

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: P967237

Luminaire Tested: **NAV-SB4D-740-U-T2U**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967237
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-16)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-740-U-T2U
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 44819.1 lumens
Efficiency: N/A
Efficacy: 152.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B4 - U0 - G4

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

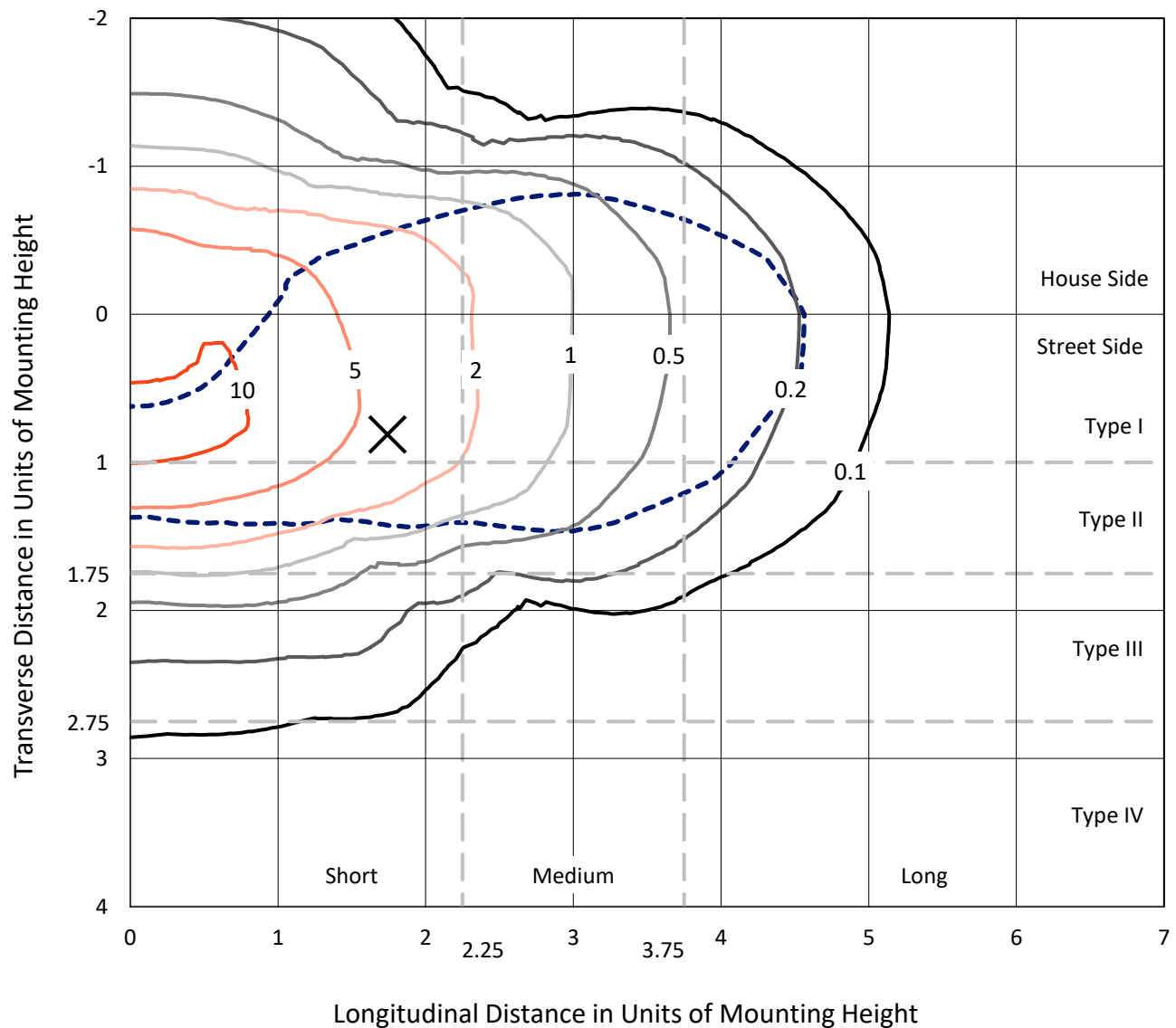


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Iso-Footcandle Lines of Horizontal Illumination

