

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: P884144

Luminaire Tested: **NAV-SB4D-827-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884144
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-SB4D-827-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 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: 33215 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B4 - U0 - G5

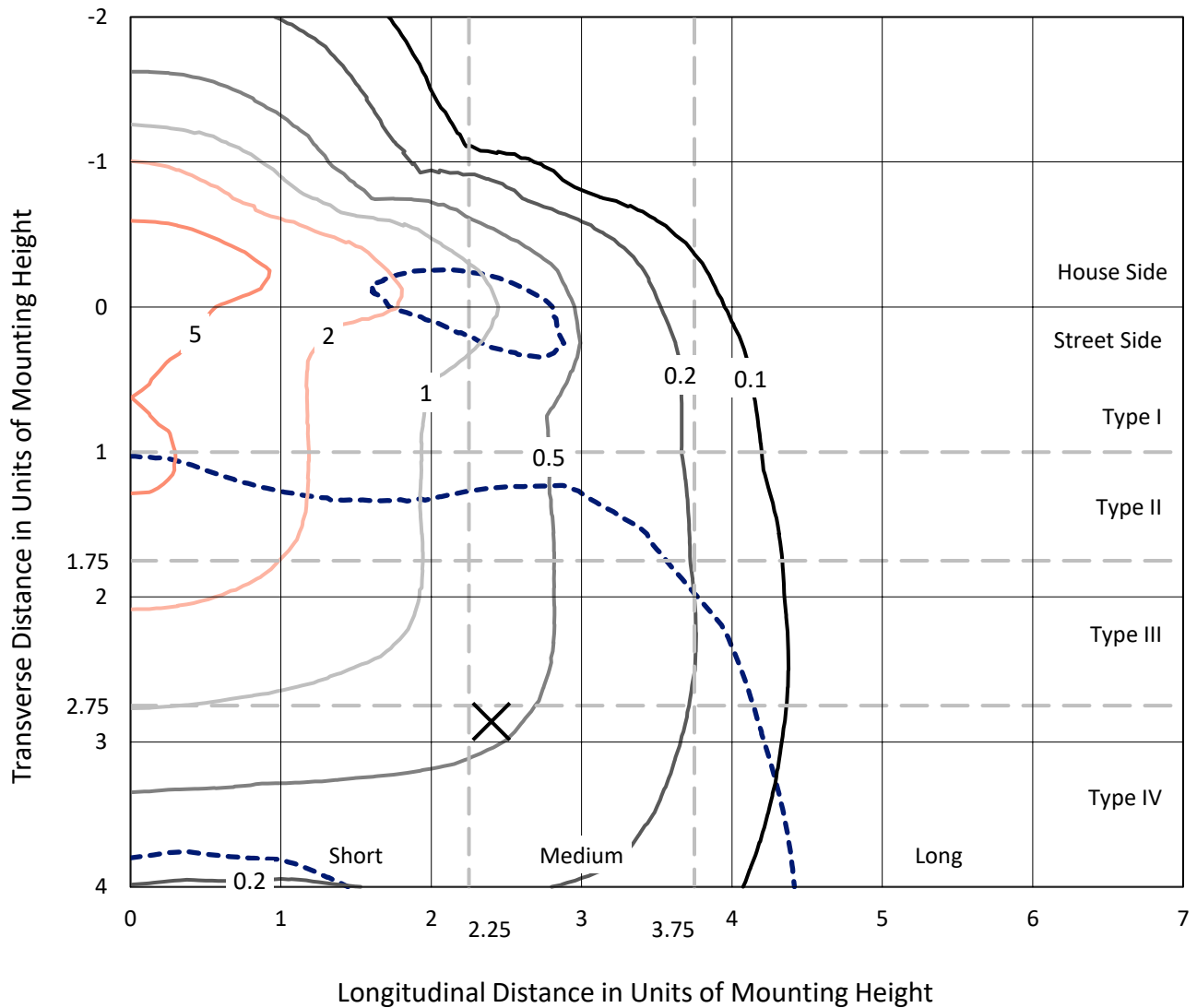
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

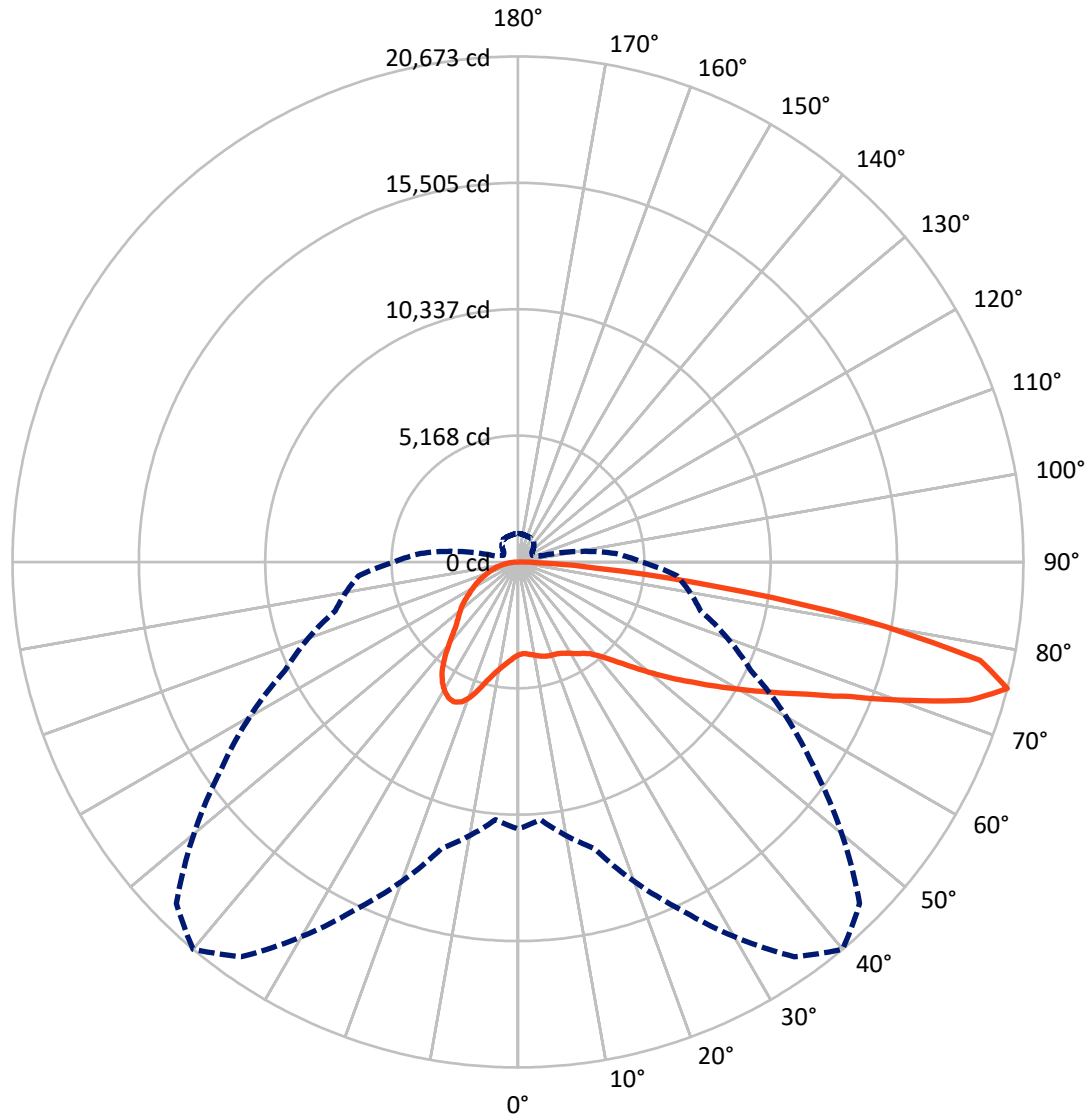
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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	10291.1	0.0	10291.1
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	22923.9	0.0	22923.9
	% Fixture	69.0	0.0	69.0
Total	Lumens	33215.0	0.0	33215.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	379.1	1.1
10°-20°	1272.9	3.8
20°-30°	2324.2	7.0
30°-40°	3296.4	9.9
40°-50°	4451.1	13.4
50°-60°	5988.0	18.0
60°-70°	7600.1	22.9
70°-80°	6897.6	20.8
80°-90°	1005.4	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°	33215.0	100.0
0°-180°	33215.0	100.0

Coefficient of Utilization



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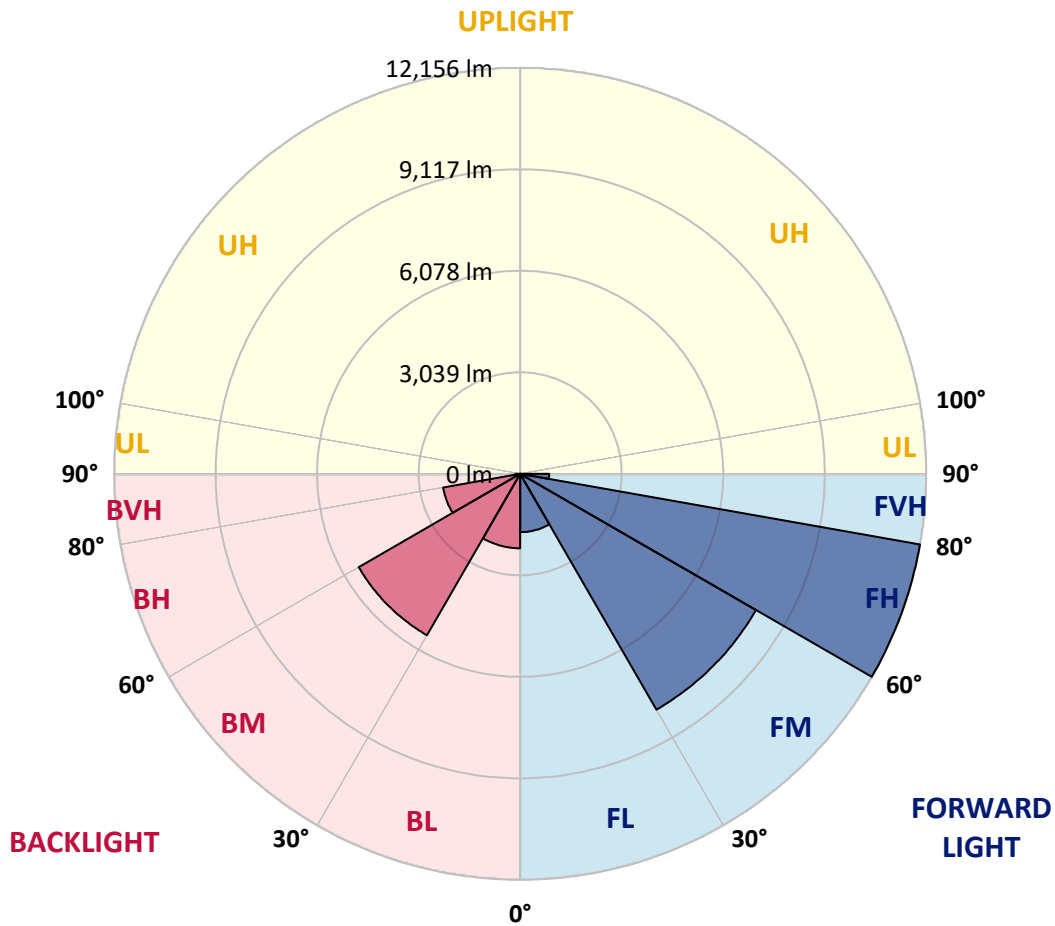
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1747.1	5.3			
FM (30°-60°)	8153.5	24.5			
FH (60°-80°)	12156.2	36.6			G5
FVH (80°-90°)	867.0	2.6			G5
BL (0°-30°)	2229.1	6.7	B3/2500		
BM (30°-60°)	5582.0	16.8	B4/8500		
BH (60°-80°)	2341.5	7.0	B3/2500		G3/2500
