

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: P884111

Luminaire Tested: **NAV-SB4D-735-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884111
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-735-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40760 lumens
Efficiency: N/A
Efficacy: 138.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

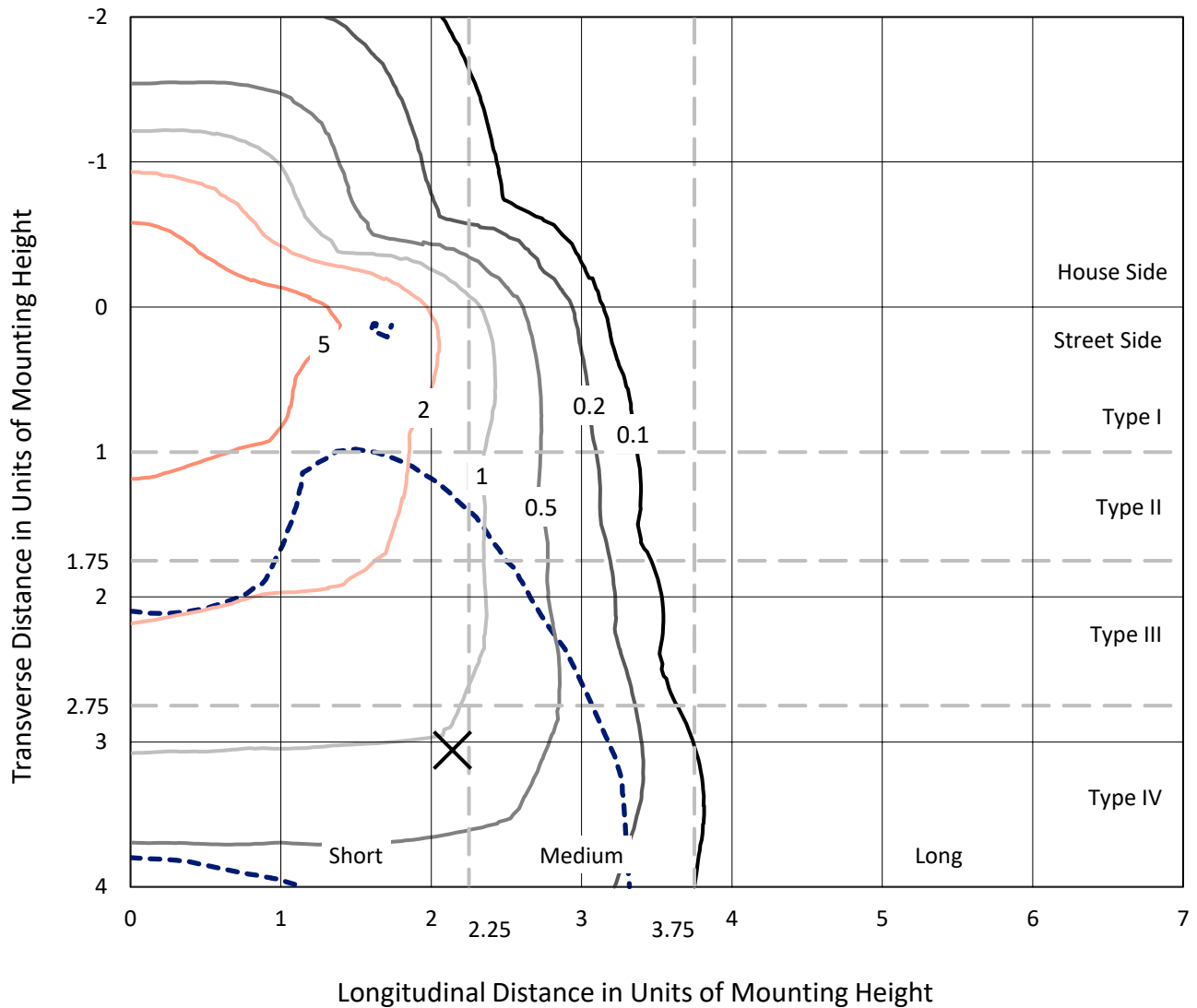
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

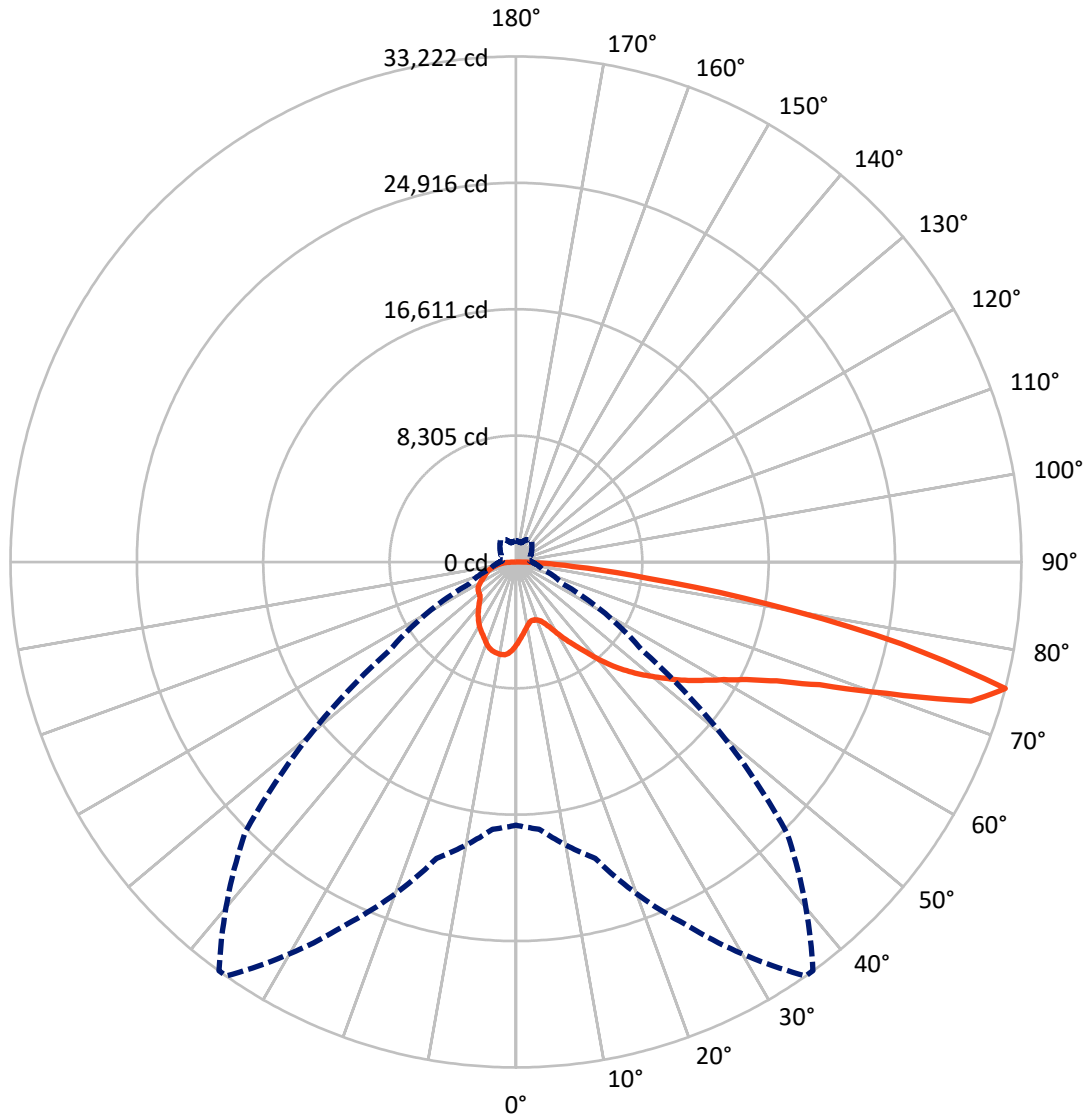
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9699.9	0.0	9699.9
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	31060.1	0.0	31060.1
	% Fixture	76.2	0.0	76.2
Total	Lumens	40760.0	0.0	40760.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.3	1.3
10°-20°	1483.3	3.6
20°-30°	2490.9	6.1
30°-40°	3871.2	9.5
40°-50°	5746.0	14.1
50°-60°	7932.6	19.5
60°-70°	9624.1	23.6
70°-80°	7953.6	19.5
80°-90°	1144.0	2.8
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°	40760.0	100.0
0°-180°	40760.0	100.0

Coefficient of Utilization



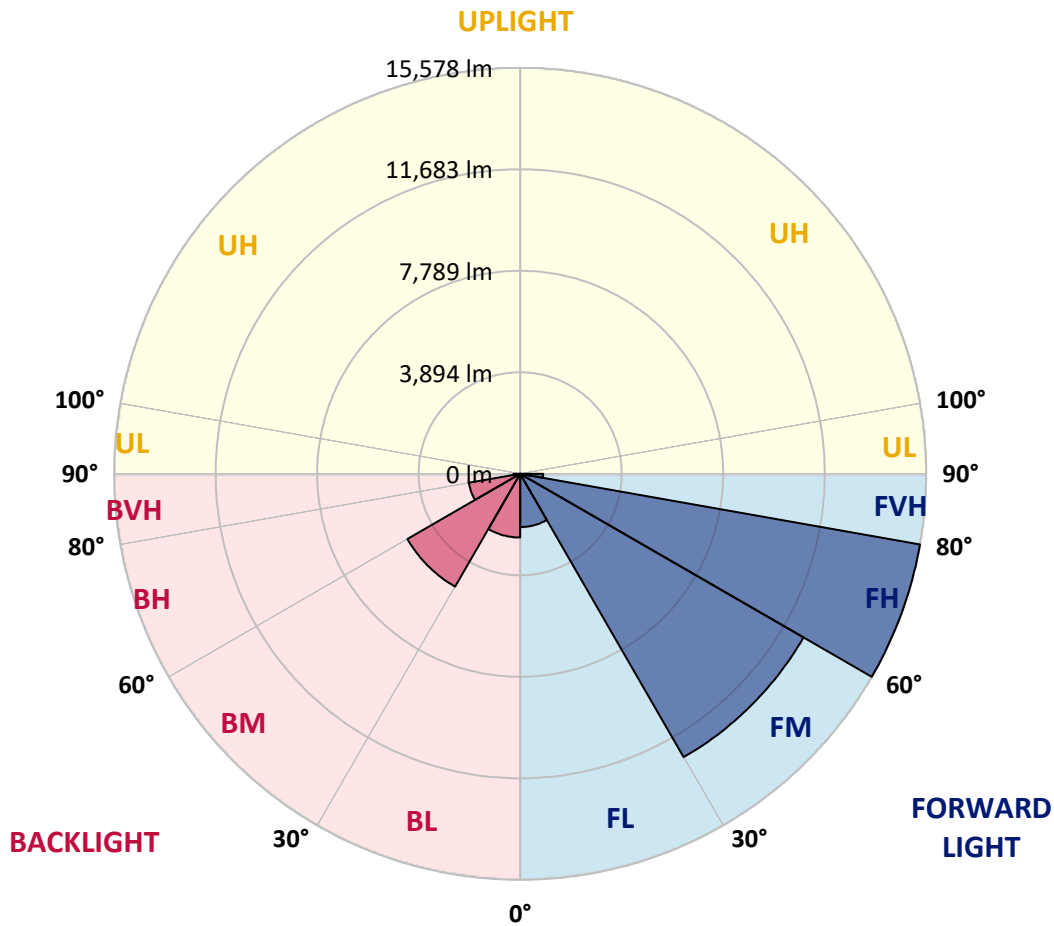
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2044.0	5.0			
FM (30°-60°)	12551.9	30.8			
FH (60°-80°)	15577.9	38.2			G5
FVH (80°-90°)	886.4	2.2			G5
BL (0°-30°)	2444.5	6.0	B3/2500		
BM (30°-60°)	4998.0	12.3	B3/5000		
BH (60°-80°)	1999.8	4.9	B3/2500		G3/2500
BVH (80°-90°)	257.6	0.6			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5
2.5°	5008.5	5039.3	5052.5	5045.9	5079.0	5074.6	5120.9	5178.1	5257.5	5334.6	5447.0
