

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: P967244

Luminaire Tested: **NAV-SB4D-740-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967244
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-740-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43712.1 lumens
Efficiency: N/A
Efficacy: 148.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U0 - G5

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



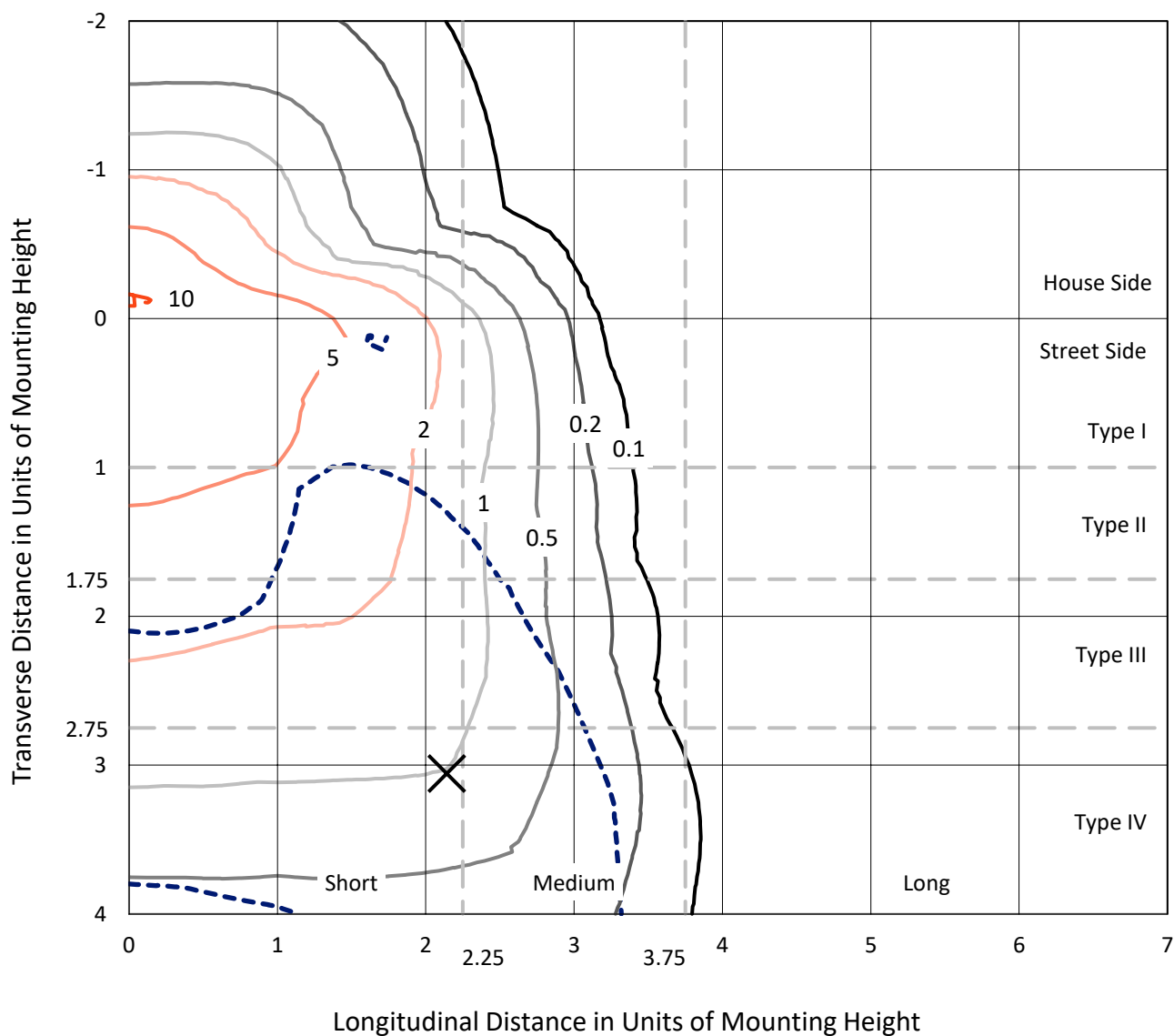
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

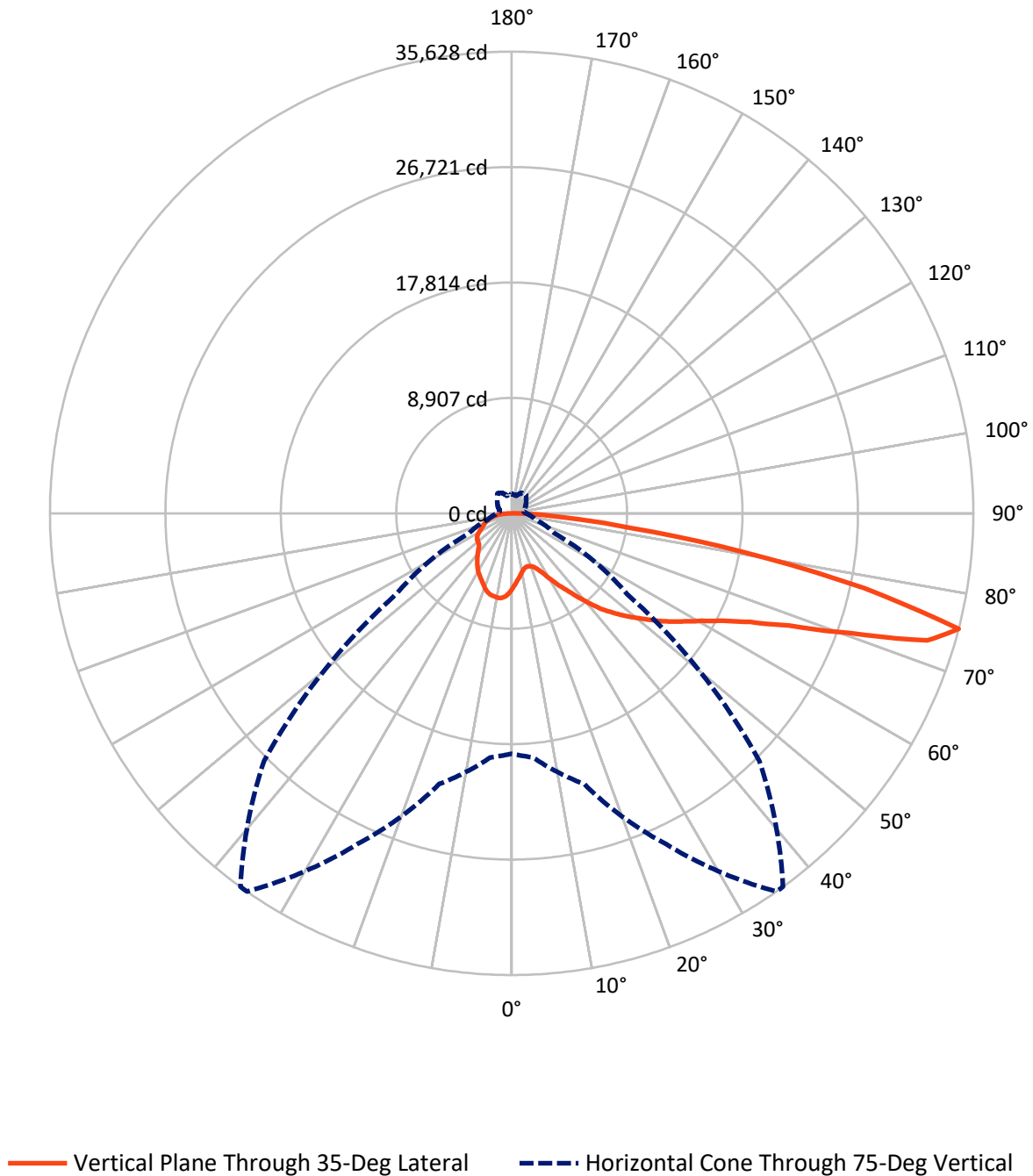


Based on 25 foot mounting height. Maximum calculated value = 10.3 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10402.4	0.0	10402.4
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	33309.8	0.0	33309.8
	% Fixture	76.2	0.0	76.2
Total	Lumens	43712.1	0.0	43712.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	551.5	1.3
10°-20°	1590.8	3.6
20°-30°	2671.3	6.1
30°-40°	4151.6	9.5
40°-50°	6162.1	14.1
50°-60°	8507.2	19.5
60°-70°	10321.1	23.6
70°-80°	8529.6	19.5
80°-90°	1226.8	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°	43712.1	100.0
0°-180°	43712.1	100.0

Coefficient of Utilization



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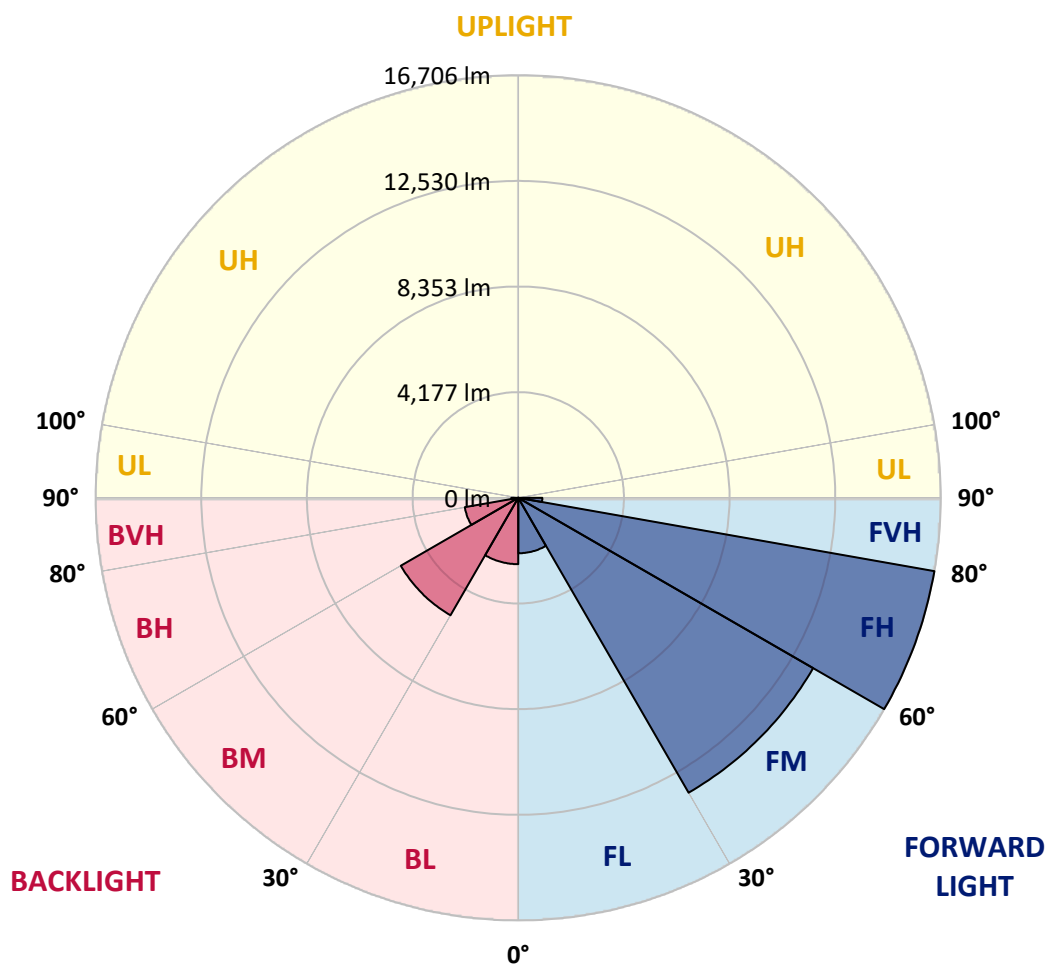
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2192.1	5.0			
FM	(30°-60°)	13461.0	30.8			
FH	(60°-80°)	16706.1	38.2			G5
FVH	(80°-90°)	950.6	2.2			G5
BL	(0°-30°)	2621.5	6.0	B4/5000		
BM	(30°-60°)	5359.9	12.3	B4/8500		
BH	(60°-80°)	2144.7	4.9	B3/2500		G3/2500
