

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: P967241

Luminaire Tested: **NAV-SB4D-740-U-T3R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967241
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-740-U-T3R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 45402.4 lumens
Efficiency: N/A
Efficacy: 154.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B4 - U0 - G5

Input Watts (W): 293.6
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



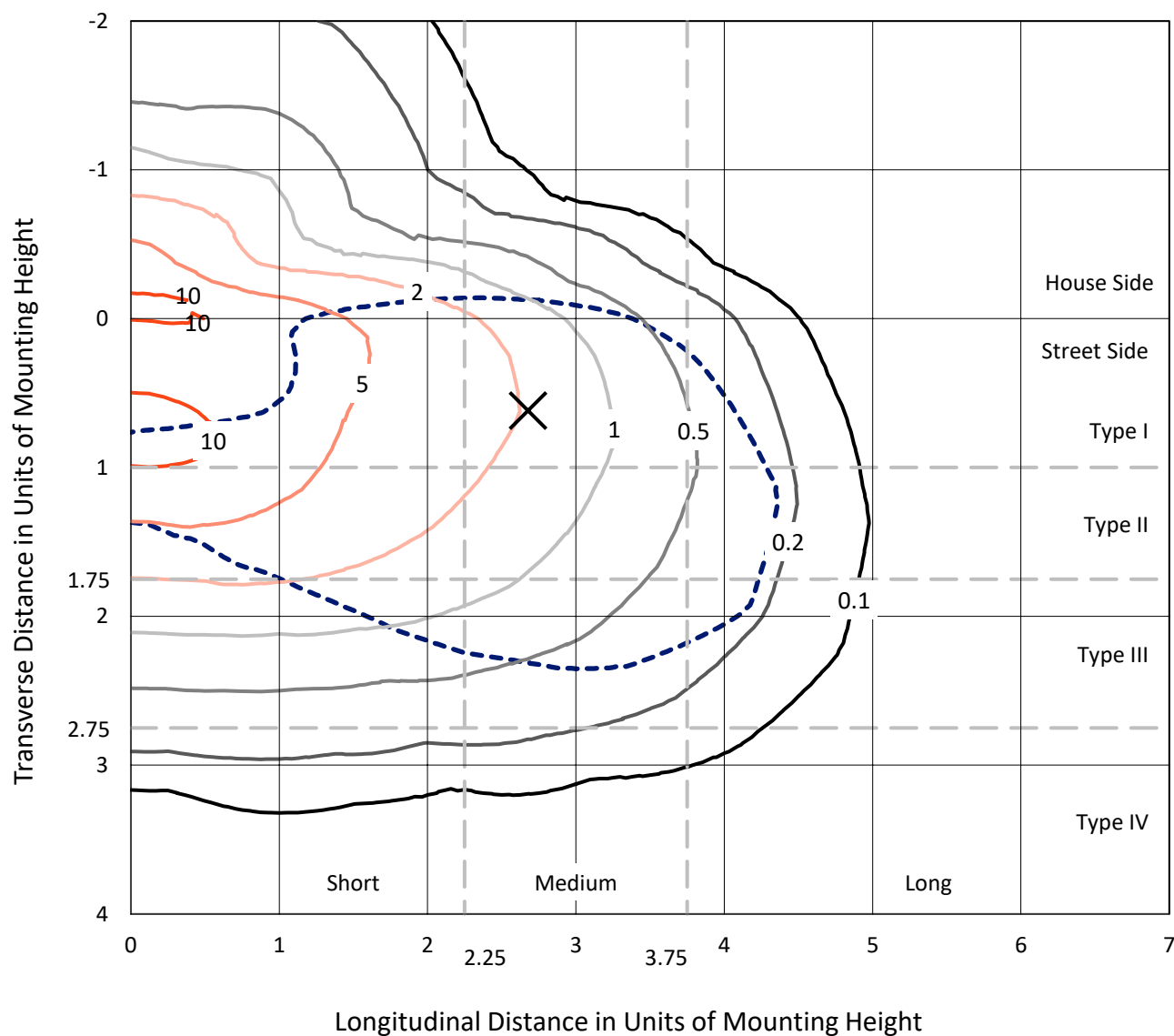
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

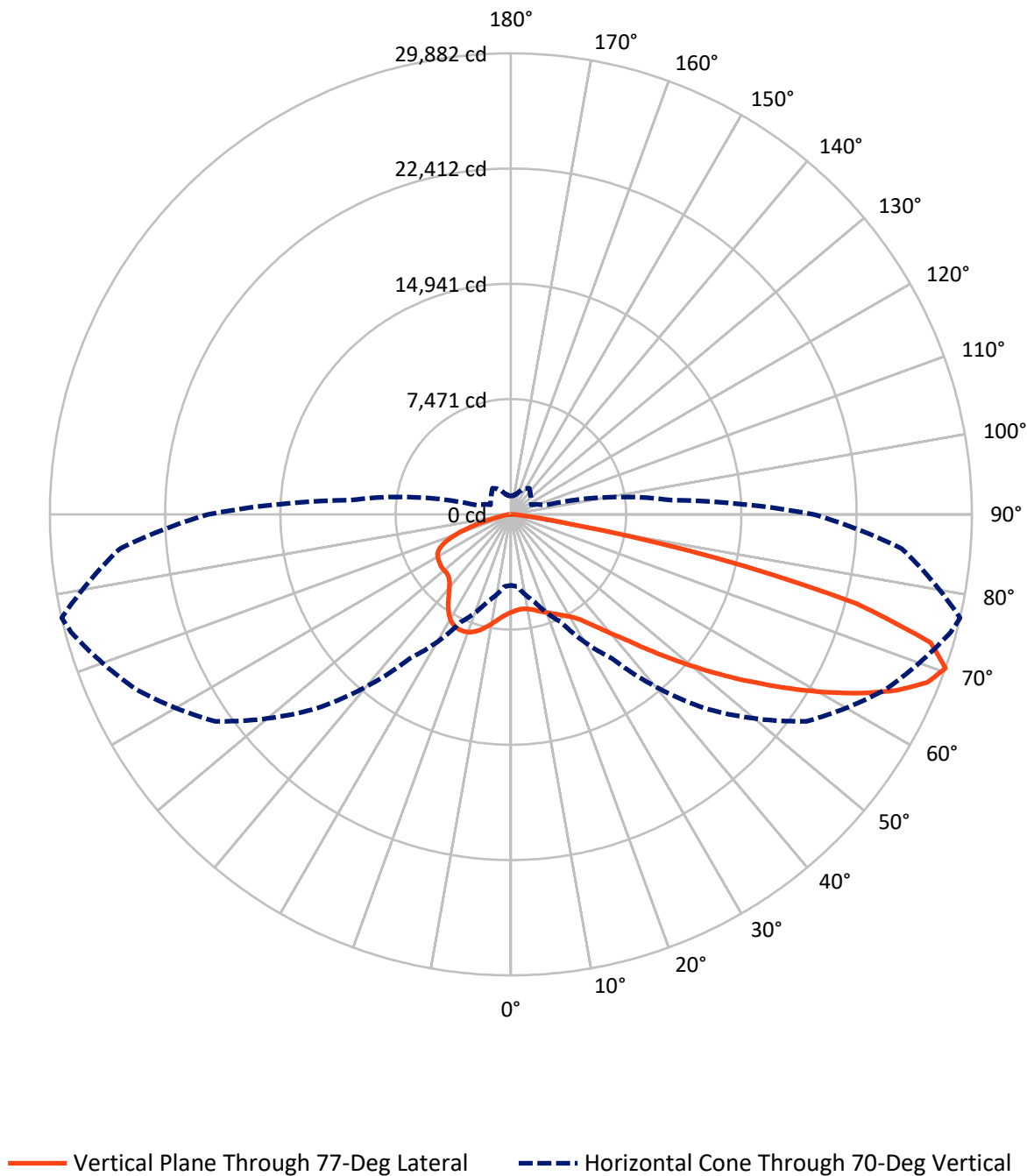
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12 fc
Type III - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9942.4	0.0	9942.4
	% Fixture	21.9	0.0	21.9
Street Side	Lumens	35460.0	0.0	35460.0
	% Fixture	78.1	0.0	78.1
Total	Lumens	45402.4	0.0	45402.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	604.1	1.3
10°-20°	1743.5	3.8
20°-30°	2981.6	6.6
30°-40°	4794.7	10.6
40°-50°	7485.8	16.5
50°-60°	9999.3	22.0
60°-70°	10657.7	23.5
70°-80°	6560.8	14.5
80°-90°	574.9	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°	45402.4	100.0
0°-180°	45402.4	100.0

Coefficient of Utilization



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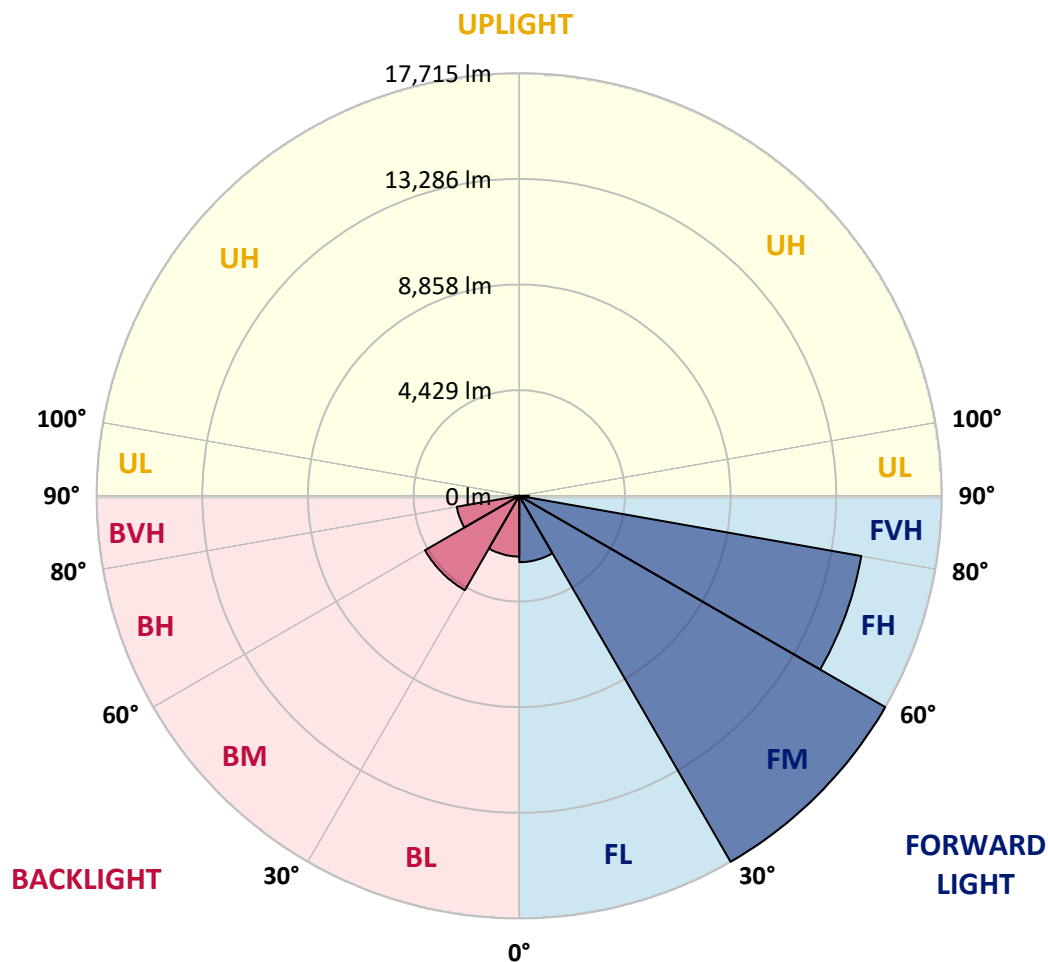
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2781.6	6.1			
FM	(30°-60°)	17715.0	39.0			
FH	(60°-80°)	14561.3	32.1			G5
FVH	(80°-90°)	402.0	0.9			G3/500
BL	(0°-30°)	2547.6	5.6	B4/5000		
BM	(30°-60°)	4564.8	10.1	B3/5000		
