

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: P882754

Luminaire Tested: **NAV-SB2D-740-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882754
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-740-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22165 lumens
Efficiency: N/A
Efficacy: 150.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

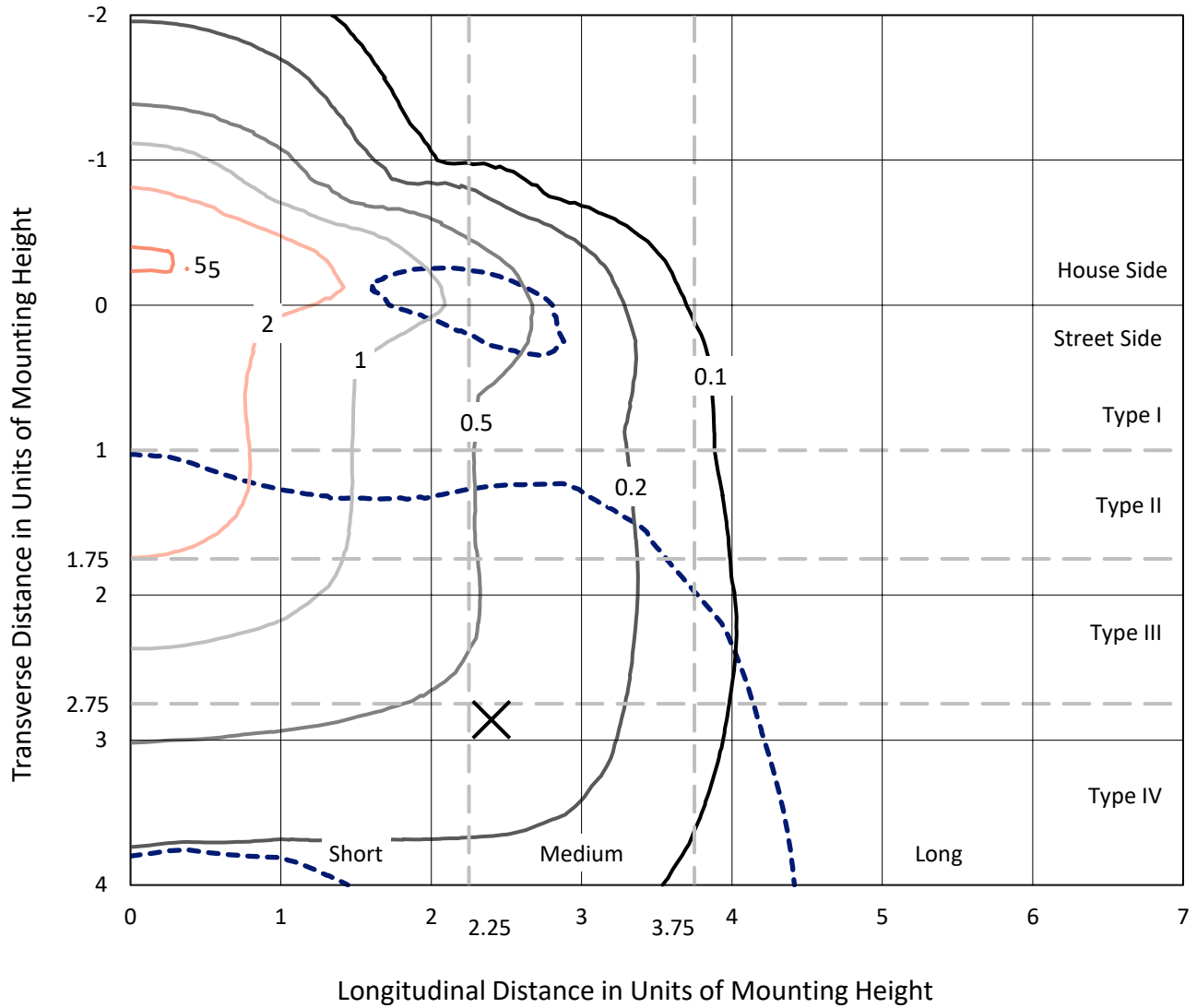
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P882754
 CATALOG NUMBER: NAV-SB2D-740-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

