

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: P884157

Luminaire Tested: **NAV-SB4D-830-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884157
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-830-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35755 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G4

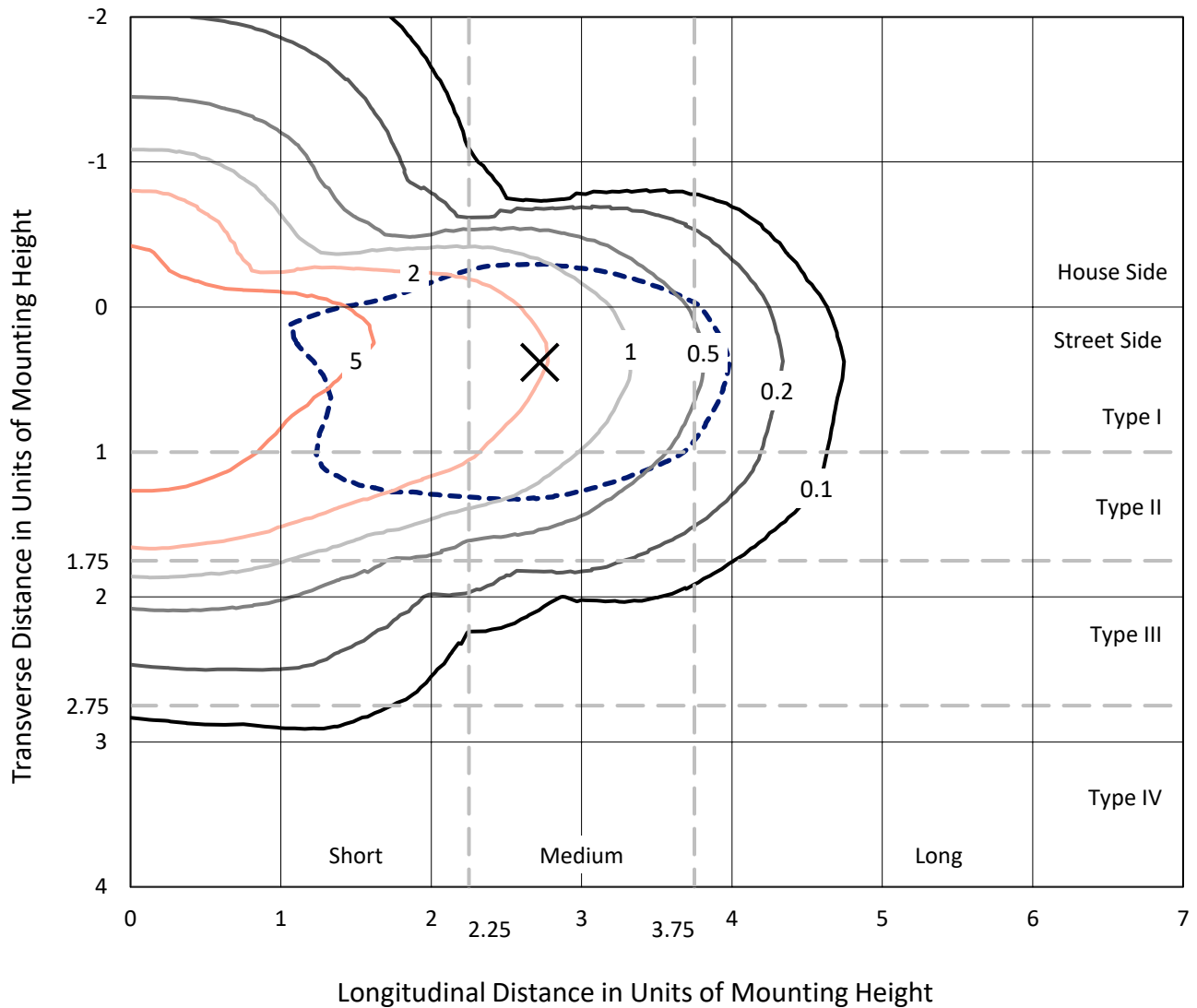
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

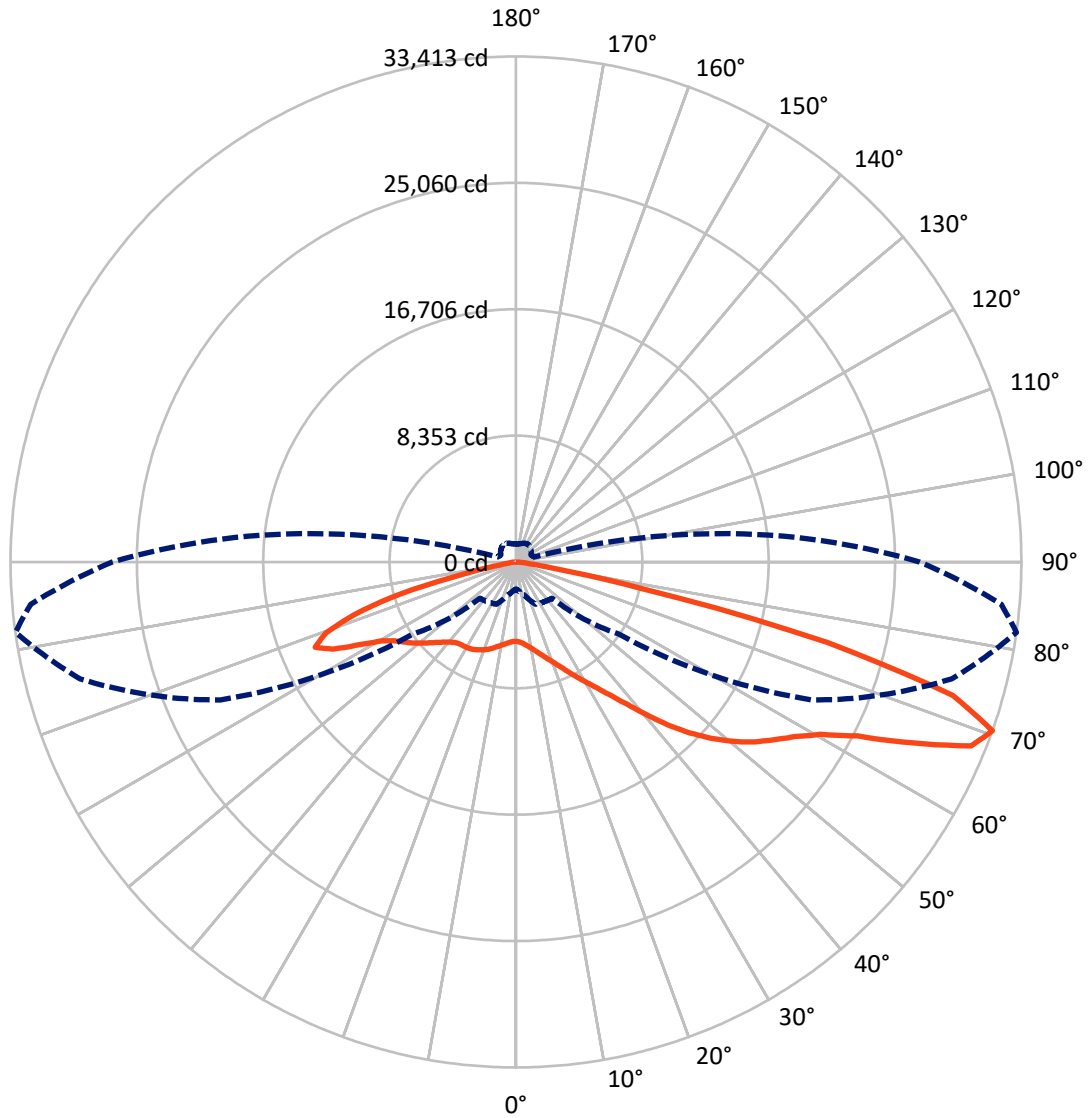
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8814.5	0.0	8814.5
	% Fixture	24.7	0.0	24.7
Street Side	Lumens	26940.5	0.0	26940.5
	% Fixture	75.3	0.0	75.3
Total	Lumens	35755.0	0.0	35755.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	494.9	1.4
10°-20°	1422.0	4.0
20°-30°	2378.9	6.7
30°-40°	3716.4	10.4
40°-50°	5918.9	16.6
50°-60°	8236.8	23.0
60°-70°	8616.1	24.1
70°-80°	4503.2	12.6
80°-90°	467.6	1.3
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°	35755.0	100.0
0°-180°	35755.0	100.0

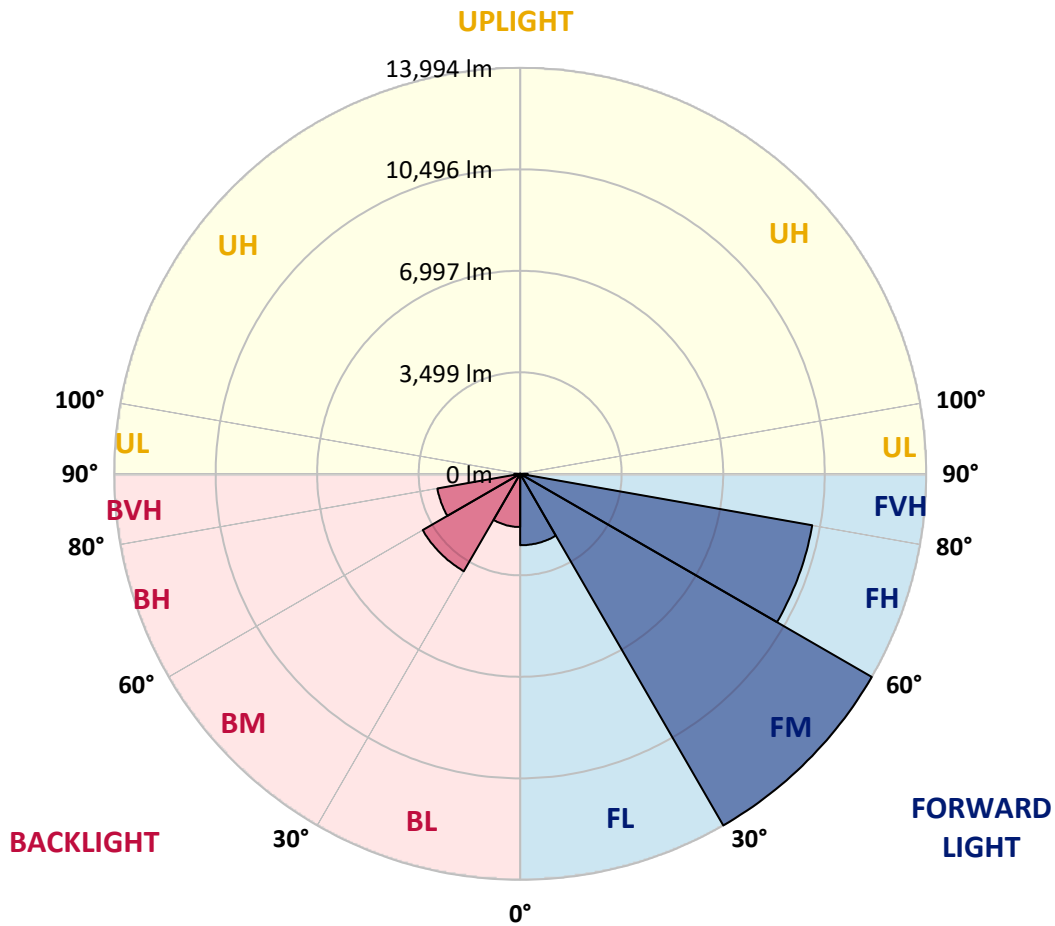


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2462.1	6.9			
FM (30°-60°)	13994.1	39.1			
FH (60°-80°)	10222.5	28.6			G4/12000
FVH (80°-90°)	261.8	0.7			G3/500
BL (0°-30°)	1833.7	5.1	B3/2500		
BM (30°-60°)	3878.0	10.8	B3/5000		
BH (60°-80°)	2896.9	8.1	B4/5000		G4/5000
BVH (80°-90°)	205.8	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1
2.5°	5367.3	5397.7	5388.2	5378.7	5378.7	5365.5	5363.6	5344.6	5329.4	5304.7	5299.0