BH	(60°-80°)	2657.2	5.9	B4/5000		G4/5000
BVH	(80°-90°)	172.9	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1
2.5°	5838.8	5836.5	5866.7	5876.0	5931.8	5971.3	6045.8	6124.8	6227.1	6238.7	6301.5
5°	5501.6	5501.6	5536.4	5573.6	5645.8	5724.8	5838.8	5976.0	6152.7	6180.5	6336.3
7.5°	5215.6	5234.2	5264.4	5336.5	5420.2	5534.2	5708.5	5903.9	6136.4	6180.5	6431.7
10°	4985.4	5006.3	5043.5	5101.6	5227.2	5385.3	5613.2	5864.3	6175.9	6245.7	6571.2
12.5°	4913.3	4934.2	4955.2	4999.3	5115.6	5301.6	5573.6	5883.0	6271.3	6341.1	6761.9
15°	5080.7	5106.3	5090.0	5078.4	5138.8	5308.6	5592.3	5950.3	6389.8	6489.9	6996.8
17.5°	5466.7	5476.1	5438.9	5329.5	5320.3	5410.9	5680.7	6043.4	6538.7	6647.9	7233.9
20°	6089.9	6073.6	5996.9	5780.6	5657.4	5638.8	5831.7	6182.9	6692.1	6808.4	7489.7
22.5°	6936.3	6917.7	6764.2	6422.4	6148.1	5966.6	6050.4	6364.2	6864.2	6994.4	7738.5
25°	7991.9	7966.4	7740.8	7275.8	6850.3	6401.4	6348.0	6603.8	7075.8	7196.7	7998.9
27.5°	9224.4	9203.5	8959.3	8345.4	7731.6	6996.8	6717.7	6885.1	7296.7	7433.9	8291.9
30°	10549.8	10610.2	10177.7	9517.3	8740.7	7773.4	7215.3	7231.6	7582.7	7705.9	8647.7
32.5°	12107.7	12212.4	11691.5	10854.3	9794.1	8617.5	7843.2	7715.3	7998.9	8101.3	9096.5
35°	13651.7	13770.3	13337.8	12412.3	11191.6	9612.7	8498.9	8271.0	8552.4	8664.0	9691.8
37.5°	14986.4	15144.5	14921.2	14116.7	12686.7	10812.5	9354.6	8924.4	9233.7	9373.2	10491.6
40°	16039.7	16281.6	16265.3	15763.1	14449.2	12268.1	10440.4	9731.2	10080.1	10231.2	11461.2
42.5°	16895.5	17104.7	17286.1	17260.5	16288.6	13921.4	11717.1	10779.9	11045.1	11219.4	12551.8
