

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: P196848

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196848
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-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 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: 38520.4 lumens
Efficiency: N/A
Efficacy: 100.8 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

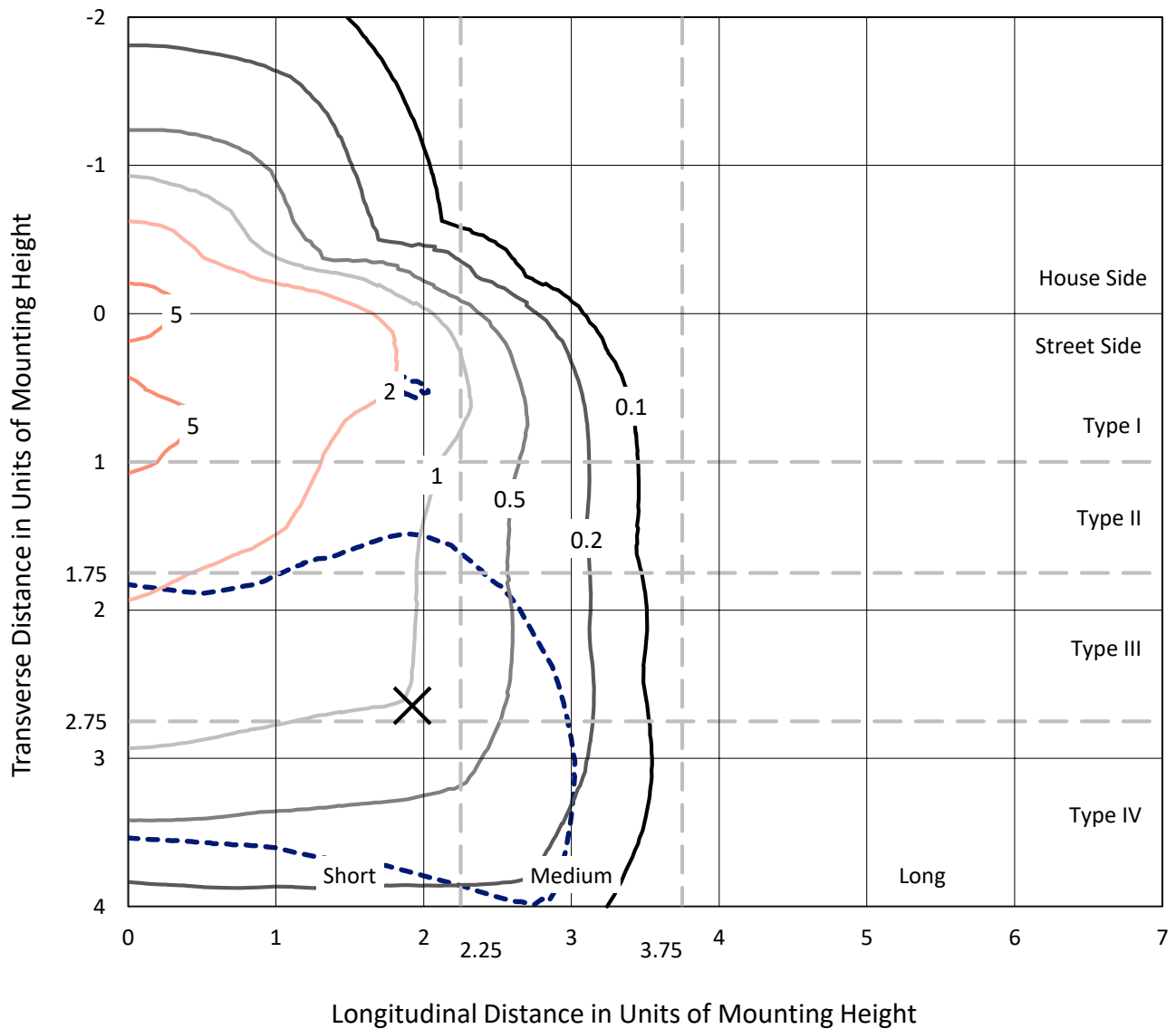
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

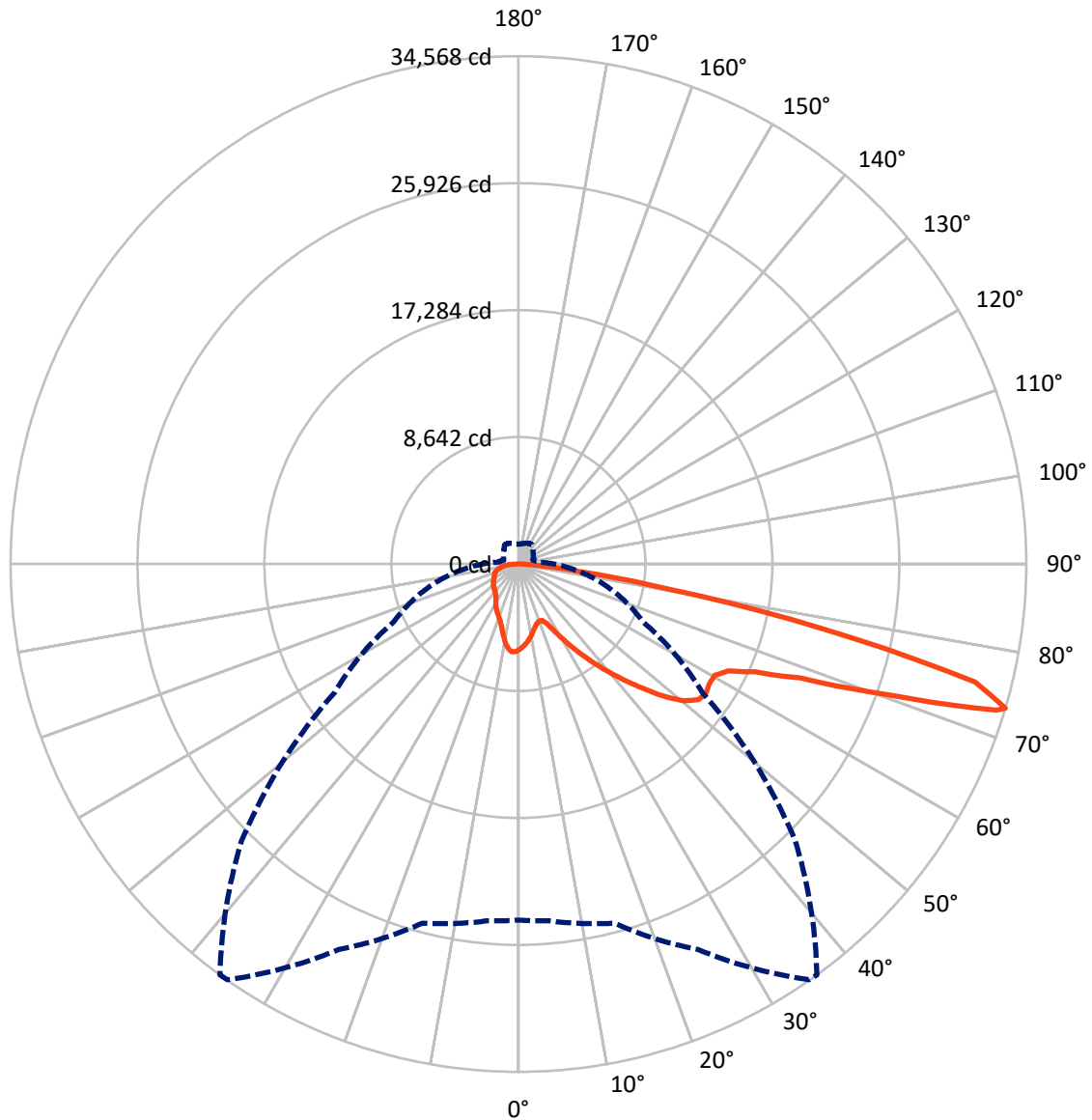
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.5 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7427.9	0.0	7427.9
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	31092.5	0.0	31092.5
	% Fixture	80.7	0.0	80.7
Total	Lumens	38520.4	0.0	38520.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.0	1.4
10°-20°	1331.0	3.5
20°-30°	2134.0	5.5
30°-40°	3529.7	9.2
40°-50°	5461.9	14.2
50°-60°	7311.9	19.0
60°-70°	9551.6	24.8
70°-80°	7802.0	20.3
80°-90°	868.4	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°	38520.4	100.0
0°-180°	38520.4	100.0

Coefficient of Utilization



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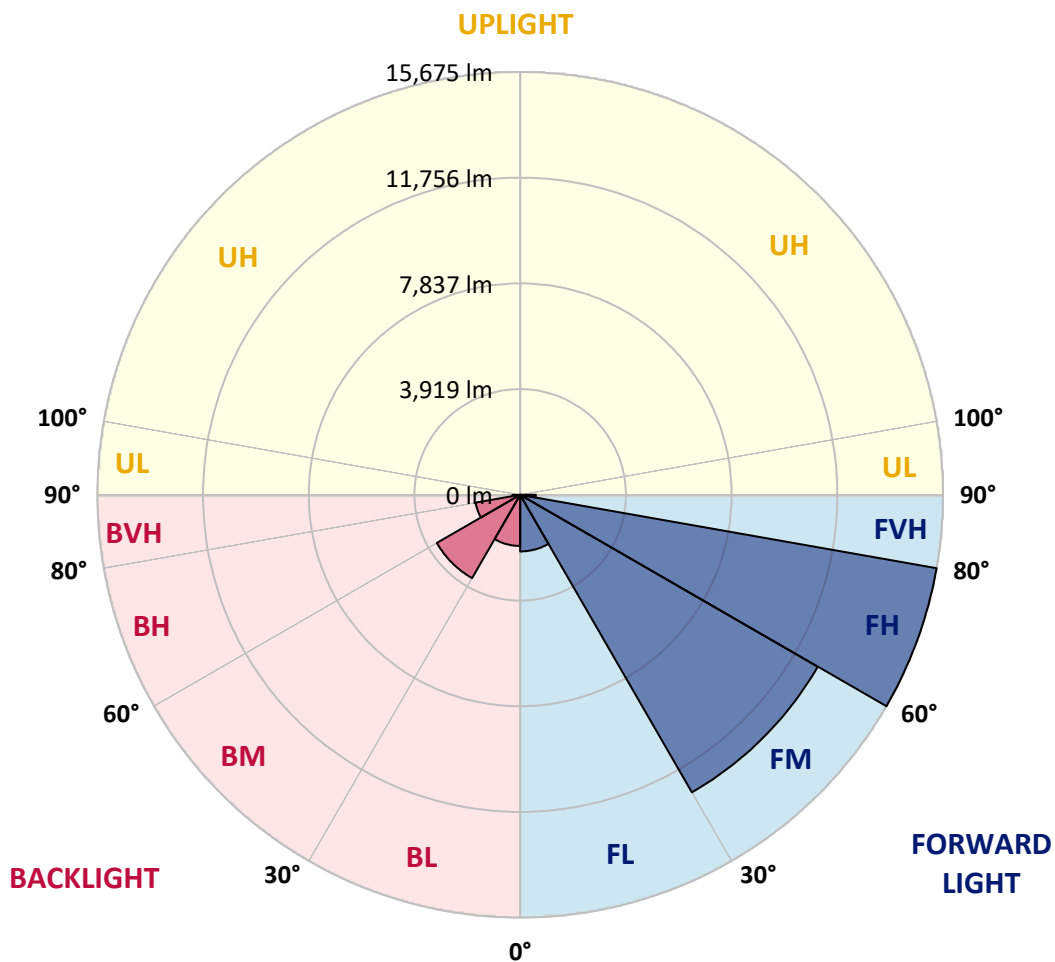
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2098.9	5.4			
FM (30°-60°)	12736.2	33.1			
FH (60°-80°)	15675.0	40.7			G5
FVH (80°-90°)	582.4	1.5			G4/750
BL (0°-30°)	1896.0	4.9	B3/2500		
BM (30°-60°)	3567.3	9.3	B3/5000		
BH (60°-80°)	1678.6	4.4	B3/2500		G3/2500
BVH (80°-90°)	286.0	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8
