

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: P884117

Luminaire Tested: **NAV-SB4D-740-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884117
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-740-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 44055 lumens
Efficiency: N/A
Efficacy: 150.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G5

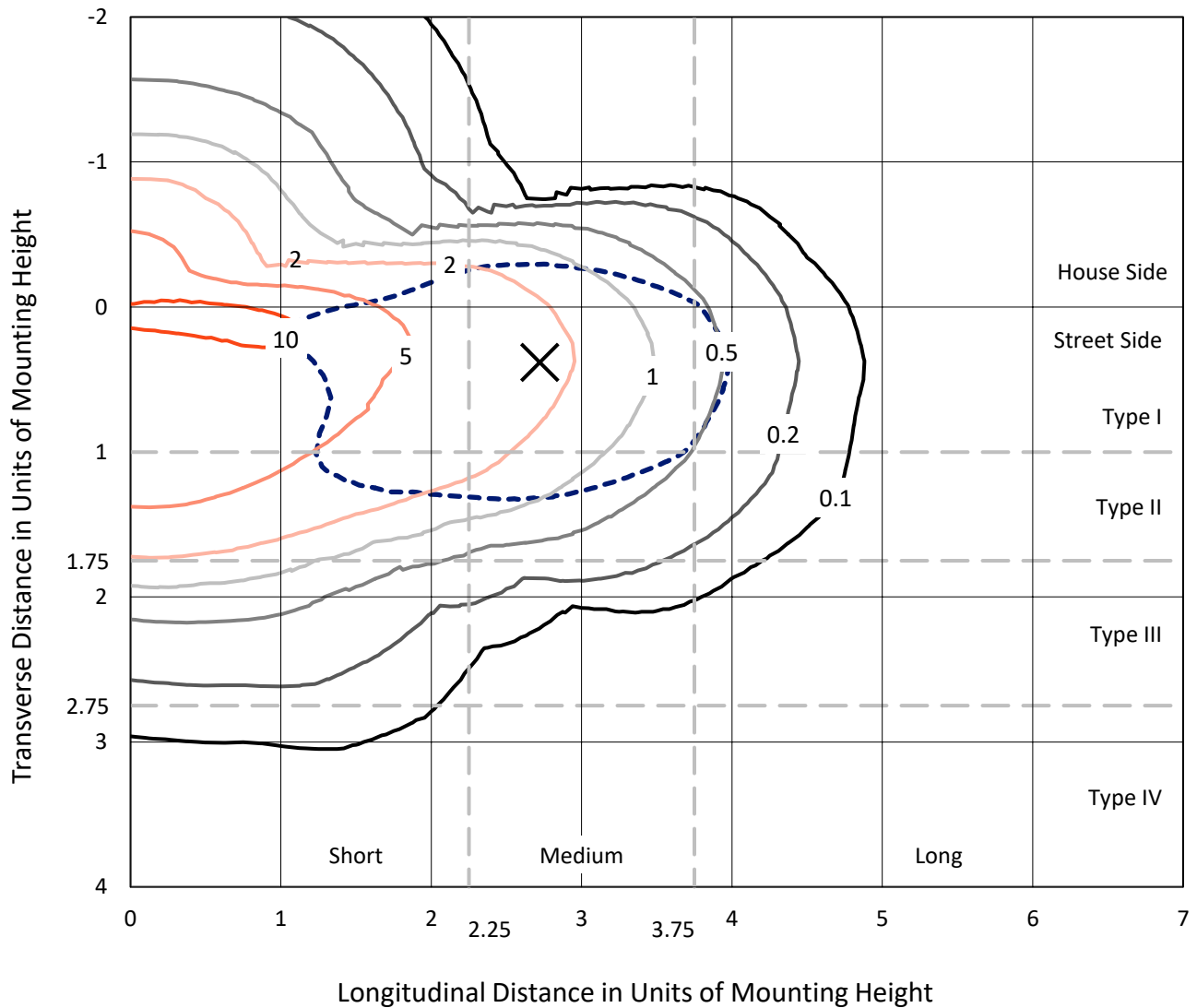
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

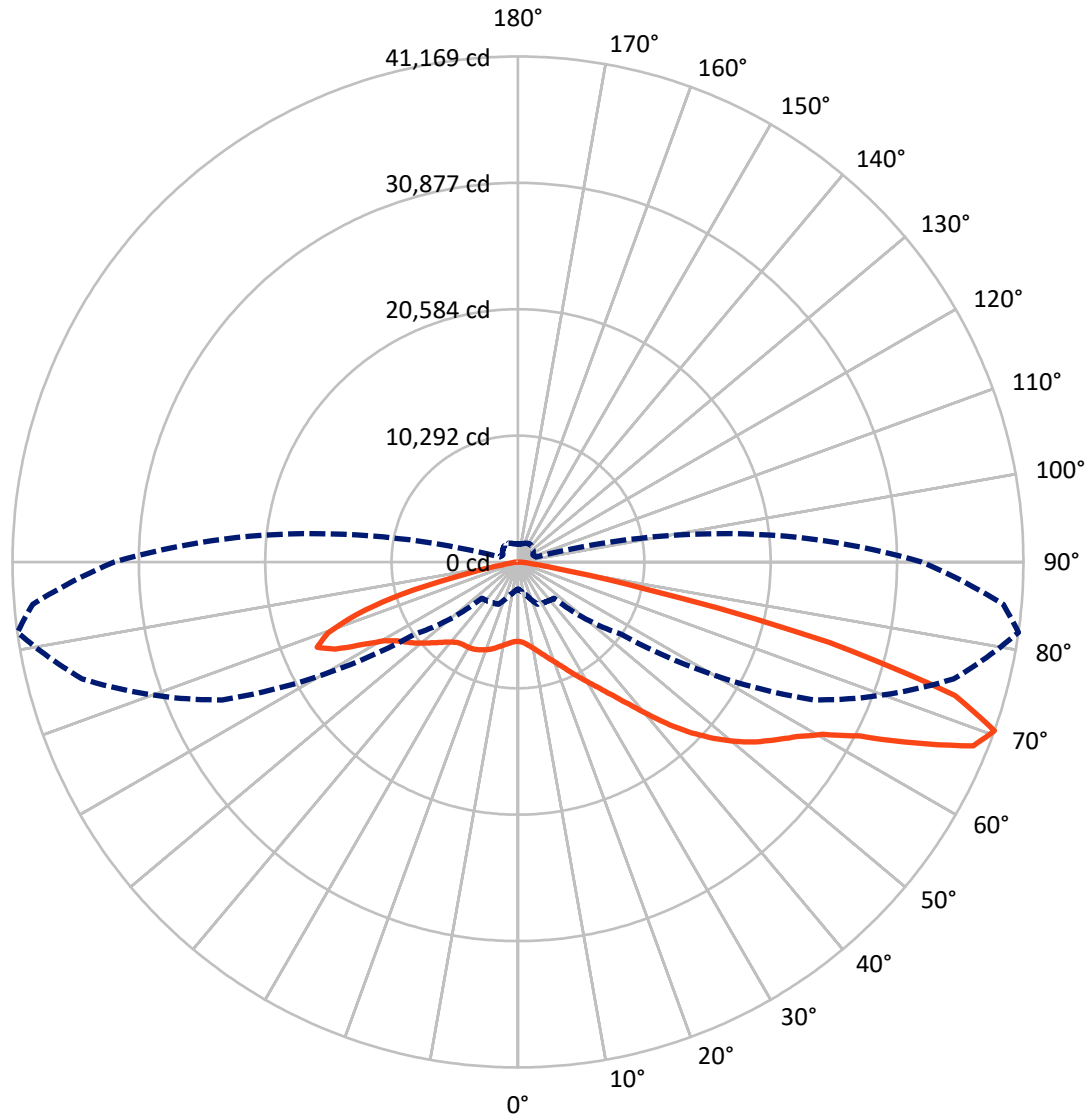
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.7 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	10860.6	0.0	10860.6
	% Fixture	24.7	0.0	24.7
Street Side	Lumens	33194.4	0.0	33194.4
	% Fixture	75.3	0.0	75.3
Total	Lumens	44055.0	0.0	44055.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	609.8	1.4
10°-20°	1752.1	4.0
20°-30°	2931.1	6.7
30°-40°	4579.2	10.4
40°-50°	7292.9	16.6
50°-60°	10148.9	23.0
60°-70°	10616.2	24.1
70°-80°	5548.6	12.6
80°-90°	576.2	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°	44055.0	100.0
0°-180°	44055.0	100.0

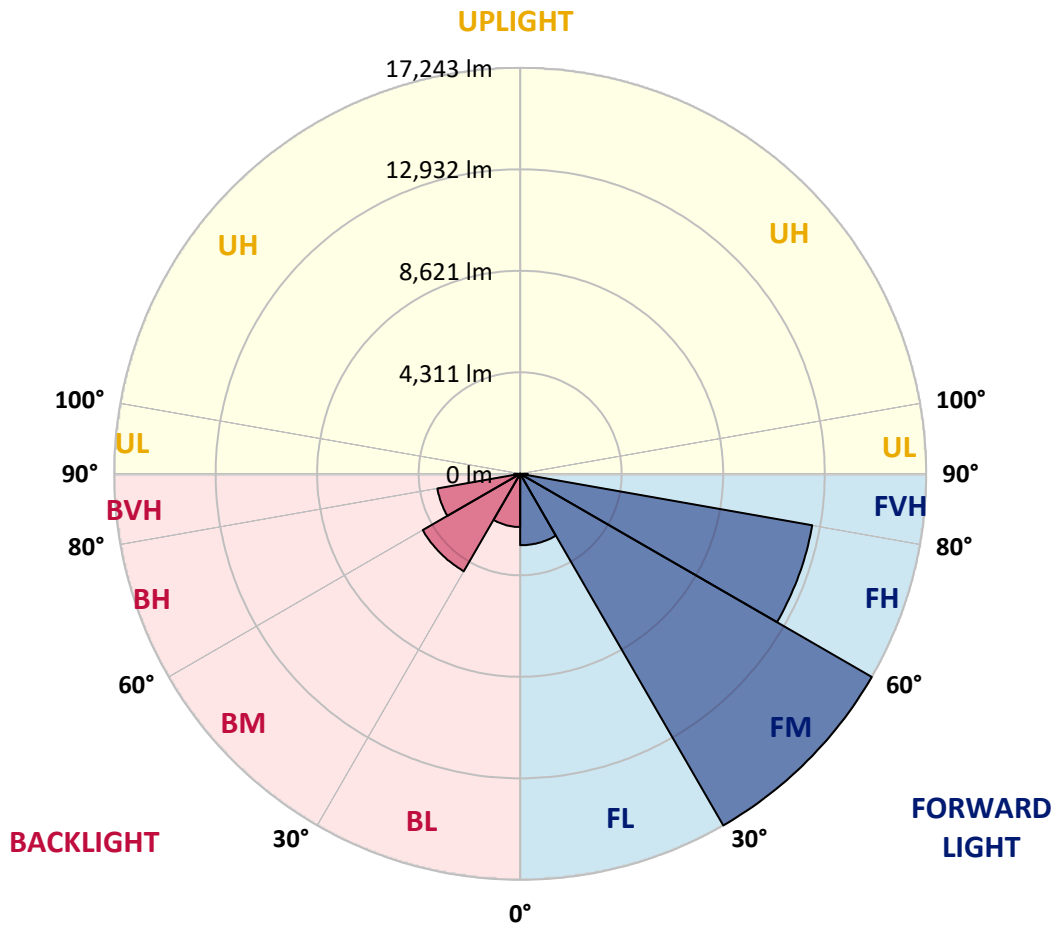


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3033.7	6.9			
FM (30°-60°)	17242.7	39.1			
FH (60°-80°)	12595.5	28.6			G5
FVH (80°-90°)	322.5	0.7			G3/500
BL (0°-30°)	2259.4	5.1	B3/2500		
BM (30°-60°)	4778.3	10.8	B3/5000		
BH (60°-80°)	3569.4	8.1	B4/5000		G4/5000
BVH (80°-90°)	253.6	0.6			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5
 Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0
