

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: P196368

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196368
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40742.1 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

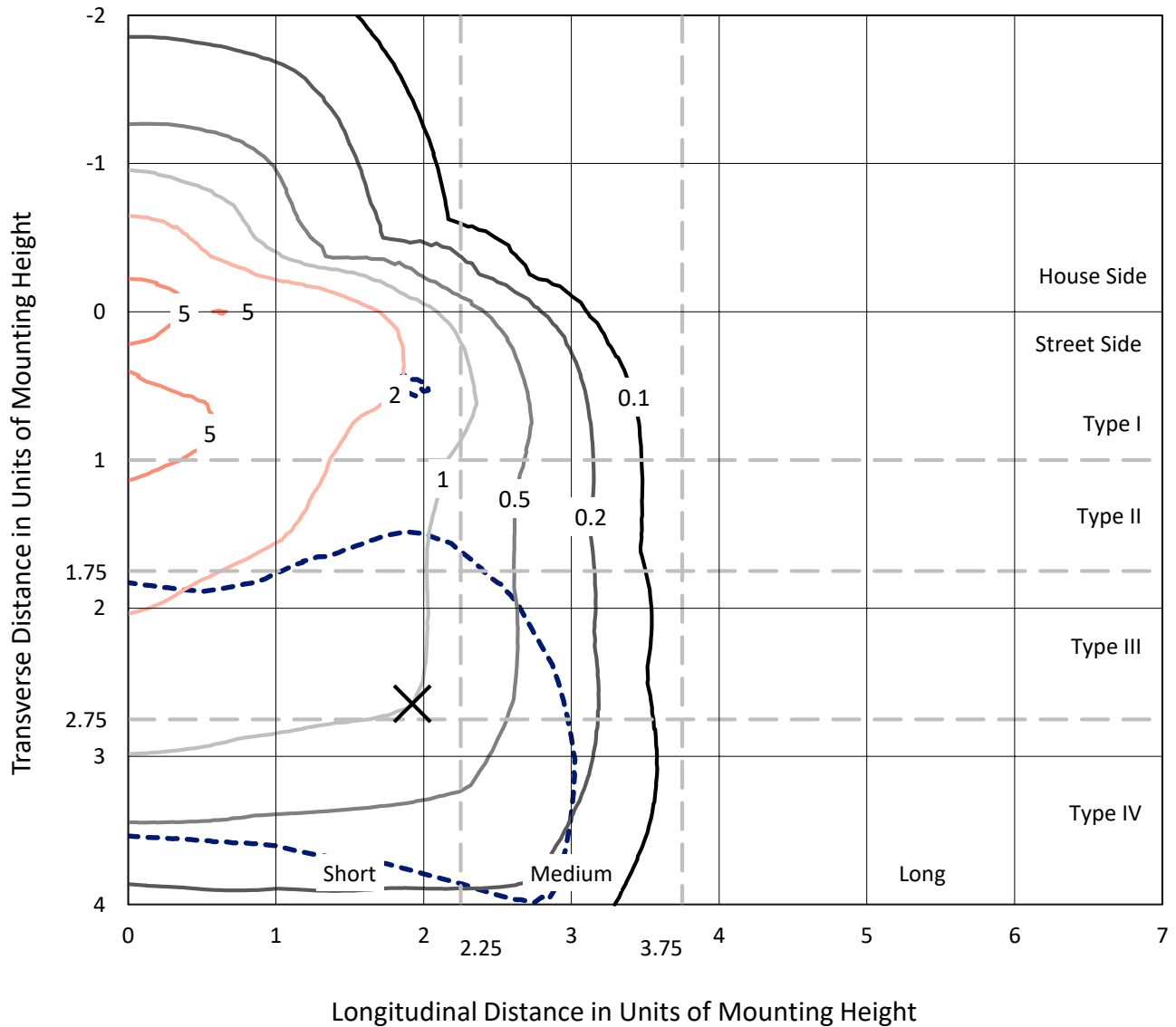
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196368
 CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-1200

