

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: P196860

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196860  
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-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27814.1 lumens  
Efficiency: N/A  
Efficacy: 111.7 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 - G4

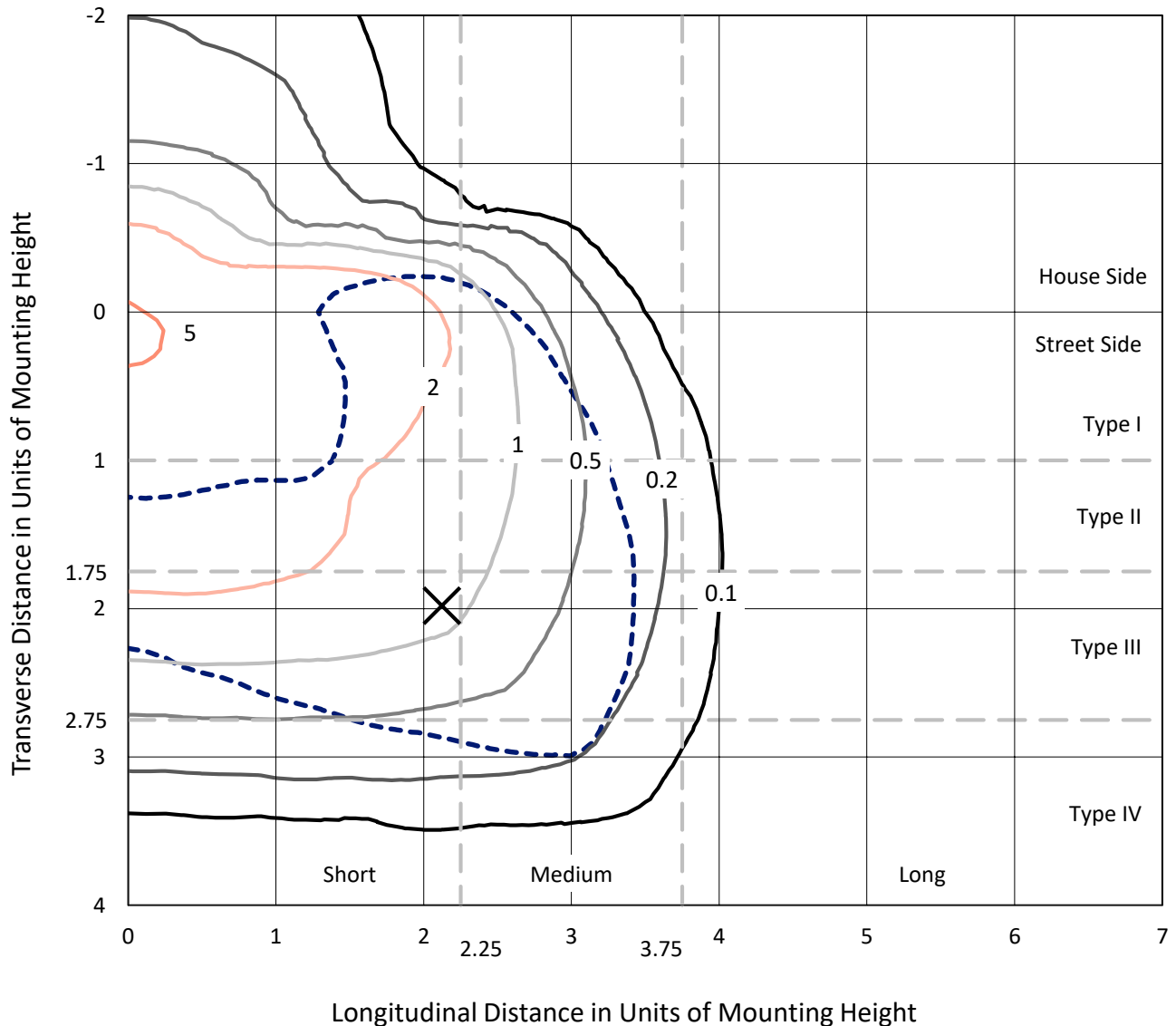
Input Watts (W): 249  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196860  
 CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-800