2.5°	6613.3	6650.7	6639.0	6627.3	6627.3	6611.0	6608.6	6585.2	6566.5	6536.2	6529.1
5°	6697.5	6737.2	6732.5	6741.9	6772.3	6779.3	6786.3	6772.3	6734.9	6697.5	6681.1
7.5°	6622.7	6667.1	6681.1	6737.2	6830.7	6914.9	6978.0	7003.7	6968.6	6914.9	6889.1
10°	6370.2	6419.3	6468.4	6601.6	6767.6	6966.3	7134.6	7235.1	7228.1	7176.7	7132.3
12.5°	5858.2	5909.7	6014.9	6274.3	6578.2	6928.9	7242.1	7452.5	7525.0	7487.6	7410.5
15°	5449.1	5493.6	5573.0	5839.5	6234.6	6767.6	7281.9	7691.0	7875.6	7854.6	7761.1
17.5°	5437.4	5456.1	5505.2	5631.5	5935.4	6515.1	7239.8	7924.7	8277.7	8275.4	8158.5
20°	5643.2	5650.2	5678.2	5703.9	5876.9	6323.4	7132.3	8118.8	8728.9	8728.9	8602.7
22.5°	5928.4	5923.7	5951.7	5928.4	6012.5	6307.1	7064.5	8289.4	9231.5	9268.9	9109.9
25°	6356.2	6332.8	6325.8	6272.0	6288.4	6459.0	7139.3	8483.4	9827.6	9904.8	9706.1
27.5°	6926.6	6889.1	6863.4	6739.5	6697.5	6772.3	7368.4	8717.2	10491.5	10624.8	10372.3
30°	7669.9	7602.1	7564.7	7349.7	7197.7	7209.4	7714.3	9028.1	11185.8	11400.9	11080.6
32.5°	8684.5	8579.3	8478.8	8125.8	7847.6	7756.4	8160.8	9458.3	11938.5	12282.2	11870.7
35°	9820.6	9736.4	9628.9	9084.2	8656.4	8446.0	8764.0	10059.0	12819.8	13364.5	12829.2
37.5°	10914.6	10842.2	10893.6	10159.6	9607.9	9301.6	9554.1	10865.5	13906.9	14711.0	14030.8
40°	12046.1	11990.0	11997.0	11295.7	10652.8	10309.2	10512.6	11877.8	15152.9	16312.3	15475.5
42.5°	13275.7	13233.6	13093.4	12471.5	11749.2	11428.9	11615.9	13046.6	16490.0	18135.7	17060.4
45°	14652.6	14626.9	14496.0	13783.0	12955.4	12595.4	12847.9	14337.0	17834.2	19851.6	18652.4
