

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: P884161

Luminaire Tested: **NAV-SB4D-830-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884161
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-830-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 35665 lumens
Efficiency: N/A
Efficacy: 121.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

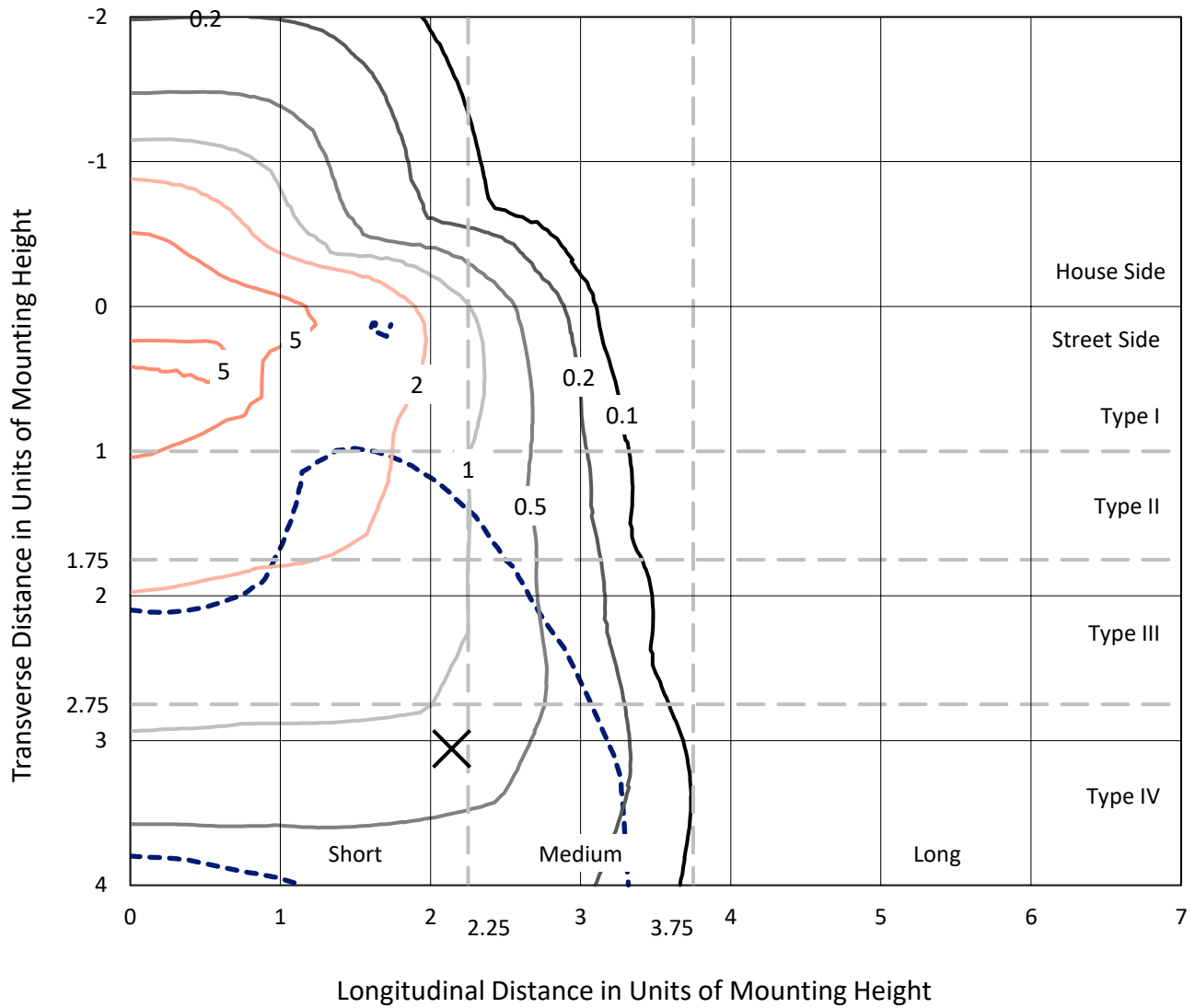
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

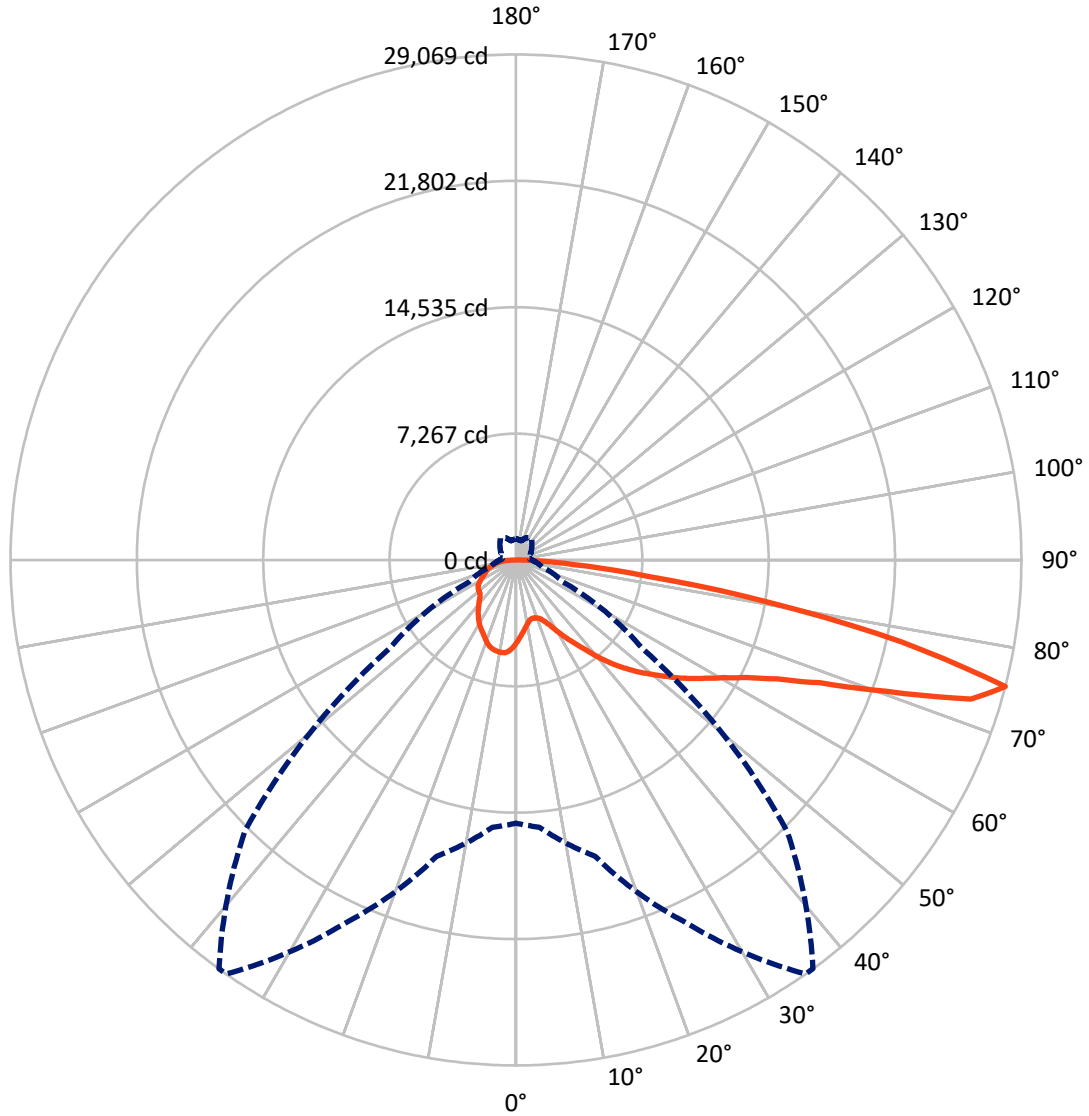
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 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
House Side	Lumens	8487.4	0.0	8487.4
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	27177.6	0.0	27177.6
	% Fixture	76.2	0.0	76.2
Total	Lumens	35665.0	0.0	35665.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.0	1.3
10°-20°	1297.9	3.6
20°-30°	2179.6	6.1
30°-40°	3387.3	9.5
40°-50°	5027.7	14.1
50°-60°	6941.1	19.5
60°-70°	8421.1	23.6
70°-80°	6959.4	19.5
80°-90°	1001.0	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°	35665.0	100.0
0°-180°	35665.0	100.0



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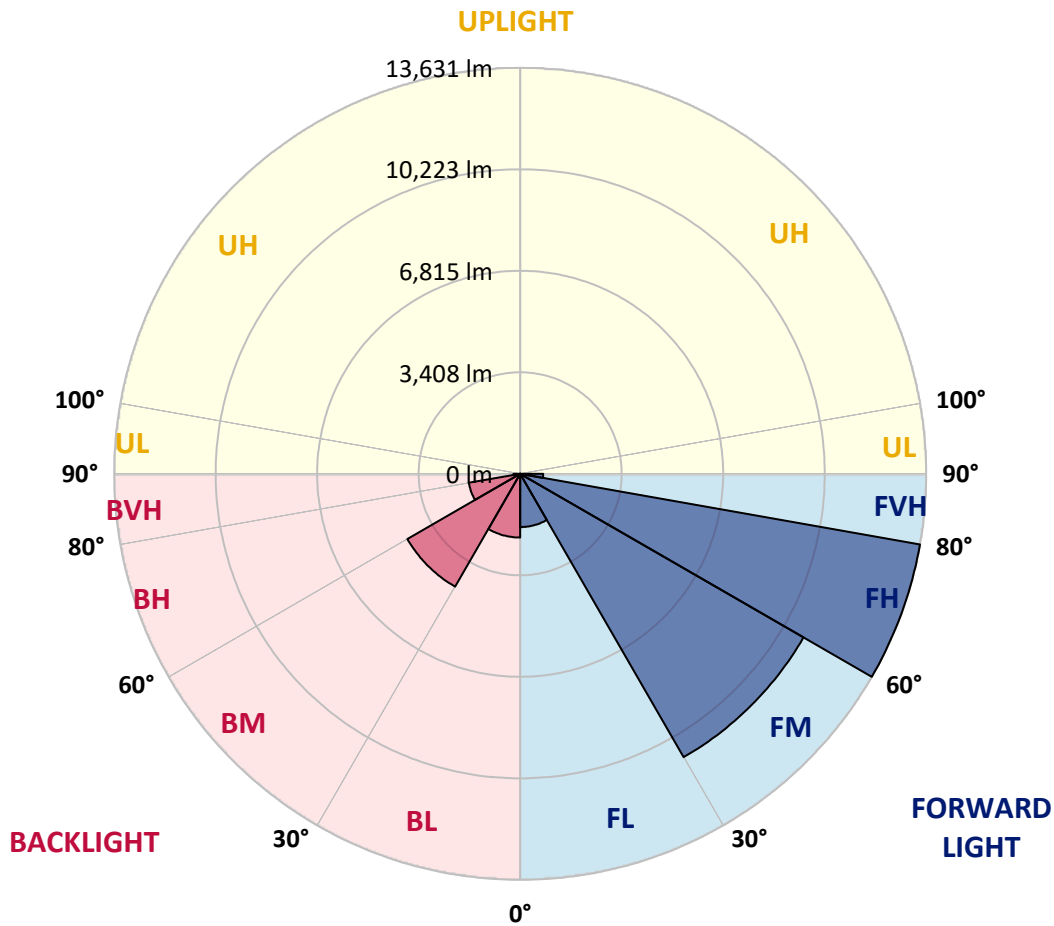
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1788.5	5.0			
FM (30°-60°)	10982.9	30.8			
FH (60°-80°)	13630.6	38.2			G5
FVH (80°-90°)	775.6	2.2			G5
BL (0°-30°)	2138.9	6.0	B3/2500		
BM (30°-60°)	4373.2	12.3	B3/5000		
BH (60°-80°)	1749.8	4.9	B3/2500		G3/2500
BVH (80°-90°)	225.4	0.6			G3/500
