

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: P884149

Luminaire Tested: **NAV-SB4D-827-U-T3**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884149
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33530 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

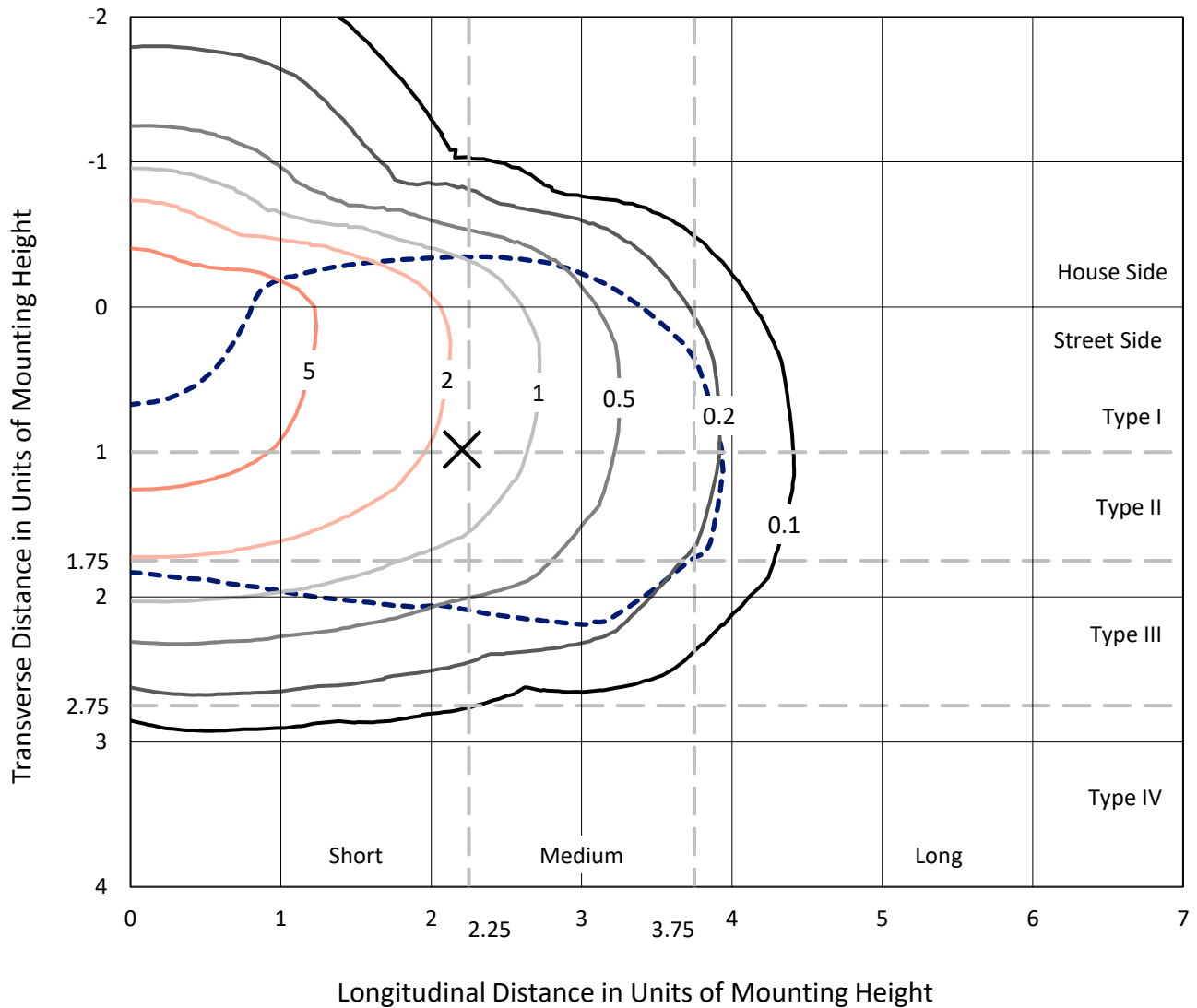
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

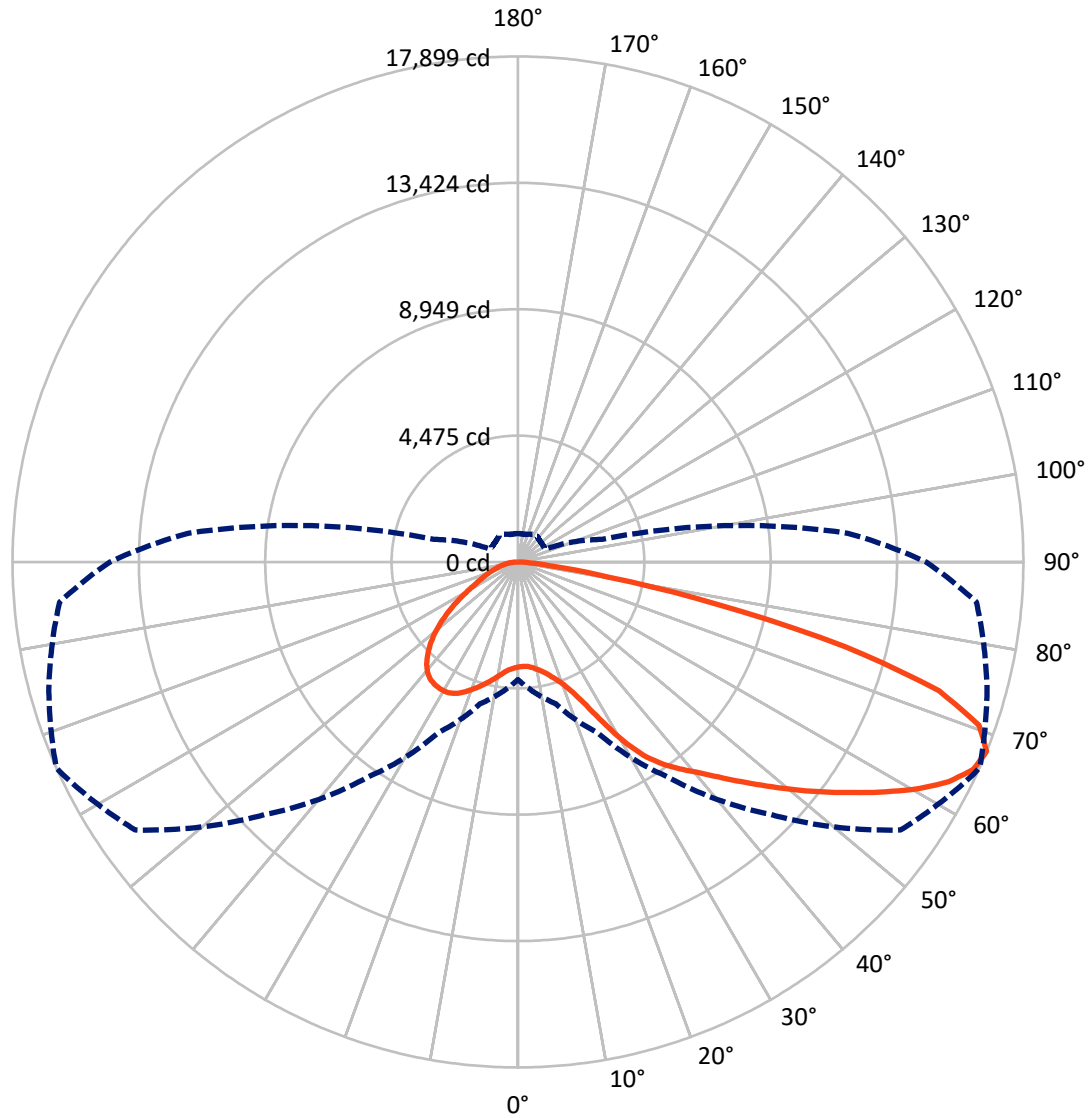
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Short - N/A

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CATALOG NUMBER: NAV-SB4D-827-U-T3

Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8337.1	0.0	8337.1
	% Fixture	24.9	0.0	24.9
Street Side	Lumens	25192.9	0.0	25192.9
	% Fixture	75.1	0.0	75.1
Total	Lumens	33530.0	0.0	33530.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.7	1.1
10°-20°	1218.2	3.6
20°-30°	2348.0	7.0
30°-40°	4116.9	12.3
40°-50°	6120.5	18.3
50°-60°	7758.3	23.1
60°-70°	7591.3	22.6
70°-80°	3621.1	10.8
80°-90°	387.0	1.2
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°	33530.0	100.0
0°-180°	33530.0	100.0

Coefficient of Utilization



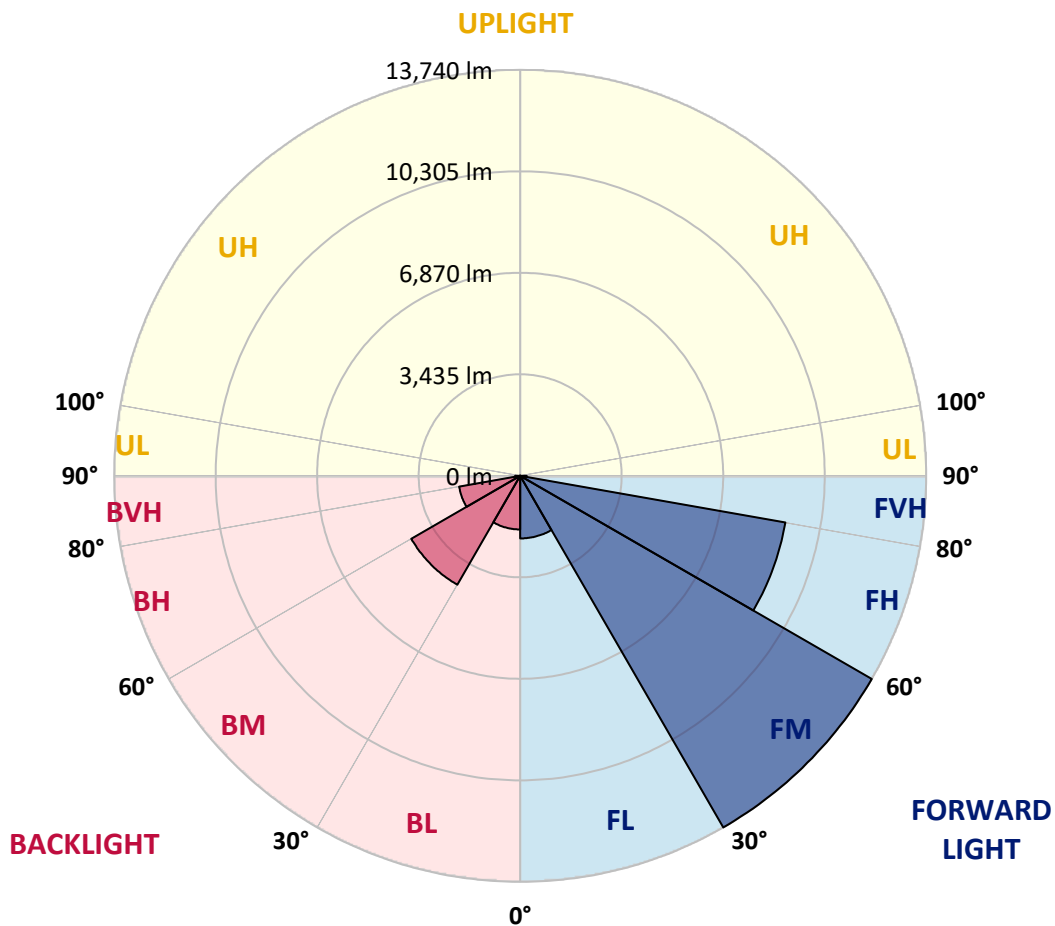
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2118.8	6.3			
FM (30°-60°)	13740.3	41.0			
FH (60°-80°)	9114.4	27.2			G4/12000
FVH (80°-90°)	219.4	0.7			G2/225
BL (0°-30°)	1816.1	5.4	B3/2500		
BM (30°-60°)	4255.4	12.7	B3/5000		
BH (60°-80°)	2098.1	6.3	B3/2500		G3/2500
BVH (80°-90°)	167.6	0.5			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9
