

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: P884104

Luminaire Tested: **NAV-SB4D-735-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884104
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-735-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 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: 40880 lumens
Efficiency: N/A
Efficacy: 139.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B4 - U0 - G5

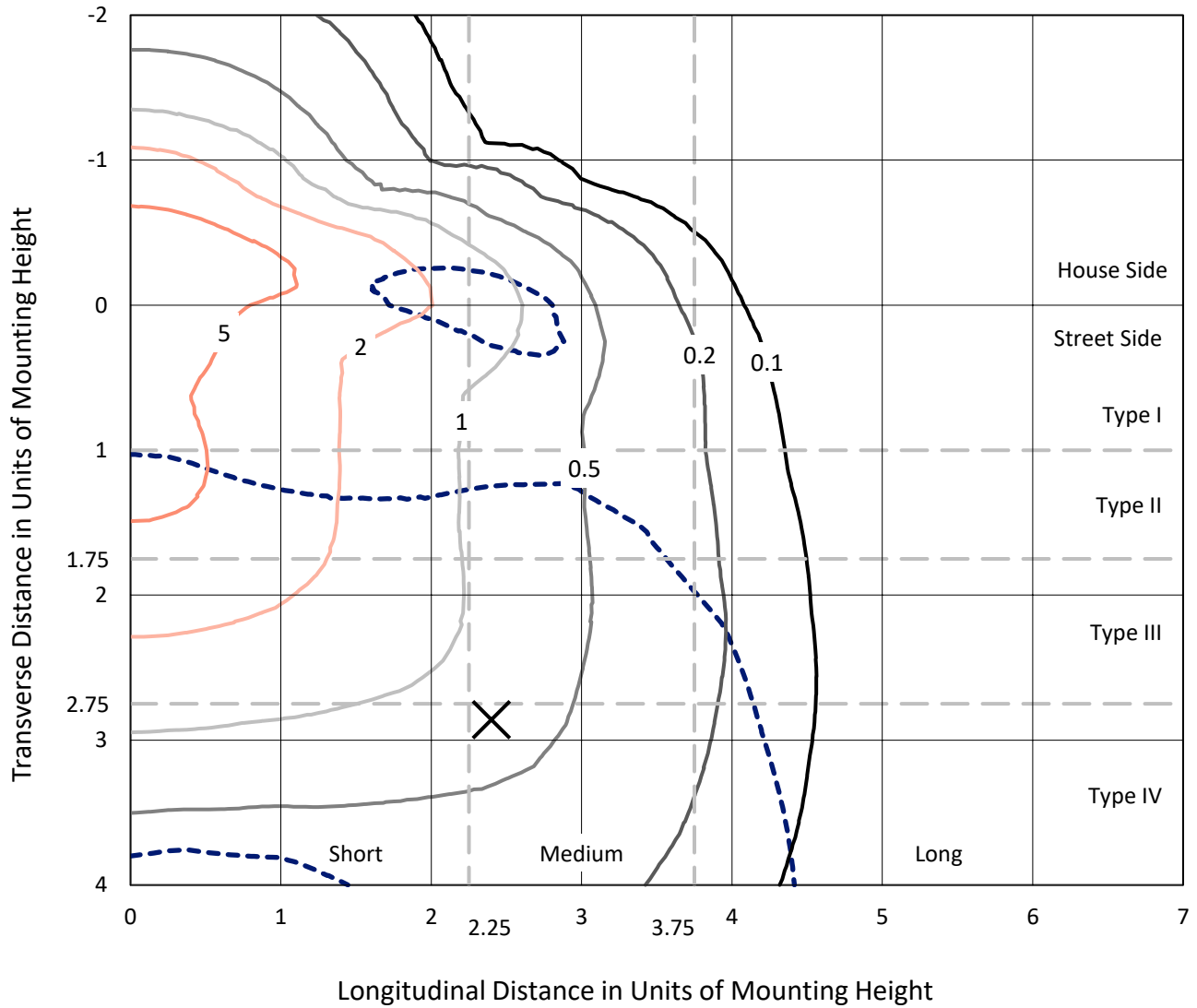
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

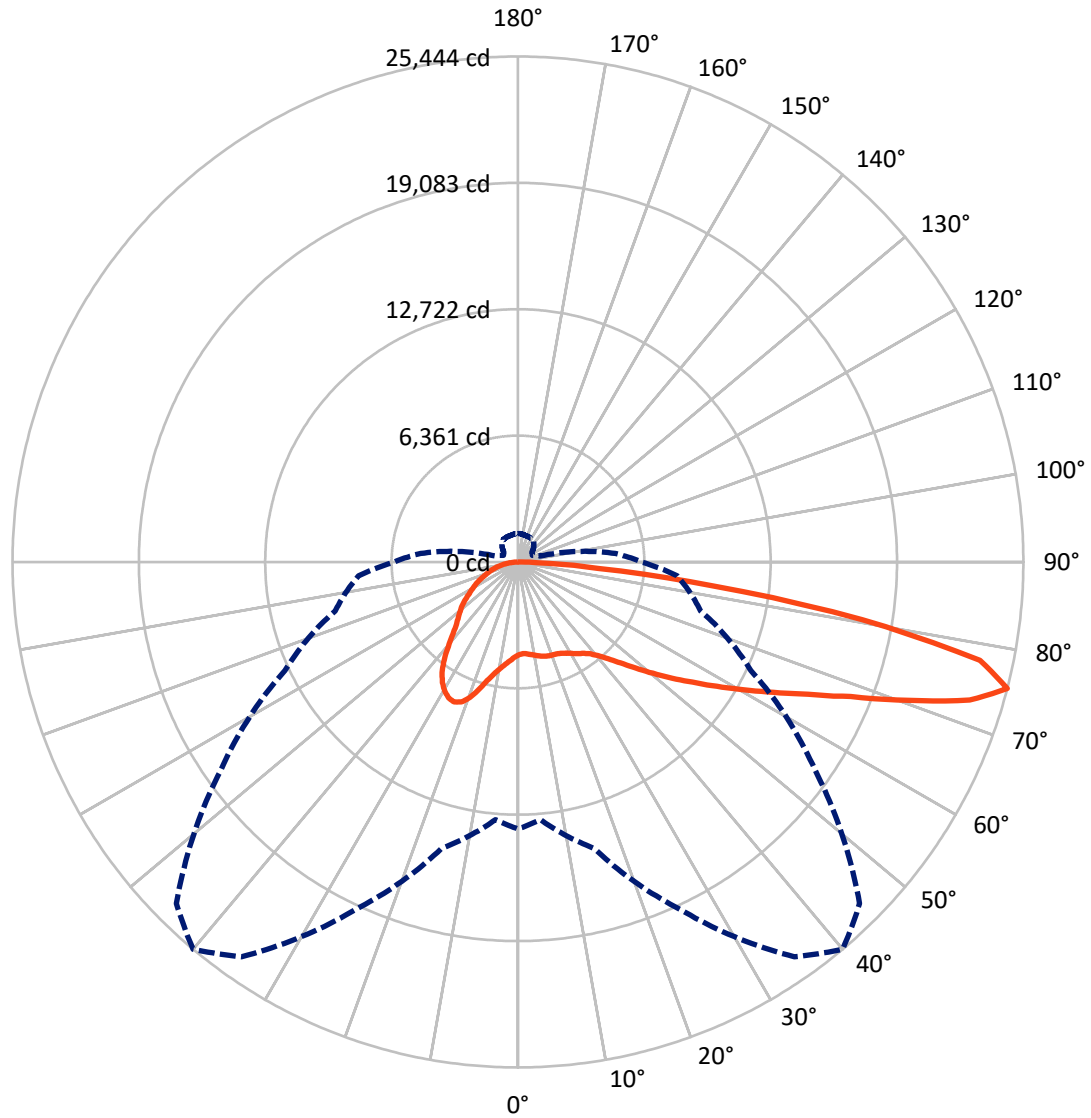
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.7 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	12666.0	0.0	12666.0
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	28214.0	0.0	28214.0
	% Fixture	69.0	0.0	69.0
Total	Lumens	40880.0	0.0	40880.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	466.6	1.1
10°-20°	1566.7	3.8
20°-30°	2860.6	7.0
30°-40°	4057.1	9.9
40°-50°	5478.3	13.4
50°-60°	7369.8	18.0
60°-70°	9354.0	22.9
70°-80°	8489.3	20.8
80°-90°	1237.5	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°	40880.0	100.0
0°-180°	40880.0	100.0

Coefficient of Utilization



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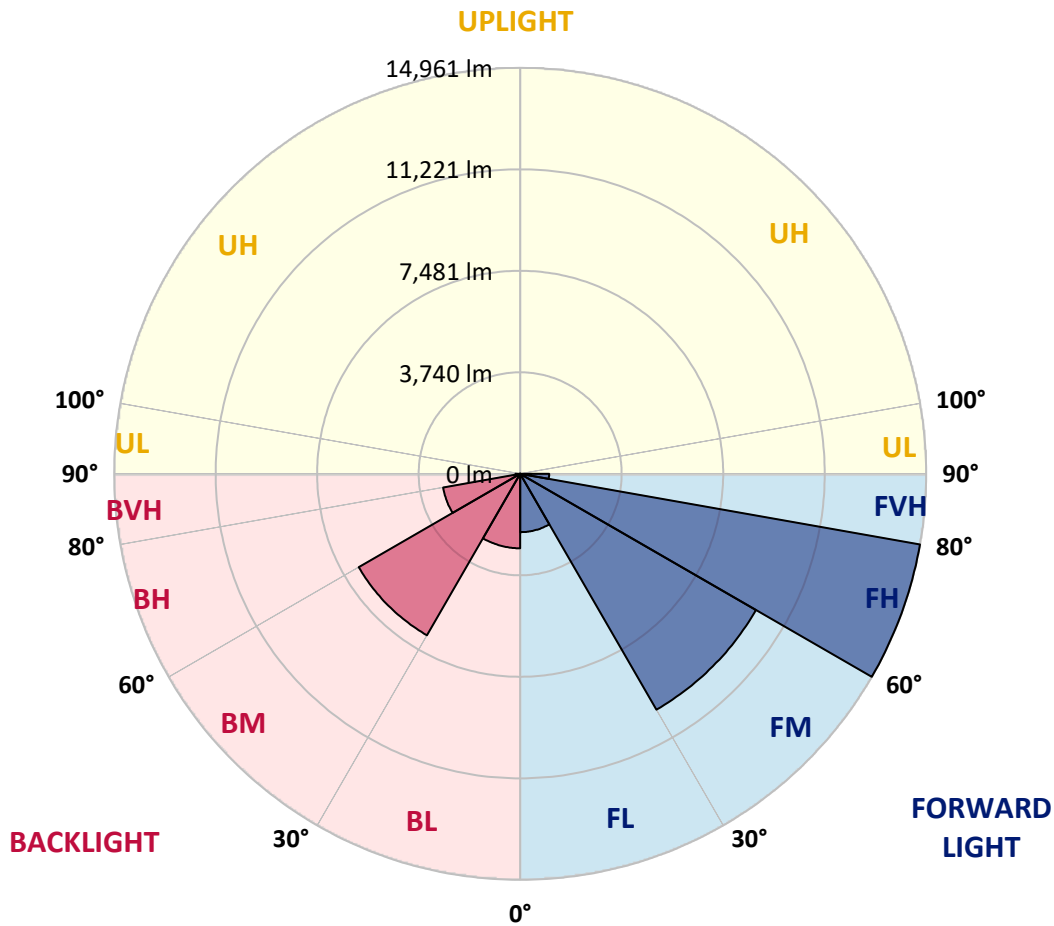
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2150.3	5.3			
FM (30°-60°)	10035.1	24.5			
FH (60°-80°)	14961.5	36.6			G5
FVH (80°-90°)	1067.1	2.6			G5
BL (0°-30°)	2743.6	6.7	B4/5000		
BM (30°-60°)	6870.2	16.8	B4/8500		
BH (60°-80°)	2881.9	7.0	B4/5000		G4/5000