2.5°	5612.0	5626.8	5629.1	5646.3	5646.3	5643.8	5651.2	5680.5	5695.2	5729.4	5758.8
5°	5335.4	5352.6	5359.9	5389.3	5426.1	5428.4	5455.5	5511.7	5565.5	5641.4	5705.0
7.5°	5024.7	5044.2	5063.7	5125.0	5178.8	5183.7	5235.0	5325.7	5396.7	5489.6	5604.7
10°	4723.6	4728.5	4748.1	4826.4	4897.3	4904.6	4978.1	5080.9	5176.3	5306.0	5435.7
12.5°	4476.4	4491.1	4486.1	4544.9	4606.2	4611.0	4708.8	4838.6	4978.1	5125.0	5279.2
15°	4390.7	4388.3	4336.9	4334.5	4361.4	4366.2	4461.7	4613.5	4770.0	4951.2	5149.4
17.5°	4449.5	4429.9	4295.3	4212.1	4194.9	4199.8	4270.8	4437.2	4603.6	4811.7	5049.1
20°	4772.6	4696.6	4381.0	4180.3	4124.0	4124.0	4165.6	4300.2	4483.8	4726.0	5024.7
22.5°	5538.6	5421.1	4748.1	4390.7	4192.5	4172.9	4141.2	4243.8	4447.1	4738.2	5125.0
25°	6502.9	6446.7	5421.1	4951.2	4542.5	4478.9	4268.3	4305.1	4522.9	4870.4	5399.0
27.5°	7396.2	7298.3	6304.6	5766.1	5188.6	5090.7	4645.2	4496.0	4704.0	5115.2	5795.5
30°	7917.5	7851.5	7212.6	6698.6	6010.9	5886.2	5247.2	4872.9	5027.0	5519.0	6358.5
32.5°	8485.3	8446.2	8123.1	7655.6	6901.8	6757.4	6025.6	5487.2	5521.4	6055.0	7036.4
35°	9036.0	9087.4	8903.9	8561.2	7861.2	7726.6	7070.7	6289.9	6130.9	6657.0	7760.9
37.5°	9696.8	9709.0	9594.0	9371.2	8869.5	8759.5	8218.6	7146.5	6794.2	7298.3	8460.8
40°	11015.9	10822.6	10372.3	10196.1	9897.5	9829.0	9212.2	7932.2	7410.8	7956.7	9121.6
42.5°	12442.9	12141.8	11436.9	11148.2	11028.2	10964.6	10039.4	8455.9	7988.5	8615.0	9770.2
45°	13593.2	13348.4	12658.2	12300.9	12315.6	12212.8	10761.5	8923.4	8615.0	9275.9	10494.7