5°	5435.7	5467.9	5464.1	5471.7	5496.4	5502.1	5507.7	5496.4	5466.0	5435.7	5422.4
7.5°	5374.9	5411.0	5422.4	5467.9	5543.8	5612.1	5663.3	5684.2	5655.7	5612.1	5591.2
10°	5170.0	5209.9	5249.7	5357.9	5492.6	5653.8	5790.4	5872.0	5866.3	5824.6	5788.5
12.5°	4754.5	4796.3	4881.7	5092.2	5338.9	5623.5	5877.7	6048.5	6107.3	6076.9	6014.3
15°	4422.5	4458.6	4523.1	4739.4	5060.0	5492.6	5910.0	6242.0	6391.9	6374.8	6298.9
17.5°	4413.0	4428.2	4468.0	4570.5	4817.1	5287.7	5875.8	6431.7	6718.2	6716.3	6621.4
20°	4580.0	4585.7	4608.4	4629.3	4769.7	5132.1	5788.5	6589.2	7084.4	7084.4	6981.9
22.5°	4811.5	4807.7	4830.4	4811.5	4879.8	5118.8	5733.5	6727.7	7492.3	7522.6	7393.6
25°	5158.7	5139.7	5134.0	5090.3	5103.6	5242.1	5794.2	6885.2	7976.1	8038.7	7877.4
27.5°	5621.6	5591.2	5570.4	5469.8	5435.7	5496.4	5980.2	7074.9	8514.9	8623.0	8418.1
30°	6224.9	6169.9	6139.5	5965.0	5841.7	5851.2	6261.0	7327.2	9078.4	9252.9	8993.0
32.5°	7048.3	6962.9	6881.4	6594.9	6369.1	6295.1	6623.3	7676.3	9689.3	9968.2	9634.3
35°	7970.4	7902.1	7814.8	7372.8	7025.6	6854.8	7112.8	8163.9	10404.6	10846.6	10412.2
37.5°	8858.3	8799.5	8841.2	8245.5	7797.7	7549.2	7754.1	8818.5	11286.8	11939.5	11387.4
40°	9776.6	9731.0	9736.7	9167.6	8645.8	8366.9	8532.0	9640.0	12298.0	13239.1	12559.9
42.5°	10774.5	10740.4	10626.6	10121.9	9535.6	9275.7	9427.5	10588.6	13383.3	14718.9	13846.2
45°	11892.0	11871.2	11764.9	11186.2	10514.6	10222.4	10427.3	11635.9	14474.2	16111.5	15138.2
47.5°	12857.7	12874.8	12861.5	12373.9	11677.6	11248.9	11493.6	12728.7	15489.2	17420.6	16377.2