### Iso-Footcandle Lines of Horizontal Illumination

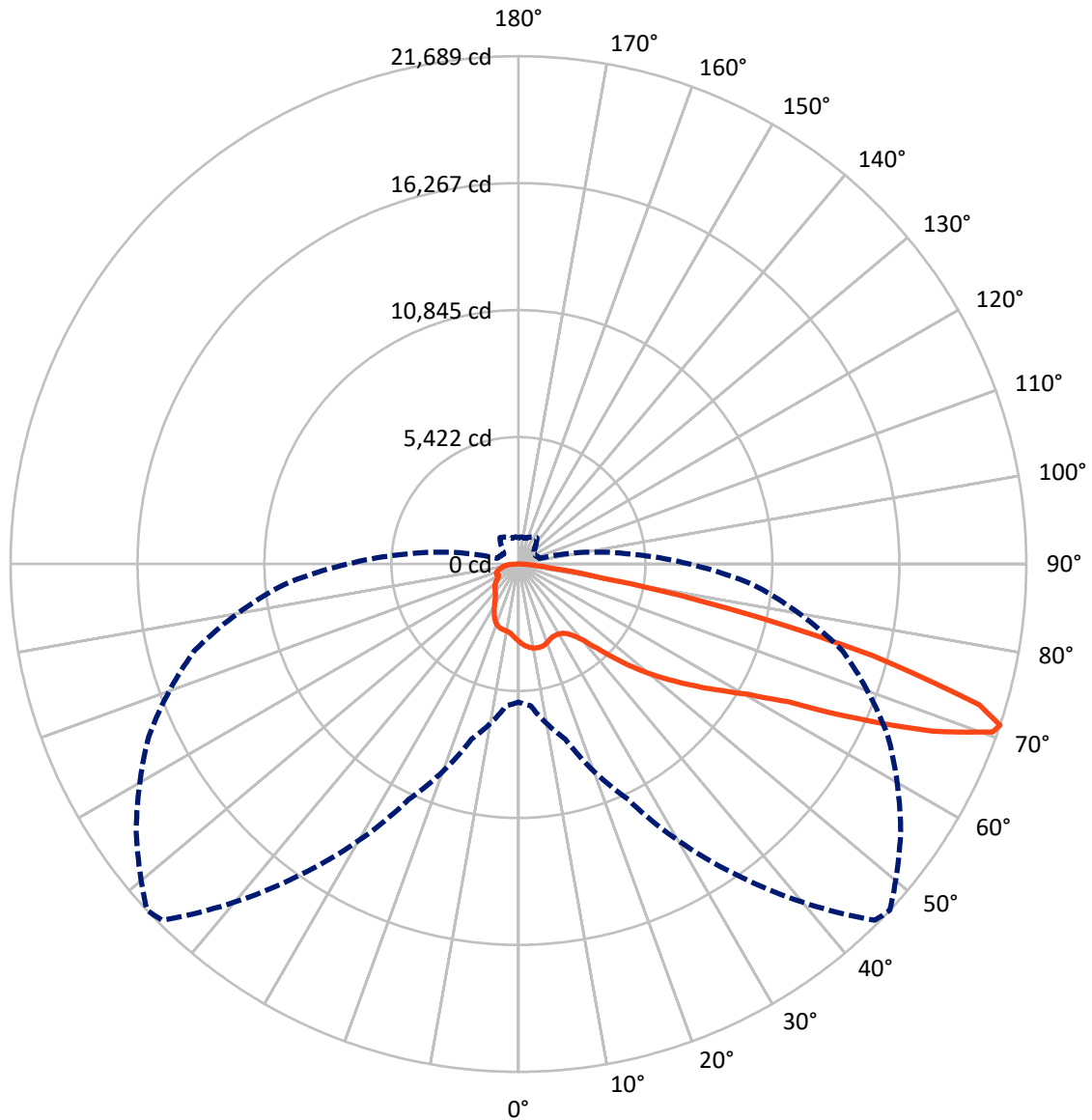
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc  
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P196860  
CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-800

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P196860

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5961.0	0.0	5961.0
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	21853.2	0.0	21853.2
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	27814.1	0.0	27814.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	315.8	1.1
10°-20°	923.9	3.3
20°-30°	1372.9	4.9
30°-40°	1971.3	7.1
40°-50°	3495.1	12.6
50°-60°	5980.7	21.5
60°-70°	8490.5	30.5
70°-80°	4650.1	16.7
80°-90°	613.8	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°	27814.1	100.0
0°-180°	27814.1	100.0