BVH (80°-90°)	138.4	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 IV Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2
2.5°	3740.0	3761.2	3755.9	3748.9	3748.9	3750.6	3748.9	3761.2	3773.5	3785.8	3805.2
5°	3778.8	3799.9	3789.4	3780.6	3773.5	3771.8	3766.5	3764.7	3771.8	3787.6	3814.0
7.5°	3854.6	3875.7	3859.8	3844.0	3829.9	3822.8	3815.8	3805.2	3799.9	3808.7	3845.7
10°	3939.1	3960.3	3940.9	3912.7	3889.8	3881.0	3873.9	3863.4	3856.3	3861.6	3902.1
12.5°	4023.7	4044.8	4018.4	3979.6	3949.7	3944.4	3935.6	3932.1	3930.3	3928.5	3969.1
15°	4102.9	4120.6	4087.1	4041.3	4009.6	4000.8	3992.0	3997.2	4006.1	4016.6	4062.4
17.5°	4164.6	4182.2	4132.9	4073.0	4043.1	4039.5	4034.2	4051.9	4076.5	4102.9	4159.3
20°	4221.0	4238.6	4175.2	4094.1	4058.9	4058.9	4060.7	4097.7	4132.9	4171.7	4249.2
22.5°	4300.3	4314.4	4236.8	4125.9	4074.8	4078.3	4092.4	4129.4	4173.4	4226.3	4333.7
25°	4418.3	4428.9	4333.7	4185.7	4127.6	4138.2	4150.5	4168.1	4210.4	4272.1	4416.5
27.5°	4608.6	4617.4	4492.3	4291.4	4203.4	4221.0	4238.6	4226.3	4245.6	4298.5	4483.5
30°	4876.3	4881.6	4723.1	4457.0	4332.0	4340.8	4344.3	4293.2	4256.2	4298.5	4531.0
32.5°	5193.4	5191.7	5003.2	4657.9	4478.2	4469.4	4439.4	4339.0	4252.7	4289.7	4573.3
35°	5684.9	5665.6	5422.4	4939.7	4643.8	4589.2	4518.7	4390.1	4270.3	4280.9	4610.3
37.5°	6498.8	6438.9	6102.5	5401.3	4890.4	4751.2	4647.3	4472.9	4309.1	4277.4	4654.4
40°	7416.7	7340.9	6971.0	6033.7	5260.4	5036.6	4869.3	4590.9	4372.5	4293.2	4719.5
42.5°	8505.4	8397.9	7999.8	6778.9	5729.0	5404.8	5152.9	4740.7	4465.9	4344.3	4807.6