50°	13322.6	13411.7	13542.6	13390.9	12958.3	12521.9	12569.3	13783.6	16456.8	18648.2	17564.8
52.5°	13079.7	13248.6	13605.3	13848.1	14015.1	13924.0	13796.9	14830.9	17367.5	19756.2	18688.0
55°	12174.7	12411.9	13003.8	13590.1	14441.9	15104.1	15271.0	15992.0	18255.4	20731.4	19750.5
57.5°	10526.0	10911.1	11442.4	12628.2	14062.5	15675.2	16990.0	17602.8	19196.5	21773.0	20862.3
60°	7699.1	8215.1	8875.4	10639.8	12734.4	15369.7	18452.8	20076.8	20534.0	23121.9	22309.9
62.5°	4927.2	5245.9	5853.0	7515.0	9922.7	13804.5	18900.5	23169.3	22801.3	25334.1	24480.3
65°	3373.3	3578.2	4134.1	5067.6	6414.6	10275.6	17701.4	25487.8	26402.3	28840.3	28191.4
67.5°	2451.3	2606.8	3081.2	3898.9	4179.7	6080.7	13736.2	25381.5	29902.7	32452.6	31443.3
70°	1787.2	1897.3	2295.7	3081.2	3215.9	3382.8	8321.4	21575.6	29826.8	33412.7	32204.1
72.5°	1324.3	1400.2	1667.7	2390.5	2603.0	2284.3	4119.0	15680.9	25630.1	30221.5	29252.0
75°	958.1	1015.0	1212.3	1829.0	2083.2	1739.8	2054.7	9163.8	17877.9	21258.8	21429.6
77.5°	732.3	776.0	905.0	1339.5	1667.7	1305.3	1275.0	4215.7	8477.0	8518.7	8996.8
80°	588.2	616.6	686.8	942.9	1278.8	977.1	831.0	1701.8	2678.9	2267.2	2379.2
82.5°	432.6	480.0	580.6	662.1	914.5	673.5	506.6	859.5	1018.8	876.5	884.1
85°	246.6	278.9	351.0	474.3	584.4	411.7	290.3	381.3	474.3	388.9	347.2
87.5°	87.3	113.8	123.3	185.9	254.2	170.8	111.9	110.0	155.6	115.7	96.8
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°	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1	5242.1
