

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: P884164

Luminaire Tested: **NAV-SB4D-835-U-SL4**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884164  
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-835-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

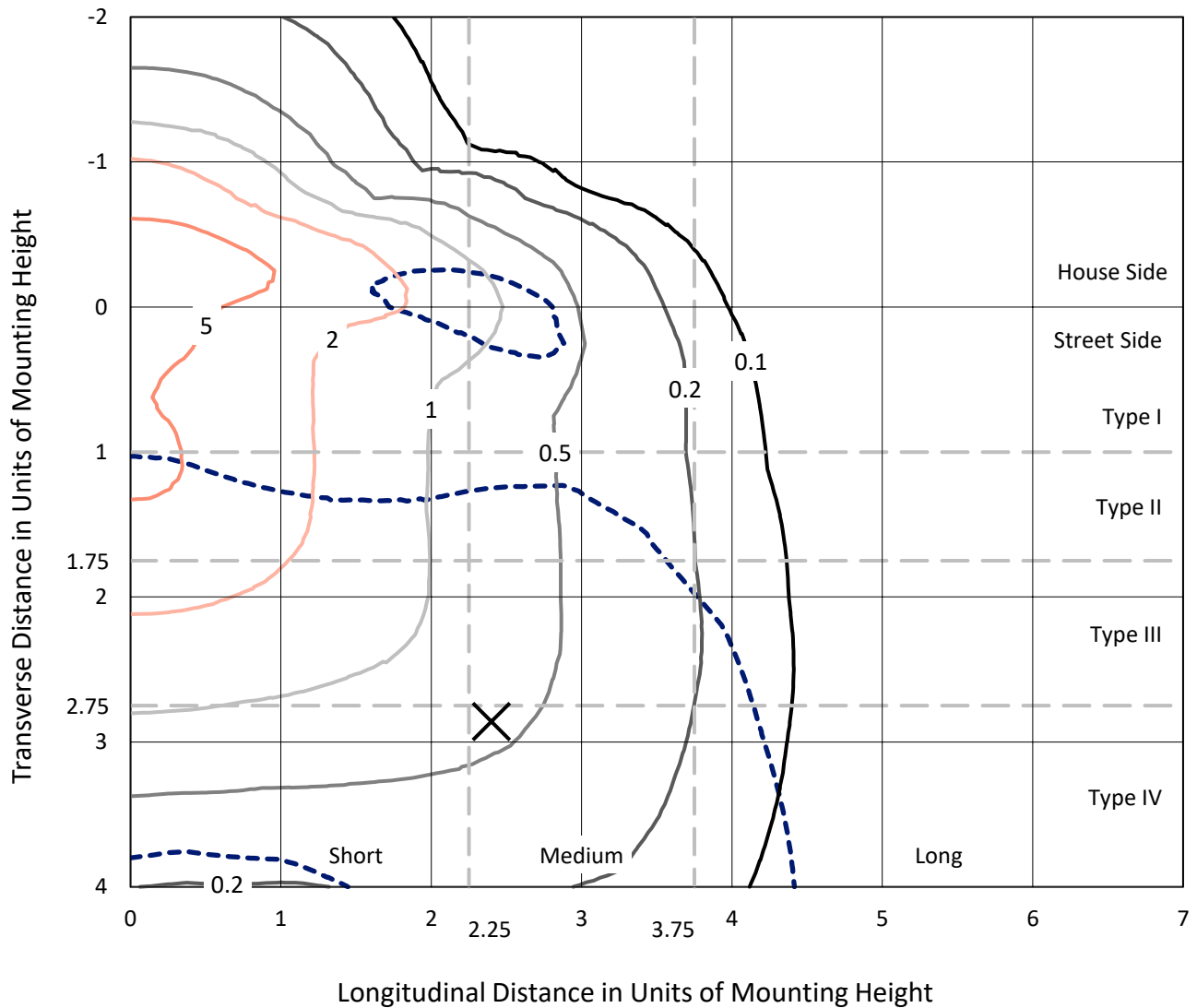
Lumens per Lamp: N/A  
Luminaire Lumens: 34492 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B4 - U0 - G5  
  
Input Watts (W): 293.6  
Input Voltage (V): 120.0  
Input Current (Ain): 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

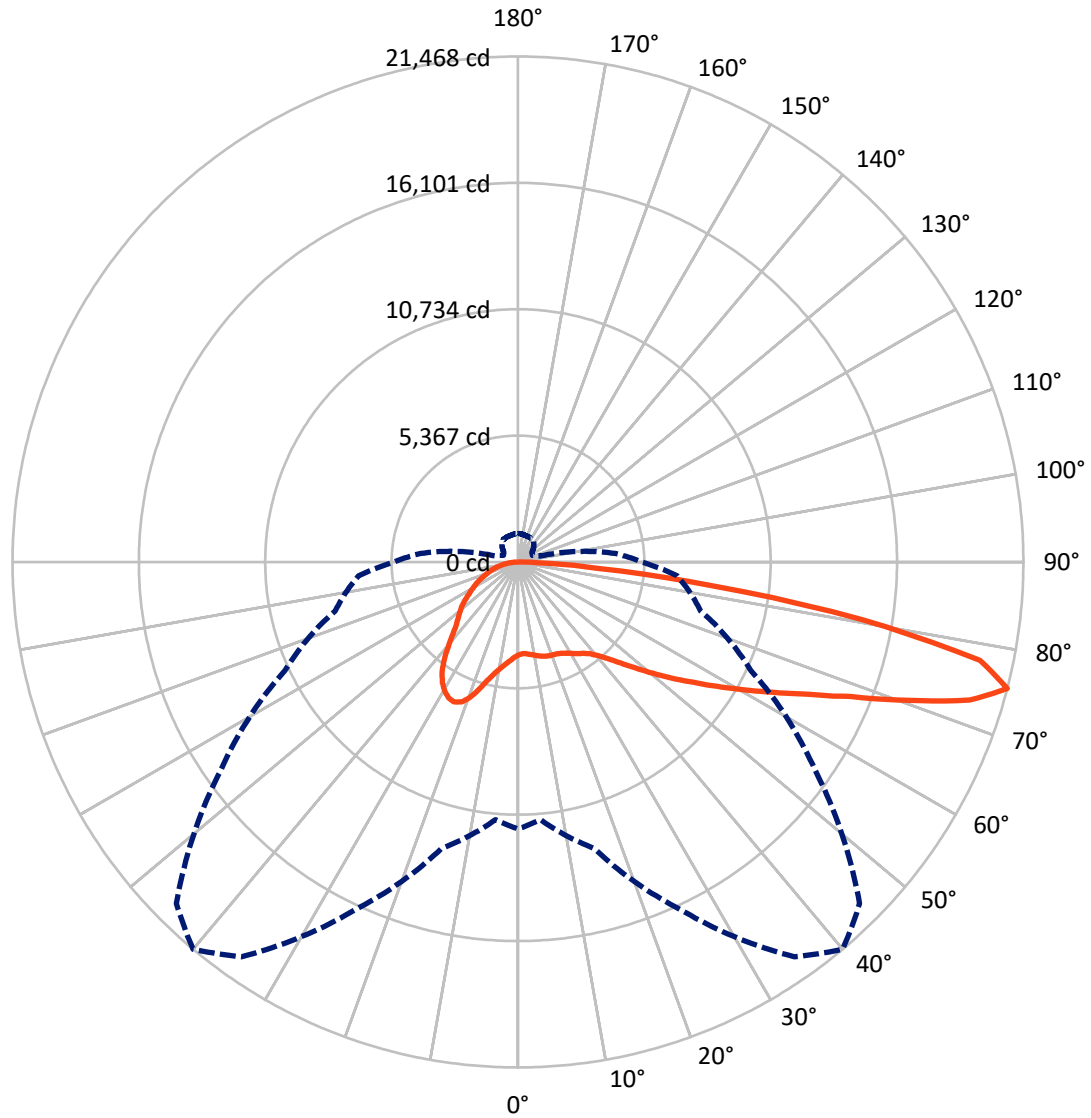
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 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
<b>House Side</b>	Lumens	10686.8	0.0	10686.8
	% Fixture	31.0	0.0	31.0
<b>Street Side</b>	Lumens	23805.2	0.0	23805.2
	% Fixture	69.0	0.0	69.0
<b>Total</b>	Lumens	34492.0	0.0	34492.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	393.7	1.1
10°-20°	1321.9	3.8
20°-30°	2413.6	7.0
30°-40°	3423.1	9.9
40°-50°	4622.3	13.4
50°-60°	6218.2	18.0
60°-70°	7892.3	22.9
70°-80°	7162.8	20.8
80°-90°	1044.1	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°	34492.0	100.0
0°-180°	34492.0	100.0

**Coefficient of Utilization**



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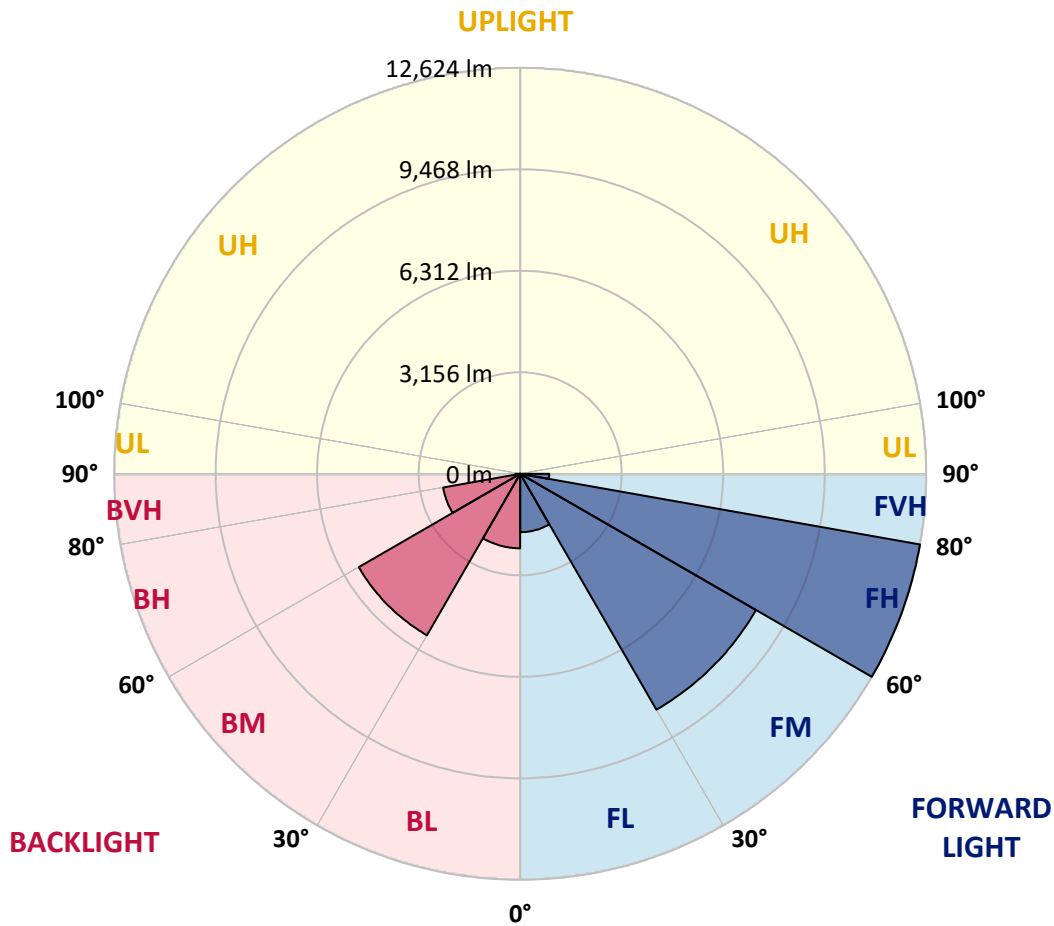
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1814.3	5.3			
FM (30°-60°)	8467.0	24.5			
FH (60°-80°)	12623.5	36.6			G5
FVH (80°-90°)	900.4	2.6			G5
BL (0°-30°)	2314.9	6.7	B3/2500		