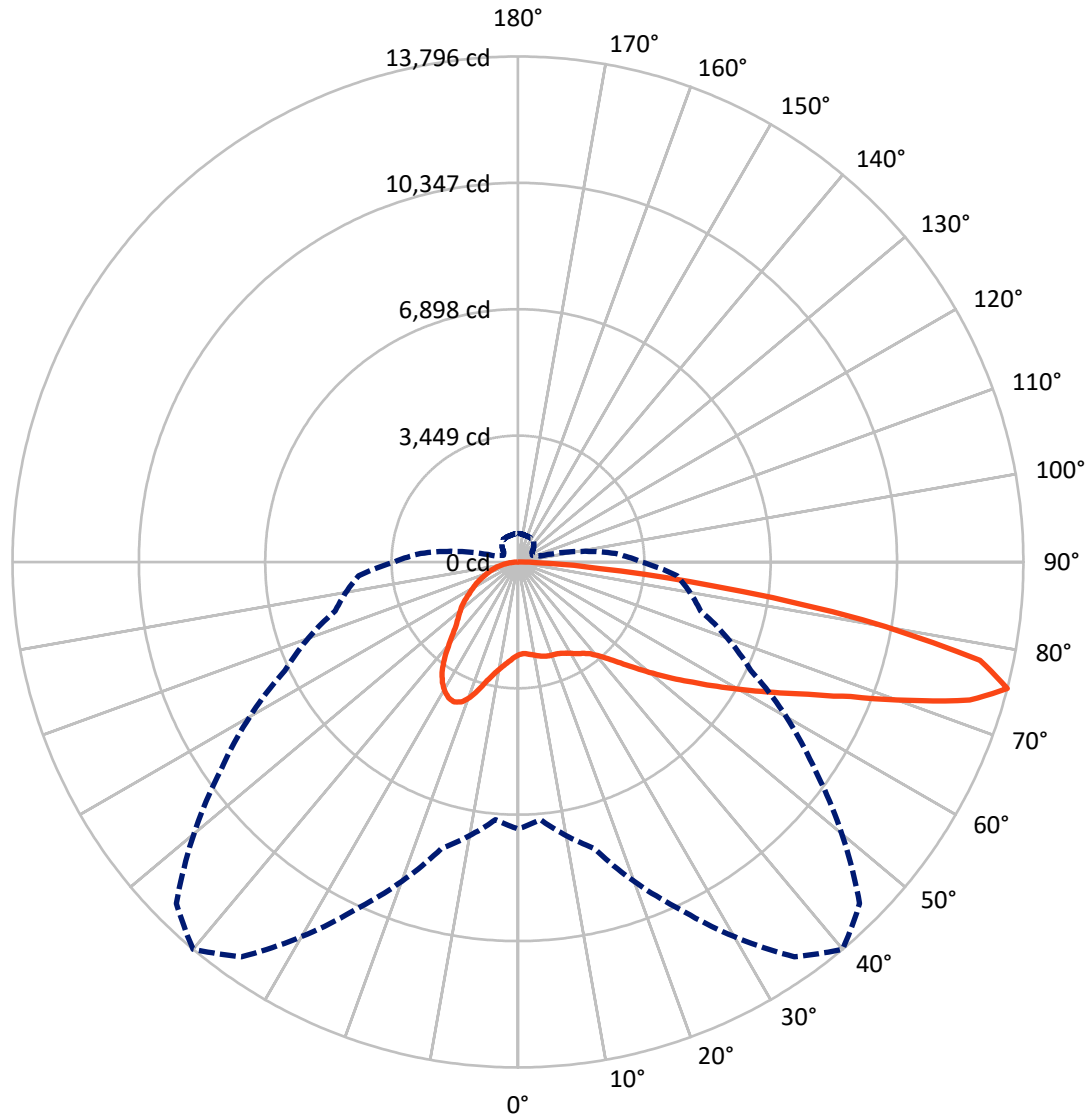
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Medium - N/A

REPORT NUMBER: P882754
CATALOG NUMBER: NAV-SB2D-740-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P882754

CATALOG NUMBER: NAV-SB2D-740-U-SL4

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6867.5	0.0	6867.5
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	15297.5	0.0	15297.5
	% Fixture	69.0	0.0	69.0
Total	Lumens	22165.0	0.0	22165.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.0	1.1
10°-20°	849.4	3.8
20°-30°	1551.0	7.0
30°-40°	2199.8	9.9
40°-50°	2970.3	13.4
50°-60°	3995.9	18.0
60°-70°	5071.7	22.9
70°-80°	4602.9	20.8
80°-90°	671.0	3.0
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°	22165.0	100.0
0°-180°	22165.0	100.0