45°	17486.1	17709.3	18100.0	18520.8	18058.0	15690.9	13179.7	12024.0	12265.9	12528.6	13851.6
47.5°	18013.9	18267.3	18774.3	19441.6	19560.2	17467.4	14781.7	13472.6	13693.5	13965.6	15156.2
50°	18060.4	18278.9	19064.9	20011.3	20627.5	19174.2	16502.5	15098.0	15305.0	15595.6	16553.6
52.5°	16937.3	17281.4	18653.4	19995.0	21118.2	20601.9	18211.6	16788.5	17021.0	17369.8	17999.9
55°	13147.1	13651.7	17446.5	19371.9	20943.7	21525.1	19836.9	18585.9	18883.6	19248.6	19455.5
57.5°	11324.1	11545.0	13849.3	18237.1	20148.5	21764.5	21208.8	20401.9	20881.0	21280.9	20994.9
60°	10177.7	10361.4	11724.1	16472.3	19102.1	21385.5	22269.1	22094.8	22922.6	23399.2	22569.1
62.5°	8950.0	9124.3	10363.8	13754.0	17762.7	20755.4	22938.8	23657.3	25015.3	25536.1	24052.6
65°	7731.6	7880.3	9068.6	11556.6	16060.6	20125.3	23285.3	25008.4	26952.3	27491.7	25285.0
67.5°	6373.6	6496.9	7620.0	9749.9	13991.1	19262.5	23457.3	26071.0	28638.1	29100.8	25894.3
70°	4599.4	4694.7	5855.0	7710.6	11393.8	17779.0	23387.6	26824.4	29512.4	29882.1	25433.8
72.5°	2174.1	2260.1	3622.8	5006.3	8047.8	14891.1	21976.2	26226.8	28624.2	28440.5	22615.6
75°	1160.3	1234.7	2081.2	2746.2	4250.6	10208.0	17983.6	22592.3	24036.4	23143.5	16714.1
77.5°	786.0	844.1	1288.2	1648.6	1941.6	4845.9	11558.9	15642.1	15049.2	13575.0	8371.0
80°	623.2	683.7	1055.6	1116.1	939.4	1750.9	4776.1	7240.9	5201.7	4160.0	2381.1
82.5°	479.0	546.4	888.3	809.2	511.6	718.5	1390.5	2290.4	1332.4	1013.8	576.7
85°	292.9	365.1	697.6	516.2	288.3	327.9	472.0	637.1	406.9	339.5	206.9
