

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: P884151

Luminaire Tested: **NAV-SB4D-827-U-T4FT**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884151  
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-827-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

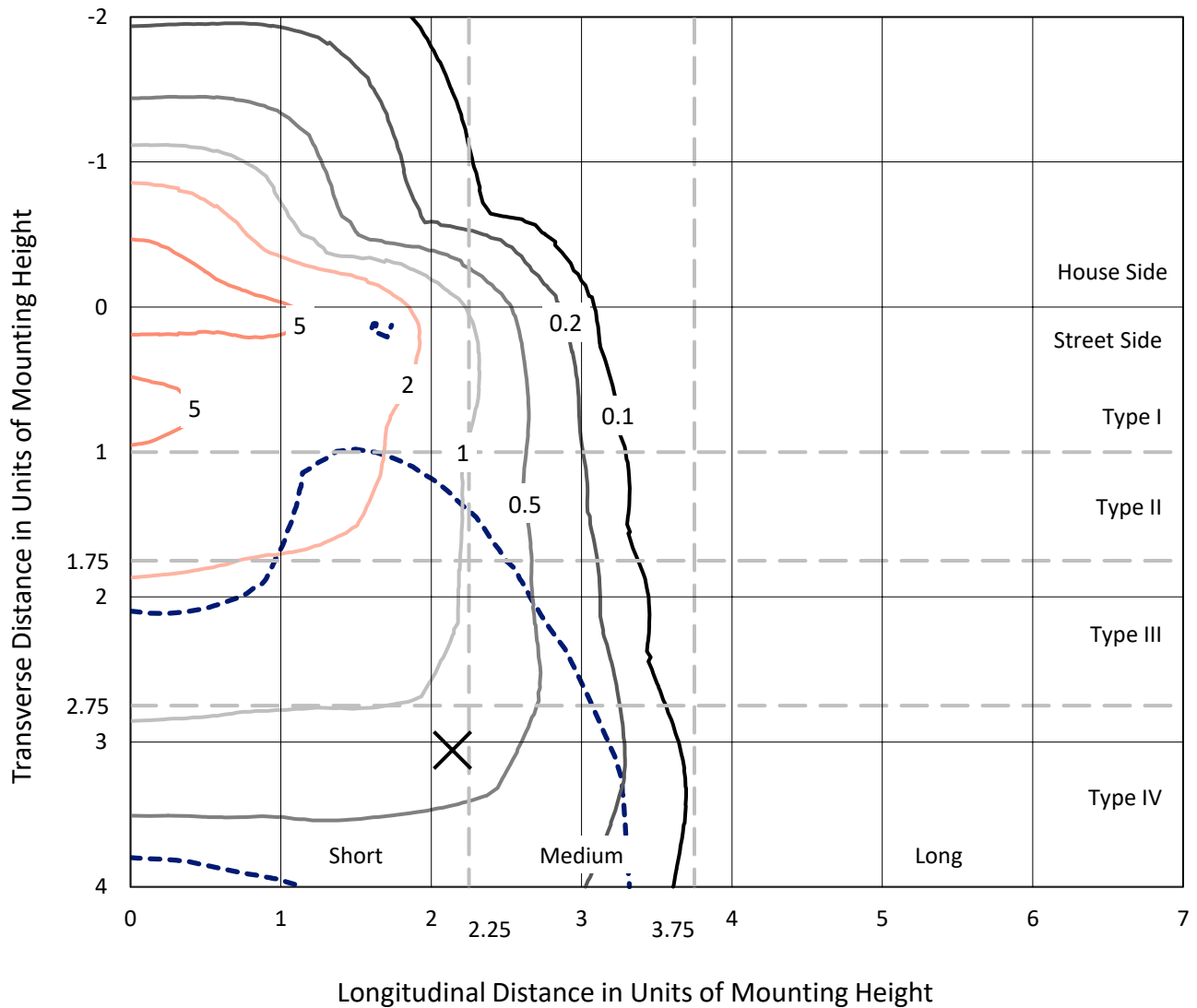
Lumens per Lamp: N/A  
Luminaire Lumens: 33118 lumens  
Efficiency: N/A  
Efficacy: 112.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G5  
  
Input Watts (W): 293.6  
Input Voltage (V): 120.0  
Input Current (Ain): 2.469  
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

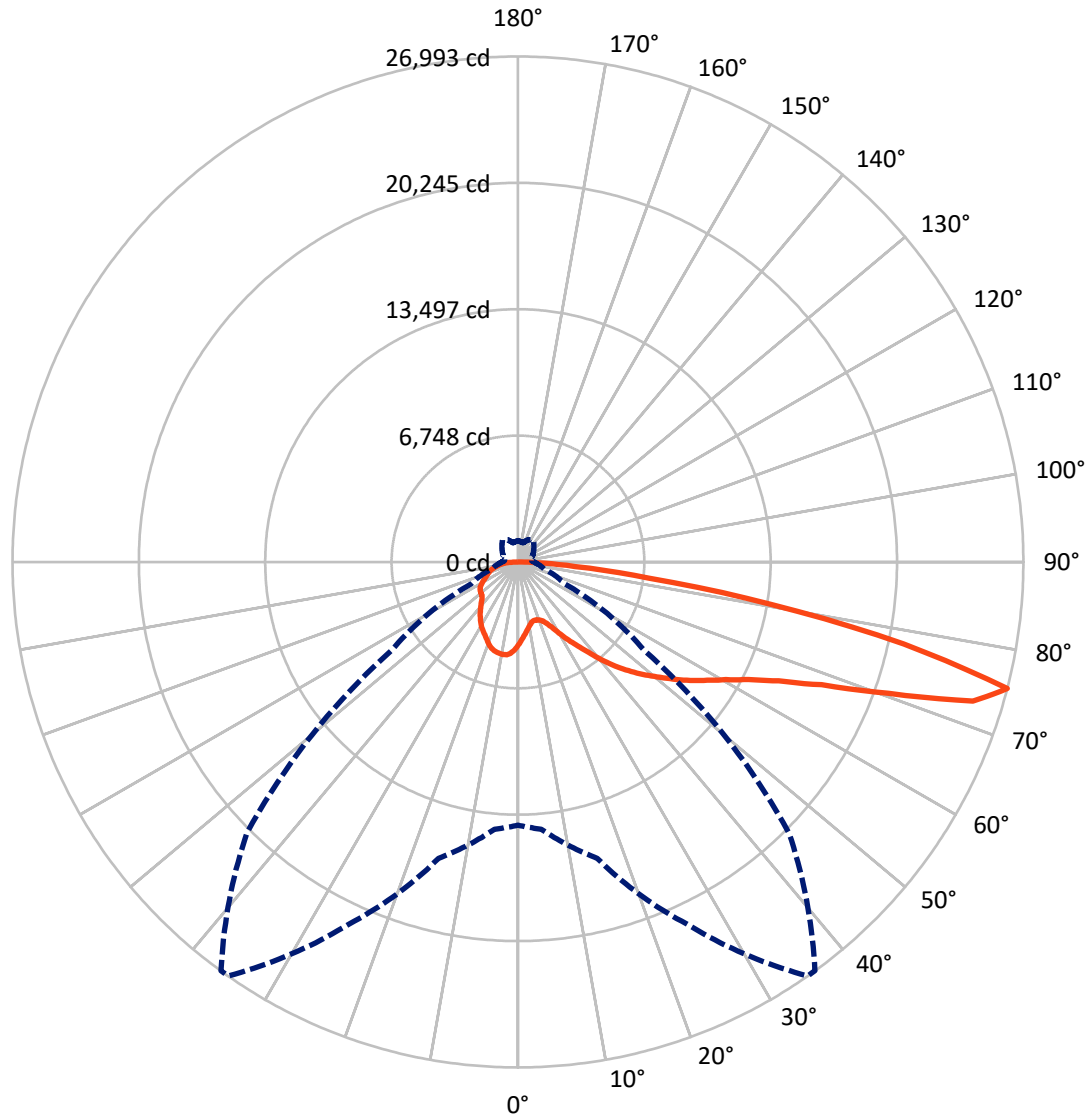
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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
<b>House Side</b>	Lumens	7881.3	0.0	7881.3
	% Fixture	23.8	0.0	23.8
<b>Street Side</b>	Lumens	25236.7	0.0	25236.7
	% Fixture	76.2	0.0	76.2
<b>Total</b>	Lumens	33118.0	0.0	33118.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	417.8	1.3
10°-20°	1205.2	3.6
20°-30°	2023.9	6.1
30°-40°	3145.4	9.5
40°-50°	4668.7	14.1
50°-60°	6445.4	19.5
60°-70°	7819.7	23.6
70°-80°	6462.4	19.5
80°-90°	929.5	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°	33118.0	100.0
0°-180°	33118.0	100.0



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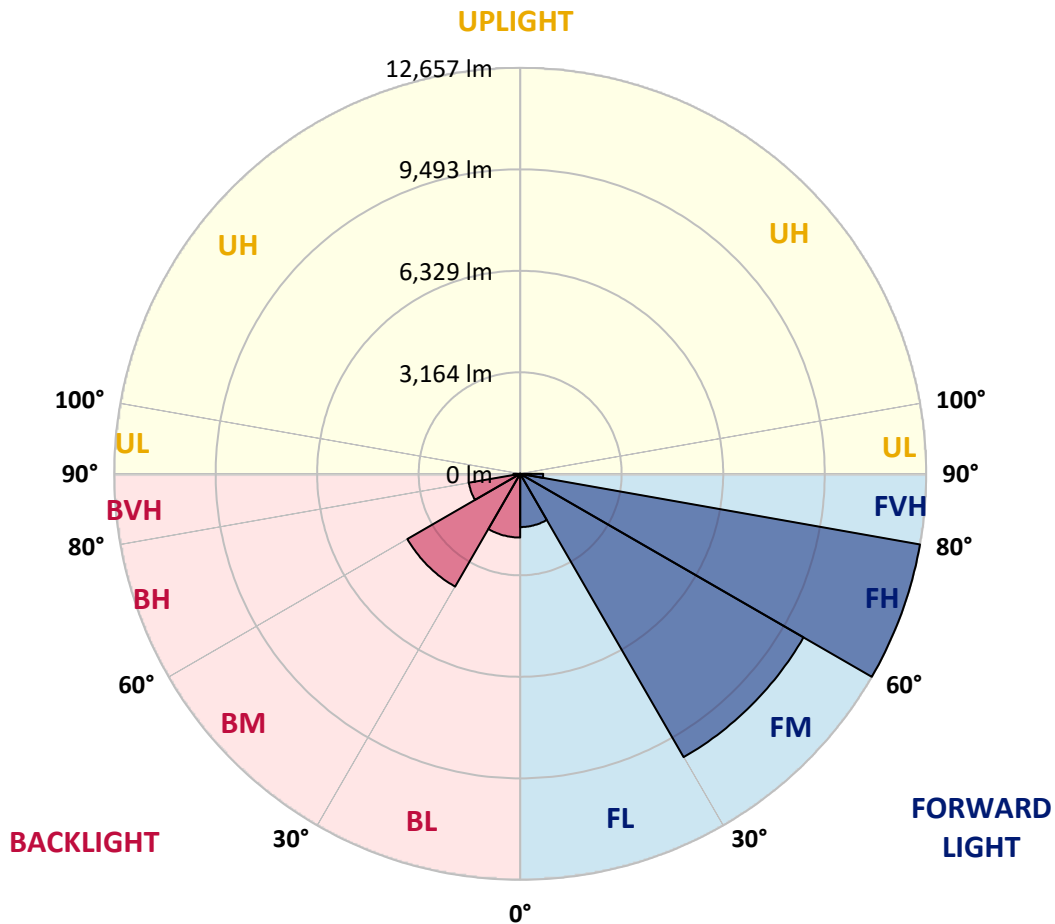
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1660.8	5.0			
FM (30°-60°)	10198.5	30.8			
FH (60°-80°)	12657.2	38.2			G5
FVH (80°-90°)	720.2	2.2			G4/750
BL (0°-30°)	1986.2	6.0	B3/2500		