47.5°	15842.5	15863.5	15847.1	15246.4	14388.4	13860.1	14161.7	15683.5	19084.8	21464.6	20178.9
50°	16415.2	16525.1	16686.4	16499.4	15966.4	15428.7	15487.1	16983.3	20277.0	22977.1	21642.3
52.5°	16116.0	16324.0	16763.5	17062.7	17268.5	17156.2	16999.6	18273.7	21399.1	24342.3	23026.2
55°	15000.9	15293.1	16022.5	16744.8	17794.4	18610.3	18816.0	19704.3	22493.2	25543.8	24335.3
57.5°	12969.5	13444.0	14098.6	15559.6	17326.9	19313.9	20933.9	21689.0	23652.7	26827.2	25705.1
60°	9486.3	10122.2	10935.7	13109.7	15690.5	18937.6	22736.3	24737.3	25300.7	28489.3	27488.8
62.5°	6071.0	6463.7	7211.7	9259.6	12226.1	17009.0	23288.0	28547.8	28094.3	31215.1	30163.1
65°	4156.4	4408.9	5093.8	6243.9	7903.7	12660.9	21810.6	31404.4	32531.2	35535.1	34735.6
67.5°	3020.3	3212.0	3796.4	4803.9	5149.9	7492.3	16924.8	31273.5	36844.2	39986.0	38742.4
70°	2202.1	2337.7	2828.6	3796.4	3962.4	4168.1	10253.1	26584.1	36750.7	41168.9	39679.8
72.5°	1631.7	1725.2	2054.8	2945.5	3207.3	2814.6	5075.1	19320.9	31579.7	37236.9	36042.4
75°	1180.5	1250.7	1493.8	2253.5	2566.8	2143.7	2531.7	11291.0	22028.0	26193.7	26404.1
77.5°	902.3	956.1	1115.1	1650.4	2054.8	1608.3	1570.9	5194.3	10444.8	10496.2	11085.3
80°	724.7	759.7	846.2	1161.8	1575.6	1203.9	1023.9	2096.9	3300.8	2793.5	2931.5
82.5°	533.0	591.4	715.3	815.9	1126.8	829.9	624.2	1059.0	1255.3	1080.0	1089.4
85°	303.9	343.6	432.5	584.4	720.0	507.3	357.7	469.9	584.4	479.2	427.8
87.5°	107.5	140.3	151.9	229.1	313.2	210.4	137.9	135.6	191.7	142.6	119.2