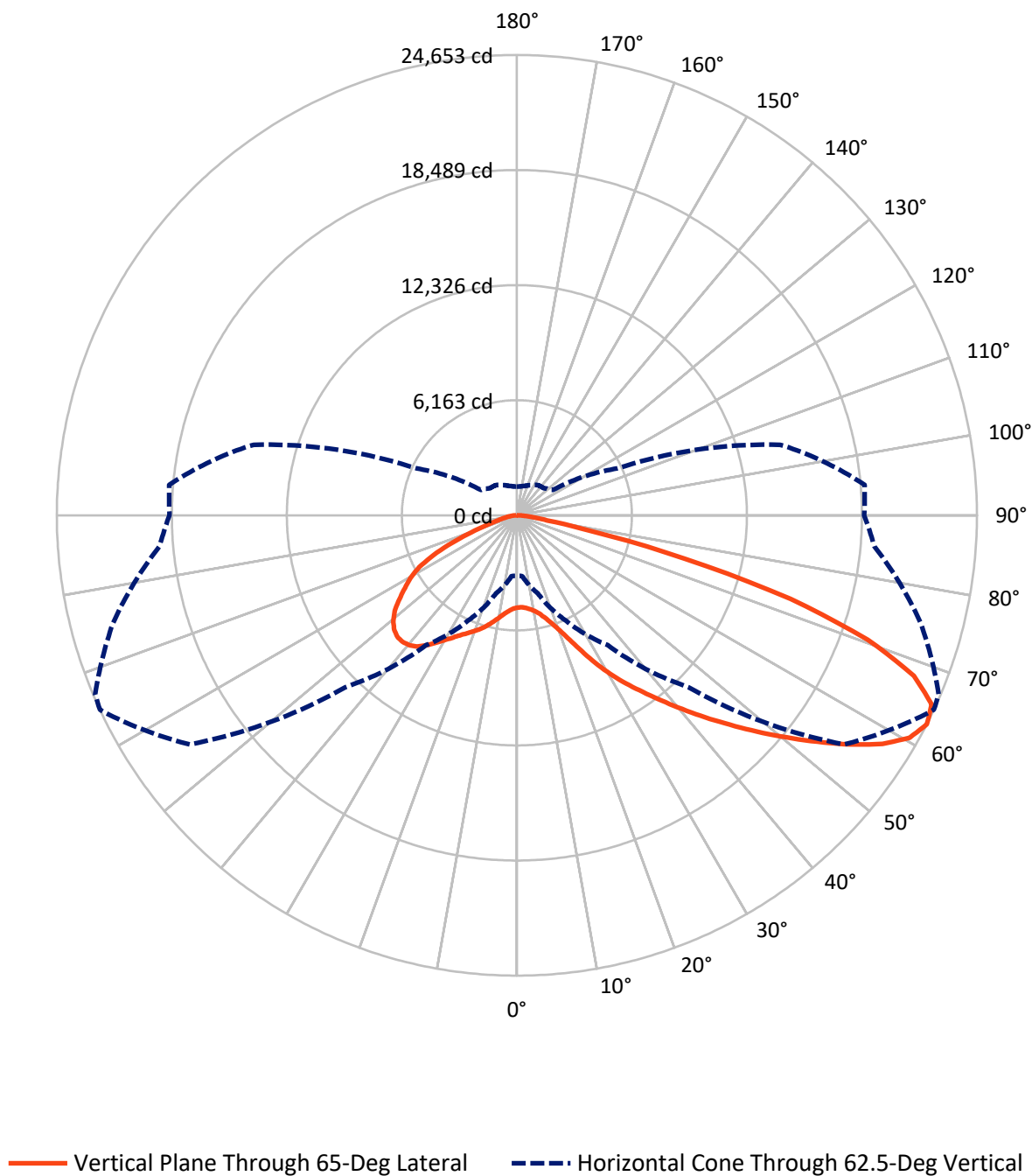
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.6 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	14143.0	0.0	14143.0
	% Fixture	31.6	0.0	31.6
Street Side	Lumens	30676.2	0.0	30676.2
	% Fixture	68.4	0.0	68.4
Total	Lumens	44819.1	0.0	44819.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	492.4	1.1
10°-20°	1669.8	3.7
20°-30°	3385.6	7.6
30°-40°	5858.8	13.1
40°-50°	8866.2	19.8
50°-60°	10395.0	23.2
60°-70°	8715.0	19.4
70°-80°	4811.4	10.7
80°-90°	625.0	1.4
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°	44819.1	100.0
0°-180°	44819.1	100.0

