

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: P884147

Luminaire Tested: **NAV-SB4D-827-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884147
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33201 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G4

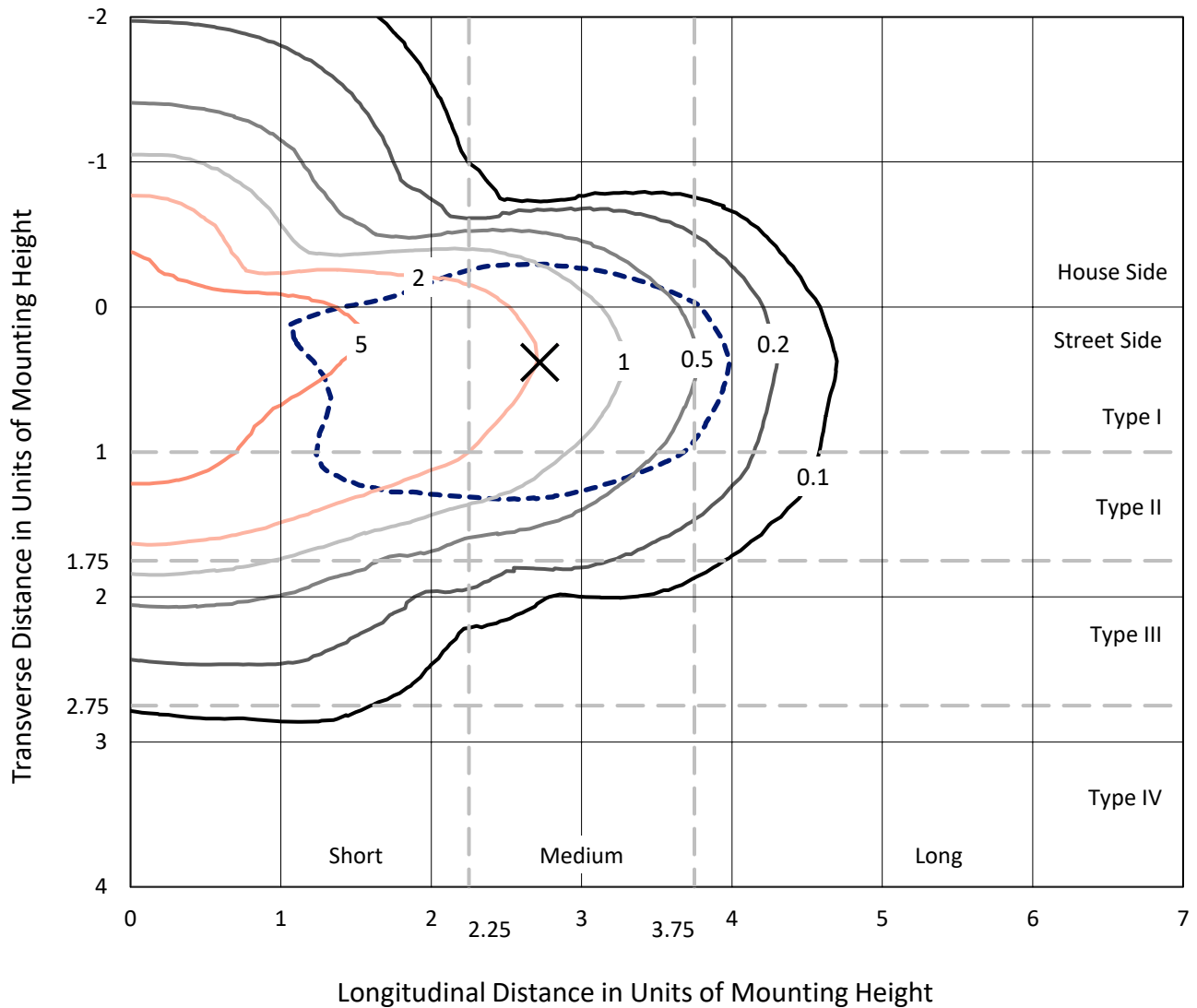
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

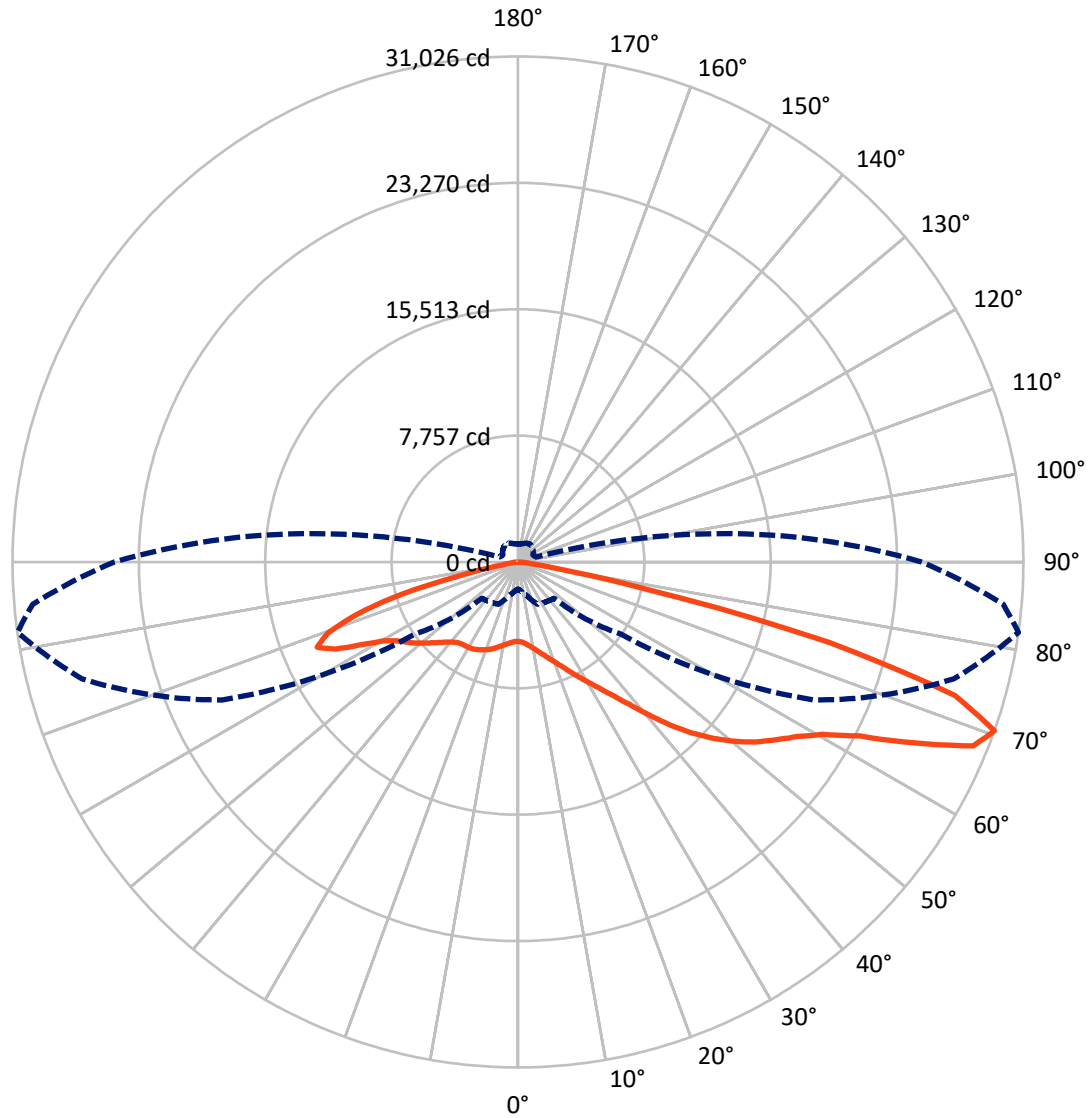
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8184.9	0.0	8184.9
	% Fixture	24.7	0.0	24.7
Street Side	Lumens	25016.1	0.0	25016.1
	% Fixture	75.3	0.0	75.3
Total	Lumens	33201.0	0.0	33201.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	459.6	1.4
10°-20°	1320.4	4.0
20°-30°	2209.0	6.7
30°-40°	3451.0	10.4
40°-50°	5496.1	16.6
50°-60°	7648.5	23.0
60°-70°	8000.7	24.1
70°-80°	4181.6	12.6
80°-90°	434.2	1.3
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°	33201.0	100.0
0°-180°	33201.0	100.0

Coefficient of Utilization

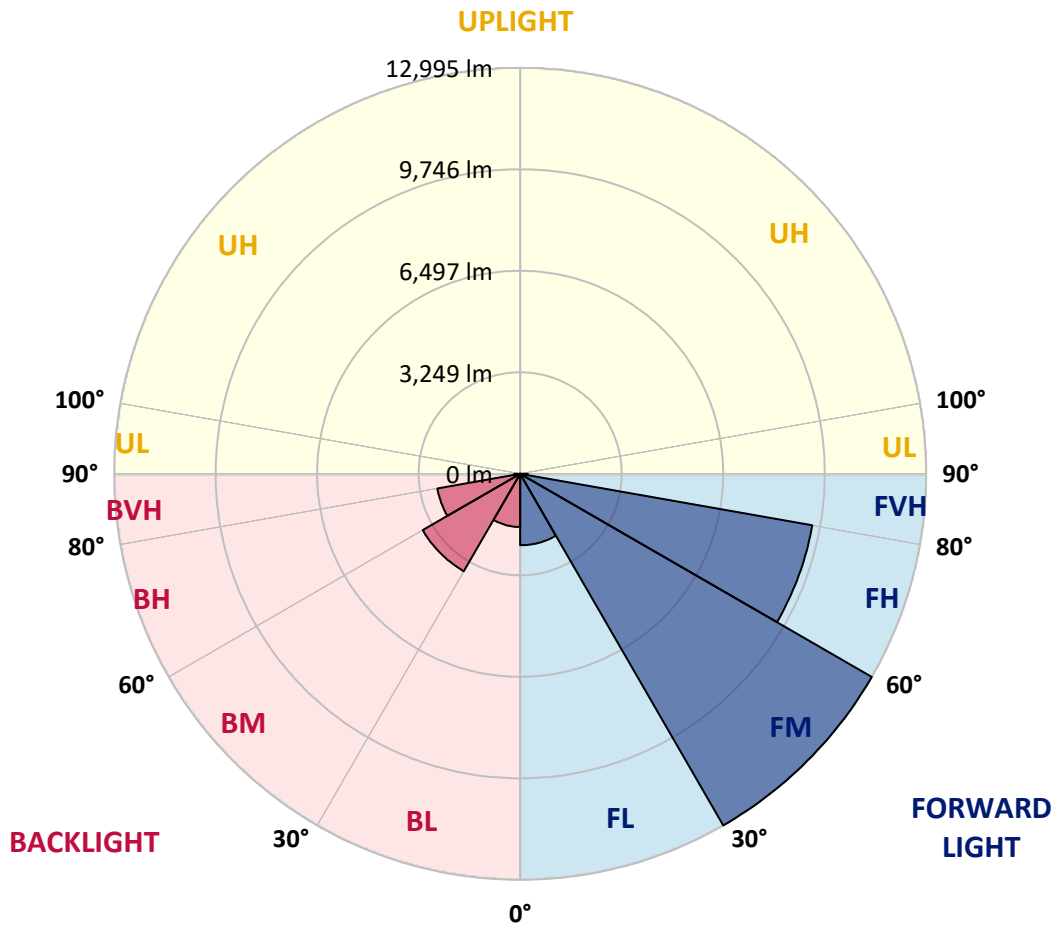


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2286.3	6.9			
FM (30°-60°)	12994.5	39.1			
FH (60°-80°)	9492.3	28.6			G4/12000
FVH (80°-90°)	243.1	0.7			G3/500
BL (0°-30°)	1702.8	5.1	B3/2500		
BM (30°-60°)	3601.0	10.8	B3/5000		
BH (60°-80°)	2690.0	8.1	B4/5000		G4/5000
BVH (80°-90°)	191.1	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7
2.5°	4984.0	5012.1	5003.3	4994.5	4994.5	4982.2	4980.4	4962.8	4948.7	4925.8	4920.5
