7115.4	7019.2	6880.6
50°	7873.7	7929.8	8086.3	8299.9	8585.5	8527.3	8010.2	7699.2	7609.3	7499.3	7371.4
52.5°	7738.3	7801.8	8002.8	8358.2	8812.8	8909.1	8533.6	8201.5	8117.0	7985.9	7857.9
55°	7383.0	7421.1	7722.5	8225.9	8866.8	9175.6	9046.6	8736.7	8652.1	8469.2	8329.6
57.5°	6724.1	6779.1	7218.0	7869.5	8731.5	9356.5	9497.1	9299.4	9217.9	8954.6	8808.6
60°	5864.3	5952.1	6454.4	7270.9	8386.7	9355.4	9906.4	9852.5	9784.8	9432.7	9280.3
62.5°	4891.3	4992.9	5476.2	6424.8	7783.8	9090.0	10162.4	10315.7	10280.9	9873.6	9679.1
65°	3756.5	3826.3	4307.6	5330.2	6845.8	8519.9	10192.0	10631.9	10638.3	10208.9	9887.4
67.5°	2501.2	2702.1	3119.9	3999.8	5589.3	7588.2	9931.8	10683.8	10745.1	10324.2	9782.7
70°	1220.5	1484.8	1894.1	2599.5	3999.8	6159.4	9251.8	10258.6	10395.0	9987.8	9158.7
72.5°	506.6	592.2	815.4	1282.9	2296.0	4156.3	7885.3	9105.8	9358.6	8849.8	7700.3
75°	341.6	370.1	466.4	657.8	1045.9	2049.6	5686.6	6789.7	7196.8	6683.9	5463.5
77.5°	263.3	281.4	339.5	460.0	621.9	775.2	3043.7	4091.8	4302.2	3982.8	2842.8
80°	207.3	221.0	253.8	335.3	441.1	414.6	1037.5	1853.9	1975.6	1657.2	913.8
82.5°	179.8	185.1	181.9	227.3	292.9	242.2	340.5	684.3	755.1	547.9	298.3
85°	130.1	144.9	151.2	140.6	155.5	122.7	139.6	242.2	266.5	238.0	168.2
87.5°	52.9	78.3	96.2	90.9	57.1	34.8	43.4	70.8	81.4	88.9	55.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P966281

CATALOG NUMBER: NAV-SB4B-827-U-T3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6
2.5°	2234.7	2242.1	2247.4	2253.7	2258.0	2264.3	2276.9	2284.4	2285.4	2290.8	2289.6
5°	2254.8	2265.4	2276.9	2294.0	2312.9	2328.8	2353.1	2370.0	2376.4	2381.7	2380.7
7.5°	2298.2	2312.9	2334.1	2363.8	2391.2	2412.3	2442.0	2462.0	2482.1	2489.5	2490.6
10°	2362.6	2383.8	2414.5	2454.7	2484.3	2511.8	2542.4	2559.3	2579.4	2587.9	2592.1
12.5°	2443.0	2465.2	2505.4	2561.5	2588.9	2608.0	2618.6	2614.4	2618.6	2625.9	2628.1
15°	2535.0	2559.3	2604.8	2665.1	2684.2	2667.3	2644.0	2622.8	2619.6	2621.7	2629.1
17.5°	2644.0	2661.9	2714.8	2765.6	2751.8	2682.0	2631.3	2597.5	2580.5	2575.2	2582.6
20°	2796.3	2796.3	2839.7	2871.3	2779.4	2660.9	2581.6	2526.6	2491.7	2476.9	2473.7
22.5°	2981.3	2964.4	2991.9	2969.7	2774.1	2601.7	2491.7	2396.4	2343.7	2322.4	2319.3
25°	3216.1	3196.1	3188.7	3051.1	2735.9	2507.6	2328.8	2213.5	2167.0	2155.4	2157.5
27.5°	3570.4	3519.6	3423.4	3095.6	2666.1	2359.4	2138.5	2031.7	2005.2	2006.2	2009.4
30°	4042.1	3940.6	3704.8	3103.0	2551.9	2150.0	1943.8	1867.7	1855.0	1860.3	1878.3
32.5°	4478.8	4382.6	3992.4	3069.2	2376.4	1944.9	1769.4	1718.6	1699.6	1705.9	1714.3
35°	4821.5	4795.1	4258.9	3021.5	2160.7	1752.4	1612.8	1569.5	1532.5	1524.0	1530.3
37.5°	5145.2	5134.6	4458.8	2954.9	1947.0	1616.0	1487.0	1429.9	1376.0	1346.3	1347.4
40°	5500.6	5489.9	4590.0	2852.3	1757.7	1497.5	1373.8	1298.7	1232.0	1178.1	1183.5
42.5°	5900.3	5837.9	4652.4	2705.3	1596.9	1397.1	1281.8	1180.3	1092.4	1042.7	1045.9
45°	6337.1	6196.4	4651.2	2518.1	1461.5	1305.0	1183.5	1039.7	958.2	911.6	909.5
47.5°	6800.3	6539.1	4594.2	2310.9	1330.4	1203.6	1031.1	921.2	867.3	838.7	832.3
50°	7278.3	6859.5	4496.9	2072.9	1196.2	1088.2	935.9	860.9	819.6	793.1	783.7
52.5°	7727.8	7150.3	4379.5	1803.2	1059.7	976.1	893.7	835.5	792.1	762.5	749.8
55°	8145.6	7401.0	4213.5	1527.1	948.6	901.1	873.6	824.9	775.2	740.4	726.5
57.5°	8516.7	7563.9	3926.8	1268.0	869.3	849.2	852.4	807.0	749.8	720.3	701.2
60°	8825.6	7683.4	3502.7	1028.0	804.8	798.5	819.6	773.1	706.4	672.6	657.8
62.5°	9010.7	7681.2	2982.4	841.8	749.8	751.9	776.2	730.8	663.1	631.4	621.9
65°	8994.8	7493.0	2411.3	720.3	697.0	699.0	730.8	684.3	627.2	608.1	607.0
67.5°	8676.4	7034.1	1849.7	640.9	638.8	648.3	685.3	652.5	605.0	602.8	606.0
70°	7814.5	6081.1	1332.6	577.5	578.5	592.2	640.9	632.4	593.3	597.6	596.4
72.5°	6266.2	4636.5	894.7	510.9	511.9	534.1	598.6	616.5	581.7	637.8	646.2
75°	4173.3	2891.4	575.3	439.9	441.1	469.6	561.6	585.9	549.9	635.6	640.9
77.5°	2005.2	1299.8	416.7	370.1	370.1	396.6	485.4	524.6	468.5	493.8	452.6
80°	692.7	488.6	327.9	298.3	291.9	309.9	409.3	454.8	404.0	372.3	349.0
82.5°	272.9	253.8	263.3	231.6	210.4	222.1	318.4	375.5	297.1	268.7	267.5
85°	156.5	165.0	186.1	153.3	121.7	136.4	233.7	269.7	224.2	197.7	202.0
87.5°	42.3	58.1	85.7	79.3	55.0	58.1	111.0	149.1	129.0	99.4	102.6
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)