Coefficient of Utilization



REPORT NUMBER: P882754

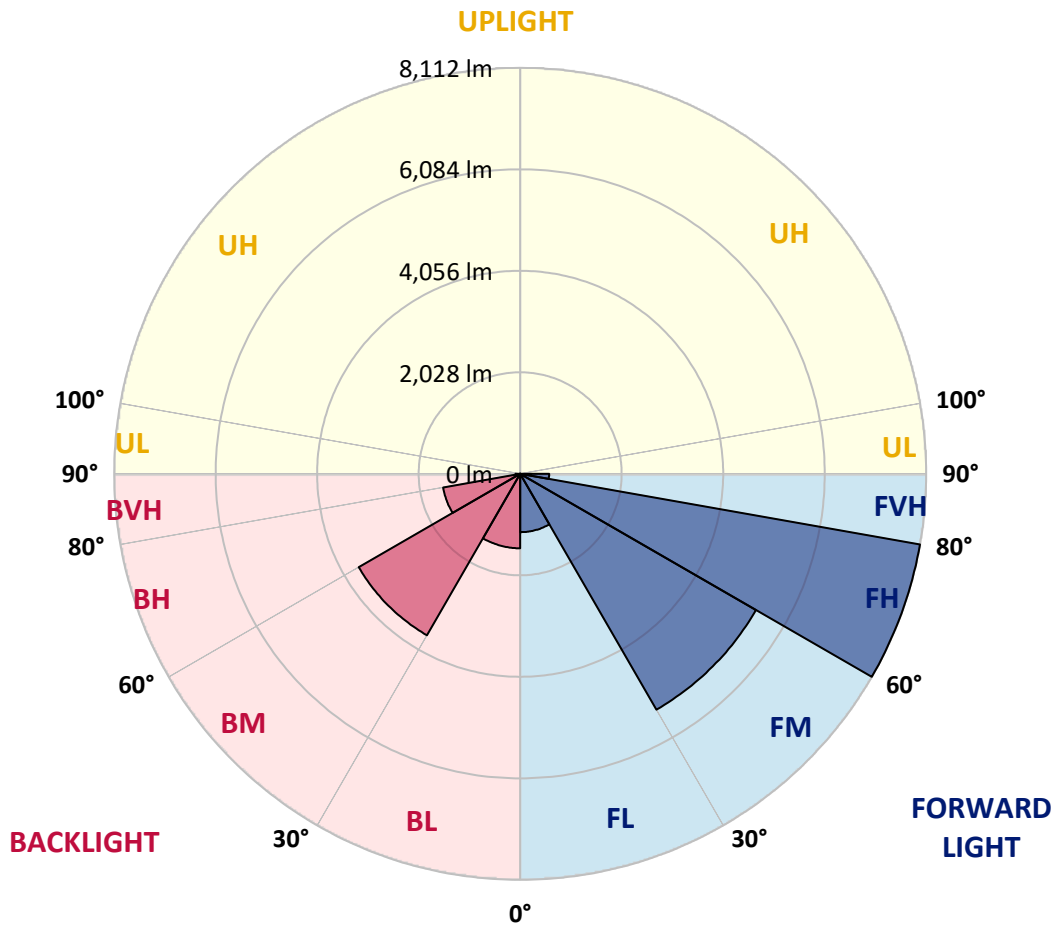
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1165.9	5.3			
FM (30°-60°)	5441.0	24.5			
FH (60°-80°)	8112.1	36.6			G4/12000
FVH (80°-90°)	578.6	2.6			G4/750
BL (0°-30°)	1487.6	6.7	B3/2500		
BM (30°-60°)	3725.0	16.8	B3/5000		
BH (60°-80°)	1562.5	7.0	B3/2500		G3/2500
BVH (80°-90°)	92.4	0.4			G1/100
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 Medium