BVH	(80°-90°)	276.2	0.6			G3/500
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 Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0
2.5°	5371.2	5404.3	5418.5	5411.4	5446.8	5442.1	5491.7	5553.1	5638.2	5720.9	5841.5
5°	4957.7	4993.2	5023.8	5052.2	5120.8	5142.0	5220.0	5338.2	5494.1	5652.5	5850.9
7.5°	4572.5	4603.3	4650.5	4702.5	4818.3	4839.5	4969.5	5153.8	5371.2	5602.9	5876.9
10°	4258.3	4288.9	4338.6	4397.7	4541.8	4567.8	4733.2	4978.9	5262.6	5555.5	5905.3
12.5°	4123.6	4133.0	4161.4	4220.4	4345.7	4362.2	4544.1	4825.4	5156.2	5520.1	5947.8
15°	4116.4	4135.4	4137.7	4168.5	4272.4	4279.5	4447.3	4726.1	5090.0	5513.1	6011.6
17.5°	4187.3	4201.5	4180.3	4199.1	4286.5	4298.4	4430.8	4678.8	5068.7	5543.7	6120.3
20°	4376.3	4388.2	4324.4	4298.4	4362.2	4371.6	4501.6	4709.6	5090.0	5607.6	6269.2
22.5°	4778.1	4785.2	4629.2	4522.9	4527.6	4532.3	4645.8	4834.8	5172.8	5723.3	6458.2
25°	5404.3	5399.6	5151.4	4945.9	4827.8	4801.7	4877.4	5038.1	5312.2	5876.9	6701.7
27.5°	6136.9	6101.4	5853.3	5546.1	5288.5	5250.8	5234.2	5302.7	5510.6	6080.2	6999.4
30°	6964.0	6930.8	6663.8	6262.1	5905.3	5843.8	5687.9	5652.5	5806.0	6356.6	7412.9
32.5°	7871.4	7850.1	7531.1	7044.3	6567.0	6496.0	6233.7	6139.2	6259.8	6774.8	7989.5
35°	8632.2	8613.4	8348.7	7847.7	7264.1	7176.6	6909.6	6803.2	6864.7	7311.3	8743.4
37.5°	9319.9	9310.5	9083.6	8688.9	8086.4	7980.0	7679.9	7644.4	7632.7	8017.9	9657.9
40°	9958.0	9934.3	9698.0	9490.1	9043.5	8946.5	8681.9	8651.2	8561.3	8887.5	10692.8
42.5°	10664.5	10603.0	10260.4	10163.5	10042.9	9962.7	9804.3	9809.0	9610.6	9868.1	11789.3