2.5°	3680.2	3701.3	3696.0	3687.2	3685.4	3689.0	3694.3	3699.5	3697.8	3706.6	3720.7
5°	3669.6	3690.7	3689.0	3689.0	3696.0	3710.1	3718.9	3727.7	3718.9	3729.5	3748.9
7.5°	3676.6	3692.5	3699.5	3706.6	3724.2	3750.6	3771.8	3791.1	3780.6	3792.9	3817.6
10°	3766.5	3778.8	3785.9	3785.9	3798.2	3828.1	3849.3	3884.5	3875.7	3895.1	3926.8
12.5°	3930.3	3942.7	3942.7	3935.6	3944.4	3963.8	3970.8	4009.6	3993.7	4025.5	4057.2
15°	4131.2	4155.8	4136.4	4124.1	4127.6	4147.0	4145.2	4175.2	4159.3	4185.8	4214.0
17.5°	4353.1	4384.8	4353.1	4351.4	4344.3	4365.5	4367.2	4393.6	4365.5	4384.8	4404.2
20°	4615.6	4659.7	4633.2	4642.0	4626.2	4635.0	4643.8	4682.6	4638.5	4652.6	4647.3
22.5°	4985.6	5038.4	5010.2	5043.7	5033.1	5026.1	5024.3	5093.0	5024.3	5029.6	4978.5
25°	5524.6	5588.1	5538.7	5584.5	5584.5	5607.4	5633.9	5722.0	5607.4	5574.0	5441.8
27.5°	6320.9	6384.4	6287.5	6315.6	6306.8	6363.2	6335.0	6553.5	6430.2	6375.5	6109.5
30°	7279.3	7392.0	7208.8	7201.8	7193.0	7282.8	7323.3	7467.8	7342.7	7288.1	6967.5
32.5°	8315.2	8433.2	8214.7	8151.3	8117.9	8172.5	8139.0	8255.3	8168.9	8084.4	7688.0
35°	9410.9	9527.2	9319.3	9196.0	9062.1	8947.6	8827.8	8857.8	8776.7	8648.1	8237.6
37.5°	10446.8	10660.0	10439.8	10307.6	10061.0	9837.3	9502.5	9363.4	9287.6	9169.6	8755.6
40°	11502.1	11623.6	11456.2	11343.5	11075.7	10725.1	10189.6	9895.4	9793.2	9678.7	9328.1
42.5°	12279.0	12395.2	12305.4	12227.9	12018.2	11611.3	10918.9	10550.7	10402.8	10274.2	9976.4
45°	12895.5	12981.9	12925.5	12953.7	12863.8	12469.2	11674.7	11253.7	11100.4	10943.6	10709.3