Coefficient of Utilization



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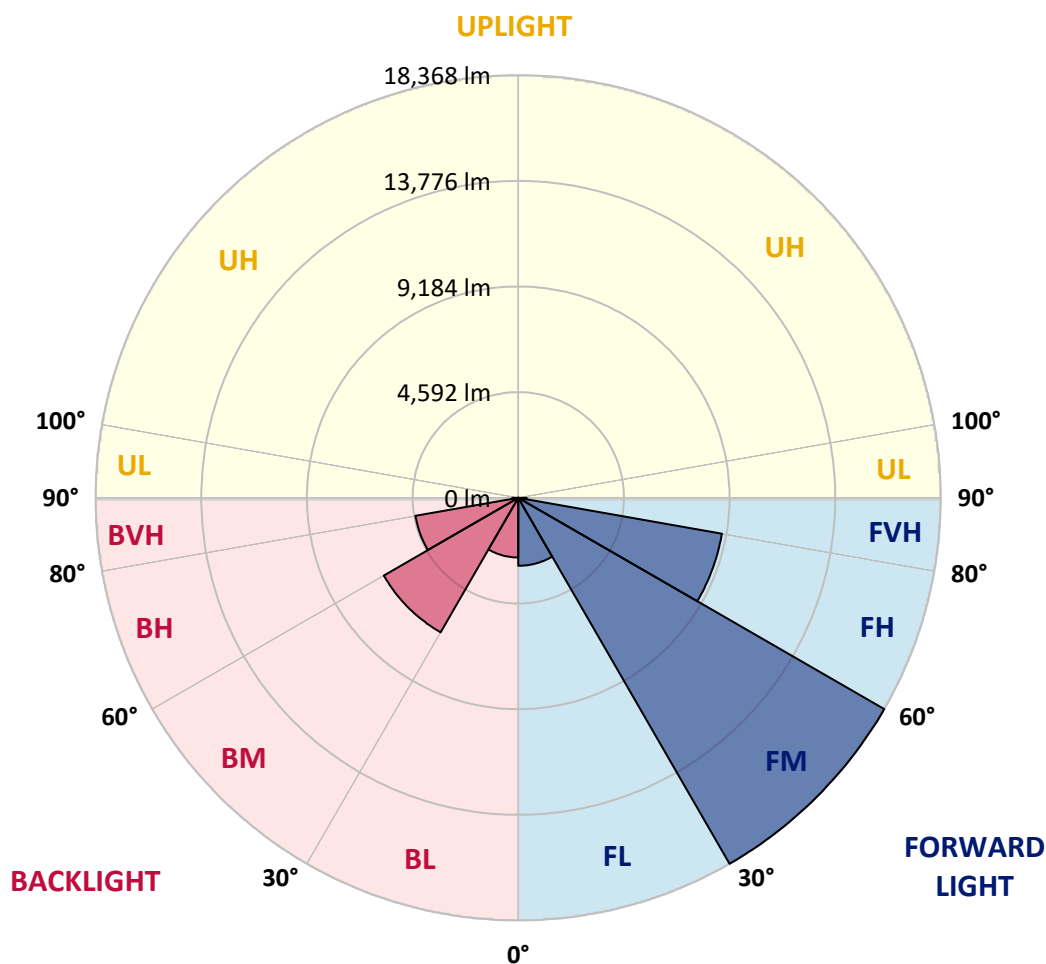
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2954.2	6.6			
FM	(30°-60°)	18368.3	41.0			
FH	(60°-80°)	8989.4	20.1			G4/12000
FVH	(80°-90°)	364.3	0.8			G3/500
BL	(0°-30°)	2593.7	5.8	B4/5000		
BM	(30°-60°)	6751.7	15.1	B4/8500		
BH	(60°-80°)	4536.9	10.1	B4/5000		G4/5000
BVH	(80°-90°)	260.7	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-G4