BM (30°-60°)	4060.9	12.3	B3/5000		
BH (60°-80°)	1624.9	4.9	B3/2500		G3/2500
BVH (80°-90°)	209.3	0.6			G2/225
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°	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2
2.5°	4069.5	4094.5	4105.3	4099.9	4126.7	4123.2	4160.8	4207.3	4271.8	4334.4	4425.7
5°	3756.1	3783.0	3806.3	3827.8	3879.7	3895.8	3954.9	4044.4	4162.5	4282.5	4432.9
7.5°	3464.3	3487.6	3523.4	3562.8	3650.5	3666.6	3765.1	3904.7	4069.5	4244.9	4452.6
10°	3226.2	3249.5	3287.1	3331.8	3441.0	3460.7	3586.1	3772.3	3987.1	4209.1	4474.1
12.5°	3124.1	3131.3	3152.8	3197.6	3292.4	3305.0	3442.8	3655.9	3906.5	4182.2	4506.3
15°	3118.8	3133.1	3134.9	3158.2	3236.9	3242.3	3369.4	3580.7	3856.4	4176.9	4554.6
17.5°	3172.5	3183.2	3167.1	3181.4	3247.7	3256.6	3356.9	3544.9	3840.3	4200.1	4637.0
20°	3315.7	3324.7	3276.3	3256.6	3305.0	3312.1	3410.6	3568.2	3856.4	4248.5	4749.8
22.5°	3620.1	3625.4	3507.3	3426.7	3430.3	3433.9	3519.8	3663.0	3919.1	4336.2	4893.0
25°	4094.5	4090.9	3902.9	3747.2	3657.7	3638.0	3695.3	3817.0	4024.7	4452.6	5077.4
27.5°	4649.5	4622.7	4434.7	4201.9	4006.8	3978.1	3965.6	4017.5	4175.1	4606.6	5303.0
30°	5276.1	5251.1	5048.8	4744.4	4474.1	4427.5	4309.4	4282.5	4398.9	4816.0	5616.3
32.5°	5963.6	5947.5	5705.8	5337.0	4975.4	4921.7	4722.9	4651.3	4742.6	5132.9	6053.2
35°	6540.1	6525.8	6325.3	5945.7	5503.5	5437.3	5235.0	5154.4	5200.9	5539.3	6624.3
37.5°	7061.1	7054.0	6882.1	6583.1	6126.6	6046.0	5818.6	5791.8	5782.8	6074.6	7317.1
40°	7544.5	7526.6	7347.6	7190.0	6851.6	6778.2	6577.7	6554.4	6486.4	6733.5	8101.3