BM (30°-60°)	5796.6	16.8	B4/8500		
BH (60°-80°)	2431.6	7.0	B3/2500		G3/2500
BVH (80°-90°)	143.7	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°	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2
2.5°	3883.8	3905.8	3900.3	3893.0	3893.0	3894.8	3893.0	3905.8	3918.6	3931.4	3951.5
5°	3924.1	3946.0	3935.1	3925.9	3918.6	3916.8	3911.3	3909.4	3916.8	3933.2	3960.7
7.5°	4002.7	4024.7	4008.2	3991.8	3977.1	3969.8	3962.5	3951.5	3946.0	3955.2	3993.6
10°	4090.6	4112.5	4092.4	4063.1	4039.3	4030.2	4022.9	4011.9	4004.6	4010.1	4052.1
12.5°	4178.4	4200.3	4172.9	4132.6	4101.5	4096.0	4086.9	4083.2	4081.4	4079.6	4121.7
15°	4260.7	4279.0	4244.2	4196.7	4163.7	4154.6	4145.4	4150.9	4160.1	4171.1	4218.6
17.5°	4324.7	4343.0	4291.8	4229.6	4198.5	4194.8	4189.3	4207.6	4233.3	4260.7	4319.2
20°	4383.3	4401.6	4335.7	4251.5	4215.0	4215.0	4216.8	4255.2	4291.8	4332.0	4412.5
22.5°	4465.6	4480.2	4399.7	4284.5	4231.4	4235.1	4249.7	4288.1	4333.9	4388.8	4500.3
25°	4588.2	4599.1	4500.3	4346.7	4286.3	4297.3	4310.1	4328.4	4372.3	4436.3	4586.3
27.5°	4785.7	4794.9	4665.0	4456.4	4365.0	4383.3	4401.6	4388.8	4408.9	4463.8	4655.8
30°	5063.8	5069.3	4904.6	4628.4	4498.5	4507.7	4511.3	4458.3	4419.9	4463.8	4705.2
32.5°	5393.1	5391.3	5195.5	4837.0	4650.4	4641.2	4610.1	4505.8	4416.2	4454.6	4749.1
35°	5903.5	5883.4	5630.9	5129.7	4822.3	4765.6	4692.4	4558.9	4434.5	4445.5	4787.6
37.5°	6748.7	6686.5	6337.1	5609.0	5078.4	4933.9	4826.0	4644.9	4474.7	4441.8	4833.3
40°	7701.8	7623.1	7239.0	6265.7	5462.6	5230.3	5056.5	4767.4	4540.6	4458.3	4901.0