5°	5047.4	5077.3	5073.8	5080.9	5103.8	5109.0	5114.3	5103.8	5075.6	5047.4	5035.0
7.5°	4991.0	5024.5	5035.0	5077.3	5147.8	5211.2	5258.8	5278.2	5251.7	5211.2	5191.8
10°	4800.7	4837.7	4874.7	4975.1	5100.2	5250.0	5376.8	5452.6	5447.3	5408.5	5375.1
12.5°	4414.9	4453.7	4533.0	4728.5	4957.5	5221.8	5457.9	5616.4	5671.0	5642.8	5584.7
15°	4106.6	4140.1	4200.0	4400.8	4698.6	5100.2	5487.8	5796.1	5935.3	5919.4	5849.0
17.5°	4097.8	4111.9	4148.9	4244.0	4473.1	4910.0	5456.1	5972.3	6238.3	6236.6	6148.5
20°	4252.8	4258.1	4279.3	4298.6	4429.0	4765.5	5375.1	6118.5	6578.3	6578.3	6483.2
22.5°	4467.8	4464.2	4485.4	4467.8	4531.2	4753.2	5324.0	6247.1	6957.1	6985.3	6865.5
25°	4790.2	4772.5	4767.3	4726.7	4739.1	4867.7	5380.3	6393.3	7406.3	7464.5	7314.7
27.5°	5220.0	5191.8	5172.5	5079.1	5047.4	5103.8	5553.0	6569.5	7906.7	8007.1	7816.8
30°	5780.3	5729.2	5701.0	5538.9	5424.4	5433.2	5813.7	6803.8	8429.9	8592.0	8350.6
32.5°	6544.9	6465.6	6389.8	6123.8	5914.2	5845.4	6150.2	7128.0	8997.2	9256.2	8946.1
35°	7401.1	7337.6	7256.6	6846.1	6523.7	6365.2	6604.8	7580.8	9661.4	10071.9	9668.4
37.5°	8225.6	8170.9	8209.7	7656.5	7240.7	7010.0	7200.2	8188.6	10480.6	11086.6	10574.0
40°	9078.2	9036.0	9041.2	8512.7	8028.2	7769.3	7922.5	8951.4	11419.6	12293.4	11662.7
42.5°	10004.9	9973.2	9867.5	9398.9	8854.5	8613.1	8754.1	9832.3	12427.3	13667.6	12857.2
45°	11042.6	11023.2	10924.5	10387.2	9763.6	9492.2	9682.5	10804.7	13440.3	14960.7	14056.9
47.5°	11939.3	11955.2	11942.8	11490.1	10843.5	10445.3	10672.6	11819.5	14382.8	16176.3	15207.3
