

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: P882744

Luminaire Tested: **NAV-SB2D-735-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882744
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-735-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 3500K, 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: 20558 lumens
Efficiency: N/A
Efficacy: 139.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

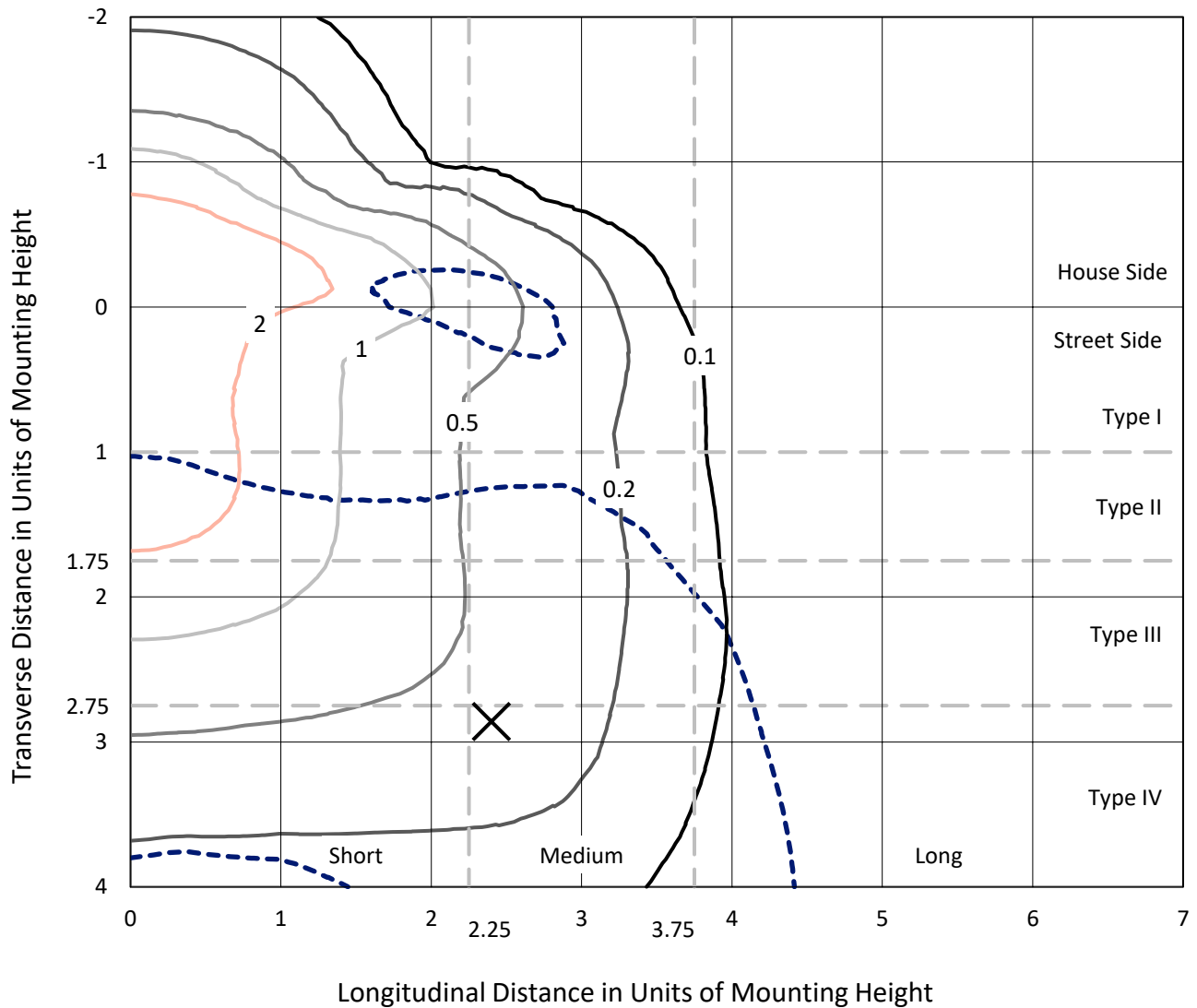
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

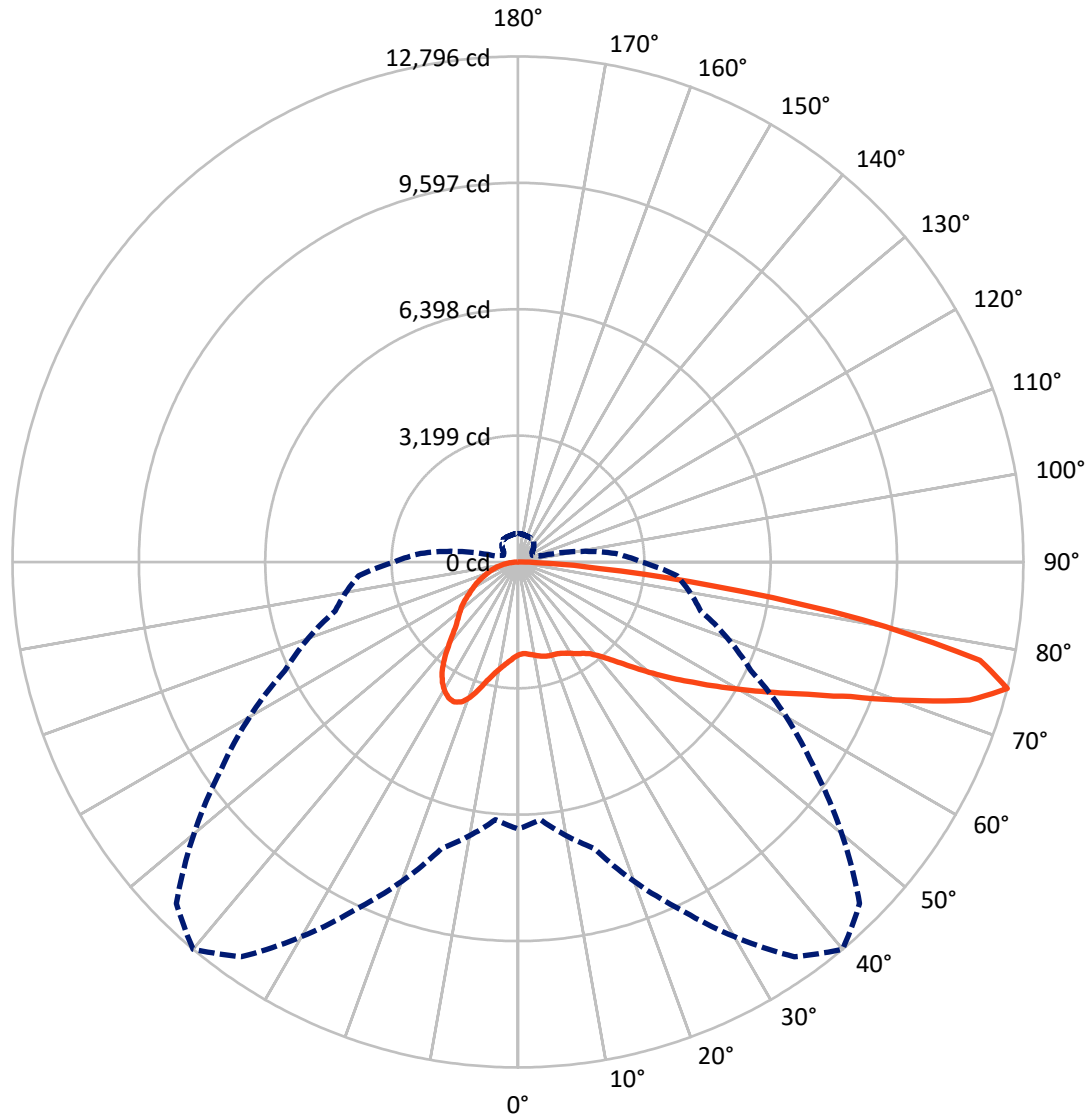
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6369.6	0.0	6369.6
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	14188.4	0.0	14188.4
	% Fixture	69.0	0.0	69.0
Total	Lumens	20558.0	0.0	20558.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.7	1.1
10°-20°	787.9	3.8
20°-30°	1438.6	7.0
30°-40°	2040.3	9.9
40°-50°	2755.0	13.4
50°-60°	3706.2	18.0
60°-70°	4704.0	22.9
70°-80°	4269.2	20.8
80°-90°	622.3	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°	20558.0	100.0
0°-180°	20558.0	100.0

Coefficient of Utilization



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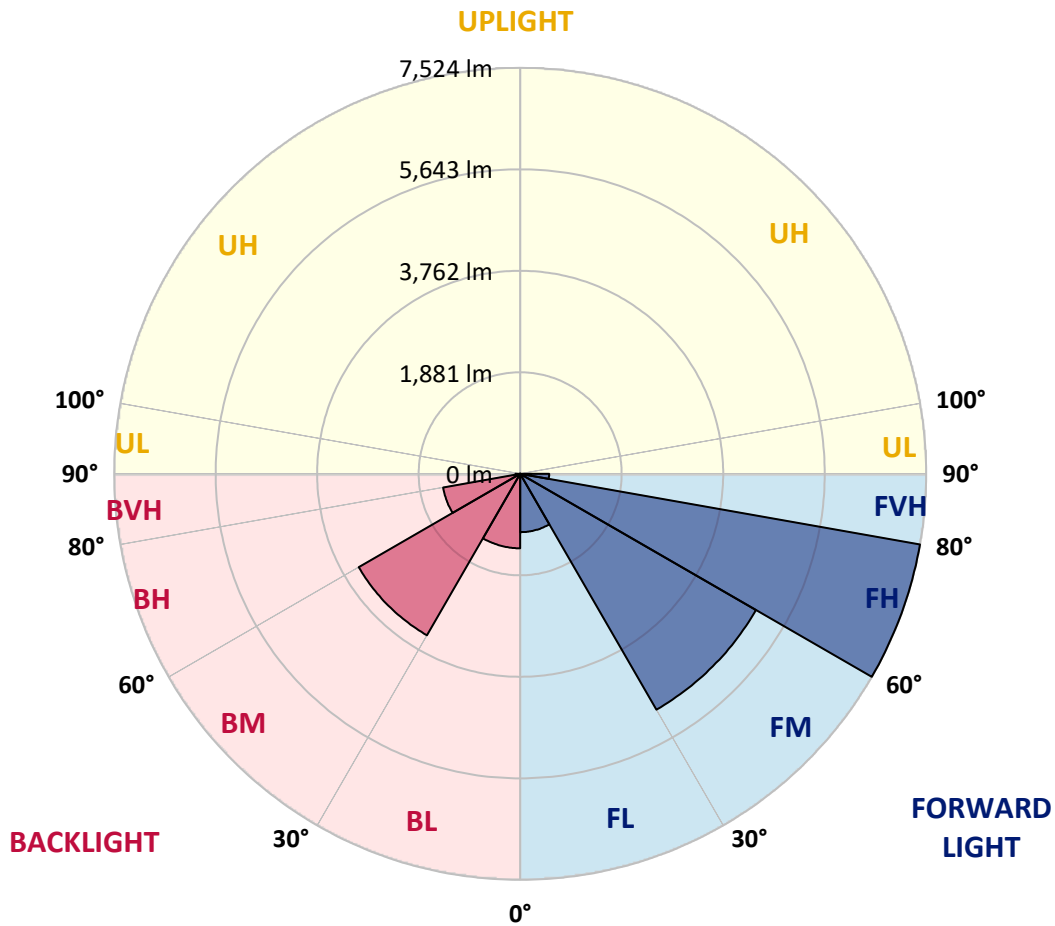
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1081.4	5.3			
FM (30°-60°)	5046.5	24.5			
FH (60°-80°)	7523.9	36.6			G4/12000
FVH (80°-90°)	536.6	2.6			G4/750
BL (0°-30°)	1379.7	6.7	B3/2500		
BM (30°-60°)	3454.9	16.8	B3/5000		
BH (60°-80°)	1449.3	7.0	B3/2500		G3/2500