2.5°	5280.1	5270.6	5232.6	5181.4	5128.3	5077.1	5060.0	5023.9	4999.3	4986.0	5001.2
5°	5386.3	5356.0	5266.8	5153.0	5033.4	4904.4	4813.3	4729.9	4669.2	4612.2	4635.0
7.5°	5538.1	5485.0	5331.3	5132.1	4919.6	4705.2	4545.8	4424.4	4342.8	4289.7	4301.1
10°	5714.5	5633.0	5397.7	5099.8	4771.6	4464.3	4276.4	4172.1	4120.8	4092.4	4100.0
12.5°	5917.6	5801.8	5466.0	5025.8	4545.8	4194.8	4065.8	4035.5	4037.4	4039.3	4043.1
15°	6168.0	6006.7	5521.0	4864.6	4251.8	3988.0	3965.3	4014.6	4065.8	4090.5	4088.6
17.5°	6450.7	6223.0	5530.5	4599.0	3963.4	3855.2	3927.3	4033.6	4111.4	4145.5	4153.1
20°	6754.2	6443.1	5462.2	4223.3	3726.2	3747.1	3876.1	4012.7	4098.1	4141.7	4153.1
22.5°	7101.4	6678.4	5299.0	3828.7	3532.7	3629.5	3781.2	3914.0	4003.2	4046.9	4058.2
25°	7498.0	6942.1	5042.9	3496.7	3365.7	3496.7	3648.4	3758.5	3830.6	3870.4	3881.8
27.5°	7938.1	7217.2	4701.4	3232.9	3219.7	3360.0	3485.3	3570.6	3608.6	3638.9	3650.3
30°	8380.2	7467.6	4287.8	3033.7	3092.5	3225.3	3314.5	3352.5	3363.8	3369.5	3382.8
32.5°	8858.3	7683.9	3853.3	2868.7	2971.1	3094.4	3147.6	3164.6	3111.5	3075.5	3086.8
35°	9437.0	7915.4	3428.3	2737.7	2851.6	2957.8	2974.9	2959.7	2897.1	2823.1	2826.9
37.5°	10152.2	8203.8	3088.7	2644.8	2739.6	2809.8	2789.0	2785.2	2790.9	2703.6	2709.3
40°	11028.8	8579.4	2840.2	2572.7	2648.6	2663.8	2604.9	2637.2	2665.7	2532.8	2536.6
42.5°	12002.1	9032.9	2682.7	2523.4	2572.7	2536.6	2445.6	2481.6	2477.8	2303.3	2301.4