5°	4622.9	4655.9	4684.6	4711.0	4774.9	4794.7	4867.5	4977.6	5123.1	5270.7	5455.8
7.5°	4263.7	4292.4	4336.4	4384.9	4492.9	4512.7	4633.9	4805.8	5008.5	5224.4	5480.0
10°	3970.6	3999.3	4045.6	4100.7	4235.1	4259.3	4413.5	4642.7	4907.1	5180.4	5506.5
12.5°	3845.0	3853.9	3880.3	3935.4	4052.2	4067.6	4237.3	4499.5	4808.0	5147.3	5546.1
15°	3838.4	3856.1	3858.3	3886.9	3983.9	3990.5	4146.9	4406.9	4746.3	5140.7	5605.6
17.5°	3904.5	3917.8	3897.9	3915.6	3997.1	4008.1	4131.5	4362.9	4726.4	5169.3	5707.0
20°	4080.8	4091.8	4032.3	4008.1	4067.6	4076.4	4197.6	4391.5	4746.3	5228.8	5845.8
22.5°	4455.4	4462.0	4316.6	4217.4	4221.8	4226.2	4332.0	4508.3	4823.4	5336.8	6022.1
25°	5039.3	5034.9	4803.6	4611.9	4501.7	4477.4	4548.0	4697.8	4953.4	5480.0	6249.0
27.5°	5722.4	5689.4	5458.0	5171.5	4931.4	4896.1	4880.7	4944.6	5138.5	5669.5	6526.7
30°	6493.6	6462.8	6213.8	5839.2	5506.5	5449.2	5303.7	5270.7	5413.9	5927.3	6912.3
32.5°	7339.7	7319.9	7022.4	6568.5	6123.4	6057.3	5812.7	5724.6	5837.0	6317.3	7449.9
35°	8049.3	8031.6	7784.8	7317.7	6773.5	6691.9	6442.9	6343.8	6401.1	6817.5	8152.8
37.5°	8690.5	8681.7	8470.1	8102.1	7540.3	7441.1	7161.3	7128.2	7117.2	7476.4	9005.6
40°	9285.4	9263.4	9043.0	8849.1	8432.7	8342.3	8095.5	8066.9	7983.2	8287.2	9970.7
42.5°	9944.2	9887.0	9567.5	9477.1	9364.7	9289.8	9142.2	9146.6	8961.5	9201.7	10993.1
45°	10481.9	10448.8	10120.5	10067.6	10188.8	10158.0	10285.8	10318.8	9959.7	10160.2	12055.2
47.5°	11059.2	11028.4	10750.7	10713.3	11041.6	11050.4	11502.1	11513.1	10933.6	11156.2	13119.4