BVH (80°-90°)	170.4	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°	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7
2.5°	4603.1	4629.1	4622.6	4614.0	4614.0	4616.1	4614.0	4629.1	4644.3	4659.5	4683.4
5°	4650.8	4676.9	4663.8	4653.0	4644.3	4642.2	4635.7	4633.5	4642.2	4661.7	4694.2
7.5°	4744.1	4770.1	4750.6	4731.1	4713.7	4705.0	4696.4	4683.4	4676.9	4687.7	4733.2
10°	4848.1	4874.2	4850.3	4815.6	4787.4	4776.6	4767.9	4754.9	4746.2	4752.7	4802.6
12.5°	4952.2	4978.2	4945.7	4898.0	4861.1	4854.6	4843.8	4839.5	4837.3	4835.1	4885.0
15°	5049.8	5071.5	5030.3	4973.9	4934.9	4924.0	4913.2	4919.7	4930.5	4943.5	4999.9
17.5°	5125.7	5147.4	5086.6	5012.9	4976.1	4971.7	4965.2	4986.9	5017.3	5049.8	5119.2
20°	5195.1	5216.7	5138.7	5038.9	4995.6	4995.6	4997.7	5043.3	5086.6	5134.3	5229.7
22.5°	5292.6	5310.0	5214.6	5078.0	5015.1	5019.4	5036.8	5082.3	5136.5	5201.6	5333.8
25°	5437.9	5450.9	5333.8	5151.7	5080.1	5093.1	5108.3	5130.0	5182.0	5257.9	5435.7
27.5°	5672.1	5682.9	5529.0	5281.8	5173.4	5195.1	5216.7	5201.6	5225.4	5290.5	5518.1
30°	6001.6	6008.1	5813.0	5485.6	5331.7	5342.5	5346.8	5284.0	5238.4	5290.5	5576.7
32.5°	6391.9	6389.7	6157.7	5732.8	5511.6	5500.8	5463.9	5340.3	5234.1	5279.6	5628.7
35°	6996.8	6973.0	6673.8	6079.7	5715.4	5648.2	5561.5	5403.2	5255.8	5268.8	5674.2
37.5°	7998.6	7924.8	7510.7	6647.8	6019.0	5847.7	5719.8	5505.1	5303.5	5264.4	5728.4
40°	9128.2	9035.0	8579.6	7426.2	6474.3	6198.9	5993.0	5650.4	5381.5	5284.0	5808.7
42.5°	10468.2	10335.9	9845.9	8343.3	7051.1	6652.1	6342.0	5834.7	5496.4	5346.8	5917.1