45°	12994.3	9526.1	2627.7	2487.3	2502.5	2430.4	2329.8	2339.3	2259.6	2102.2	2107.9
47.5°	13980.9	10055.5	2661.9	2457.0	2415.2	2333.6	2255.8	2214.1	2096.5	1978.8	1978.8
50°	14948.5	10611.4	2787.1	2396.2	2295.7	2248.3	2191.3	2117.3	1992.1	1891.6	1884.0
52.5°	15845.9	11171.1	2927.5	2295.7	2145.8	2174.3	2138.2	2052.8	1929.5	1827.1	1829.0
55°	16695.9	11730.8	2982.5	2157.2	2005.4	2109.8	2088.9	1931.4	1783.4	1699.9	1692.4
57.5°	17621.8	12404.3	2921.8	1980.7	1891.6	2035.8	1956.1	1781.5	1696.2	1633.5	1627.8
60°	18904.3	13461.1	2790.9	1762.6	1783.4	1925.7	1789.1	1717.0	1624.1	1553.9	1550.1
62.5°	21034.9	15432.3	2580.3	1546.3	1656.3	1762.6	1709.4	1637.3	1542.5	1474.2	1474.2
65°	24184.4	18172.0	2183.7	1377.4	1514.0	1603.2	1624.1	1552.0	1453.3	1381.2	1385.0
67.5°	26840.5	19890.9	1652.5	1237.0	1367.9	1474.2	1533.0	1462.8	1358.4	1288.2	1290.1
70°	26694.5	18642.5	1261.7	1098.5	1238.9	1347.1	1422.9	1367.9	1256.0	1189.6	1195.3
72.5°	23710.1	15595.5	1020.7	958.1	1108.0	1214.2	1305.3	1263.6	1149.7	1085.2	1085.2
75°	17418.7	11070.5	815.8	815.8	944.8	1075.7	1176.3	1149.7	1045.4	999.9	986.6
77.5°	7342.4	4644.5	639.4	677.3	785.5	924.0	1049.2	1058.7	967.6	1024.5	929.7
80°	1952.3	1280.7	487.6	533.1	616.6	762.7	912.6	908.8	810.1	757.0	703.9
82.5°	743.7	504.7	347.2	375.7	445.9	584.4	722.9	745.6	647.0	559.7	559.7
85°	286.5	216.3	214.4	225.8	259.9	387.0	546.4	565.4	487.6	413.6	426.9
87.5°	74.0	64.5	79.7	75.9	119.5	206.8	313.0	324.4	297.9	172.7	246.6
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)