

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: P196872

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196872
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-T4W-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37765.5 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

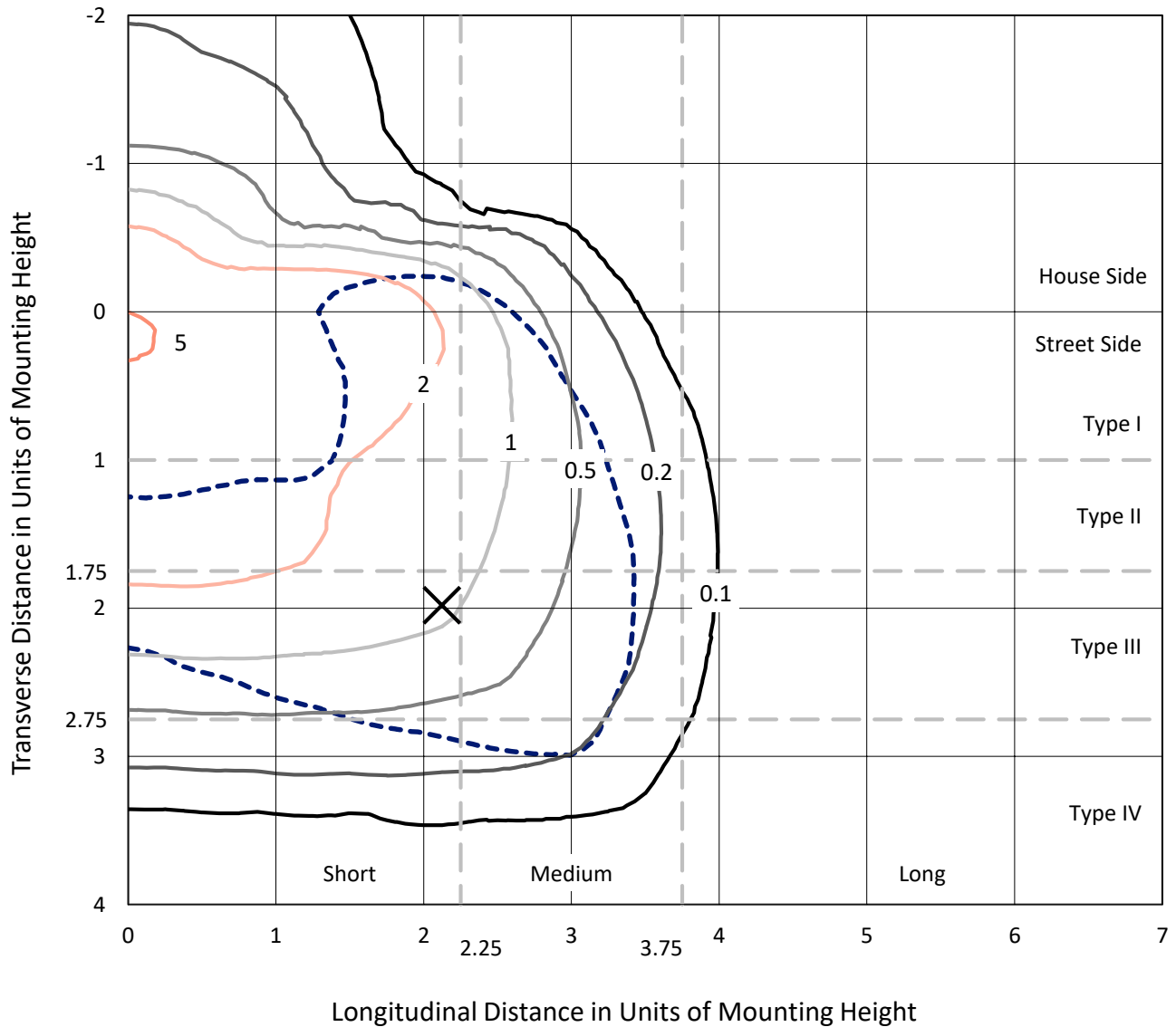
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