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°	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6
2.5°	4382.4	4409.4	4421.0	4415.2	4444.1	4440.3	4480.7	4530.9	4600.3	4667.8	4766.1
5°	4045.0	4073.9	4099.0	4122.1	4178.0	4195.4	4259.0	4355.4	4482.7	4611.9	4773.8
7.5°	3730.7	3755.8	3794.4	3836.8	3931.3	3948.6	4054.7	4205.0	4382.4	4571.4	4795.0
10°	3474.3	3499.4	3539.9	3588.1	3705.7	3726.9	3861.9	4062.4	4293.7	4532.8	4818.2
12.5°	3364.4	3372.1	3395.3	3443.5	3545.7	3559.1	3707.6	3937.0	4207.0	4503.9	4852.9
15°	3358.6	3374.1	3376.0	3401.1	3485.9	3491.7	3628.6	3856.1	4153.0	4498.1	4904.9
17.5°	3416.5	3428.0	3410.7	3426.1	3497.5	3507.1	3615.1	3817.5	4135.6	4523.2	4993.6
20°	3570.7	3580.4	3528.3	3507.1	3559.1	3566.9	3672.9	3842.6	4153.0	4575.2	5115.1
22.5°	3898.5	3904.3	3777.0	3690.3	3694.1	3698.0	3790.5	3944.8	4220.5	4669.7	5269.3
25°	4409.4	4405.6	4203.1	4035.4	3939.0	3917.8	3979.5	4110.6	4334.2	4795.0	5467.9
27.5°	5007.1	4978.2	4775.7	4525.1	4314.9	4284.1	4270.6	4326.5	4496.2	4960.8	5710.8
30°	5681.9	5654.9	5437.1	5109.3	4818.2	4768.0	4640.8	4611.9	4737.2	5186.4	6048.2
32.5°	6422.3	6404.9	6144.6	5747.5	5358.0	5300.2	5086.2	5009.0	5107.4	5527.7	6518.7
35°	7043.1	7027.7	6811.7	6403.0	5926.8	5855.4	5637.6	5550.8	5600.9	5965.3	7133.7
37.5°	7604.2	7596.5	7411.4	7089.4	6597.7	6511.0	6266.1	6237.2	6227.5	6541.8	7879.9
40°	8124.7	8105.5	7912.6	7743.0	7378.6	7299.5	7083.6	7058.5	6985.3	7251.3	8724.4
42.5°	8701.2	8651.1	8371.5	8292.5	8194.1	8128.6	7999.4	8003.3	7841.3	8051.5	9619.0