42.5°	8832.4	8720.8	8307.3	7039.6	5949.2	5612.6	5351.0	4922.9	4637.6	4511.3	4992.5
45°	10220.9	10072.7	9487.3	7912.2	6562.1	6113.9	5764.5	5158.9	4785.7	4613.8	5129.7
47.5°	11624.1	11660.7	10828.3	8911.1	7297.5	6732.2	6282.2	5513.8	5001.6	4778.4	5351.0
50°	13115.0	13140.6	12161.9	10017.8	8131.7	7431.1	6863.9	5910.8	5301.6	5012.6	5682.1
52.5°	14278.5	14282.2	13373.0	11175.9	9000.7	8199.4	7491.4	6364.5	5649.2	5323.6	6123.0
55°	15006.6	14997.5	14221.8	12271.7	9999.6	9006.2	8186.6	6880.4	6073.6	5689.5	6677.3
57.5°	15535.3	15507.9	14807.2	13213.8	11064.3	9959.3	8973.3	7465.8	6574.9	6124.9	7407.3
60°	15736.6	15720.1	15204.2	14027.9	12183.9	11013.0	9880.6	8120.7	7143.8	6638.9	8345.8
62.5°	15813.4	15844.5	15593.9	14816.4	13382.1	12180.2	10877.7	8903.7	7784.1	7220.7	9335.5
65°	16084.2	16140.9	16089.7	15848.2	14735.9	13546.8	12200.3	9834.9	8483.0	7844.5	10369.1
67.5°	16620.2	16676.9	16698.8	17083.0	16389.7	15250.0	13850.5	10994.7	9300.7	8492.1	11146.6
70°	16607.4	16590.9	16978.7	18065.4	18460.6	17608.1	16075.0	12421.7	10275.8	9030.0	11245.4
72.5°	15116.4	14984.7	15901.2	18054.4	20183.9	20070.4	18791.7	14262.1	11117.3	9095.8	9758.1
75°	11340.5	10989.3	12608.3	16270.8	20471.1	21468.1	20518.7	15403.6	10917.9	8036.6	6790.8
77.5°	4849.8	4496.7	6404.8	12044.8	18321.5	20068.6	18934.4	13438.8	8715.3	5314.4	3335.0
80°	1269.6	1267.8	1935.5	5460.8	12460.1	14820.0	13001.6	8678.7	4979.7	1898.9	920.2
82.5°	525.0	512.2	711.6	2123.9	6088.3	8316.5	6787.1	3871.0	1798.3	514.1	305.5
85°	195.7	193.9	345.8	733.6	2147.7	3430.1	2482.5	989.7	448.2	250.6	137.2