47.5°	13143.9	13235.6	13325.4	13492.8	13646.0	13355.3	12486.8	12014.7	11852.6	11692.3	11461.5
50°	13115.8	13209.1	13469.9	13825.7	14301.4	14204.5	13343.0	12825.1	12675.3	12492.1	12279.0
52.5°	12890.3	12996.0	13330.7	13922.6	14680.1	14840.4	14215.0	13661.9	13520.9	13302.5	13089.3
55°	12298.3	12361.8	12863.8	13702.4	14770.0	15284.4	15069.5	14553.3	14412.4	14107.6	13875.0
57.5°	11200.8	11292.4	12023.5	13108.7	14544.5	15585.6	15819.9	15490.5	15354.9	14916.2	14673.1
60°	9768.6	9914.8	10751.6	12111.6	13970.2	15583.9	16501.7	16411.9	16299.1	15712.5	15458.8
62.5°	8147.8	8316.9	9122.0	10702.2	12966.0	15141.7	16928.0	17183.5	17125.4	16447.1	16123.0
65°	6257.5	6373.8	7175.3	8878.9	11403.4	14192.1	16977.4	17710.2	17720.8	17005.6	16470.0
67.5°	4166.4	4501.1	5197.0	6662.7	9310.5	12640.1	16544.0	17796.6	17898.7	17197.6	16295.6
70°	2033.0	2473.4	3155.2	4330.2	6662.7	10260.1	15411.2	17088.4	17315.6	16637.4	15256.2
72.5°	843.8	986.5	1358.3	2136.9	3824.6	6923.4	13135.1	15168.1	15589.2	14741.8	12826.8
75°	569.0	616.6	776.9	1095.8	1742.3	3414.1	9472.6	11310.0	11988.3	11133.9	9100.9
77.5°	438.7	468.6	565.5	766.3	1035.9	1291.3	5070.1	6816.0	7166.5	6634.5	4735.4
80°	345.3	368.2	422.8	558.5	734.6	690.6	1728.2	3088.2	3290.8	2760.6	1522.1
82.5°	299.5	308.3	303.0	378.8	488.0	403.4	567.3	1139.8	1257.8	912.6	496.8
85°	216.7	241.4	251.9	234.3	259.0	204.4	232.5	403.4	443.9	396.4	280.1
87.5°	88.1	130.4	160.3	151.5	95.1	58.1	72.2	118.0	135.6	148.0	91.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P884149