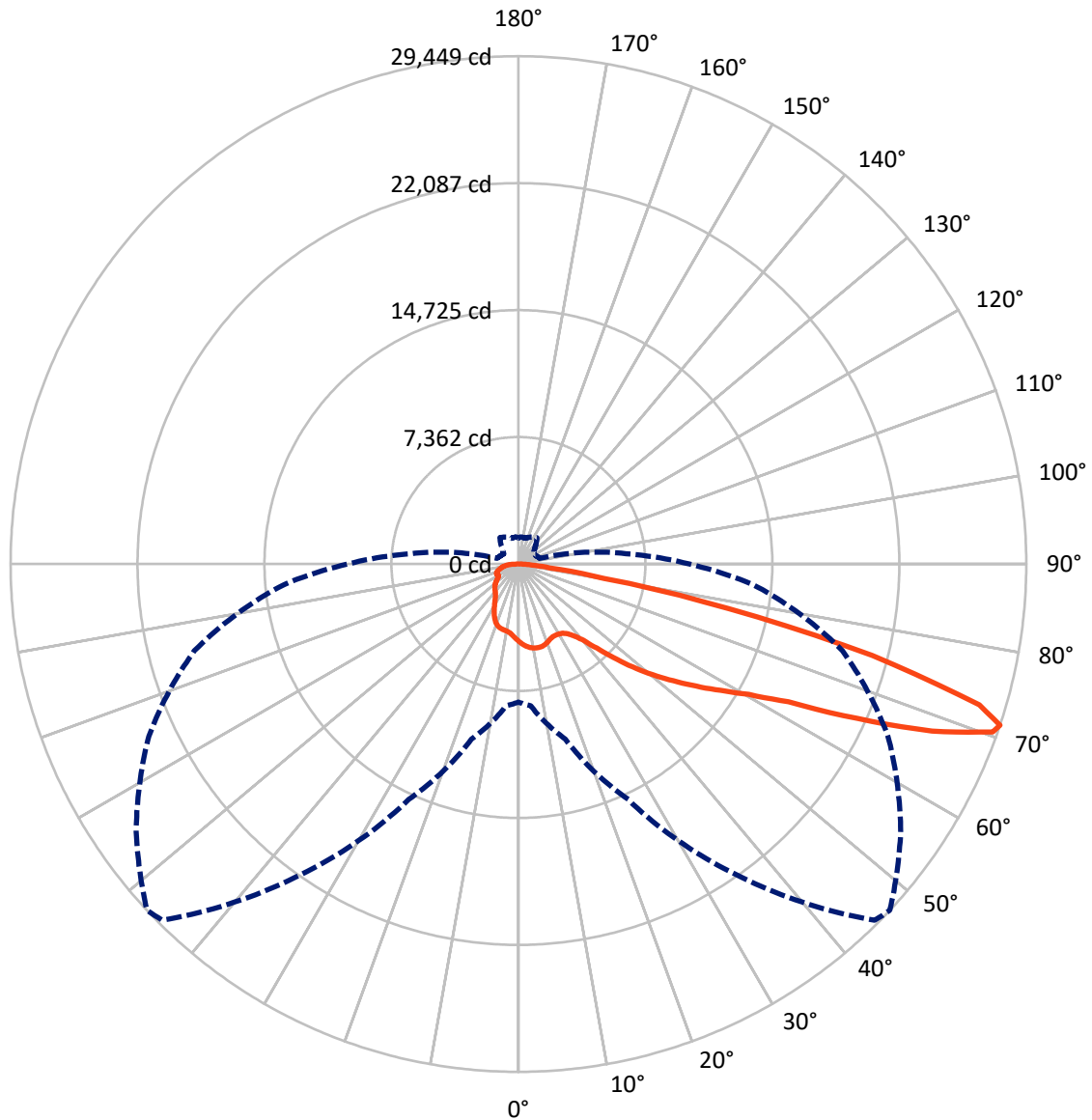
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P196872
CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8093.7	0.0	8093.7
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	29671.8	0.0	29671.8
	% Fixture	78.6	0.0	78.6
Total	Lumens	37765.5	0.0	37765.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.8	1.1
10°-20°	1254.5	3.3
20°-30°	1864.1	4.9
30°-40°	2676.6	7.1
40°-50°	4745.6	12.6
50°-60°	8120.4	21.5
60°-70°	11528.2	30.5
70°-80°	6313.9	16.7
80°-90°	833.5	2.2
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°	37765.5	100.0
0°-180°	37765.5	100.0