50°	12370.9	12453.7	12575.3	12434.3	12032.7	11627.5	11671.5	12799.0	15281.3	17316.1	16310.2
52.5°	12145.4	12302.2	12633.4	12858.9	13014.0	12929.4	12811.4	13771.5	16126.9	18345.0	17353.1
55°	11305.1	11525.3	12075.0	12619.3	13410.3	14025.2	14180.2	14849.7	16951.4	19250.5	18339.7
57.5°	9774.1	10131.8	10625.0	11726.1	13058.0	14555.5	15776.4	16345.4	17825.3	20217.7	19372.1
60°	7149.1	7628.3	8241.4	9879.8	11824.8	14271.8	17134.7	18642.7	19067.3	21470.3	20716.3
62.5°	4575.2	4871.2	5435.0	6978.2	9213.9	12818.4	17550.4	21514.3	21172.6	23524.5	22731.7
65°	3132.4	3322.6	3838.8	4705.6	5956.4	9541.6	16437.0	23667.2	24516.3	26780.2	26177.7
67.5°	2276.2	2420.6	2861.1	3620.4	3881.1	5646.4	12755.0	23568.5	27766.8	30134.5	29197.3
70°	1659.6	1761.7	2131.7	2861.1	2986.1	3141.2	7727.0	20034.5	27696.3	31026.0	29903.7
72.5°	1229.7	1300.2	1548.6	2219.8	2417.1	2121.1	3824.7	14560.8	23799.3	28062.7	27162.5
75°	889.7	942.5	1125.8	1698.3	1934.4	1615.5	1908.0	8509.2	16600.9	19740.3	19898.8
77.5°	680.0	720.6	840.3	1243.8	1548.6	1212.1	1183.9	3914.6	7871.4	7910.2	8354.2
80°	546.1	572.6	637.7	875.6	1187.4	907.3	771.6	1580.3	2487.6	2105.3	2209.2
82.5°	401.7	445.7	539.1	614.8	849.2	625.4	470.4	798.1	946.1	813.9	821.0
85°	229.0	259.0	325.9	440.4	542.6	382.3	269.5	354.1	440.4	361.2	322.4
87.5°	81.0	105.7	114.5	172.7	236.1	158.6	103.9	102.2	144.5	107.5	89.8
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°	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7	4867.7