**Coefficient of Utilization**



REPORT NUMBER: P196860

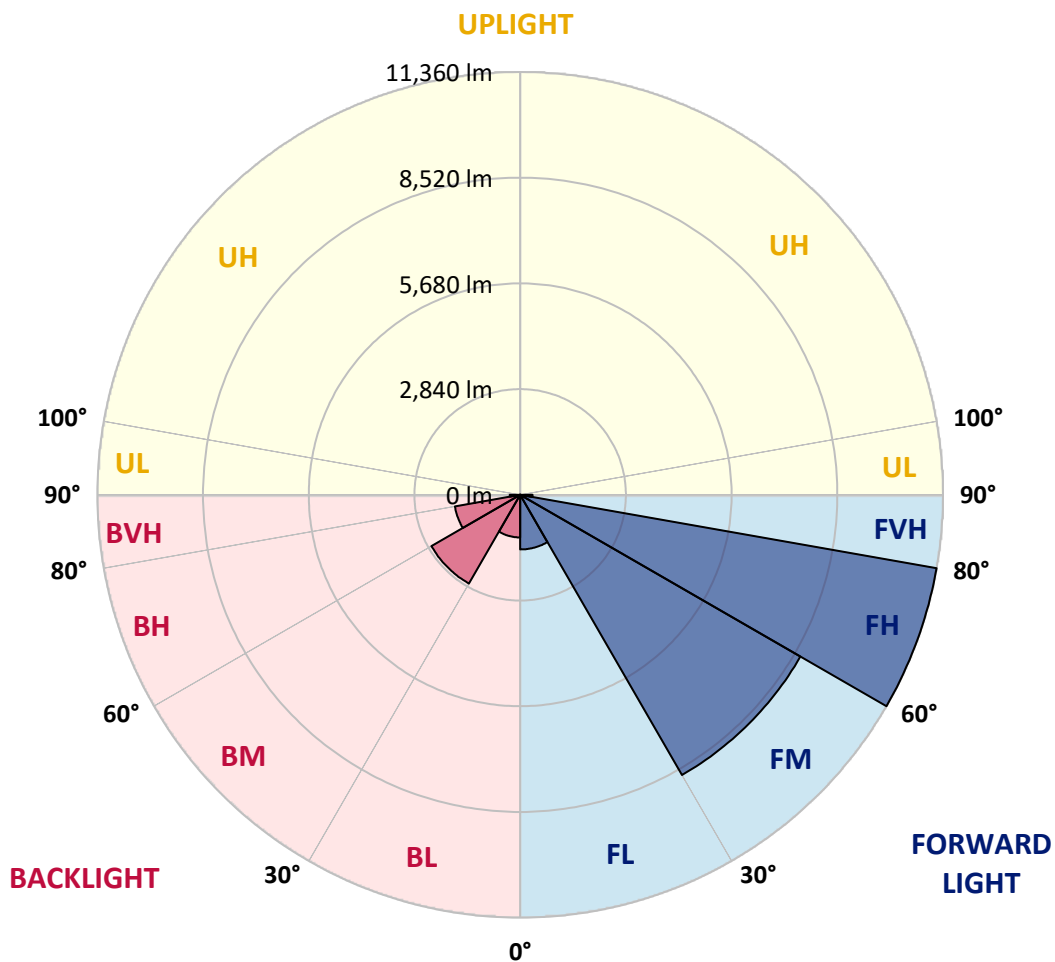
CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-800

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1467.9	5.3			
FM	(30°-60°)	8692.8	31.3			
FH	(60°-80°)	11359.6	40.8			G4/12000
FVH	(80°-90°)	332.9	1.2			G3/500
BL	(0°-30°)	1144.7	4.1	B3/2500		
BM	(30°-60°)	2754.3	9.9	B3/5000		
BH	(60°-80°)	1781.0	6.4	B3/2500		G3/2500
BVH	(80°-90°)	280.9	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-G4**