45°	12113.8	11938.2	11244.4	9377.6	7777.4	7246.2	6832.1	6114.4	5672.1	5468.3	6079.7
47.5°	13776.9	13820.2	12833.7	10561.4	8649.0	7979.0	7445.7	6535.0	5927.9	5663.4	6342.0
50°	15544.0	15574.3	14414.3	11873.2	9637.7	8807.3	8135.2	7005.5	6283.5	5940.9	6734.5
52.5°	16923.0	16927.3	15849.7	13245.7	10667.6	9718.0	8878.9	7543.2	6695.5	6309.5	7257.0
55°	17785.9	17775.1	16855.7	14544.4	11851.5	10674.1	9702.8	8154.7	7198.5	6743.2	7914.0
57.5°	18412.5	18380.0	17549.6	15661.1	13113.4	11803.8	10635.1	8848.5	7792.6	7259.2	8779.1
60°	18651.0	18631.5	18020.1	16625.9	14440.3	13052.7	11710.6	9624.7	8466.9	7868.5	9891.4
62.5°	18742.1	18779.0	18481.9	17560.4	15860.5	14436.0	12892.2	10552.7	9225.8	8558.0	11064.4
65°	19063.0	19130.2	19069.5	18783.3	17465.0	16055.7	14459.9	11656.4	10054.0	9297.3	12289.5
67.5°	19698.3	19765.5	19791.5	20246.8	19425.1	18074.3	16415.6	13031.0	11023.2	10064.9	13211.0
70°	19683.1	19663.6	20123.3	21411.2	21879.5	20869.1	19052.1	14722.2	12178.9	10702.3	13328.0
72.5°	17916.0	17759.9	18846.2	21398.2	23922.0	23787.5	22272.0	16903.4	13176.3	10780.4	11565.3
75°	13440.8	13024.5	14943.4	19284.1	24262.4	25444.1	24318.8	18256.4	12939.9	9525.0	8048.4
77.5°	5748.0	5329.5	7590.9	14275.6	21714.7	23785.4	22441.1	15927.7	10329.4	6298.7	3952.7
80°	1504.7	1502.6	2294.0	6472.1	14767.7	17564.8	15409.5	10286.0	5901.9	2250.6	1090.6
82.5°	622.3	607.1	843.4	2517.3	7215.8	9856.7	8044.1	4588.0	2131.4	609.3	362.1
85°	232.0	229.8	409.8	869.5	2545.5	4065.4	2942.3	1173.0	531.2	297.0	162.6