REPORT NUMBER: P882754

CATALOG NUMBER: NAV-SB2D-740-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6
2.5°	2495.8	2509.9	2506.4	2501.7	2501.7	2502.9	2501.7	2509.9	2518.1	2526.4	2539.3
5°	2521.7	2535.8	2528.7	2522.8	2518.1	2517.0	2513.4	2512.3	2517.0	2527.5	2545.2
7.5°	2572.2	2586.3	2575.7	2565.2	2555.8	2551.1	2546.4	2539.3	2535.8	2541.7	2566.3
10°	2628.6	2642.8	2629.8	2611.0	2595.7	2589.9	2585.1	2578.1	2573.4	2576.9	2604.0
12.5°	2685.1	2699.2	2681.5	2655.7	2635.7	2632.2	2626.3	2623.9	2622.8	2621.6	2648.6
15°	2738.0	2749.7	2727.4	2696.8	2675.7	2669.8	2663.9	2667.4	2673.3	2680.4	2710.9
17.5°	2779.1	2790.9	2758.0	2718.0	2698.0	2695.7	2692.1	2703.9	2720.3	2738.0	2775.6
20°	2816.7	2828.5	2786.2	2732.1	2708.6	2708.6	2709.8	2734.4	2758.0	2783.8	2835.6
22.5°	2869.6	2879.0	2827.3	2753.3	2719.2	2721.5	2730.9	2755.6	2785.0	2820.3	2892.0
25°	2948.4	2955.5	2892.0	2793.2	2754.4	2761.5	2769.7	2781.5	2809.7	2850.8	2947.2
27.5°	3075.4	3081.3	2997.8	2863.8	2805.0	2816.7	2828.5	2820.3	2833.2	2868.5	2991.9
30°	3254.1	3257.6	3151.8	2974.3	2890.8	2896.7	2899.0	2864.9	2840.3	2868.5	3023.6
32.5°	3465.7	3464.5	3338.7	3108.3	2988.4	2982.5	2962.5	2895.5	2837.9	2862.6	3051.9
35°	3793.7	3780.7	3618.5	3296.4	3098.9	3062.4	3015.4	2929.6	2849.7	2856.7	3076.5
37.5°	4336.8	4296.8	4072.3	3604.4	3263.5	3170.6	3101.2	2984.9	2875.5	2854.4	3105.9
40°	4949.3	4898.7	4651.9	4026.4	3510.3	3361.0	3249.4	3063.6	2917.8	2864.9	3149.4
42.5°	5675.8	5604.1	5338.4	4523.7	3823.1	3606.7	3438.6	3163.5	2980.2	2899.0	3208.2
45°	6568.1	6472.9	6096.7	5084.5	4216.9	3928.9	3704.3	3315.2	3075.4	2964.9	3296.4
47.5°	7469.8	7493.3	6958.4	5726.4	4689.5	4326.2	4037.0	3543.3	3214.1	3070.7	3438.6
50°	8427.9	8444.3	7815.4	6437.6	5225.5	4775.3	4410.9	3798.4	3406.9	3221.1	3651.4
52.5°	9175.6	9177.9	8593.6	7181.8	5784.0	5269.0	4814.1	4089.9	3630.3	3421.0	3934.7
55°	9643.5	9637.6	9139.1	7885.9	6425.8	5787.5	5260.8	4421.4	3903.0	3656.1	4290.9
57.5°	9983.2	9965.6	9515.3	8491.4	7110.0	6400.0	5766.3	4797.6	4225.1	3935.9	4760.0
60°	10112.5	10101.9	9770.4	9014.5	7829.5	7077.1	6349.4	5218.5	4590.7	4266.3	5363.1
62.5°	10161.9	10181.9	10020.8	9521.2	8599.5	7827.2	6990.1	5721.7	5002.2	4640.1	5999.1
65°	10335.9	10372.3	10339.4	10184.2	9469.5	8705.3	7840.1	6320.0	5451.3	5041.0	6663.3
67.5°	10680.3	10716.8	10730.9	10977.8	10532.2	9799.8	8900.5	7065.4	5976.8	5457.1	7162.9
70°	10672.1	10661.5	10910.8	11609.1	11863.0	11315.2	10330.0	7982.3	6603.4	5802.8	7226.4
72.5°	9714.0	9629.4	10218.3	11602.0	12970.4	12897.5	12075.8	9165.0	7144.1	5845.1	6270.7
75°	7287.6	7061.8	8102.2	10455.8	13155.0	13795.7	13185.5	9898.6	7016.0	5164.4	4363.8
77.5°	3116.5	2889.6	4115.8	7740.2	11773.7	12896.4	12167.5	8636.0	5600.6	3415.1	2143.1
80°	815.9	814.7	1243.8	3509.2	8007.0	9523.5	8355.0	5577.1	3200.0	1220.3	591.3
82.5°	337.4	329.2	457.3	1364.9	3912.4	5344.3	4361.5	2487.6	1155.6	330.3	196.3
85°	125.8	124.6	222.2	471.4	1380.2	2204.3	1595.3	636.0	288.0	161.1	88.2
87.5°	35.3	34.1	48.2	163.4	336.2	510.2	272.7	104.6	81.1	63.5	25.9
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: P882754