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°	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0	6459.0
2.5°	6505.8	6494.1	6447.3	6384.2	6318.8	6255.6	6234.6	6190.2	6159.8	6143.4	6162.1
5°	6636.7	6599.3	6489.4	6349.1	6201.9	6042.9	5930.7	5827.8	5753.0	5682.9	5711.0
7.5°	6823.7	6758.2	6568.9	6323.4	6061.6	5797.5	5601.1	5451.5	5351.0	5285.5	5299.5
10°	7041.1	6940.6	6650.7	6283.7	5879.3	5500.6	5269.1	5140.6	5077.4	5042.4	5051.7
12.5°	7291.2	7148.6	6734.9	6192.5	5601.1	5168.6	5009.7	4972.2	4974.6	4976.9	4981.6
15°	7599.8	7401.1	6802.7	5993.8	5238.7	4913.8	4885.8	4946.5	5009.7	5040.0	5037.7
17.5°	7948.1	7667.6	6814.3	5666.5	4883.4	4750.2	4839.0	4969.9	5065.8	5107.8	5117.2
20°	8322.1	7938.8	6730.2	5203.7	4591.2	4616.9	4775.9	4944.2	5049.4	5103.2	5117.2
22.5°	8749.9	8228.6	6529.1	4717.4	4352.8	4472.0	4659.0	4822.6	4932.5	4986.3	5000.3
25°	9238.5	8553.6	6213.6	4308.3	4147.0	4308.3	4495.4	4630.9	4719.8	4768.9	4782.9
27.5°	9780.9	8892.5	5792.8	3983.4	3967.0	4140.0	4294.3	4399.5	4446.3	4483.7	4497.7
30°	10325.5	9201.1	5283.2	3738.0	3810.4	3974.1	4083.9	4130.7	4144.7	4151.7	4168.1
32.5°	10914.6	9467.6	4747.8	3534.6	3660.8	3812.8	3878.2	3899.3	3833.8	3789.4	3803.4
35°	11627.6	9752.8	4224.2	3373.3	3513.5	3644.4	3665.5	3646.8	3569.6	3478.5	3483.1
37.5°	12508.9	10108.1	3805.7	3258.7	3375.6	3462.1	3436.4	3431.7	3438.7	3331.2	3338.2
40°	13588.9	10571.0	3499.5	3169.9	3263.4	3282.1	3209.6	3249.4	3284.4	3120.8	3125.5
42.5°	14788.2	11129.7	3305.5	3109.1	3169.9	3125.5	3013.3	3057.7	3053.0	2837.9	2835.6