42.5°	8079.8	8033.3	7773.7	7700.3	7609.0	7548.1	7428.1	7431.7	7281.3	7476.5	8932.0
45°	8516.7	8489.8	8223.0	8180.1	8278.5	8253.5	8357.3	8384.2	8092.4	8255.3	9795.0
47.5°	8985.7	8960.7	8735.1	8704.7	8971.4	8978.6	9345.6	9354.5	8883.7	9064.5	10659.7
50°	9564.0	9528.2	9304.4	9342.0	9641.0	9667.9	10339.2	10278.4	9612.4	9886.3	11517.3
52.5°	9945.4	9966.8	9918.5	9979.4	10387.6	10412.6	11316.8	11161.0	10333.9	10697.3	12358.7
55°	10226.4	10269.4	10419.8	10559.4	11175.3	11200.4	12238.8	12000.7	10931.8	11449.2	13150.1
57.5°	10588.1	10527.2	10808.3	11080.4	11923.7	11989.9	13135.8	12809.9	11461.8	12097.4	13692.5
60°	11107.3	11064.3	11282.7	11685.6	12761.6	12867.2	14084.6	13538.6	11850.3	12611.2	13798.2
62.5°	12160.0	12052.6	12086.6	12442.9	13817.9	13957.5	15155.3	14174.2	12043.6	12811.7	13232.4
65°	13733.7	13549.3	13377.4	13624.5	15305.6	15443.5	16363.7	14673.7	11972.0	12423.2	11730.3
67.5°	15715.6	15533.0	15321.8	15554.5	17497.0	17606.2	17855.1	14954.7	11408.1	10926.5	9075.3
70°	17350.2	17282.2	17534.6	18492.5	20997.2	21000.7	19767.2	14722.0	9863.0	7746.8	5251.1
72.5°	17133.6	17092.4	18422.6	21383.9	25408.6	25313.7	21577.2	12960.3	6644.0	3494.8	1967.6
75°	14056.0	14322.8	16383.4	21331.9	26993.0	26980.5	20469.0	8239.2	2748.2	1448.4	1016.9
77.5°	7537.3	7959.9	10636.4	15749.7	21072.3	21389.2	14390.8	2882.5	1179.8	927.4	703.6
80°	2458.1	2827.0	4239.5	8018.9	13692.5	13633.5	6167.7	1131.5	807.4	657.1	487.0
82.5°	1043.8	1086.7	1894.2	3786.6	7027.1	6917.9	1964.0	649.9	567.5	449.4	300.8
85°	408.2	456.5	836.1	1751.0	3043.6	2977.3	709.0	322.3	363.4	293.6	179.0