87.5°	65.0	62.9	88.9	301.4	620.1	941.0	503.0	193.0	149.6	117.1	47.7
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°	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7	4674.7
2.5°	4689.9	4700.7	4720.2	4735.4	4754.9	4776.6	4806.9	4826.5	4846.0	4859.0	4850.3
5°	4709.4	4733.2	4783.1	4833.0	4891.5	4945.7	5008.6	5054.1	5091.0	5101.8	5106.2
7.5°	4752.7	4791.8	4876.3	4960.9	5054.1	5143.0	5234.1	5312.1	5375.0	5398.9	5401.0
10°	4828.6	4880.7	4999.9	5119.2	5242.8	5379.4	5496.4	5609.2	5698.1	5734.9	5737.1
12.5°	4924.0	4989.1	5145.2	5310.0	5481.3	5669.9	5821.7	5960.4	6071.0	6120.9	6120.9
15°	5047.6	5132.2	5331.7	5552.8	5804.3	6066.7	6259.7	6413.6	6537.2	6597.9	6593.6
17.5°	5182.0	5294.8	5546.3	5880.2	6240.1	6584.9	6810.4	6923.1	7051.1	7109.6	7107.4
20°	5312.1	5450.9	5810.8	6296.5	6775.7	7142.1	7324.2	7354.6	7363.3	7369.8	7387.1
22.5°	5446.6	5633.0	6142.6	6821.2	7335.1	7588.8	7614.8	7484.7	7302.6	7218.0	7241.9
25°	5594.0	5841.2	6576.2	7400.1	7816.4	7846.8	7647.3	7330.8	6986.0	6827.7	6851.6
27.5°	5737.1	6081.9	7096.6	7953.0	8163.3	7896.7	7467.3	7018.5	6602.2	6435.3	6454.8
30°	5880.2	6357.2	7671.2	8436.5	8321.6	7773.1	7183.3	6682.5	6264.0	6088.4	6107.9
32.5°	6025.5	6678.1	8332.5	8785.6	8293.4	7510.7	6829.9	6305.2	5936.6	5752.3	5776.1
35°	6190.3	7072.7	8959.1	8976.4	8104.8	7124.8	6363.7	5854.2	5533.3	5385.9	5418.4
37.5°	6404.9	7573.6	9512.0	9024.1	7775.2	6558.9	5784.8	5320.8	5056.3	4989.1	5036.8
40°	6671.6	8176.4	9934.8	8948.2	7287.4	5871.5	5151.7	4780.9	4631.3	4646.5	4698.5
42.5°	7018.5	8850.7	10231.8	8753.1	6608.7	5162.5	4596.6	4431.8	4503.4	4564.1	4620.5