2.5°	4902.9	4894.1	4858.9	4811.3	4762.0	4714.4	4698.6	4665.1	4642.2	4629.8	4643.9
5°	5001.6	4973.4	4890.6	4784.9	4673.9	4554.1	4469.5	4392.0	4335.6	4282.8	4303.9
7.5°	5142.5	5093.2	4950.5	4765.5	4568.2	4369.1	4221.1	4108.4	4032.6	3983.3	3993.9
10°	5306.4	5230.6	5012.1	4735.6	4430.8	4145.4	3971.0	3874.1	3826.5	3800.1	3807.1
12.5°	5494.9	5387.4	5075.6	4666.8	4221.1	3895.2	3775.4	3747.2	3749.0	3750.7	3754.3
15°	5727.4	5577.7	5126.7	4517.1	3948.1	3703.2	3682.0	3727.8	3775.4	3798.3	3796.5
17.5°	5989.9	5778.5	5135.5	4270.5	3680.3	3579.9	3646.8	3745.5	3817.7	3849.4	3856.4
20°	6271.8	5982.9	5072.0	3921.6	3460.1	3479.4	3599.2	3726.1	3805.4	3845.9	3856.4
22.5°	6594.2	6201.3	4920.5	3555.2	3280.4	3370.2	3511.1	3634.5	3717.3	3757.8	3768.4
25°	6962.4	6446.2	4682.7	3246.9	3125.3	3246.9	3387.8	3490.0	3556.9	3593.9	3604.5
27.5°	7371.1	6701.7	4365.6	3002.0	2989.7	3120.0	3236.3	3315.6	3350.8	3379.0	3389.6
30°	7781.6	6934.2	3981.5	2817.0	2871.6	2995.0	3077.8	3113.0	3123.6	3128.8	3141.2
32.5°	8225.6	7135.0	3578.1	2663.7	2758.9	2873.4	2922.7	2938.6	2889.3	2855.8	2866.3
35°	8762.9	7350.0	3183.5	2542.2	2647.9	2746.5	2762.4	2748.3	2690.2	2621.5	2625.0
37.5°	9427.1	7617.8	2868.1	2455.9	2543.9	2609.1	2589.8	2586.2	2591.5	2510.5	2515.8
40°	10241.0	7966.6	2637.3	2388.9	2459.4	2473.5	2418.9	2448.8	2475.2	2351.9	2355.4
42.5°	11144.8	8387.6	2491.1	2343.1	2388.9	2355.4	2270.9	2304.4	2300.8	2138.7	2137.0