87.5°	134.3	162.9	299.0	599.8	947.1	913.1	173.7	111.0	157.6	134.3	64.5
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°	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2	4413.2
2.5°	4450.8	4479.4	4513.5	4563.6	4606.6	4642.4	4680.0	4703.2	4712.2	4739.0	4737.2
5°	4483.0	4545.7	4629.8	4712.2	4792.8	4841.1	4884.1	4905.5	4925.2	4939.6	4943.1
7.5°	4536.7	4617.3	4749.8	4857.2	4925.2	4964.6	4993.3	4986.1	4993.3	4996.8	5002.2
10°	4583.3	4696.1	4853.6	4955.7	5007.6	5009.4	5002.2	4977.2	4964.6	4966.4	4970.0
12.5°	4638.8	4764.1	4934.2	5020.1	5034.4	4995.1	4964.6	4921.7	4905.5	4898.4	4894.8
15°	4714.0	4857.2	5021.9	5054.1	5018.3	4968.2	4916.3	4846.5	4810.7	4782.0	4791.0
17.5°	4805.3	4962.8	5089.9	5066.7	4989.7	4907.3	4823.2	4717.6	4644.2	4613.7	4615.5
20°	4932.4	5073.8	5141.9	5039.8	4923.4	4798.1	4654.9	4526.0	4458.0	4427.5	4423.9
22.5°	5086.4	5222.4	5192.0	4993.3	4828.6	4628.0	4449.0	4354.1	4320.1	4298.6	4302.2
25°	5270.8	5387.1	5227.8	4925.2	4672.8	4402.5	4264.6	4234.2	4218.1	4201.9	4201.9
27.5°	5510.7	5573.3	5254.7	4825.0	4429.3	4162.5	4112.4	4117.8	4112.4	4085.6	4090.9
30°	5827.6	5815.0	5279.7	4662.1	4150.0	3945.9	3949.5	3972.8	3976.4	3958.5	3967.4
32.5°	6244.7	6117.6	5292.3	4450.8	3883.3	3756.1	3759.7	3784.8	3802.7	3772.3	3786.6
35°	6749.6	6470.3	5272.6	4185.8	3677.4	3575.3	3548.5	3555.6	3561.0	3532.3	3552.0
37.5°	7338.6	6866.0	5184.8	3892.2	3507.3	3398.1	3340.8	3292.4	3263.8	3236.9	3254.8
40°	7984.9	7297.4	5023.7	3605.8	3317.5	3210.1	3124.1	3032.8	2936.2	2900.4	2916.5