BVH (80°-90°)	85.7	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8
2.5°	2314.9	2327.9	2324.7	2320.3	2320.3	2321.4	2320.3	2327.9	2335.6	2343.2	2355.2
5°	2338.8	2351.9	2345.4	2339.9	2335.6	2334.5	2331.2	2330.1	2334.5	2344.3	2360.6
7.5°	2385.7	2398.8	2389.0	2379.2	2370.5	2366.1	2361.7	2355.2	2351.9	2357.4	2380.3
10°	2438.1	2451.1	2439.2	2421.7	2407.5	2402.1	2397.7	2391.2	2386.8	2390.1	2415.2
12.5°	2490.4	2503.5	2487.1	2463.1	2444.6	2441.3	2435.9	2433.7	2432.6	2431.5	2456.6
15°	2539.5	2550.4	2529.7	2501.3	2481.7	2476.2	2470.8	2474.0	2479.5	2486.0	2514.4
17.5°	2577.6	2588.5	2558.0	2520.9	2502.4	2500.2	2496.9	2507.8	2523.1	2539.5	2574.4
20°	2612.5	2623.4	2584.2	2534.0	2512.2	2512.2	2513.3	2536.2	2558.0	2582.0	2630.0
22.5°	2661.6	2670.3	2622.3	2553.6	2522.0	2524.2	2532.9	2555.8	2583.1	2615.8	2682.3
25°	2734.6	2741.2	2682.3	2590.7	2554.7	2561.3	2568.9	2579.8	2606.0	2644.1	2733.6
27.5°	2852.4	2857.9	2780.4	2656.1	2601.6	2612.5	2623.4	2615.8	2627.8	2660.5	2775.0
30°	3018.1	3021.4	2923.3	2758.6	2681.2	2686.7	2688.8	2657.2	2634.3	2660.5	2804.4
32.5°	3214.4	3213.3	3096.6	2882.9	2771.7	2766.3	2747.7	2685.6	2632.1	2655.0	2830.6
35°	3518.6	3506.6	3356.2	3057.4	2874.2	2840.4	2796.8	2717.2	2643.1	2649.6	2853.5
37.5°	4022.4	3985.3	3777.0	3343.1	3026.9	2940.7	2876.4	2768.4	2667.0	2647.4	2880.8
40°	4590.5	4543.6	4314.6	3734.5	3255.8	3117.4	3013.8	2841.5	2706.3	2657.2	2921.1
42.5°	5264.3	5197.8	4951.4	4195.7	3545.9	3345.3	3189.3	2934.2	2764.1	2688.8	2975.6