45°	9842.5	9699.8	9136.1	7619.3	6319.1	5887.5	5551.0	4967.9	4608.6	4443.0	4939.7
47.5°	11193.7	11228.9	10427.4	8581.1	7027.3	6483.0	6049.6	5309.7	4816.4	4601.5	5152.9
50°	12629.5	12654.1	11711.6	9647.0	7830.7	7155.9	6609.8	5692.0	5105.3	4827.0	5471.8
52.5°	13749.9	13753.4	12877.9	10762.1	8667.5	7895.8	7214.1	6128.9	5440.1	5126.5	5896.3
55°	14451.1	14442.2	13695.3	11817.3	9629.3	8672.7	7883.5	6625.7	5848.8	5478.8	6430.1
57.5°	14960.2	14933.8	14259.0	12724.6	10654.6	9590.6	8641.0	7189.4	6331.5	5898.1	7133.0
60°	15154.0	15138.1	14641.3	13508.6	11732.8	10605.3	9514.8	7820.1	6879.4	6393.1	8036.8
62.5°	15228.0	15257.9	15016.6	14267.8	12886.7	11729.3	10474.9	8574.1	7495.9	6953.3	8989.8
65°	15488.7	15543.3	15494.0	15261.4	14190.3	13045.2	11748.6	9470.8	8168.9	7554.1	9985.2
67.5°	16004.9	16059.5	16080.6	16450.6	15782.9	14685.4	13337.7	10587.7	8956.4	8177.7	10733.9
70°	15992.5	15976.7	16350.1	17396.6	17777.1	16956.2	15479.9	11961.8	9895.3	8695.6	10829.0
72.5°	14556.8	14429.9	15312.5	17386.0	19436.6	19327.4	18096.0	13734.0	10705.7	8759.1	9396.8
75°	10920.6	10582.4	12141.5	15668.4	19713.2	20673.3	19759.0	14833.3	10513.7	7739.1	6539.4
77.5°	4670.2	4330.2	6167.6	11598.9	17643.2	19325.6	18233.4	12941.3	8392.6	5117.7	3211.5
80°	1222.6	1220.8	1863.9	5258.6	11998.8	14271.4	12520.3	8357.4	4795.3	1828.6	886.1
82.5°	505.6	493.3	685.3	2045.3	5862.9	8008.6	6535.8	3727.7	1731.7	495.0	294.2
85°	188.5	186.7	333.0	706.4	2068.2	3303.1	2390.6	953.1	431.6	241.3	132.1
87.5°	52.9	51.1	72.2	244.9	503.8	764.6	408.7	156.8	121.6	95.1	38.8