Type IV Short





REPORT NUMBER: P196860

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6
2.5°	3509.4	3502.2	3505.8	3493.2	3462.5	3430.0	3430.0	3395.9	3359.8	3323.7	3284.2
5°	3727.6	3716.8	3707.7	3668.1	3608.7	3541.8	3531.0	3462.5	3388.6	3314.8	3242.7
7.5°	3909.7	3898.8	3871.7	3799.6	3713.1	3614.0	3601.4	3511.3	3414.0	3311.2	3210.2
10°	4039.5	4032.2	3979.9	3888.0	3787.0	3669.9	3648.2	3556.3	3440.9	3313.0	3185.0
12.5°	4111.4	4100.6	4037.5	3929.4	3810.4	3691.6	3669.9	3581.5	3450.0	3309.4	3159.8
15°	4082.6	4077.2	4017.8	3907.7	3788.8	3686.1	3668.1	3577.9	3444.5	3296.8	3136.3
17.5°	3960.1	3972.6	3925.8	3817.6	3720.4	3648.2	3628.4	3543.8	3417.5	3266.1	3100.2
20°	3790.6	3805.1	3781.6	3671.6	3615.8	3569.0	3558.1	3489.6	3372.5	3221.1	3057.1
22.5°	3610.4	3623.0	3624.7	3522.1	3504.1	3486.0	3476.9	3428.3	3332.9	3193.9	3028.2
25°	3486.0	3500.4	3504.1	3414.0	3424.7	3430.0	3428.3	3394.1	3325.7	3193.9	3031.8
27.5°	3453.5	3460.8	3457.2	3374.3	3394.1	3424.7	3426.5	3419.3	3354.5	3230.0	3082.2
30°	3565.3	3569.0	3523.8	3399.5	3419.3	3458.9	3460.8	3457.2	3415.7	3323.7	3195.9
32.5°	4048.4	4044.8	3889.7	3569.0	3500.4	3514.9	3520.3	3552.7	3556.3	3478.9	3359.8
35°	4783.8	4781.9	4601.8	4053.8	3731.2	3655.5	3662.7	3713.1	3758.2	3706.0	3637.5
37.5°	5593.1	5598.6	5488.5	4746.0	4228.7	3913.2	3906.0	3943.8	4025.0	4043.0	4052.0
40°	6490.8	6517.8	6512.4	5540.9	4926.2	4353.0	4280.9	4237.6	4394.5	4493.7	4621.5
42.5°	7516.4	7509.2	7512.7	6413.3	5722.9	5045.1	4911.8	4709.9	4892.0	5063.2	5344.4
45°	8397.7	8426.6	8448.3	7341.5	6615.1	5836.4	5701.2	5333.6	5497.6	5753.6	6182.6
47.5°	9284.7	9234.1	9273.8	8374.4	7608.3	6739.5	6564.7	6069.1	6222.2	6582.7	7235.1
50°	10317.5	10294.0	10113.8	9722.7	8808.8	7655.1	7426.3	6836.8	7060.4	7541.6	8534.8
52.5°	11243.9	11117.7	10977.2	10782.5	9989.3	8581.7	8291.4	7635.4	8046.3	8643.0	10148.0
55°	11582.8	11498.1	11667.5	11919.8	11238.5	9526.1	9201.7	8567.2	9158.4	9902.8	12046.1
57.5°	11943.2	11972.1	12354.3	12864.4	12420.9	10533.8	10182.3	9670.3	10378.7	11312.3	14167.5
60°	12123.5	12238.9	13001.3	13958.4	13545.8	11638.7	11301.6	10937.5	11732.4	12869.7	16283.7
62.5°	12154.2	12309.1	13388.8	14342.4	15094.0	13331.2	12941.9	12547.2	13423.1	14591.1	17815.9
65°	11591.8	11829.7	13354.6	14814.7	16505.4	16159.3	15912.4	15223.8	15687.0	16107.0	18077.2
67.5°	9938.9	10198.5	12033.4	14620.0	17637.4	19093.7	19046.8	18030.3	17435.5	16692.8	16139.4
70°	7294.7	7503.7	9266.6	12498.5	17143.5	21397.4	21480.3	19849.0	17924.0	15449.1	12000.9
71°	5899.6	6079.8	7741.7	11096.2	16181.0	21516.3	21689.4	19930.1	17415.6	14326.2	10047.1
72.5°	3671.6	3772.6	5140.6	8374.4	13933.3	20290.6	20582.6	18891.9	15815.1	12109.1	7101.9
75°	1386.1	1425.8	1907.0	3693.3	8316.7	15243.7	15597.0	14277.6	11110.6	6912.5	2972.3
77.5°	744.4	764.3	946.3	1535.7	3332.9	8738.4	9192.6	8143.6	5330.0	2418.9	1214.9
80°	499.4	511.9	654.4	910.2	1532.2	3327.4	3706.0	3269.7	1995.4	1380.7	865.3
82.5°	322.7	329.9	445.2	598.4	989.6	1169.8	1335.7	1395.1	1245.5	989.6	522.7
85°	212.7	218.1	293.8	382.1	612.8	576.8	591.2	773.2	849.0	652.5	266.8
87.5°	122.6	126.2	176.7	196.4	275.8	216.4	234.4	367.6	504.7	425.3	153.2
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: P196860