47.5°	14726.3	14317.6	13544.3	13492.8	13664.2	13512.4	11451.7	9390.9	9268.5	9995.4	11219.1
50°	14799.7	14427.6	14114.4	14525.6	14819.4	14630.9	12078.2	10002.6	9946.4	10866.7	12154.0
52.5°	13906.4	13852.6	14329.8	15022.5	15509.5	15340.6	12589.7	10631.7	10639.1	11955.8	13292.2
55°	13580.9	13512.4	14085.0	14936.9	15595.1	15494.8	12971.5	11341.5	11407.5	13277.4	14513.4
57.5°	14129.2	13957.9	14070.4	14775.2	15394.5	15335.7	13368.0	12129.5	12249.5	14799.7	15641.7
60°	15830.1	15480.2	14883.0	15015.2	15401.8	15367.6	13935.8	13008.2	13208.9	16385.7	16356.3
62.5°	18378.0	17981.5	16765.1	16177.7	16092.0	16025.9	14873.1	14087.6	14187.9	17531.0	15940.3
65°	21173.0	20747.0	19300.6	18338.7	17834.6	17692.7	16385.7	15389.6	14760.6	17528.7	14320.1
67.5°	24310.5	23860.2	22418.7	21500.9	20955.1	20712.9	18840.4	16442.0	14574.5	16045.5	11459.0
70°	27524.0	27095.7	26435.0	26755.5	26995.4	26625.8	22707.5	16791.9	13238.3	12579.9	7694.8
72.5°	25818.2	25783.9	26285.6	29325.4	33948.6	34022.0	26569.5	15803.1	10227.9	7476.9	4101.9
73°	24234.7	24379.1	25309.2	28946.0	34543.3	34567.8	26645.4	15291.7	9390.9	6441.7	3602.6
75°	12555.4	13534.4	16985.3	23471.1	31985.7	32100.8	23488.2	11576.4	5597.4	3578.1	2427.8
77.5°	3362.8	3318.7	5472.5	11434.5	21324.6	21173.0	14841.3	5604.7	2682.5	2244.3	1703.5
80°	1152.8	1167.4	1862.6	4182.7	9953.7	10308.7	6441.7	2445.0	1764.6	1563.9	1206.5
82.5°	587.4	606.9	974.0	1779.3	4163.1	4075.1	2072.9	1439.1	1182.0	949.6	675.6
85°	313.2	323.1	536.0	922.7	1527.2	1544.4	729.3	768.5	751.3	538.4	332.8
87.5°	154.2	159.1	257.0	406.2	565.3	545.8	254.6	332.8	369.6	303.5	183.5