Iso-Footcandle Lines of Horizontal Illumination

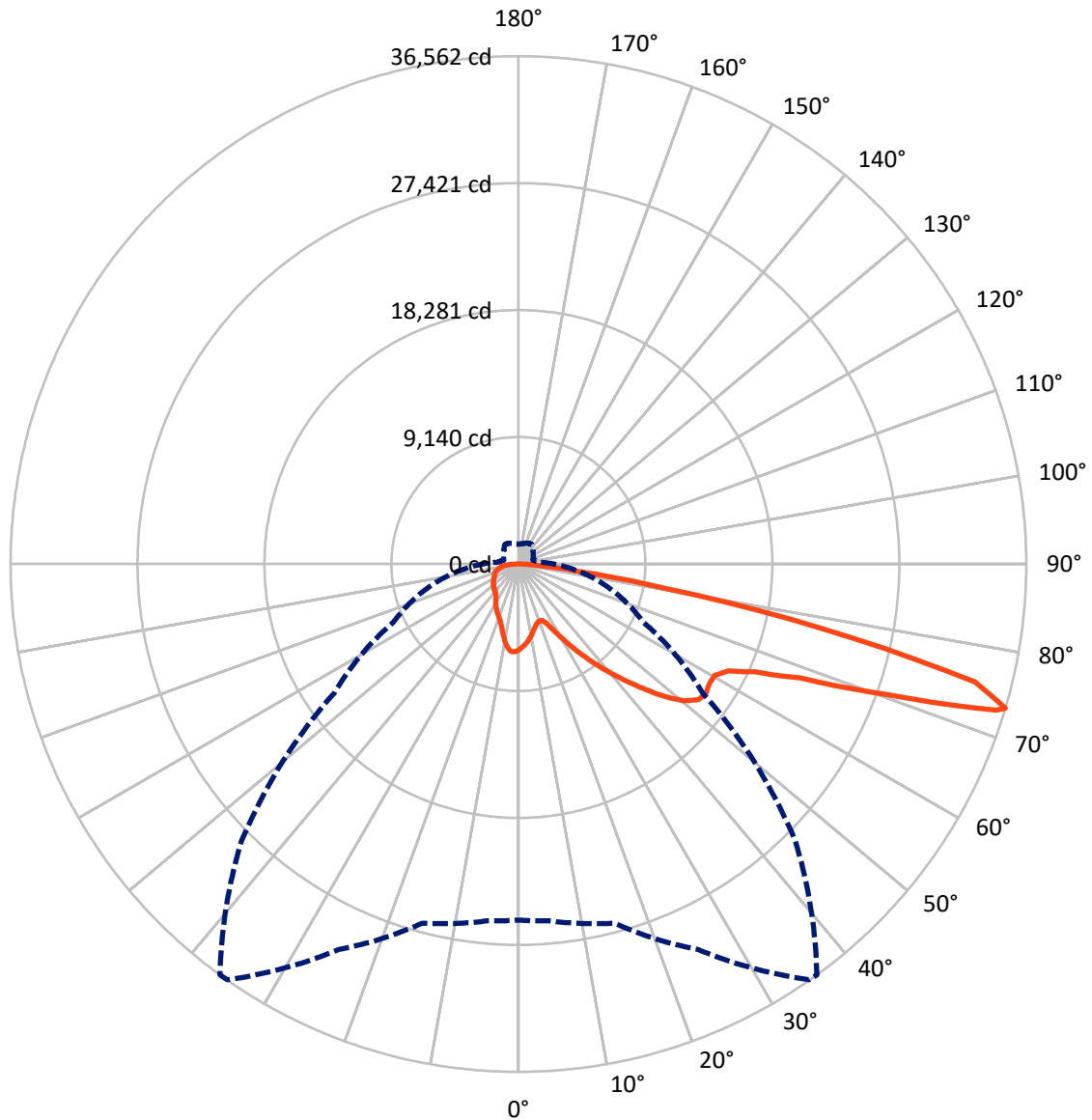
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196368
CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P196368

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7856.3	0.0	7856.3
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	32885.8	0.0	32885.8
	% Fixture	80.7	0.0	80.7
Total	Lumens	40742.1	0.0	40742.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	560.5	1.4
10°-20°	1407.8	3.5
20°-30°	2257.1	5.5
30°-40°	3733.3	9.2
40°-50°	5776.9	14.2
50°-60°	7733.6	19.0
60°-70°	10102.5	24.8
70°-80°	8252.0	20.3
80°-90°	918.5	2.3
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°	40742.1	100.0
0°-180°	40742.1	100.0