45°	12066.1	8845.7	2440.0	2309.6	2323.7	2256.8	2163.4	2172.2	2098.2	1952.0	1957.3
47.5°	12982.2	9337.2	2471.7	2281.5	2242.7	2166.9	2094.7	2055.9	1946.7	1837.5	1837.5
50°	13880.7	9853.4	2588.0	2225.1	2131.7	2087.7	2034.8	1966.1	1849.8	1756.5	1749.4
52.5°	14714.0	10373.1	2718.4	2131.7	1992.5	2019.0	1985.5	1906.2	1791.7	1696.6	1698.3
55°	15503.3	10892.8	2769.5	2003.1	1862.2	1959.1	1939.7	1793.4	1656.0	1578.5	1571.5
57.5°	16363.0	11518.2	2713.1	1839.3	1756.5	1890.3	1816.4	1654.3	1575.0	1516.9	1511.6
60°	17554.0	12499.5	2591.5	1636.7	1656.0	1788.2	1661.3	1594.4	1508.0	1442.9	1439.3
62.5°	19532.4	14330.0	2396.0	1435.8	1538.0	1636.7	1587.3	1520.4	1432.3	1368.9	1368.9
65°	22456.9	16873.9	2027.8	1279.0	1405.9	1488.7	1508.0	1441.1	1349.5	1282.5	1286.1
67.5°	24923.3	18470.1	1534.5	1148.7	1270.2	1368.9	1423.5	1358.3	1261.4	1196.2	1198.0
70°	24787.7	17310.8	1171.6	1020.0	1150.4	1250.8	1321.3	1270.2	1166.3	1104.6	1109.9
72.5°	22016.4	14481.5	947.8	889.7	1028.9	1127.5	1212.1	1173.3	1067.6	1007.7	1007.7
75°	16174.5	10279.7	757.5	757.5	877.3	998.9	1092.3	1067.6	970.7	928.4	916.1
77.5°	6817.9	4312.7	593.7	628.9	729.4	858.0	974.2	983.0	898.5	951.3	863.3
80°	1812.8	1189.2	452.8	495.0	572.6	708.2	847.4	843.9	752.3	702.9	653.6
82.5°	690.6	468.6	322.4	348.8	414.0	542.6	671.2	692.4	600.8	519.7	519.7
85°	266.0	200.8	199.1	209.6	241.4	359.4	507.4	525.0	452.8	384.1	396.4
87.5°	68.7	59.9	74.0	70.5	111.0	192.0	290.7	301.3	276.6	160.3	229.0
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)