45°	6091.9	6003.6	5654.7	4715.8	3911.2	3644.0	3435.8	3074.8	2852.4	2749.9	3057.4
47.5°	6928.2	6950.0	6453.9	5311.2	4349.5	4012.6	3744.3	3286.4	2981.1	2848.0	3189.3
50°	7816.9	7832.1	7248.8	5970.9	4846.7	4429.1	4091.1	3523.0	3159.9	2987.6	3386.7
52.5°	8510.3	8512.5	7970.6	6661.1	5364.6	4887.0	4465.1	3793.4	3367.1	3173.0	3649.5
55°	8944.3	8938.8	8476.5	7314.2	5960.0	5367.9	4879.4	4100.9	3620.0	3391.0	3979.8
57.5°	9259.4	9243.1	8825.4	7875.7	6594.5	5936.0	5348.3	4449.8	3918.8	3650.6	4414.9
60°	9379.4	9369.5	9062.1	8360.9	7261.9	6564.0	5889.1	4840.1	4257.9	3956.9	4974.3
62.5°	9425.1	9443.7	9294.3	8830.9	7976.0	7259.7	6483.3	5306.8	4639.5	4303.7	5564.2
65°	9586.5	9620.3	9589.8	9445.9	8782.9	8074.2	7271.7	5861.8	5056.0	4675.5	6180.2
67.5°	9906.0	9939.8	9952.9	10181.9	9768.6	9089.3	8255.2	6553.1	5543.4	5061.5	6643.6
70°	9898.4	9888.6	10119.7	10767.4	11002.9	10494.8	9581.1	7403.6	6124.6	5382.1	6702.5
72.5°	9009.7	8931.2	9477.5	10760.8	12030.0	11962.4	11200.3	8500.5	6626.2	5421.3	5816.0
75°	6759.2	6549.8	7514.8	9697.7	12201.2	12795.5	12229.6	9180.9	6507.3	4790.0	4047.4
77.5°	2890.6	2680.1	3817.4	7179.0	10920.0	11961.3	11285.3	8009.8	5194.5	3167.5	1987.7
80°	756.7	755.6	1153.6	3254.8	7426.5	8833.1	7749.2	5172.7	2968.0	1131.8	548.5
82.5°	312.9	305.3	424.2	1265.9	3628.7	4956.8	4045.3	2307.2	1071.8	306.4	182.1
85°	116.7	115.6	206.1	437.2	1280.1	2044.4	1479.6	589.9	267.1	149.4	81.8
87.5°	32.7	31.6	44.7	151.6	311.8	473.2	253.0	97.0	75.2	58.9	24.0