45°	11241.1	11205.6	10853.5	10796.8	10926.8	10893.7	11030.7	11066.2	10681.0	10896.1	12928.3
47.5°	11860.2	11827.1	11529.4	11489.2	11841.3	11850.7	12335.2	12346.9	11725.5	11964.2	14069.7
50°	12623.5	12576.2	12280.8	12330.4	12725.1	12760.5	13646.6	13566.3	12687.2	13048.8	15201.6
52.5°	13126.8	13155.2	13091.3	13171.7	13710.5	13743.5	14936.9	14731.3	13639.6	14119.3	16312.2
55°	13497.8	13554.5	13753.0	13937.3	14750.3	14783.3	16153.9	15839.6	14428.8	15111.8	17356.6
57.5°	13975.2	13894.8	14265.7	14625.0	15738.0	15825.4	17337.8	16907.7	15128.3	15967.1	18072.7
60°	14660.4	14603.7	14892.0	15423.7	16843.9	16983.3	18590.2	17869.4	15641.1	16645.4	18212.1
62.5°	16049.9	15908.1	15953.0	16423.3	18238.1	18422.4	20003.3	18708.3	15896.3	16910.0	17465.4
65°	18127.0	17883.6	17656.8	17982.9	20201.8	20383.8	21598.4	19367.6	15801.8	16397.2	15482.7
67.5°	20742.9	20501.9	20223.0	20530.2	23094.2	23238.3	23566.8	19738.6	15057.5	14421.7	11978.4
70°	22900.4	22810.6	23143.8	24408.0	27714.0	27718.7	26090.6	19431.4	13018.1	10225.0	6930.8
72.5°	22614.5	22560.1	24315.9	28224.4	33536.6	33411.3	28479.6	17106.2	8769.3	4612.7	2597.0
75°	18552.4	18904.5	21624.3	28155.8	35627.9	35611.3	27016.8	10874.8	3627.3	1911.7	1342.2
77.5°	9948.4	10506.1	14038.9	20787.8	27813.2	28231.5	18994.3	3804.5	1557.3	1224.1	928.6
80°	3244.4	3731.3	5595.7	10584.2	18072.7	17994.7	8140.8	1493.4	1065.7	867.3	642.8
82.5°	1377.7	1434.4	2500.1	4997.9	9275.0	9130.9	2592.2	857.8	749.1	593.2	397.0
85°	538.7	602.6	1103.5	2311.1	4017.2	3929.7	935.7	425.4	479.7	387.6	236.3