87.5°	54.9	53.1	75.0	254.3	523.2	794.0	424.4	162.8	126.2	98.8	40.2
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°	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2	3944.2
2.5°	3957.0	3966.2	3982.6	3995.4	4011.9	4030.2	4055.8	4072.3	4088.7	4099.7	4092.4
5°	3973.5	3993.6	4035.7	4077.8	4127.1	4172.9	4225.9	4264.4	4295.5	4304.6	4308.3
7.5°	4010.1	4043.0	4114.3	4185.7	4264.4	4339.4	4416.2	4482.1	4535.1	4555.2	4557.1
10°	4074.1	4118.0	4218.6	4319.2	4423.5	4538.8	4637.6	4732.7	4807.7	4838.8	4840.6
12.5°	4154.6	4209.5	4341.2	4480.2	4624.7	4783.9	4912.0	5029.0	5122.3	5164.4	5164.4
15°	4258.9	4330.2	4498.5	4685.1	4897.3	5118.7	5281.5	5411.4	5515.7	5566.9	5563.2
17.5°	4372.3	4467.4	4679.6	4961.4	5265.0	5555.9	5746.2	5841.3	5949.2	5998.6	5996.8
20°	4482.1	4599.1	4902.8	5312.6	5716.9	6026.1	6179.7	6205.4	6212.7	6218.2	6232.8
22.5°	4595.5	4752.8	5182.7	5755.3	6188.9	6402.9	6424.9	6315.1	6161.5	6090.1	6110.2
25°	4719.9	4928.4	5548.6	6243.8	6595.0	6620.6	6452.3	6185.2	5894.4	5760.8	5780.9
27.5°	4840.6	5131.5	5987.7	6710.3	6887.7	6662.7	6300.5	5921.8	5570.6	5429.7	5446.2
30°	4961.4	5363.8	6472.4	7118.2	7021.3	6558.4	6060.8	5638.2	5285.2	5137.0	5153.4
32.5°	5083.9	5634.6	7030.4	7412.8	6997.5	6337.1	5762.6	5319.9	5008.9	4853.4	4873.5
35°	5223.0	5967.5	7559.1	7573.8	6838.3	6011.4	5369.3	4939.4	4668.7	4544.3	4571.7
37.5°	5404.1	6390.1	8025.6	7614.0	6560.3	5534.0	4880.9	4489.4	4266.2	4209.5	4249.7
40°	5629.1	6898.7	8382.4	7550.0	6148.6	4954.0	4346.7	4033.8	3907.6	3920.4	3964.3