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°	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8	2350.8
2.5°	2358.5	2363.9	2373.7	2381.4	2391.2	2402.1	2417.3	2427.2	2437.0	2443.5	2439.2
5°	2368.3	2380.3	2405.4	2430.4	2459.9	2487.1	2518.8	2541.6	2560.2	2565.6	2567.8
7.5°	2390.1	2409.7	2452.2	2494.8	2541.6	2586.4	2632.1	2671.4	2703.0	2715.0	2716.1
10°	2428.3	2454.4	2514.4	2574.4	2636.5	2705.2	2764.1	2820.8	2865.5	2884.0	2885.1
12.5°	2476.2	2508.9	2587.4	2670.3	2756.5	2851.3	2927.6	2997.4	3053.0	3078.1	3078.1
15°	2538.4	2580.9	2681.2	2792.4	2918.9	3050.9	3147.9	3225.3	3287.5	3318.0	3315.8
17.5°	2606.0	2662.7	2789.2	2957.1	3138.1	3311.4	3424.8	3481.5	3545.9	3575.3	3574.2
20°	2671.4	2741.2	2922.2	3166.4	3407.4	3591.7	3683.3	3698.5	3702.9	3706.2	3714.9
22.5°	2739.0	2832.8	3089.0	3430.3	3688.7	3816.3	3829.4	3764.0	3672.4	3629.8	3641.8
25°	2813.2	2937.5	3307.1	3721.4	3930.8	3946.0	3845.7	3686.5	3513.2	3433.6	3445.6
27.5°	2885.1	3058.5	3568.8	3999.5	4105.2	3971.1	3755.2	3529.5	3320.2	3236.2	3246.0
30°	2957.1	3197.0	3857.7	4242.6	4184.8	3909.0	3612.4	3360.5	3150.1	3061.8	3071.6
32.5°	3030.1	3358.3	4190.3	4418.2	4170.7	3777.0	3434.7	3170.8	2985.4	2892.7	2904.7
35°	3113.0	3556.8	4505.4	4514.1	4075.8	3583.0	3200.2	2944.0	2782.6	2708.5	2724.8
37.5°	3220.9	3808.7	4783.4	4538.1	3910.1	3298.4	2909.1	2675.8	2542.7	2508.9	2532.9
40°	3355.1	4111.8	4996.1	4500.0	3664.7	2952.7	2590.7	2404.3	2329.0	2336.7	2362.8
42.5°	3529.5	4450.9	5145.4	4401.8	3323.4	2596.2	2311.6	2228.7	2264.7	2295.2	2323.6