 CATALOG NUMBER: NAV-SB4D-827-U-T3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9	3718.9
2.5°	3722.4	3734.8	3743.6	3754.2	3761.2	3771.8	3792.9	3805.2	3807.0	3815.8	3814.1
5°	3755.9	3773.5	3792.9	3821.1	3852.8	3879.2	3919.8	3947.9	3958.5	3967.3	3965.6
7.5°	3828.1	3852.8	3888.0	3937.4	3983.2	4018.4	4067.7	4101.2	4134.7	4147.0	4148.8
10°	3935.6	3970.8	4021.9	4088.9	4138.2	4184.0	4235.1	4263.3	4296.8	4310.8	4317.9
12.5°	4069.5	4106.5	4173.4	4266.8	4312.6	4344.3	4361.9	4354.9	4361.9	4374.3	4377.8
15°	4222.8	4263.3	4339.0	4439.4	4471.2	4443.0	4404.2	4369.0	4363.7	4367.2	4379.6
17.5°	4404.2	4434.2	4522.2	4606.8	4583.9	4467.6	4383.1	4326.7	4298.5	4289.7	4302.0
20°	4657.9	4657.9	4730.1	4783.0	4629.7	4432.4	4300.3	4208.7	4150.5	4125.9	4120.6
22.5°	4966.2	4938.0	4983.8	4946.8	4620.9	4333.7	4150.5	3992.0	3903.9	3868.7	3863.4
25°	5357.3	5323.8	5311.5	5082.5	4557.5	4177.0	3879.2	3687.2	3609.7	3590.3	3593.8
27.5°	5947.5	5862.9	5702.6	5156.5	4441.2	3930.3	3562.1	3384.2	3340.2	3341.9	3347.2
30°	6733.2	6564.0	6171.2	5168.8	4250.9	3581.5	3238.0	3111.1	3090.0	3098.8	3128.8
32.5°	7460.7	7300.4	6650.4	5112.4	3958.5	3239.7	2947.3	2862.7	2831.0	2841.6	2855.7
35°	8031.5	7987.5	7094.3	5033.1	3599.1	2919.1	2686.6	2614.3	2552.7	2538.6	2549.2
37.5°	8570.6	8553.0	7427.3	4922.2	3243.3	2691.9	2476.9	2381.8	2292.0	2242.6	2244.4
40°	9162.5	9144.9	7645.7	4751.3	2927.9	2494.5	2288.4	2163.4	2052.4	1962.5	1971.3
42.5°	9828.4	9724.5	7749.7	4506.4	2660.1	2327.2	2135.2	1966.0	1819.8	1737.0	1742.3