50°	11770.9	11726.9	11451.4	11497.7	11865.7	11898.7	12725.0	12650.1	11830.4	12167.5	14174.9
52.5°	12240.3	12266.7	12207.2	12282.1	12784.5	12815.4	13928.1	13736.4	12718.4	13165.7	15210.5
55°	12586.2	12639.1	12824.2	12996.0	13754.0	13784.9	15062.9	14769.8	13454.4	14091.2	16184.5
57.5°	13031.3	12956.4	13302.3	13637.3	14675.1	14756.6	16166.8	15765.8	14106.6	14888.8	16852.1
60°	13670.3	13617.4	13886.2	14382.0	15706.3	15836.3	17334.7	16662.6	14584.7	15521.2	16982.1
62.5°	14965.9	14833.7	14875.6	15314.1	17006.4	17178.2	18652.3	17444.8	14822.7	15768.0	16285.8
65°	16902.8	16675.8	16464.3	16768.4	18837.4	19007.1	20139.7	18059.6	14734.6	15289.9	14437.1
67.5°	19342.0	19117.3	18857.3	19143.7	21534.5	21668.9	21975.2	18405.6	14040.5	13447.8	11169.4
70°	21353.8	21270.1	21580.8	22759.6	25842.3	25846.7	24328.5	18119.1	12138.9	9534.4	6462.8
72.5°	21087.2	21036.5	22673.7	26318.2	31271.6	31154.8	26556.2	15950.9	8177.1	4301.2	2421.6
75°	17299.4	17627.7	20163.9	26254.3	33221.7	33206.2	25192.2	10140.4	3382.3	1782.6	1251.6
77.5°	9276.6	9796.6	13090.8	19383.9	25934.8	26324.8	17711.5	3547.6	1452.1	1141.4	866.0
80°	3025.4	3479.3	5217.8	9869.3	16852.1	16779.4	7590.9	1392.6	993.8	808.7	599.3
82.5°	1284.6	1337.5	2331.3	4660.3	8648.6	8514.2	2417.2	799.9	698.5	553.1	370.2
85°	502.4	561.9	1029.0	2155.0	3745.9	3664.4	872.6	396.6	447.3	361.4	220.3
87.5°	165.3	200.5	368.0	738.2	1165.6	1123.8	213.7	136.6	193.9	165.3	79.3