CATALOG NUMBER: NAV-SB2D-740-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6	2534.6
2.5°	2542.8	2548.7	2559.3	2567.5	2578.1	2589.9	2606.3	2616.9	2627.5	2634.5	2629.8
5°	2553.4	2566.3	2593.4	2620.4	2652.2	2681.5	2715.6	2740.3	2760.3	2766.2	2768.5
7.5°	2576.9	2598.1	2643.9	2689.8	2740.3	2788.5	2837.9	2880.2	2914.3	2927.2	2928.4
10°	2618.1	2646.3	2710.9	2775.6	2842.6	2916.7	2980.2	3041.3	3089.5	3109.5	3110.6
12.5°	2669.8	2705.1	2789.7	2879.0	2971.9	3074.2	3156.5	3231.7	3291.7	3318.7	3318.7
15°	2736.8	2782.6	2890.8	3010.7	3147.1	3289.3	3394.0	3477.4	3544.4	3577.4	3575.0
17.5°	2809.7	2870.8	3007.2	3188.2	3383.4	3570.3	3692.6	3753.7	3823.1	3854.8	3853.6
20°	2880.2	2955.5	3150.6	3413.9	3673.8	3872.4	3971.2	3987.6	3992.3	3995.9	4005.3
22.5°	2953.1	3054.2	3330.5	3698.4	3977.1	4114.6	4128.7	4058.2	3959.4	3913.6	3926.5
25°	3033.1	3167.1	3565.6	4012.3	4238.0	4254.5	4146.3	3974.7	3787.8	3702.0	3714.9
27.5°	3110.6	3297.6	3847.7	4312.1	4426.1	4281.5	4048.8	3805.4	3579.7	3489.2	3499.8
30°	3188.2	3446.9	4159.3	4574.3	4512.0	4214.5	3894.8	3623.2	3396.3	3301.1	3311.7
32.5°	3267.0	3620.9	4517.8	4763.5	4496.7	4072.3	3703.1	3418.6	3218.8	3118.9	3131.8
35°	3356.3	3834.8	4857.6	4867.0	4394.4	3863.0	3450.4	3174.1	3000.1	2920.2	2937.8
37.5°	3472.7	4106.4	5157.4	4892.9	4215.7	3556.2	3136.5	2884.9	2741.5	2705.1	2730.9
40°	3617.3	4433.2	5386.6	4851.7	3951.2	3183.5	2793.2	2592.2	2511.1	2519.3	2547.5
42.5°	3805.4	4798.8	5547.7	4745.9	3583.2	2799.1	2492.3	2402.9	2441.7	2474.6	2505.2
45°	4049.9	5178.5	5647.6	4566.0	3167.1	2473.5	2314.8	2335.9	2365.3	2368.8	2392.3
47.5°	4362.7	5562.9	5713.4	4294.5	2742.7	2244.2	2201.9	2206.6	2200.7	2176.0	2194.8
50°	4753.0	5936.8	5772.2	3934.7	2381.8	2100.8	2044.4	2027.9	1946.8	1866.9	1877.4
52.5°	5197.3	6280.1	5796.9	3488.0	2100.8	1980.9	1889.2	1785.7	1634.1	1609.4	1617.6
55°	5691.1	6597.5	5733.4	2939.0	1864.5	1826.9	1688.2	1563.6	1547.1	1525.9	1529.5
57.5°	6281.2	6939.6	5604.1	2326.5	1622.3	1647.0	1511.8	1525.9	1496.5	1463.6	1457.7
60°	6926.6	7293.4	5377.2	1768.1	1371.9	1422.5	1466.0	1464.8	1456.6	1429.5	1420.1
62.5°	7507.4	7526.2	4930.5	1354.3	1152.1	1248.5	1367.2	1366.0	1359.0	1343.7	1337.8
65°	7853.0	7490.9	4185.1	1066.3	971.0	1105.1	1233.2	1242.6	1243.8	1242.6	1242.6
67.5°	7791.9	7078.3	3162.4	848.8	821.7	959.3	1100.4	1113.3	1122.7	1125.1	1127.4
70°	7100.6	6171.9	2062.0	677.1	688.9	831.2	974.6	987.5	995.7	1005.1	1009.8
72.5°	5534.7	4537.8	1180.3	547.8	572.5	720.6	850.0	865.2	869.9	887.6	894.6
75°	3372.8	2668.6	637.2	431.4	470.2	616.0	726.5	744.2	752.4	773.5	775.9
77.5°	1603.5	1155.6	363.3	336.2	378.5	503.2	613.7	633.6	611.3	623.1	613.7
80°	542.0	429.1	229.2	256.3	289.2	392.7	491.4	511.4	464.4	462.0	457.3
82.5°	189.3	174.0	145.8	170.5	186.9	281.0	371.5	397.4	345.6	344.5	328.0
85°	74.1	70.5	81.1	92.9	111.7	172.8	244.5	257.5	212.8	171.6	169.3
87.5°	15.3	16.5	20.0	21.2	34.1	60.0	88.2	108.2	85.8	72.9	67.0
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)