45°	9171.7	9142.7	8855.5	8809.2	8915.2	8888.2	9000.1	9029.0	8714.7	8890.2	10548.3
47.5°	9676.8	9649.8	9406.9	9374.1	9661.4	9669.1	10064.3	10074.0	9566.9	9761.6	11479.5
50°	10299.6	10261.0	10020.0	10060.5	10382.5	10411.4	11134.4	11068.8	10351.6	10646.6	12403.0
52.5°	10710.2	10733.4	10681.3	10746.9	11186.5	11213.4	12187.1	12019.4	11128.6	11520.0	13309.2
55°	11012.9	11059.2	11221.2	11371.5	12034.8	12061.8	13180.0	12923.6	11772.6	12329.8	14161.4
57.5°	11402.4	11336.8	11639.5	11932.6	12840.7	12912.0	14146.0	13795.1	12343.3	13027.7	14745.6
60°	11961.5	11915.2	12150.5	12584.3	13743.0	13856.8	15167.8	14579.8	12761.7	13581.1	14859.4
62.5°	13095.2	12979.5	13016.2	13399.8	14880.6	15030.9	16320.8	15264.2	12969.9	13797.0	14250.1
65°	14789.9	14591.4	14406.3	14672.3	16482.8	16631.2	17622.2	15802.2	12892.8	13378.6	12632.5
67.5°	16924.3	16727.6	16500.1	16750.8	18842.7	18960.3	19228.3	16104.9	12285.4	11766.8	9773.2
70°	18684.6	18611.3	18883.2	19914.7	22612.0	22615.8	21287.4	15854.2	10621.5	8342.6	5654.9
72.5°	18451.3	18406.9	19839.5	23028.4	27362.7	27260.5	23236.7	13957.0	7154.9	3763.5	2118.9
75°	15137.0	15424.3	17643.4	22972.5	29069.0	29055.5	22043.2	8872.8	2959.5	1559.8	1095.1
77.5°	8117.0	8572.0	11454.4	16960.9	22693.0	23034.2	15497.5	3104.1	1270.6	998.7	757.7
80°	2647.2	3044.4	4565.6	8635.7	14745.6	14682.0	6642.1	1218.5	869.5	707.6	524.4
82.5°	1124.0	1170.3	2039.9	4077.8	7567.5	7449.9	2115.1	699.9	611.2	483.9	323.9
85°	439.6	491.6	900.4	1885.6	3277.7	3206.3	763.5	347.0	391.4	316.2	192.8
87.5°	144.6	175.5	322.0	645.9	1019.9	983.3	187.0	119.5	169.7	144.6	69.4