87.5°	177.2	215.0	394.6	791.6	1250.1	1205.2	229.2	146.5	208.0	177.2	85.1
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°	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0	5825.0
2.5°	5874.6	5912.4	5957.3	6023.4	6080.2	6127.4	6177.1	6207.7	6219.6	6255.1	6252.6
5°	5917.1	5999.8	6110.8	6219.6	6325.9	6389.7	6446.4	6474.8	6500.8	6519.7	6524.4
7.5°	5987.9	6094.3	6269.2	6411.0	6500.8	6552.7	6590.5	6581.1	6590.5	6595.3	6602.4
10°	6049.4	6198.3	6406.2	6540.9	6609.5	6611.9	6602.4	6569.3	6552.7	6555.1	6559.9
12.5°	6122.7	6288.1	6512.5	6626.0	6644.9	6592.9	6552.7	6496.0	6474.8	6465.3	6460.6
15°	6222.0	6411.0	6628.4	6670.9	6623.7	6557.4	6489.0	6396.8	6349.6	6311.7	6323.5
17.5°	6342.5	6550.4	6718.2	6687.4	6585.8	6477.2	6366.1	6226.7	6129.8	6089.6	6092.0
20°	6510.2	6696.9	6786.7	6652.0	6498.4	6333.0	6144.0	5973.8	5884.0	5843.8	5839.1
22.5°	6713.4	6893.0	6852.8	6590.5	6373.1	6108.5	5872.2	5747.0	5702.1	5673.7	5678.4
25°	6956.9	7110.4	6900.1	6500.8	6167.6	5810.7	5628.8	5588.6	5567.4	5546.1	5546.1
27.5°	7273.5	7356.2	6935.6	6368.4	5846.2	5494.1	5428.0	5435.1	5428.0	5392.5	5399.6
30°	7691.8	7675.2	6968.7	6153.4	5477.6	5208.2	5212.9	5243.6	5248.3	5224.7	5236.5
32.5°	8242.3	8074.5	6985.2	5874.6	5125.5	4957.7	4962.4	4995.5	5019.1	4978.9	4997.9
35°	8908.7	8540.1	6959.2	5524.9	4853.7	4719.0	4683.5	4693.1	4700.1	4662.3	4688.3
37.5°	9686.1	9062.3	6843.4	5137.3	4629.2	4485.1	4409.4	4345.7	4307.9	4272.4	4296.1
40°	10539.3	9631.8	6630.7	4759.2	4378.7	4236.9	4123.6	4003.0	3875.4	3828.2	3849.4
42.5°	11432.4	10217.8	6373.1	4397.7	4090.5	3974.6	3854.1	3679.2	3487.9	3391.0	3402.8