87.5°	148.8	209.3	353.4	188.4	130.2	76.8	125.6	125.6	107.0	93.0	53.5
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°	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1	6334.1
2.5°	6357.3	6403.8	6482.8	6557.2	6615.5	6671.2	6727.0	6757.2	6766.5	6803.7	6824.7
5°	6431.7	6517.8	6671.2	6815.3	6906.0	6961.9	7001.4	7024.6	7029.3	7040.9	7059.5
7.5°	6568.9	6706.1	6920.0	7064.2	7131.6	7126.9	7110.7	7052.5	7029.3	7008.3	7013.0
10°	6761.9	6943.2	7206.1	7306.0	7264.2	7152.6	7008.3	6838.6	6759.6	6682.8	6659.6
12.5°	7001.4	7231.6	7489.7	7485.1	7278.1	6992.1	6657.3	6396.8	6231.7	6113.1	6085.2
15°	7292.1	7557.1	7754.7	7596.7	7143.2	6629.4	6138.7	5799.2	5650.4	5520.2	5506.2
17.5°	7592.0	7875.7	7966.4	7561.8	6803.7	6092.2	5536.4	5269.1	5122.5	5052.8	5073.8
20°	7885.0	8166.4	8092.0	7361.9	6287.6	5483.0	4987.8	4841.2	4810.9	4827.2	4820.3
22.5°	8194.3	8445.4	8117.5	6975.8	5629.5	4859.8	4587.8	4592.4	4659.9	4708.6	4720.3
25°	8510.5	8680.2	8050.1	6417.7	4922.6	4401.8	4334.3	4408.7	4541.3	4636.6	4662.2
27.5°	8815.1	8889.5	7903.6	5727.2	4315.7	4073.9	4085.5	4239.0	4439.0	4571.5	4604.0
30°	9159.3	9075.6	7622.2	4950.5	3894.8	3792.5	3890.2	4069.2	4269.2	4387.8	4415.7
32.5°	9547.6	9236.0	7175.8	4232.0	3597.2	3567.0	3727.4	3843.6	3932.0	3967.0	3985.5
35°	10031.3	9461.6	6603.8	3727.4	3329.8	3401.9	3555.3	3497.2	3462.3	3443.7	3462.3
37.5°	10659.1	9766.2	5934.1	3399.5	3113.5	3283.3	3346.1	3164.7	3027.5	2960.1	2976.4
40°	11414.8	10212.6	5290.0	3146.1	2976.4	3181.0	3071.7	2853.1	2678.7	2583.4	2590.4
42.5°	12254.2	10680.0	4748.2	2955.4	2899.6	3097.2	2869.4	2608.9	2327.6	2297.3	2327.6