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6	3307.6
2.5°	3266.1	3251.7	3219.3	3199.4	3190.4	3186.8	3183.2	3190.4	3190.4	3186.8	3179.6
5°	3206.6	3179.6	3125.5	3087.6	3067.8	3062.4	3069.6	3078.6	3084.1	3084.1	3078.6
7.5°	3163.4	3123.7	3051.6	2999.3	2968.7	2959.8	2979.5	3012.0	3033.6	3044.4	3046.2
10°	3127.3	3073.3	2993.9	2939.8	2914.6	2911.0	2936.3	2977.8	3022.7	3042.7	3046.2
12.5°	3094.9	3033.6	2947.0	2896.6	2878.6	2887.6	2921.8	2959.8	3012.0	3040.8	3042.7
15°	3064.1	3001.2	2909.2	2856.9	2853.3	2867.7	2900.2	2930.9	2970.5	3006.6	3006.6
17.5°	3028.2	2959.8	2864.1	2815.5	2815.5	2828.0	2849.7	2866.0	2891.2	2925.4	2923.7
20°	2985.0	2914.6	2817.2	2766.8	2755.9	2748.8	2748.8	2752.3	2774.0	2804.6	2810.0
22.5°	2952.5	2880.4	2777.6	2716.4	2667.7	2620.8	2601.0	2593.9	2613.6	2642.4	2649.6
25°	2952.5	2880.4	2765.1	2662.3	2543.3	2453.2	2415.2	2404.5	2424.4	2451.3	2462.1
27.5°	3001.2	2929.0	2793.9	2613.6	2395.5	2251.3	2206.3	2197.2	2215.2	2236.9	2247.7
30°	3114.7	3044.4	2876.8	2557.8	2231.5	2042.2	1991.8	1982.7	1991.8	2000.7	2013.4
32.5°	3304.0	3244.5	3012.0	2507.3	2065.6	1852.9	1791.7	1777.2	1780.8	1782.7	1793.5
35°	3612.2	3585.2	3192.2	2447.7	1908.9	1698.0	1634.8	1606.0	1604.3	1613.2	1625.9
37.5°	4084.4	4100.6	3424.7	2361.3	1779.1	1588.0	1524.9	1496.1	1481.7	1499.7	1514.2
40°	4751.3	4789.2	3693.3	2244.0	1672.8	1523.1	1456.4	1429.3	1409.6	1404.1	1411.3
42.5°	5618.3	5607.5	3967.3	2094.5	1557.4	1479.8	1409.6	1380.7	1348.3	1306.8	1297.8
45°	6645.8	6490.8	4196.2	1910.6	1425.8	1438.4	1366.3	1326.6	1276.1	1214.9	1207.7
47.5°	7858.8	7431.7	4336.8	1714.2	1303.3	1384.4	1317.6	1256.4	1182.4	1142.8	1137.4
50°	9320.7	8532.9	4435.9	1514.2	1193.2	1315.8	1249.2	1168.0	1095.9	1085.1	1083.3
52.5°	11051.0	9832.6	4558.6	1333.8	1106.7	1227.5	1180.6	1097.7	1040.0	1045.4	1045.4
55°	12891.4	11177.2	4562.1	1191.5	1031.0	1124.8	1130.2	1063.4	1018.4	1036.5	1041.8
57.5°	14569.5	12352.5	4203.4	1090.5	959.0	1043.7	1113.9	1076.1	1041.8	1104.9	1110.3
60°	16033.1	13257.3	3432.0	1007.6	899.4	1013.1	1150.0	1153.6	1146.3	1317.6	1330.2
62.5°	16568.5	13266.3	2436.9	937.3	867.0	1031.0	1225.7	1231.2	1231.2	1389.7	1413.2
65°	15818.7	12161.4	1622.3	895.8	845.3	1070.6	1287.0	1263.6	1207.7	1317.6	1292.4
67.5°	13176.2	9466.7	1186.0	868.8	814.7	1072.5	1341.0	1281.6	1186.0	1279.8	1236.5
70°	9055.7	6023.9	993.1	843.6	778.7	1025.6	1369.9	1276.1	1153.6	1193.2	1135.5
71°	7289.2	4807.2	942.7	834.5	764.3	998.6	1373.5	1268.9	1137.4	1162.6	1110.3
72.5°	4801.8	2961.5	881.4	814.7	742.6	951.7	1364.4	1252.7	1115.7	1117.5	1083.3
75°	1894.4	1227.5	793.1	769.6	681.3	876.0	1324.9	1218.5	1074.2	1038.2	1023.8
77.5°	957.1	802.1	697.5	706.6	609.2	798.4	1268.9	1162.6	1016.6	967.9	957.1
80°	699.4	609.2	596.7	612.8	528.2	722.8	1198.7	1086.9	942.7	993.1	971.6
82.5°	425.3	371.3	466.9	506.5	441.6	645.2	1115.7	998.6	849.0	782.3	757.0
85°	201.9	218.1	337.1	373.1	326.2	515.4	1020.3	901.3	740.8	639.9	650.7
87.5°	99.1	120.7	192.9	223.6	214.4	378.5	769.6	699.4	584.0	481.3	470.5
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)