42.5°	8661.7	7741.4	4828.6	3331.8	3099.1	3011.4	2920.1	2787.6	2642.5	2569.1	2578.1
45°	9363.5	8196.2	4637.0	3061.5	2875.3	2837.7	2732.1	2572.7	2415.2	2322.1	2314.9
47.5°	10051.0	8625.9	4355.9	2789.4	2665.8	2707.0	2624.6	2477.8	2302.4	2155.6	2139.5
50°	10708.0	9028.7	3895.8	2513.6	2495.7	2667.6	2588.8	2377.6	2177.1	1989.1	1973.0
52.5°	11359.7	9354.5	3306.8	2263.0	2404.4	2656.9	2542.3	2309.5	2064.3	1867.3	1845.8
55°	11912.9	9522.8	2739.2	2048.2	2271.9	2565.6	2486.8	2229.0	1904.9	1695.5	1677.6
57.5°	12228.0	9386.8	2266.6	1836.9	2089.3	2415.2	2391.9	2057.1	1715.1	1554.0	1532.5
60°	12092.0	8835.3	1879.9	1652.5	1915.7	2252.3	2227.2	1887.0	1570.1	1418.0	1396.5
62.5°	11341.8	7784.4	1573.7	1491.4	1758.1	2085.8	2062.5	1756.3	1459.1	1312.3	1289.0
65°	9830.8	6332.4	1335.6	1357.1	1598.8	1885.2	1919.2	1647.1	1371.4	1228.2	1204.9
67.5°	7498.0	4586.9	1149.4	1240.7	1443.0	1688.3	1786.8	1568.3	1298.0	1161.9	1140.4
70°	4273.6	2605.0	991.9	1127.9	1305.2	1505.7	1684.7	1505.7	1219.2	1106.4	1092.1
72.5°	1620.3	1195.9	857.6	1015.1	1172.7	1351.7	1571.9	1407.2	1127.9	1043.8	1029.4
75°	864.7	728.7	721.5	882.6	1020.5	1201.3	1430.5	1310.5	1059.9	1102.9	1138.7
77.5°	589.0	515.6	603.3	755.5	854.0	1034.8	1280.1	1163.7	918.4	914.9	843.3
80°	408.2	365.2	490.6	608.7	660.6	870.1	1117.2	999.0	748.4	698.2	667.8
82.5°	245.3	238.1	367.0	454.7	467.3	671.4	925.6	837.9	612.3	533.5	537.1
85°	134.3	141.4	234.5	266.8	272.1	469.1	725.1	648.1	470.9	395.7	399.2
87.5°	37.6	48.3	85.9	105.6	130.7	243.5	431.5	384.9	236.3	164.7	164.7
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)