45°	3756.3	4803.1	5238.1	4235.0	2937.5	2294.1	2146.9	2166.6	2193.8	2197.1	2218.9
47.5°	4046.4	5159.6	5299.2	3983.1	2543.8	2081.5	2042.3	2046.6	2041.2	2018.3	2035.7
50°	4408.4	5506.4	5353.7	3649.5	2209.1	1948.5	1896.2	1880.9	1805.7	1731.5	1741.3
52.5°	4820.5	5824.7	5376.6	3235.1	1948.5	1837.3	1752.2	1656.3	1515.6	1492.7	1500.3
55°	5278.5	6119.1	5317.7	2725.9	1729.3	1694.4	1565.8	1450.2	1434.9	1415.3	1418.6
57.5°	5825.8	6436.4	5197.8	2157.8	1504.7	1527.6	1402.2	1415.3	1388.0	1357.5	1352.1
60°	6424.5	6764.6	4987.3	1639.9	1272.5	1319.3	1359.7	1358.6	1351.0	1325.9	1317.2
62.5°	6963.1	6980.5	4573.0	1256.1	1068.6	1158.0	1268.1	1267.0	1260.5	1246.3	1240.8
65°	7283.7	6947.8	3881.7	989.0	900.6	1024.9	1143.8	1152.5	1153.6	1152.5	1152.5
67.5°	7227.0	6565.1	2933.1	787.2	762.2	889.7	1020.6	1032.6	1041.3	1043.5	1045.7
70°	6585.8	5724.4	1912.5	628.1	639.0	770.9	903.9	915.9	923.5	932.3	936.6
72.5°	5133.5	4208.8	1094.7	508.1	531.0	668.4	788.3	802.5	806.9	823.2	829.8
75°	3128.3	2475.1	591.0	400.2	436.1	571.4	673.8	690.2	697.8	717.5	719.6
77.5°	1487.3	1071.8	336.9	311.8	351.1	466.7	569.2	587.7	567.0	577.9	569.2
80°	502.7	398.0	212.6	237.7	268.2	364.2	455.8	474.3	430.7	428.5	424.2
82.5°	175.5	161.4	135.2	158.1	173.4	260.6	344.6	368.5	320.6	319.5	304.2
85°	68.7	65.4	75.2	86.1	103.6	160.3	226.8	238.8	197.4	159.2	157.0
87.5°	14.2	15.3	18.5	19.6	31.6	55.6	81.8	100.3	79.6	67.6	62.2
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)