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°	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2	3798.2
2.5°	3810.5	3819.3	3835.2	3847.5	3863.4	3881.0	3905.6	3921.5	3937.4	3947.9	3940.9
5°	3826.4	3845.7	3886.3	3926.8	3974.3	4018.4	4069.5	4106.5	4136.4	4145.2	4148.8
7.5°	3861.6	3893.3	3962.0	4030.7	4106.5	4178.7	4252.7	4316.1	4367.2	4386.6	4388.3
10°	3923.3	3965.5	4062.4	4159.3	4259.7	4370.7	4465.9	4557.5	4629.7	4659.6	4661.4
12.5°	4000.8	4053.6	4180.5	4314.4	4453.5	4606.8	4730.1	4842.9	4932.7	4973.2	4973.2
15°	4101.2	4169.9	4332.0	4511.7	4716.0	4929.2	5086.0	5211.0	5311.5	5360.8	5357.3
17.5°	4210.4	4302.0	4506.4	4777.7	5070.1	5350.2	5533.4	5625.0	5729.0	5776.5	5774.8
20°	4316.1	4428.9	4721.3	5115.9	5505.2	5803.0	5951.0	5975.6	5982.7	5987.9	6002.0
22.5°	4425.3	4576.8	4990.8	5542.2	5959.8	6165.9	6187.0	6081.3	5933.3	5864.6	5884.0
25°	4545.1	4746.0	5343.2	6012.6	6350.9	6375.5	6213.4	5956.2	5676.1	5547.5	5566.9
27.5°	4661.4	4941.5	5766.0	6461.8	6632.7	6416.0	6067.2	5702.6	5364.3	5228.7	5244.5
30°	4777.7	5165.2	6232.8	6854.7	6761.3	6315.6	5836.4	5429.5	5089.5	4946.8	4962.6
32.5°	4895.7	5426.0	6770.1	7138.3	6738.4	6102.5	5549.3	5123.0	4823.5	4673.7	4693.1
35°	5029.6	5746.6	7279.3	7293.4	6585.2	5788.9	5170.5	4756.5	4495.8	4376.0	4402.4
37.5°	5204.0	6153.5	7728.5	7332.1	6317.4	5329.1	4700.2	4323.2	4108.2	4053.6	4092.4
40°	5420.7	6643.3	8072.0	7270.4	5921.0	4770.6	4185.7	3884.5	3762.9	3775.3	3817.6
42.5°	5702.6	7191.2	8313.4	7111.9	5369.6	4194.6	3734.8	3600.9	3659.0	3708.3	3754.1
