

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: P196865

Luminaire Tested: **NAV-AF-05-D-UNV-T4W-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196865  
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-05-D-UNV-T4W-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28739.6 lumens  
Efficiency: N/A  
Efficacy: 103.0 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

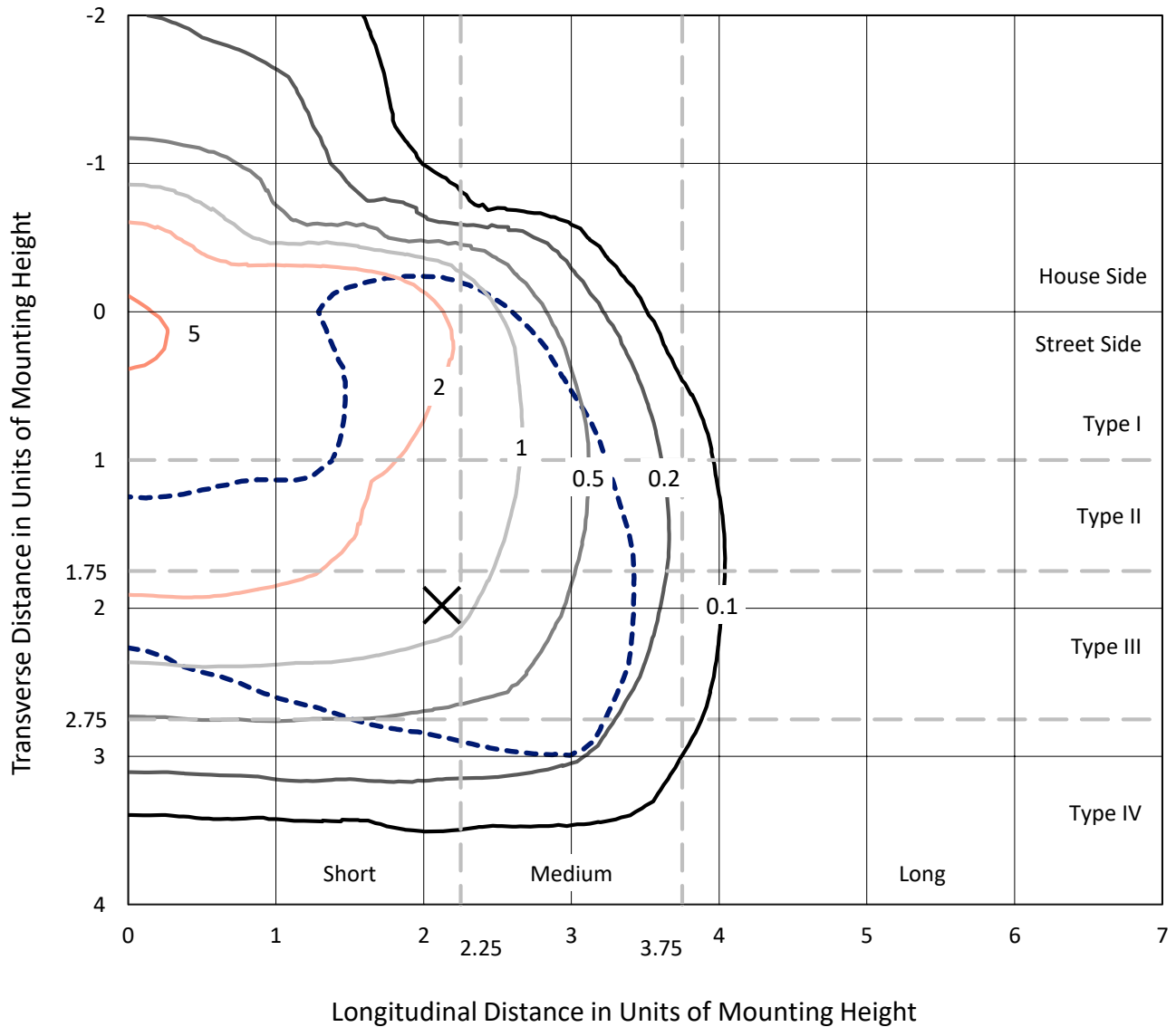
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