REPORT NUMBER: P196368

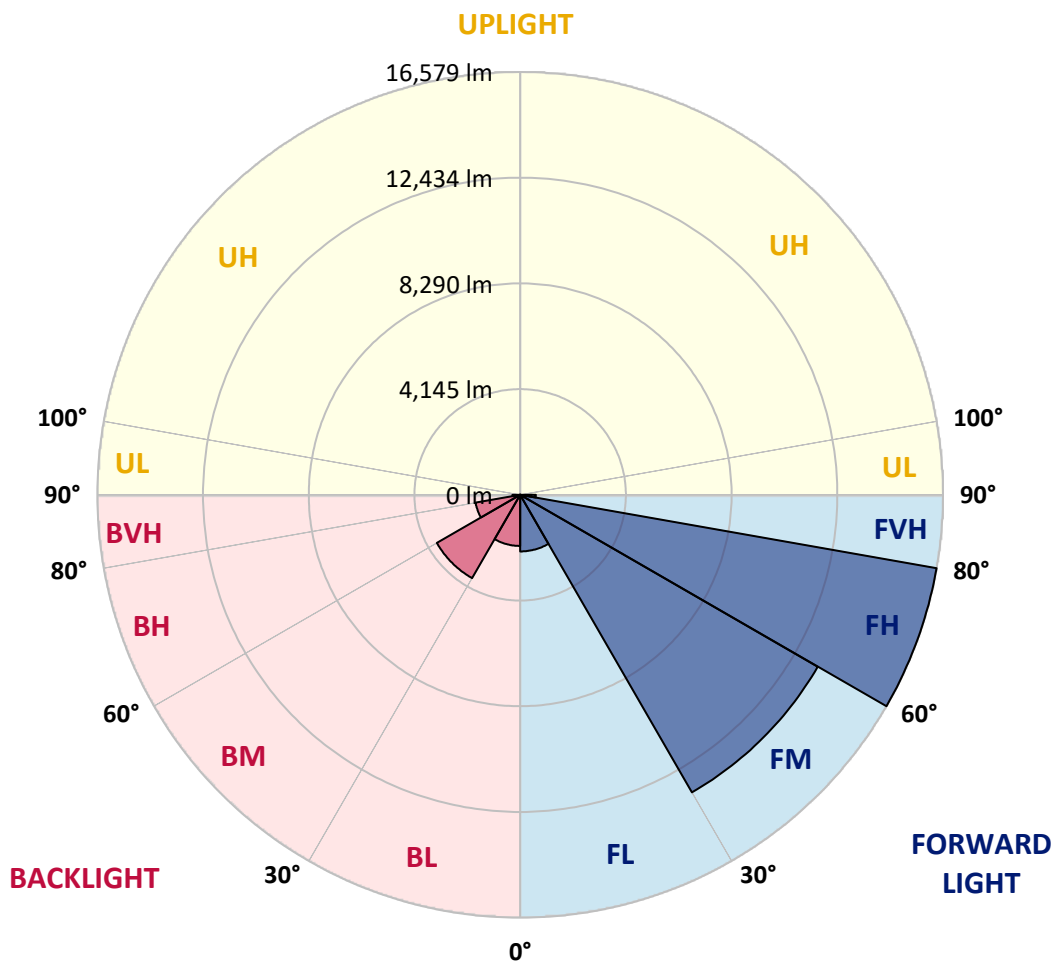
CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2220.0	5.4			
FM (30°-60°)	13470.8	33.1			
FH (60°-80°)	16579.0	40.7			G5
FVH (80°-90°)	616.0	1.5			G4/750
BL (0°-30°)	2005.4	4.9	B3/2500		
BM (30°-60°)	3773.0	9.3	B3/5000		
BH (60°-80°)	1775.4	4.4	B3/2500		G3/2500
BVH (80°-90°)	302.5	0.7			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: P196368