45°	12358.8	10818.1	6120.3	4040.9	3795.1	3745.5	3606.1	3395.7	3187.7	3064.9	3055.4
47.5°	13266.2	11385.2	5749.3	3681.6	3518.6	3572.9	3464.3	3270.5	3038.9	2845.1	2823.9
50°	14133.4	11916.9	5142.0	3317.7	3294.1	3521.0	3416.9	3138.1	2873.5	2625.3	2604.1
52.5°	14993.6	12346.9	4364.6	2987.0	3173.6	3506.7	3355.5	3048.4	2724.7	2464.7	2436.3
55°	15723.8	12569.1	3615.5	2703.3	2998.7	3386.3	3282.3	2942.1	2514.3	2237.8	2214.2
57.5°	16139.6	12389.5	2991.7	2424.5	2757.7	3187.7	3157.0	2715.1	2263.8	2051.1	2022.7
60°	15960.1	11661.7	2481.2	2181.1	2528.5	2972.7	2939.6	2490.6	2072.4	1871.5	1843.2
62.5°	14970.0	10274.6	2077.2	1968.4	2320.5	2752.9	2722.2	2318.1	1925.9	1732.1	1701.4
65°	12975.6	8358.2	1762.8	1791.2	2110.2	2488.3	2533.2	2174.0	1810.2	1621.0	1590.3
67.5°	9896.5	6054.2	1517.1	1637.6	1904.7	2228.4	2358.3	2070.1	1713.2	1533.6	1505.3
70°	5640.6	3438.3	1309.1	1488.7	1722.7	1987.4	2223.6	1987.4	1609.2	1460.4	1441.5
72.5°	2138.6	1578.5	1131.9	1339.9	1547.9	1784.1	2074.8	1857.4	1488.7	1377.7	1358.7
75°	1141.3	961.8	952.3	1165.0	1347.0	1585.6	1888.0	1729.8	1398.9	1455.6	1502.9
77.5°	777.5	680.6	796.3	997.2	1127.2	1365.8	1689.6	1536.0	1212.3	1207.6	1113.0
80°	538.7	482.1	647.5	803.4	872.0	1148.4	1474.6	1318.6	987.8	921.6	881.4
82.5°	323.7	314.3	484.4	600.2	616.7	886.1	1221.7	1105.9	808.2	704.2	708.9
85°	177.2	186.7	309.5	352.1	359.2	619.1	957.0	855.5	621.5	522.2	527.0
87.5°	49.6	63.8	113.5	139.4	172.5	321.3	569.5	508.1	311.9	217.4	217.4
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)