REPORT NUMBER: P196872

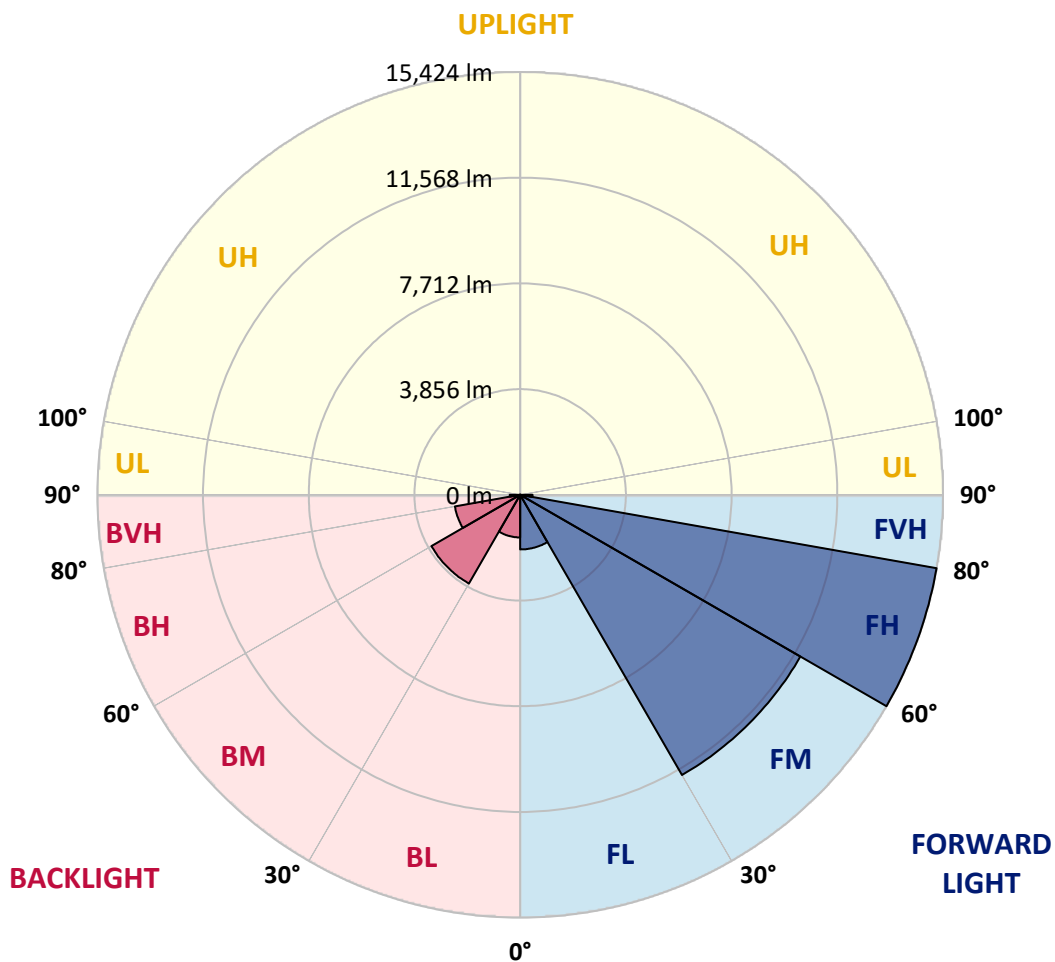
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1993.1	5.3			
FM	(30°-60°)	11802.9	31.3			
FH	(60°-80°)	15423.8	40.8			G5
FVH	(80°-90°)	452.1	1.2			G3/500
BL	(0°-30°)	1554.3	4.1	B3/2500		
BM	(30°-60°)	3739.7	9.9	B3/5000		
BH	(60°-80°)	2418.3	6.4	B3/2500		G3/2500
BVH	(80°-90°)	381.4	1.0			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