45°	7469.5	9551.0	10416.1	8421.4	5841.2	4561.9	4269.2	4308.3	4362.5	4369.0	4412.3
47.5°	8046.3	10260.0	10537.5	7920.5	5058.5	4139.1	4061.1	4069.7	4058.9	4013.4	4048.1
50°	8766.1	10949.5	10646.0	7257.0	4392.8	3874.6	3770.5	3740.2	3590.6	3443.1	3462.6
52.5°	9585.7	11582.6	10691.5	6433.1	3874.6	3653.5	3484.3	3293.5	3013.8	2968.3	2983.5
55°	10496.4	12168.1	10574.4	5420.6	3438.8	3369.4	3113.6	2883.7	2853.4	2814.3	2820.9
57.5°	11584.8	12799.0	10335.9	4290.9	2992.1	3037.7	2788.3	2814.3	2760.1	2699.4	2688.6
60°	12775.2	13451.6	9917.4	3261.0	2530.3	2623.5	2703.8	2701.6	2686.4	2636.6	2619.2
62.5°	13846.3	13880.9	9093.5	2497.8	2124.9	2302.6	2521.6	2519.5	2506.5	2478.3	2467.4
65°	14483.7	13815.9	7718.9	1966.6	1790.9	2038.1	2274.5	2291.8	2294.0	2291.8	2291.8
67.5°	14371.0	13054.9	5832.5	1565.5	1515.6	1769.3	2029.5	2053.3	2070.7	2075.0	2079.3
70°	13096.0	11383.2	3803.1	1248.9	1270.6	1532.9	1797.5	1821.3	1836.5	1853.8	1862.5
72.5°	10208.0	8369.3	2176.9	1010.4	1055.9	1329.1	1567.6	1595.8	1604.5	1637.0	1650.0
75°	6220.6	4921.9	1175.2	795.7	867.3	1136.1	1340.0	1372.5	1387.7	1426.7	1431.0
77.5°	2957.5	2131.4	670.0	620.1	698.2	928.0	1131.8	1168.7	1127.5	1149.2	1131.8
80°	999.5	791.4	422.8	472.7	533.4	724.2	906.3	943.2	856.4	852.1	843.4
82.5°	349.1	320.9	268.9	314.4	344.7	518.2	685.2	732.9	637.5	635.3	604.9
85°	136.6	130.1	149.6	171.3	206.0	318.7	451.0	474.8	392.4	316.6	312.2
87.5°	28.2	30.4	36.9	39.0	62.9	110.6	162.6	199.5	158.3	134.4	123.6
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)