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3
2.5°	5935.7	5951.2	5953.8	5971.9	5971.9	5969.3	5977.1	6008.2	6023.6	6060.0	6091.0
5°	5643.2	5661.3	5669.1	5700.1	5739.0	5741.5	5770.1	5829.6	5886.5	5966.8	6034.1
7.5°	5314.4	5335.1	5355.9	5420.5	5477.5	5482.7	5537.0	5632.8	5707.9	5806.3	5927.9
10°	4996.0	5001.2	5021.9	5104.7	5179.8	5187.6	5265.2	5374.0	5474.9	5612.1	5749.3
12.5°	4734.5	4750.1	4745.0	4807.1	4871.8	4876.9	4980.4	5117.7	5265.2	5420.5	5583.7
15°	4644.0	4641.3	4587.0	4584.5	4612.9	4618.1	4719.1	4879.5	5045.2	5236.8	5446.4
17.5°	4706.1	4685.4	4543.0	4455.0	4436.8	4442.1	4517.1	4693.2	4869.1	5089.2	5340.3
20°	5047.8	4967.6	4633.6	4421.3	4361.8	4361.8	4405.8	4548.1	4742.3	4998.6	5314.4
22.5°	5858.0	5733.7	5021.9	4644.0	4434.3	4413.6	4380.0	4488.6	4703.5	5011.5	5420.5
25°	6877.9	6818.4	5733.7	5236.8	4804.5	4737.2	4514.5	4553.4	4783.7	5151.4	5710.4
27.5°	7822.8	7719.2	6668.2	6098.7	5487.8	5384.3	4913.1	4755.3	4975.3	5410.2	6129.8
30°	8374.2	8304.2	7628.7	7085.1	6357.6	6225.6	5550.0	5153.9	5317.0	5837.3	6725.2
32.5°	8974.7	8933.3	8591.6	8097.2	7299.9	7147.2	6373.2	5803.6	5839.9	6404.2	7442.3
35°	9557.1	9611.5	9417.4	9055.0	8314.6	8172.3	7478.5	6652.8	6484.5	7041.0	8208.5
37.5°	10256.1	10269.0	10147.4	9911.8	9381.1	9264.7	8692.5	7558.7	7186.0	7719.2	8948.8
40°	11651.3	11446.8	10970.5	10784.2	10468.4	10395.8	9743.5	8389.6	7838.3	8415.6	9647.8
42.5°	13160.5	12842.1	12096.6	11791.1	11664.3	11597.0	10618.4	8943.7	8449.3	9111.9	10333.7
45°	14377.2	14118.3	13388.3	13010.3	13025.8	12917.1	11382.1	9438.1	9111.9	9810.8	11099.9
47.5°	15575.7	15143.4	14325.4	14271.0	14452.1	14291.7	12112.1	9932.4	9803.0	10571.9	11866.1
50°	15653.3	15259.9	14928.5	15363.4	15674.1	15474.7	12774.8	10579.7	10520.1	11493.5	12855.0
52.5°	14708.5	14651.5	15156.3	15888.9	16404.0	16225.4	13315.8	11244.9	11252.7	12645.3	14058.7
55°	14364.2	14291.7	14897.4	15798.2	16494.6	16388.5	13719.6	11995.6	12065.5	14043.2	15350.4
57.5°	14944.1	14762.8	14881.9	15627.4	16282.3	16220.2	14139.0	12829.1	12956.0	15653.3	16543.8
60°	16743.1	16372.9	15741.4	15881.1	16290.1	16253.9	14739.5	13758.5	13970.7	17330.7	17299.6
62.5°	19437.9	19018.5	17731.9	17110.7	17020.1	16950.2	15730.9	14900.0	15006.2	18542.2	16859.6
65°	22394.0	21943.6	20413.8	19396.5	18863.2	18713.0	17330.7	16277.2	15611.9	18539.7	15145.9
67.5°	25712.7	25236.3	23711.7	22740.9	22163.7	21907.4	19927.1	17390.3	15415.2	16971.0	12119.8
70°	29111.4	28658.5	27959.6	28298.7	28552.3	28161.4	24017.1	17760.5	14001.7	13305.4	8138.6
72.5°	27307.3	27270.9	27801.7	31016.7	35906.6	35984.2	28101.9	16714.6	10817.8	7908.2	4338.5
73°	25632.4	25785.1	26768.8	30615.5	36535.6	36561.5	28182.2	16173.7	9932.4	6813.3	3810.4
75°	13279.5	14315.0	17965.0	24824.8	33830.5	33952.1	24842.9	12244.1	5920.1	3784.5	2567.9
77.5°	3556.7	3510.2	5788.2	12093.9	22554.5	22394.0	15697.3	5927.9	2837.2	2373.8	1801.6
80°	1219.3	1234.8	1969.9	4424.0	10527.9	10903.2	6813.3	2586.0	1866.4	1654.1	1276.2
82.5°	621.2	642.0	1030.3	1881.9	4403.2	4310.0	2192.6	1522.2	1250.3	1004.3	714.4
85°	331.3	341.7	566.9	975.9	1615.3	1633.4	771.4	812.8	794.7	569.5	352.1
87.5°	163.1	168.3	271.8	429.7	598.0	577.3	269.2	352.1	390.9	321.0	194.2
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: P196368