REPORT NUMBER: P196872

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0
2.5°	4765.1	4755.3	4760.2	4743.1	4701.4	4657.4	4657.4	4610.8	4561.9	4513.0	4459.1
5°	5061.2	5046.4	5034.2	4980.5	4899.6	4809.1	4794.4	4701.4	4601.1	4500.7	4402.8
7.5°	5308.4	5293.7	5257.0	5159.1	5041.7	4907.1	4889.9	4767.5	4635.4	4495.8	4358.8
10°	5484.6	5474.8	5403.9	5279.0	5142.0	4982.9	4953.5	4828.7	4672.0	4498.3	4324.5
12.5°	5582.5	5567.8	5482.1	5335.2	5173.8	5012.3	4982.9	4862.9	4684.3	4493.4	4290.3
15°	5543.3	5535.9	5455.2	5305.9	5144.4	5004.9	4980.5	4858.1	4677.0	4476.3	4258.5
17.5°	5376.8	5394.0	5330.4	5183.6	5051.4	4953.5	4926.6	4811.6	4640.2	4434.7	4209.5
20°	5146.8	5166.5	5134.6	4985.3	4909.4	4845.8	4831.1	4738.1	4579.0	4373.4	4150.8
22.5°	4902.1	4919.3	4921.7	4782.2	4757.7	4733.2	4721.0	4654.9	4525.2	4336.7	4111.7
25°	4733.2	4752.8	4757.7	4635.4	4650.1	4657.4	4654.9	4608.4	4515.4	4336.7	4116.5
27.5°	4689.2	4699.0	4694.1	4581.5	4608.4	4650.1	4652.5	4642.7	4554.6	4385.6	4185.0
30°	4840.9	4845.8	4784.7	4615.7	4642.7	4696.5	4699.0	4694.1	4637.8	4513.0	4339.2
32.5°	5496.9	5491.9	5281.5	4845.8	4752.8	4772.5	4779.8	4823.8	4828.7	4723.5	4561.9
35°	6495.4	6492.9	6248.2	5504.2	5066.2	4963.3	4973.1	5041.7	5102.9	5031.8	4938.8
37.5°	7594.2	7601.6	7452.2	6444.0	5741.6	5313.3	5303.5	5354.9	5465.0	5489.5	5501.8
40°	8813.1	8849.8	8842.4	7523.3	6688.8	5910.4	5812.5	5753.8	5966.7	6101.4	6275.1
42.5°	10205.6	10195.7	10200.7	8707.8	7770.4	6850.2	6669.0	6395.1	6642.2	6874.7	7256.5
45°	11402.4	11441.5	11470.9	9968.2	8981.8	7924.6	7741.0	7241.8	7464.5	7812.0	8394.5
47.5°	12606.5	12537.9	12591.8	11370.5	10330.4	9150.8	8913.4	8240.4	8448.4	8937.9	9823.8
50°	14008.7	13977.0	13732.2	13201.1	11960.4	10394.1	10083.2	9282.8	9586.4	10239.9	11588.4
52.5°	15266.8	15095.5	14904.6	14640.2	13563.5	11652.0	11258.0	10367.1	10925.2	11735.2	13778.8
55°	15726.9	15611.8	15841.9	16184.6	15259.4	12934.4	12493.9	11632.4	12435.2	13445.9	16355.9
57.5°	16216.4	16255.5	16774.3	17467.0	16864.9	14302.5	13825.2	13130.2	14092.0	15359.7	19236.4
60°	16461.1	16617.7	17653.0	18952.5	18392.0	15802.7	15345.1	14850.7	15930.0	17474.3	22109.7
62.5°	16502.7	16713.2	18179.1	19473.9	20494.5	18100.9	17572.1	17036.2	18225.6	19811.6	24189.9
65°	15739.2	16062.2	18132.6	20115.0	22410.7	21940.8	21605.5	20670.5	21299.5	21869.8	24544.8
67.5°	13494.8	13847.3	16338.7	19850.8	23947.7	25925.1	25861.4	24481.1	23673.5	22665.2	21913.9
70°	9904.6	10188.4	12582.0	16970.1	23277.0	29052.9	29165.4	26950.6	24336.7	20976.4	16294.7
71°	8010.3	8255.0	10511.5	15066.1	21970.2	29214.4	29449.3	27060.7	23646.7	19451.8	13641.7
72.5°	4985.3	5122.4	6979.9	11370.5	18918.2	27550.2	27946.7	25651.1	21473.4	16441.6	9642.6
75°	1882.0	1935.8	2589.3	5014.7	11292.3	20697.5	21177.1	19385.8	15085.7	9385.7	4035.7
77.5°	1010.7	1037.8	1284.9	2085.2	4525.2	11864.9	12481.7	11057.2	7236.9	3284.4	1649.5
80°	678.0	695.1	888.4	1235.9	2080.3	4517.9	5031.8	4439.5	2709.3	1874.7	1174.7
82.5°	438.1	447.9	604.5	812.6	1343.6	1588.3	1813.4	1894.2	1691.2	1343.6	709.7
85°	288.8	296.1	398.9	518.9	832.1	783.2	802.7	1050.0	1152.6	886.0	362.2
87.5°	166.4	171.3	239.9	266.8	374.4	293.7	318.2	499.4	685.3	577.6	208.0
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: P196872