42.5°	5921.8	7467.6	8633.0	7385.3	5576.0	4355.8	3878.3	3739.3	3799.7	3850.9	3898.5
45°	6302.3	8058.5	8788.5	7105.4	4928.4	3849.1	3602.1	3635.0	3680.8	3686.3	3722.8
47.5°	6788.9	8656.8	8890.9	6682.8	4268.0	3492.3	3426.5	3433.8	3424.7	3386.2	3415.5
50°	7396.3	9238.5	8982.4	6123.0	3706.4	3269.2	3181.3	3155.7	3029.5	2905.1	2921.6
52.5°	8087.8	9772.7	9020.8	5427.9	3269.2	3082.6	2939.9	2778.9	2542.9	2504.5	2517.3
55°	8856.2	10266.6	8922.0	4573.5	2901.4	2842.9	2627.0	2433.1	2407.5	2374.6	2380.1
57.5°	9774.5	10799.0	8720.8	3620.4	2524.6	2563.0	2352.6	2374.6	2328.8	2277.6	2268.5
60°	10778.9	11349.7	8367.7	2751.4	2134.9	2213.6	2281.3	2279.4	2266.6	2224.6	2209.9
62.5°	11682.6	11711.9	7672.5	2107.5	1792.8	1942.8	2127.6	2125.8	2114.8	2091.0	2081.9
65°	12220.5	11657.0	6512.7	1659.3	1511.1	1719.6	1919.1	1933.7	1935.5	1933.7	1933.7
67.5°	12125.3	11014.9	4921.1	1320.8	1278.8	1492.8	1712.3	1732.5	1747.1	1750.7	1754.4
70°	11049.6	9604.4	3208.8	1053.7	1072.0	1293.4	1516.6	1536.7	1549.5	1564.1	1571.5
72.5°	8612.9	7061.5	1836.7	852.5	890.9	1121.4	1322.7	1346.4	1353.8	1381.2	1392.2
75°	5248.6	4152.8	991.5	671.4	731.8	958.6	1130.6	1158.0	1170.8	1203.8	1207.4
77.5°	2495.3	1798.3	565.3	523.2	589.1	783.0	955.0	986.1	951.3	969.6	955.0
80°	843.4	667.7	356.7	398.8	450.0	611.0	764.7	795.8	722.6	719.0	711.6
82.5°	294.5	270.8	226.8	265.3	290.9	437.2	578.1	618.3	537.8	536.0	510.4
85°	115.3	109.8	126.2	144.5	173.8	268.9	380.5	400.6	331.1	267.1	263.4
87.5°	23.8	25.6	31.1	32.9	53.1	93.3	137.2	168.3	133.5	113.4	104.3
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)