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°	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6	4752.6
2.5°	4793.1	4823.9	4860.6	4914.6	4960.8	4999.4	5039.9	5064.9	5074.6	5103.5	5101.6
5°	4827.8	4895.3	4985.9	5074.6	5161.3	5213.4	5259.7	5282.8	5304.0	5319.4	5323.3
7.5°	4885.6	4972.4	5115.1	5230.8	5304.0	5346.4	5377.3	5369.6	5377.3	5381.1	5386.9
10°	4935.8	5057.2	5226.9	5336.8	5392.7	5394.6	5386.9	5359.9	5346.4	5348.4	5352.2
12.5°	4995.5	5130.5	5313.7	5406.2	5421.6	5379.2	5346.4	5300.2	5282.8	5275.1	5271.2
15°	5076.5	5230.8	5408.1	5442.8	5404.3	5350.3	5294.4	5219.2	5180.6	5149.8	5159.4
17.5°	5174.8	5344.5	5481.4	5456.3	5373.4	5284.7	5194.1	5080.4	5001.3	4968.5	4970.5
20°	5311.7	5464.0	5537.3	5427.4	5302.1	5167.1	5012.9	4874.1	4800.8	4768.0	4764.2
22.5°	5477.5	5624.1	5591.3	5377.3	5199.9	4984.0	4791.2	4689.0	4652.3	4629.2	4633.1
25°	5676.1	5801.5	5629.9	5304.0	5032.2	4741.0	4592.6	4559.8	4542.4	4525.1	4525.1
27.5°	5934.5	6002.0	5658.8	5196.1	4770.0	4482.7	4428.7	4434.5	4428.7	4399.8	4405.6
30°	6275.7	6262.3	5685.8	5020.6	4469.2	4249.4	4253.2	4278.3	4282.2	4262.9	4272.5
32.5°	6725.0	6588.1	5699.3	4793.1	4181.9	4045.0	4048.9	4075.9	4095.1	4062.4	4077.8
35°	7268.7	6967.9	5678.1	4507.7	3960.2	3850.3	3821.4	3829.1	3834.9	3804.0	3825.2
37.5°	7903.0	7394.0	5583.6	4191.5	3777.0	3659.4	3597.7	3545.7	3514.8	3485.9	3505.2
40°	8599.0	7858.7	5410.1	3883.1	3572.6	3457.0	3364.4	3266.1	3162.0	3123.4	3140.8
42.5°	9327.8	8336.8	5199.9	3588.1	3337.4	3243.0	3144.6	3001.9	2845.8	2766.7	2776.4