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°	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5	5431.5
2.5°	5477.8	5513.1	5554.9	5616.6	5669.5	5713.6	5759.9	5788.5	5799.5	5832.6	5830.4
5°	5517.5	5594.6	5698.2	5799.5	5898.7	5958.2	6011.1	6037.5	6061.7	6079.4	6083.8
7.5°	5583.6	5682.7	5845.8	5978.0	6061.7	6110.2	6145.5	6136.7	6145.5	6149.9	6156.5
10°	5640.9	5779.7	5973.6	6099.2	6163.1	6165.3	6156.5	6125.6	6110.2	6112.4	6116.8
12.5°	5709.2	5863.4	6072.8	6178.5	6196.1	6147.7	6110.2	6057.3	6037.5	6028.7	6024.3
15°	5801.7	5978.0	6180.7	6220.4	6176.3	6114.6	6050.7	5964.8	5920.7	5885.5	5896.5
17.5°	5914.1	6108.0	6264.5	6235.8	6141.1	6039.7	5936.1	5806.1	5715.8	5678.3	5680.5
20°	6070.6	6244.6	6328.4	6202.8	6059.5	5905.3	5729.0	5570.4	5486.6	5449.2	5444.8
22.5°	6260.0	6427.5	6390.1	6145.5	5942.8	5696.0	5475.6	5358.8	5317.0	5290.5	5294.9
25°	6487.0	6630.2	6434.1	6061.7	5751.0	5418.3	5248.7	5211.2	5191.4	5171.5	5171.5
27.5°	6782.3	6859.4	6467.2	5938.3	5451.4	5123.1	5061.4	5068.0	5061.4	5028.3	5034.9
30°	7172.3	7156.9	6498.0	5737.8	5107.6	4856.4	4860.8	4889.5	4893.9	4871.9	4882.9
32.5°	7685.7	7529.2	6513.4	5477.8	4779.3	4622.9	4627.3	4658.1	4680.2	4642.7	4660.3
35°	8307.1	7963.3	6489.2	5151.7	4525.9	4400.3	4367.3	4376.1	4382.7	4347.4	4371.7
37.5°	9032.0	8450.3	6381.2	4790.3	4316.6	4182.2	4111.7	4052.2	4016.9	3983.9	4005.9
40°	9827.5	8981.3	6182.9	4437.8	4083.0	3950.8	3845.0	3732.7	3613.7	3569.6	3589.4
42.5°	10660.4	9527.8	5942.8	4100.7	3814.2	3706.2	3593.9	3430.8	3252.3	3162.0	3173.0