45°	16010.8	11737.5	3237.7	3064.7	3083.4	2994.6	2870.7	2882.4	2784.2	2590.2	2597.2
47.5°	17226.4	12389.7	3279.8	3027.3	2975.9	2875.3	2779.5	2728.1	2583.1	2438.2	2438.2
50°	18418.6	13074.7	3434.1	2952.5	2828.6	2770.2	2700.0	2608.9	2454.6	2330.7	2321.3
52.5°	19524.3	13764.3	3607.0	2828.6	2643.9	2679.0	2634.6	2529.4	2377.4	2251.2	2253.5
55°	20571.6	14453.9	3674.8	2657.9	2470.9	2599.5	2573.8	2379.8	2197.4	2094.6	2085.2
57.5°	21712.4	15283.8	3600.0	2440.5	2330.7	2508.3	2410.1	2195.1	2089.9	2012.7	2005.7
60°	23292.7	16585.8	3438.7	2171.7	2197.4	2372.7	2204.4	2115.6	2001.1	1914.6	1909.9
62.5°	25917.9	19014.7	3179.2	1905.2	2040.8	2171.7	2106.3	2017.4	1900.5	1816.4	1816.4
65°	29798.4	22390.3	2690.7	1697.2	1865.5	1975.3	2001.1	1912.2	1790.7	1701.8	1706.5
67.5°	33071.2	24508.3	2036.1	1524.2	1685.5	1816.4	1888.8	1802.4	1673.8	1587.3	1589.6
70°	32891.2	22970.1	1554.6	1353.5	1526.5	1659.8	1753.3	1685.5	1547.5	1465.7	1472.7
72.5°	29214.0	19215.7	1257.7	1180.5	1365.2	1496.1	1608.3	1556.9	1416.6	1337.2	1337.2
75°	21462.3	13640.4	1005.2	1005.2	1164.2	1325.5	1449.4	1416.6	1288.1	1232.0	1215.6
77.5°	9046.8	5722.6	787.8	834.6	967.8	1138.5	1292.7	1304.4	1192.2	1262.3	1145.5
80°	2405.5	1577.9	600.8	656.9	759.7	939.7	1124.4	1119.7	998.2	932.7	867.3
82.5°	916.4	621.8	427.8	462.9	549.4	720.0	890.7	918.7	797.1	689.6	689.6
85°	353.0	266.5	264.2	278.2	320.3	476.9	673.3	696.6	600.8	509.6	526.0
87.5°	91.2	79.5	98.2	93.5	147.3	254.8	385.7	399.7	367.0	212.7	303.9
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)