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°	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8	5834.8
2.5°	5795.5	5795.5	5827.4	5881.2	5920.4	5957.2	5981.6	6020.7	6042.8	6040.3	6037.8
5°	5756.5	5780.9	5844.5	5910.6	5954.6	5984.0	5984.0	6001.2	6001.2	5993.9	5984.0
7.5°	5665.8	5707.4	5800.5	5859.2	5871.5	5839.6	5776.0	5727.1	5665.8	5634.1	5621.8
10°	5521.4	5575.3	5692.7	5719.7	5656.1	5543.5	5389.3	5257.1	5139.7	5085.8	5068.6
12.5°	5379.5	5450.5	5560.6	5519.0	5367.3	5146.9	4909.6	4728.5	4596.3	4544.9	4527.8
15°	5262.0	5347.7	5433.4	5303.7	5039.2	4733.3	4471.6	4302.6	4202.3	4163.1	4153.4
17.5°	5183.7	5284.0	5313.4	5071.2	4704.0	4361.4	4128.8	4018.7	3974.7	3957.5	3952.7
20°	5188.6	5301.2	5230.2	4845.9	4381.0	4035.8	3881.7	3849.9	3849.9	3849.9	3847.3
22.5°	5323.2	5421.1	5196.0	4635.5	4070.1	3761.7	3695.7	3722.6	3742.1	3742.1	3739.7
25°	5602.3	5656.1	5220.4	4432.3	3778.8	3524.3	3526.8	3578.1	3595.2	3595.2	3590.4
27.5°	6028.1	5984.0	5264.4	4207.1	3492.5	3308.9	3343.3	3389.8	3402.0	3394.5	3392.2
30°	6561.7	6385.4	5301.2	3942.8	3223.2	3108.3	3137.6	3164.5	3154.8	3137.6	3135.2
32.5°	7158.7	6794.2	5279.2	3646.7	2985.9	2900.2	2917.3	2932.1	2917.3	2875.7	2875.7
35°	7751.1	7163.7	5159.2	3323.6	2797.5	2699.6	2697.1	2743.6	2741.1	2692.1	2694.7
37.5°	8270.0	7455.0	4926.7	3027.5	2635.9	2552.8	2562.4	2591.8	2606.5	2540.5	2533.0
40°	8722.7	7655.6	4598.7	2775.4	2506.2	2511.1	2484.1	2437.7	2420.5	2391.1	2386.2
42.5°	9148.6	7795.1	4251.3	2565.0	2440.1	2496.3	2405.9	2295.7	2249.2	2276.1	2293.3