45°	6069.0	7760.2	8463.1	6842.4	4746.0	3706.6	3468.7	3500.5	3544.5	3549.8	3585.0
47.5°	6537.6	8336.3	8561.8	6435.4	4110.0	3363.0	3299.6	3306.7	3297.9	3260.9	3289.1
50°	7122.5	8896.5	8649.8	5896.3	3569.2	3148.1	3063.6	3038.9	2917.3	2797.5	2813.4
52.5°	7788.4	9410.9	8686.8	5226.9	3148.1	2968.4	2831.0	2676.0	2448.7	2411.7	2424.1
55°	8528.3	9886.5	8591.7	4404.2	2794.0	2737.6	2529.8	2343.0	2318.4	2286.7	2291.9
57.5°	9412.6	10399.2	8397.9	3486.4	2431.1	2468.1	2265.5	2286.7	2242.6	2193.3	2184.5
60°	10379.8	10929.5	8057.9	2649.6	2055.9	2131.6	2196.8	2195.1	2182.7	2142.2	2128.1
62.5°	11250.1	11278.3	7388.5	2029.5	1726.4	1870.9	2048.8	2047.1	2036.5	2013.6	2004.8
65°	11768.0	11225.4	6271.6	1597.8	1455.1	1656.0	1848.0	1862.1	1863.9	1862.1	1862.1
67.5°	11676.4	10607.1	4738.9	1271.9	1231.4	1437.5	1648.9	1668.3	1682.4	1685.9	1689.4
70°	10640.5	9248.8	3090.0	1014.7	1032.3	1245.5	1460.4	1479.8	1492.1	1506.2	1513.3
72.5°	8294.0	6800.1	1768.7	820.9	857.9	1079.9	1273.7	1296.6	1303.6	1330.1	1340.6
75°	5054.3	3999.0	954.8	646.5	704.7	923.1	1088.7	1115.1	1127.5	1159.2	1162.7
77.5°	2402.9	1731.7	544.4	503.8	567.3	754.0	919.6	949.5	916.1	933.7	919.6
80°	812.1	643.0	343.5	384.0	433.4	588.4	736.4	766.3	695.9	692.3	685.3
82.5°	283.6	260.7	218.4	255.4	280.1	421.0	556.7	595.4	517.9	516.2	491.5
85°	111.0	105.7	121.6	139.2	167.4	259.0	366.4	385.8	318.9	257.2	253.7
87.5°	22.9	24.7	29.9	31.7	51.1	89.8	132.1	162.1	128.6	109.2	100.4
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)