45°	11524.1	10087.5	5707.0	3767.9	3538.8	3492.5	3362.5	3166.4	2972.5	2857.9	2849.1
47.5°	12370.3	10616.3	5361.0	3433.0	3281.0	3331.6	3230.3	3049.6	2833.7	2653.0	2633.1
50°	13178.9	11112.1	4794.7	3093.7	3071.6	3283.2	3186.2	2926.2	2679.4	2448.1	2428.2
52.5°	13981.0	11513.1	4069.8	2785.2	2959.3	3269.9	3128.9	2842.5	2540.6	2298.2	2271.8
55°	14661.9	11720.2	3371.3	2520.8	2796.2	3157.6	3060.6	2743.3	2344.5	2086.7	2064.6
57.5°	15049.7	11552.8	2789.6	2260.8	2571.4	2972.5	2943.8	2531.8	2110.9	1912.6	1886.2
60°	14882.2	10874.1	2313.6	2033.8	2357.7	2772.0	2741.1	2322.5	1932.4	1745.1	1718.7
62.5°	13959.0	9580.7	1936.8	1835.5	2163.8	2567.0	2538.4	2161.6	1795.8	1615.1	1586.5
65°	12099.2	7793.7	1643.8	1670.2	1967.7	2320.3	2362.1	2027.2	1687.9	1511.6	1482.9
67.5°	9228.1	5645.3	1414.6	1527.0	1776.0	2077.9	2199.1	1930.2	1597.5	1430.0	1403.6
70°	5259.7	3206.0	1220.7	1388.2	1606.3	1853.1	2073.5	1853.1	1500.6	1361.7	1344.1
72.5°	1994.1	1471.9	1055.5	1249.4	1443.3	1663.6	1934.6	1731.9	1388.2	1284.6	1267.0
75°	1064.3	896.8	888.0	1086.3	1256.0	1478.5	1760.6	1612.9	1304.5	1357.3	1401.4
77.5°	724.9	634.6	742.6	929.9	1051.1	1273.6	1575.5	1432.3	1130.4	1126.0	1037.8
80°	502.4	449.5	603.7	749.2	813.1	1070.9	1375.0	1229.5	921.0	859.4	821.9
82.5°	301.9	293.1	451.7	559.7	575.1	826.3	1139.2	1031.2	753.6	656.6	661.0
85°	165.3	174.1	288.7	328.3	334.9	577.3	892.4	797.7	579.5	487.0	491.4
87.5°	46.3	59.5	105.8	130.0	160.9	299.7	531.0	473.7	290.9	202.7	202.7
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)