45°	9567.1	7951.8	3916.0	2391.1	2356.9	2452.4	2327.5	2205.2	2151.4	2163.6	2180.7
47.5°	10078.6	8169.7	3512.1	2205.2	2229.7	2371.6	2278.6	2146.4	2065.6	2016.7	2002.0
50°	10751.6	8485.3	2988.3	2004.5	2095.0	2283.5	2237.0	2060.7	1972.6	1874.8	1850.3
52.5°	11593.6	8783.9	2459.7	1842.9	1984.9	2207.6	2168.5	1987.3	1879.7	1762.2	1742.5
55°	12433.0	8825.5	2004.5	1703.5	1860.0	2104.8	2085.2	1928.7	1776.9	1681.4	1661.9
57.5°	13020.4	8431.4	1698.6	1585.9	1740.2	1977.6	2009.4	1857.6	1691.3	1617.8	1605.6
60°	13030.3	7489.1	1512.4	1507.7	1649.6	1867.5	1931.0	1774.4	1637.4	1588.4	1578.6
62.5°	11994.9	6035.4	1392.6	1448.9	1583.5	1776.9	1872.2	1727.9	1625.1	1605.6	1595.7
65°	10054.1	4459.3	1297.1	1395.0	1522.3	1700.9	1823.3	1713.1	1620.2	1612.8	1605.6
67.5°	7423.1	3056.8	1216.4	1326.5	1453.8	1622.6	1776.9	1691.3	1590.9	1620.2	1610.4
70°	4669.7	2041.2	1140.5	1248.2	1363.2	1532.2	1715.7	1652.0	1554.1	1537.0	1505.1
72.5°	2635.9	1475.8	1050.0	1147.9	1245.8	1412.1	1632.5	1585.9	1470.9	1402.4	1370.5
73°	2381.5	1397.5	1027.9	1123.4	1218.8	1387.7	1612.8	1566.3	1446.5	1370.5	1341.1
75°	1742.5	1143.0	927.6	1023.0	1106.2	1275.2	1519.9	1468.5	1338.8	1248.2	1228.6
77.5°	1262.9	881.0	797.9	883.6	957.0	1118.5	1380.4	1321.6	1194.3	1145.4	1125.8
80°	910.4	668.1	660.8	744.0	807.7	971.7	1231.1	1169.8	1047.5	1191.9	1160.2
82.5°	543.3	428.3	484.6	577.6	643.6	815.0	1069.5	998.5	881.0	890.9	758.7
85°	259.4	242.3	301.0	379.3	425.9	558.0	890.9	834.6	704.8	577.6	565.3
87.5°	115.0	110.2	144.4	169.0	227.6	335.3	609.4	540.9	511.6	305.9	239.9
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)