45°	10083.6	8826.5	4993.6	3296.9	3096.4	3055.9	2942.2	2770.6	2600.9	2500.7	2492.9
47.5°	10824.0	9289.3	4690.9	3003.9	2870.8	2915.2	2826.5	2668.4	2479.5	2321.4	2304.0
50°	11531.6	9723.1	4195.4	2707.0	2687.7	2872.8	2787.9	2560.4	2344.5	2142.0	2124.7
52.5°	12233.4	10074.0	3561.1	2437.0	2589.3	2861.2	2737.8	2487.2	2223.0	2010.9	1987.8
55°	12829.1	10255.2	2949.9	2205.7	2446.7	2762.9	2678.0	2400.4	2051.4	1825.8	1806.6
57.5°	13168.5	10108.7	2440.9	1978.2	2250.0	2600.9	2575.9	2215.3	1847.1	1673.5	1650.4
60°	13021.9	9514.8	2024.4	1779.6	2063.0	2425.5	2398.5	2032.1	1690.9	1527.0	1503.9
62.5°	12214.1	8383.1	1694.7	1606.1	1893.3	2246.2	2221.1	1891.4	1571.3	1413.2	1388.2
65°	10586.8	6819.5	1438.3	1461.4	1721.7	2030.2	2066.9	1773.8	1476.9	1322.6	1297.6
67.5°	8074.6	4939.6	1237.8	1336.1	1554.0	1818.1	1924.2	1689.0	1397.8	1251.3	1228.2
70°	4602.2	2805.3	1068.1	1214.7	1405.5	1621.5	1814.3	1621.5	1313.0	1191.5	1176.1
72.5°	1744.9	1287.9	923.5	1093.2	1262.9	1455.7	1692.8	1515.4	1214.7	1124.0	1108.6
75°	931.2	784.7	777.0	950.5	1099.0	1293.7	1540.5	1411.3	1141.4	1187.7	1226.2
77.5°	634.3	555.3	649.7	813.6	919.7	1114.4	1378.5	1253.2	989.1	985.2	908.1
80°	439.6	393.3	528.3	655.5	711.4	937.0	1203.1	1075.8	805.9	751.9	719.2
82.5°	264.1	256.4	395.2	489.7	503.2	723.0	996.8	902.3	659.4	574.6	578.4
85°	144.6	152.3	252.6	287.3	293.1	505.1	780.9	697.9	507.1	426.1	430.0
87.5°	40.5	52.1	92.5	113.8	140.7	262.2	464.7	414.5	254.5	177.4	177.4
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)