45°	13135.5	11161.3	4378.5	2808.9	2862.4	3025.2	2753.1	2332.3	2132.3	2255.5	2320.6
47.5°	14016.8	11603.1	4155.2	2699.6	2843.8	2943.8	2650.9	2178.7	2037.0	2215.9	2299.7
50°	14998.0	11998.4	4055.3	2620.6	2822.8	2911.2	2497.3	2139.3	1936.9	2055.5	2143.9
52.5°	15972.3	12305.3	3980.9	2541.5	2792.6	2885.7	2422.9	2092.7	1816.0	1823.1	1871.9
55°	16944.3	12505.3	3899.5	2436.9	2725.3	2829.8	2415.9	2041.6	1725.4	1692.8	1716.1
57.5°	17981.4	12619.3	3799.5	2320.6	2608.9	2688.1	2409.0	2002.0	1697.4	1644.0	1651.0
60°	19037.0	12786.7	3669.3	2178.7	2453.1	2518.3	2392.7	1988.1	1681.2	1590.5	1597.5
62.5°	19983.4	12844.8	3513.5	2044.0	2253.2	2350.8	2357.8	1976.5	1637.0	1481.2	1481.2
65°	20604.2	12593.7	3241.5	1890.4	2037.0	2178.7	2290.4	1936.9	1557.9	1402.1	1402.1
67.5°	20578.7	11877.5	2815.9	1692.8	1827.7	1988.1	2192.8	1869.5	1462.6	1304.5	1311.5
70°	19620.7	10463.7	2276.4	1462.6	1597.5	1783.5	2067.1	1769.6	1348.7	1197.5	1211.4
72.5°	16828.0	8189.6	1653.2	1192.9	1330.0	1571.8	1904.4	1648.6	1232.4	1102.2	1095.2
75°	12021.7	5183.0	1120.7	916.1	1034.7	1332.4	1702.1	1506.7	1125.4	1106.8	1044.1
77.5°	6141.1	2476.4	741.8	669.6	720.9	1051.0	1430.1	1346.3	1141.7	913.8	813.8
80°	1997.4	913.8	467.4	455.7	479.0	699.9	1106.8	1104.5	865.0	620.8	548.8
82.5°	637.1	393.0	304.6	292.9	281.4	439.5	772.0	874.3	583.6	393.0	390.6
85°	253.5	234.8	179.1	165.1	118.6	206.9	404.6	581.3	434.8	283.7	290.7
87.5°	93.0	93.0	48.8	34.8	25.6	69.8	109.3	174.4	248.8	146.5	144.2
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)