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3	6171.3
2.5°	6129.8	6129.8	6163.5	6220.5	6261.9	6300.7	6326.5	6368.0	6391.3	6388.6	6386.1
5°	6088.4	6114.3	6181.6	6251.5	6298.1	6329.1	6329.1	6347.3	6347.3	6339.5	6329.1
7.5°	5992.7	6036.6	6135.0	6197.1	6210.0	6176.4	6109.2	6057.3	5992.7	5959.0	5946.0
10°	5839.9	5896.8	6021.1	6049.5	5982.3	5863.2	5700.1	5560.4	5436.1	5379.1	5361.0
12.5°	5689.8	5764.8	5881.4	5837.3	5676.9	5443.8	5192.7	5001.2	4861.4	4807.1	4788.9
15°	5565.5	5656.1	5746.7	5609.6	5330.0	5006.3	4729.4	4550.8	4444.6	4403.2	4392.9
17.5°	5482.7	5588.8	5619.9	5363.6	4975.3	4612.9	4367.0	4250.5	4203.9	4185.8	4180.6
20°	5487.8	5606.9	5531.8	5125.4	4633.6	4268.6	4105.5	4071.9	4071.9	4071.9	4069.3
22.5°	5630.2	5733.7	5495.6	4902.8	4304.9	3978.7	3908.8	3937.2	3958.0	3958.0	3955.3
25°	5925.3	5982.3	5521.5	4688.0	3996.8	3727.6	3730.2	3784.5	3802.6	3802.6	3797.5
27.5°	6375.7	6329.1	5568.1	4449.8	3694.0	3499.8	3536.0	3585.2	3598.1	3590.4	3587.8
30°	6940.1	6753.7	5606.9	4170.3	3409.2	3287.6	3318.6	3347.1	3336.8	3318.6	3316.0
32.5°	7571.7	7186.0	5583.7	3857.0	3158.1	3067.5	3085.6	3101.2	3085.6	3041.6	3041.6
35°	8198.1	7576.9	5456.8	3515.4	2958.8	2855.3	2852.6	2901.8	2899.2	2847.5	2850.0
37.5°	8746.9	7884.9	5210.9	3202.1	2788.0	2699.9	2710.3	2741.3	2756.9	2687.0	2679.2
40°	9225.8	8097.2	4864.0	2935.5	2650.8	2655.9	2627.4	2578.2	2560.1	2529.0	2523.9
42.5°	9676.2	8244.7	4496.4	2712.9	2580.8	2640.3	2544.6	2428.1	2379.0	2407.4	2425.5
45°	10118.8	8410.4	4141.7	2529.0	2492.8	2593.8	2461.7	2332.3	2275.3	2288.3	2306.4
47.5°	10659.9	8640.8	3714.6	2332.3	2358.2	2508.4	2410.0	2270.2	2184.8	2133.1	2117.5
50°	11371.7	8974.7	3160.7	2120.1	2215.8	2415.2	2366.0	2179.6	2086.4	1982.9	1957.0
52.5°	12262.2	9290.5	2601.6	1949.2	2099.4	2334.9	2293.5	2102.0	1988.0	1863.8	1843.1
55°	13150.1	9334.5	2120.1	1801.6	1967.3	2226.2	2205.5	2039.9	1879.4	1778.4	1757.6
57.5°	13771.4	8917.8	1796.5	1677.4	1840.5	2091.6	2125.3	1964.8	1788.7	1711.1	1698.1
60°	13781.7	7921.1	1599.8	1594.6	1744.7	1975.1	2042.4	1876.7	1731.8	1680.0	1669.7
62.5°	12686.7	6383.5	1472.9	1532.5	1674.9	1879.4	1980.3	1827.6	1718.9	1698.1	1687.8
65°	10634.0	4716.4	1372.0	1475.5	1610.1	1799.1	1928.5	1812.1	1713.6	1705.9	1698.1
67.5°	7851.2	3233.1	1286.6	1403.0	1537.6	1716.2	1879.4	1788.7	1682.5	1713.6	1703.3
70°	4939.1	2158.9	1206.3	1320.2	1441.8	1620.5	1814.6	1747.3	1643.8	1625.7	1592.0
72.5°	2788.0	1560.9	1110.5	1214.0	1317.6	1493.6	1726.6	1677.4	1555.7	1483.3	1449.6
73°	2518.7	1478.1	1087.2	1188.2	1289.1	1467.7	1705.9	1656.7	1529.8	1449.6	1418.5
75°	1843.1	1208.9	981.1	1082.1	1170.1	1348.7	1607.6	1553.1	1416.0	1320.2	1299.5
77.5°	1335.8	931.9	843.9	934.5	1012.1	1183.0	1460.0	1397.9	1263.2	1211.5	1190.7
80°	963.0	706.7	698.9	787.0	854.3	1027.7	1302.1	1237.4	1108.0	1260.7	1227.0
82.5°	574.7	453.0	512.5	610.9	680.8	862.0	1131.2	1056.2	931.9	942.2	802.5
85°	274.4	256.2	318.4	401.2	450.4	590.2	942.2	882.7	745.5	610.9	598.0
87.5°	121.6	116.5	152.7	178.6	240.7	354.7	644.6	572.0	541.0	323.6	253.7
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)