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9
2.5°	4906.4	4892.3	4904.0	4904.0	4908.6	4906.4	4922.6	4927.3	4934.2	4948.2	4948.2
5°	4857.5	4855.1	4876.1	4894.7	4913.3	4929.5	4950.5	4980.7	4985.4	5001.7	5022.6
7.5°	4841.2	4827.2	4859.8	4883.1	4927.3	4966.7	5022.6	5073.8	5094.7	5101.6	5141.2
10°	4966.7	4943.6	4973.7	4987.8	5025.0	5064.4	5129.5	5210.9	5234.2	5262.0	5306.2
12.5°	5180.7	5155.1	5199.3	5220.2	5255.1	5290.0	5334.2	5413.2	5424.8	5476.1	5517.9
15°	5473.7	5443.5	5471.3	5497.0	5555.1	5587.6	5631.8	5708.5	5708.5	5748.1	5778.3
17.5°	5871.3	5831.7	5852.7	5862.0	5899.2	5948.1	6022.5	6089.9	6124.8	6110.8	6068.9
20°	6464.3	6415.4	6415.4	6368.9	6355.0	6394.5	6492.1	6585.2	6622.4	6550.3	6448.0
22.5°	7354.8	7285.1	7245.5	7087.5	7024.6	7029.2	7126.9	7240.9	7271.1	7143.2	6913.0
25°	8487.2	8377.9	8324.4	8092.0	7950.1	7826.9	7903.6	8050.0	8092.0	7933.8	7561.7
27.5°	9619.6	9626.6	9575.4	9296.4	9061.6	8836.0	8796.6	8950.0	8994.2	8815.1	8354.7
30°	11207.8	11042.7	10945.1	10610.2	10275.4	9959.1	9796.3	9859.2	9870.8	9656.8	9122.1
32.5°	12577.4	12535.5	12326.2	12033.3	11603.1	11107.8	10835.8	10735.7	10717.2	10412.6	9777.8
35°	14137.6	14114.4	13893.5	13544.7	13079.6	12391.3	11900.8	11614.7	11591.5	11163.6	10426.5
37.5°	15723.5	15723.5	15507.2	15125.9	14644.6	13784.2	13037.8	12584.3	12509.9	11951.9	11086.9
40°	16988.5	16911.7	16951.2	16790.8	16239.7	15325.9	14300.4	13642.3	13542.4	12872.7	11789.1
42.5°	17707.0	17681.4	17918.5	18097.6	17872.0	17141.9	15690.9	14788.7	14649.2	13886.5	12598.3
45°	17867.4	17839.5	18262.6	18918.4	19234.6	18934.7	17202.4	15995.5	15825.8	14946.9	13465.6
47.5°	17497.7	17441.8	18062.8	19097.5	20111.3	20639.1	18839.4	17304.7	17058.2	15979.2	14356.3
50°	16386.2	16332.7	17272.1	18646.4	20406.6	21797.1	20615.8	18692.8	18316.1	17086.1	15256.1
52.5°	13970.2	13995.8	15467.7	17355.8	20018.2	22517.9	22145.8	20155.5	19702.0	18218.5	16100.2
55°	10882.2	10938.1	12747.1	14825.9	18465.0	22408.7	23189.9	21662.2	21211.1	19283.4	16972.2
57.5°	7791.9	8038.5	9733.6	11791.5	15481.7	20676.3	23417.8	23094.6	22657.4	20446.1	17825.6
60°	5050.5	5094.7	6838.6	8912.8	11789.1	17597.6	22955.1	24180.5	23838.6	21632.0	18539.4
62.5°	3236.7	3267.0	4329.7	6234.0	8484.9	13019.2	21397.2	24652.5	24547.9	22415.6	19225.3
65°	2378.7	2355.4	2909.0	4120.4	5715.5	8029.1	18372.0	24424.6	24631.6	22906.3	19792.8
67.5°	1985.7	1953.2	2225.3	2853.1	4211.1	4559.8	13593.6	22943.5	23701.5	22850.4	20208.9
70°	1809.0	1781.1	1946.3	2118.4	3285.6	3053.1	6852.5	19946.2	21113.5	22215.6	20141.5
72.5°	1532.4	1483.5	1709.1	1881.2	2555.4	2341.5	2832.2	15321.2	16744.3	20181.0	19192.8
75°	1188.2	1155.7	1348.7	1655.6	1920.6	1827.7	1790.5	9303.4	10856.7	15607.3	16790.8
77.5°	941.8	897.6	1074.3	1290.5	1727.6	1378.9	1304.5	4006.4	5545.8	9963.8	12563.4
80°	709.2	669.6	816.2	1020.8	1327.7	1039.4	844.1	1634.7	2090.4	5048.1	6317.8
82.5°	504.6	469.7	569.7	748.8	892.9	932.4	518.5	916.1	1030.1	1946.3	1411.4
85°	323.2	302.3	381.3	469.7	567.3	599.9	316.2	479.0	525.5	802.3	588.2
87.5°	176.7	144.2	204.6	218.5	262.7	239.5	151.2	174.4	188.4	290.7	248.8