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0	4491.0
2.5°	4434.7	4415.0	4371.0	4344.1	4331.9	4327.0	4322.1	4331.9	4331.9	4327.0	4317.2
5°	4353.9	4317.2	4243.7	4192.4	4165.4	4158.1	4167.9	4180.2	4187.5	4187.5	4180.2
7.5°	4295.2	4241.3	4143.4	4072.4	4030.8	4018.5	4045.6	4089.6	4119.0	4133.6	4136.1
10°	4246.3	4172.8	4065.1	3991.7	3957.4	3952.6	3986.8	4043.0	4104.3	4131.2	4136.1
12.5°	4202.1	4119.0	4001.5	3932.9	3908.4	3920.7	3967.2	4018.5	4089.6	4128.7	4131.2
15°	4160.6	4075.0	3950.0	3879.1	3874.3	3893.8	3937.8	3979.4	4033.3	4082.3	4082.3
17.5°	4111.7	4018.5	3888.9	3822.8	3822.8	3839.9	3869.3	3891.4	3925.5	3972.1	3969.6
20°	4052.9	3957.4	3825.2	3756.8	3742.0	3732.3	3732.3	3737.1	3766.5	3808.1	3815.5
22.5°	4008.8	3910.9	3771.4	3688.1	3622.2	3558.5	3531.6	3521.8	3548.7	3587.8	3597.7
25°	4008.8	3910.9	3754.2	3614.8	3453.2	3330.9	3279.5	3264.7	3291.8	3328.5	3343.2
27.5°	4075.0	3977.0	3793.5	3548.7	3252.5	3056.7	2995.6	2983.4	3007.8	3037.2	3051.9
30°	4229.1	4133.6	3906.0	3472.8	3029.9	2772.9	2704.3	2692.1	2704.3	2716.6	2733.7
32.5°	4486.0	4405.4	4089.6	3404.3	2804.6	2515.9	2432.6	2413.1	2418.0	2420.4	2435.2
35°	4904.5	4867.8	4334.4	3323.5	2591.7	2305.5	2219.8	2180.6	2178.2	2190.4	2207.6
37.5°	5545.8	5567.8	4650.1	3206.1	2415.6	2156.1	2070.5	2031.3	2011.8	2036.3	2055.8
40°	6451.3	6502.7	5014.7	3047.0	2271.2	2068.1	1977.5	1940.8	1913.9	1906.5	1916.3
42.5°	7628.5	7613.8	5386.7	2843.9	2114.5	2009.3	1913.9	1874.7	1830.6	1774.4	1762.2
45°	9023.5	8813.1	5697.6	2594.3	1935.8	1953.0	1855.1	1801.2	1732.8	1649.5	1639.8
47.5°	10670.6	10090.5	5888.4	2327.4	1769.5	1879.6	1789.0	1705.9	1605.4	1551.6	1544.3
50°	12655.4	11586.0	6023.0	2055.8	1620.2	1786.6	1696.0	1585.9	1488.0	1473.4	1470.8
52.5°	15004.9	13350.5	6189.4	1811.1	1502.7	1666.6	1603.1	1490.4	1412.1	1419.5	1419.5
55°	17503.7	15176.2	6194.4	1617.7	1399.9	1527.1	1534.5	1444.0	1382.7	1407.3	1414.6
57.5°	19782.2	16772.0	5707.2	1480.7	1302.1	1417.0	1512.4	1461.2	1414.6	1500.2	1507.6
60°	21769.5	18000.5	4659.8	1368.0	1221.2	1375.5	1561.5	1566.3	1556.5	1789.0	1806.2
62.5°	22496.4	18012.7	3308.8	1272.7	1177.2	1399.9	1664.2	1671.5	1671.5	1886.9	1918.7
65°	21478.1	16512.5	2202.6	1216.4	1147.8	1453.7	1747.4	1715.6	1639.8	1789.0	1754.8
67.5°	17890.3	12853.7	1610.4	1179.7	1106.2	1456.2	1820.8	1740.1	1610.4	1737.7	1678.9
70°	12295.6	8179.1	1348.5	1145.4	1057.3	1392.5	1860.0	1732.8	1566.3	1620.2	1541.8
71°	9897.2	6527.1	1280.0	1133.1	1037.8	1355.8	1864.9	1722.9	1544.3	1578.6	1507.6
72.5°	6519.8	4021.1	1196.7	1106.2	1008.4	1292.2	1852.7	1700.9	1514.9	1517.4	1470.8
75°	2572.2	1666.6	1076.9	1045.1	925.1	1189.4	1798.9	1654.4	1458.6	1409.7	1390.1
77.5°	1299.5	1089.1	947.2	959.4	827.2	1084.2	1722.9	1578.6	1380.3	1314.3	1299.5
80°	949.6	827.2	810.0	832.1	717.1	981.3	1627.5	1475.8	1280.0	1348.5	1319.1
82.5°	577.6	504.1	633.9	687.7	599.7	876.1	1514.9	1355.8	1152.6	1062.1	1027.9
85°	274.1	296.1	457.7	506.6	442.9	700.0	1385.2	1223.7	1005.8	868.8	883.5
87.5°	134.6	164.0	261.9	303.5	291.2	513.9	1045.1	949.6	793.0	653.5	638.7
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)