45°	10556.0	10321.7	7747.9	4194.6	2434.7	2173.9	1971.3	1731.7	1596.1	1518.6	1515.1
47.5°	11327.6	10892.5	7652.8	3849.3	2216.2	2004.8	1717.6	1534.4	1444.6	1397.0	1386.4
50°	12123.9	11426.3	7490.7	3452.9	1992.5	1812.8	1559.1	1434.0	1365.3	1321.3	1305.4
52.5°	12872.6	11910.8	7295.1	3003.7	1765.2	1626.0	1488.6	1391.7	1319.5	1270.2	1249.0
55°	13568.5	12328.3	7018.6	2543.9	1580.2	1501.0	1455.2	1374.1	1291.3	1233.2	1210.3
57.5°	14186.9	12599.6	6541.1	2112.3	1448.1	1414.6	1419.9	1344.2	1249.0	1199.7	1168.0
60°	14701.3	12798.7	5834.7	1712.4	1340.6	1330.1	1365.3	1287.8	1176.8	1120.4	1095.8
62.5°	15009.6	12795.1	4968.0	1402.3	1249.0	1252.6	1293.1	1217.3	1104.6	1051.7	1035.9
65°	14983.1	12481.5	4016.6	1199.7	1161.0	1164.5	1217.3	1139.8	1044.7	1013.0	1011.2
67.5°	14452.9	11717.0	3081.2	1067.6	1064.1	1079.9	1141.6	1087.0	1007.7	1004.2	1009.4
70°	13017.1	10129.7	2219.7	961.9	963.6	986.5	1067.6	1053.5	988.3	995.4	993.6
72.5°	10438.0	7723.2	1490.4	850.9	852.7	889.7	997.1	1027.1	968.9	1062.3	1076.4
75°	6951.6	4816.5	958.4	732.9	734.6	782.2	935.5	976.0	916.1	1058.8	1067.6
77.5°	3340.2	2165.1	694.1	616.6	616.6	660.6	808.6	873.8	780.4	822.7	754.0
80°	1153.9	813.9	546.1	496.8	486.2	516.2	681.8	757.5	673.0	620.1	581.4
82.5°	454.5	422.8	438.7	385.8	350.6	370.0	530.3	625.4	495.0	447.5	445.7
85°	260.7	274.8	310.1	255.4	202.6	227.3	389.3	449.2	373.5	329.4	336.5
87.5°	70.5	96.9	142.7	132.1	91.6	96.9	185.0	248.4	214.9	165.6	170.9
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)