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°	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9	4938.9
2.5°	4957.5	4964.5	4987.8	4994.7	5010.9	5031.9	5045.9	5059.8	5059.8	5073.8	5073.8
5°	5025.0	5041.2	5090.0	5115.6	5157.5	5199.3	5224.8	5255.1	5273.7	5283.1	5287.7
7.5°	5155.1	5180.7	5250.5	5294.6	5366.7	5424.8	5464.4	5506.2	5515.5	5541.2	5531.8
10°	5331.8	5362.1	5441.1	5524.9	5610.8	5683.0	5720.2	5750.4	5762.0	5766.6	5755.1
12.5°	5534.2	5578.4	5680.7	5782.9	5873.7	5936.4	5945.7	5938.7	5906.2	5878.3	5878.3
15°	5782.9	5822.5	5936.4	6048.0	6136.4	6148.1	6089.9	6052.7	6013.2	6006.2	6006.2
17.5°	6080.6	6101.5	6206.2	6315.4	6322.4	6282.8	6196.8	6162.0	6124.8	6099.2	6101.5
20°	6427.1	6420.1	6494.5	6541.0	6492.1	6371.2	6241.0	6182.9	6145.7	6115.5	6117.8
22.5°	6841.0	6787.4	6778.1	6766.5	6636.4	6382.9	6206.2	6131.8	6073.6	6031.7	6045.7
25°	7443.2	7238.6	7096.7	7017.7	6724.7	6320.0	6094.5	5929.4	5820.2	5748.1	5776.0
27.5°	8196.6	7852.4	7494.4	7301.4	6724.7	6192.2	5824.8	5557.4	5378.4	5304.0	5341.2
30°	8915.0	8554.6	8026.9	7643.1	6708.4	5982.9	5390.0	5017.9	4808.7	4734.3	4778.4
32.5°	9528.9	9136.0	8591.9	8017.6	6668.9	5643.4	4850.5	4439.0	4236.6	4148.3	4192.5
35°	10098.6	9680.1	9159.2	8429.1	6564.2	5145.8	4257.5	3943.7	3718.1	3576.2	3622.8
37.5°	10682.3	10184.7	9696.4	8801.2	6375.9	4564.5	3801.8	3534.4	3269.3	3078.7	3129.8
40°	11317.1	10721.8	10270.7	9022.0	6066.7	4011.1	3448.4	3204.3	2922.9	2720.6	2760.1
42.5°	12058.8	11365.9	10910.2	9136.0	5643.4	3618.1	3218.2	2978.6	2713.6	2548.5	2581.1
45°	12833.2	12075.1	11493.8	9133.7	5171.4	3434.5	3143.8	2906.6	2613.6	2441.5	2469.4
47.5°	13644.7	12816.9	11998.4	8984.8	4762.2	3460.0	3102.0	2750.8	2427.6	2260.1	2283.4
50°	14458.5	13628.4	12486.8	8705.8	4587.8	3404.2	2946.2	2532.3	2150.9	1999.8	2009.0
52.5°	15265.4	14491.0	12907.6	8308.2	4411.1	3197.3	2746.2	2248.5	2037.0	1932.3	1932.3
55°	16076.9	15344.5	13365.7	7729.2	3969.2	2955.4	2411.3	2141.5	1946.3	1850.9	1841.6
57.5°	16890.8	16330.4	13800.5	7150.2	3413.5	2657.8	2227.6	2011.4	1855.6	1774.2	1760.2
60°	17737.2	17458.1	14249.2	6617.7	2864.8	2276.4	2092.7	1906.7	1748.6	1657.9	1651.0
62.5°	18609.2	18699.8	14600.4	5931.8	2360.2	2044.0	1971.8	1781.1	1627.7	1541.7	1539.3
65°	19488.1	19897.3	14830.6	4980.7	1913.7	1823.0	1841.6	1644.0	1488.2	1413.8	1411.4
67.5°	20150.8	20760.0	14765.4	3769.2	1569.6	1613.8	1678.8	1499.8	1353.3	1295.2	1297.5
70°	20225.2	20657.7	14123.7	2581.1	1313.7	1409.1	1497.5	1357.9	1206.8	1164.9	1167.3
72.5°	19234.6	19262.5	12335.6	1685.8	1111.5	1237.1	1306.8	1213.8	1067.3	1025.4	1023.2
75°	16637.3	15930.4	9056.9	1111.5	930.1	1062.6	1127.8	1062.6	920.8	930.1	897.6
77.5°	12605.2	11282.2	5499.2	790.6	776.6	892.9	981.2	934.8	813.8	913.8	804.5
80°	6494.5	6103.9	2453.1	590.6	613.9	713.8	806.9	746.4	644.1	613.9	560.4
82.5°	1488.2	1730.0	967.3	423.2	444.1	513.9	616.2	560.4	462.7	390.6	386.0
85°	520.9	569.7	427.8	265.1	260.5	320.9	418.5	374.3	314.0	251.1	265.1
87.5°	165.1	216.3	160.4	107.0	111.6	144.2	193.0	176.7	146.5	95.3	99.9
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)