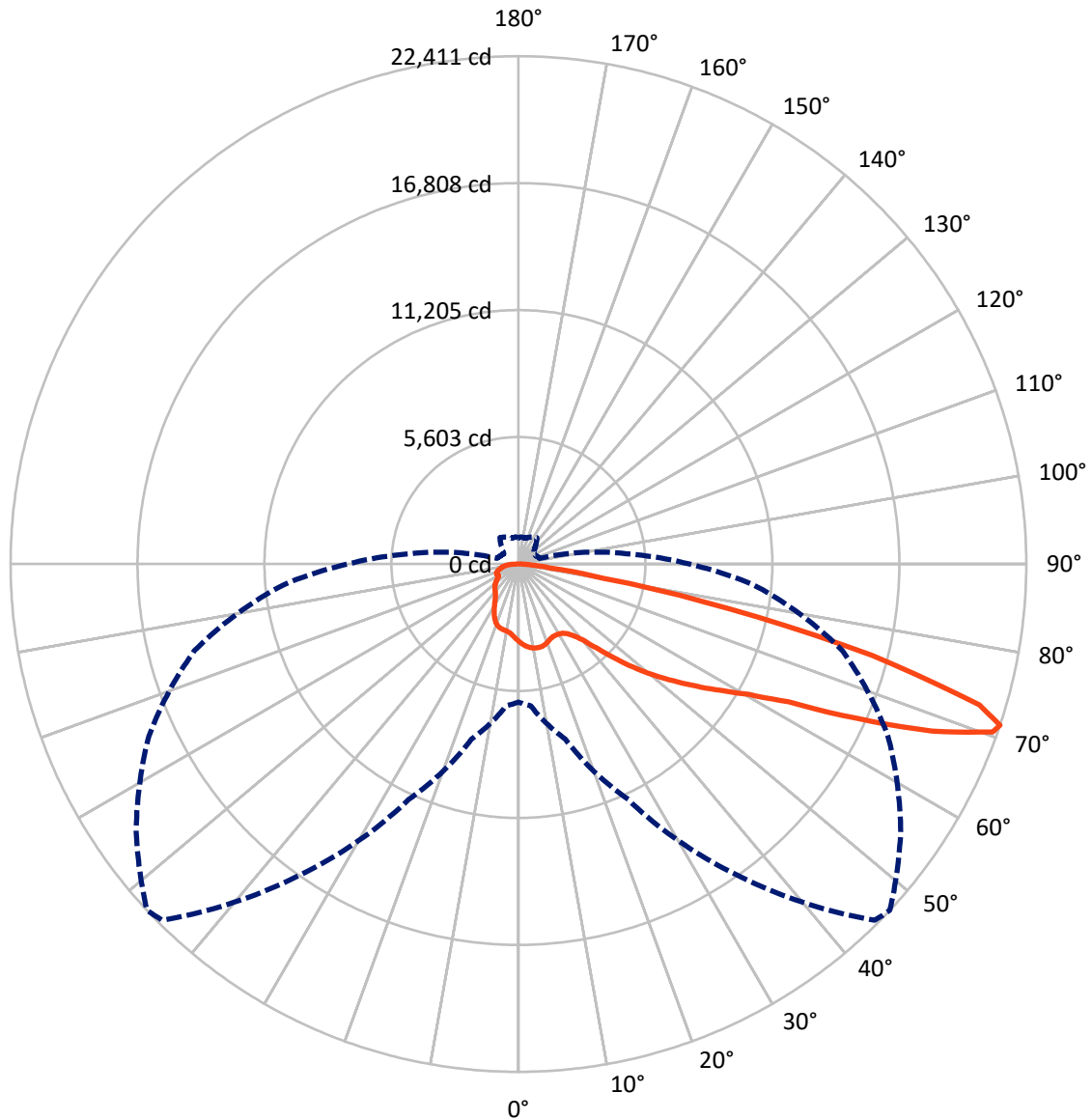
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6159.3	0.0	6159.3
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	22580.3	0.0	22580.3
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	28739.6	0.0	28739.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	326.3	1.1
10°-20°	954.7	3.3
20°-30°	1418.6	4.9
30°-40°	2036.9	7.1
40°-50°	3611.4	12.6
50°-60°	6179.6	21.5
60°-70°	8773.0	30.5
70°-80°	4804.9	16.7
80°-90°	634.3	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°	28739.6	100.0
0°-180°	28739.6	100.0



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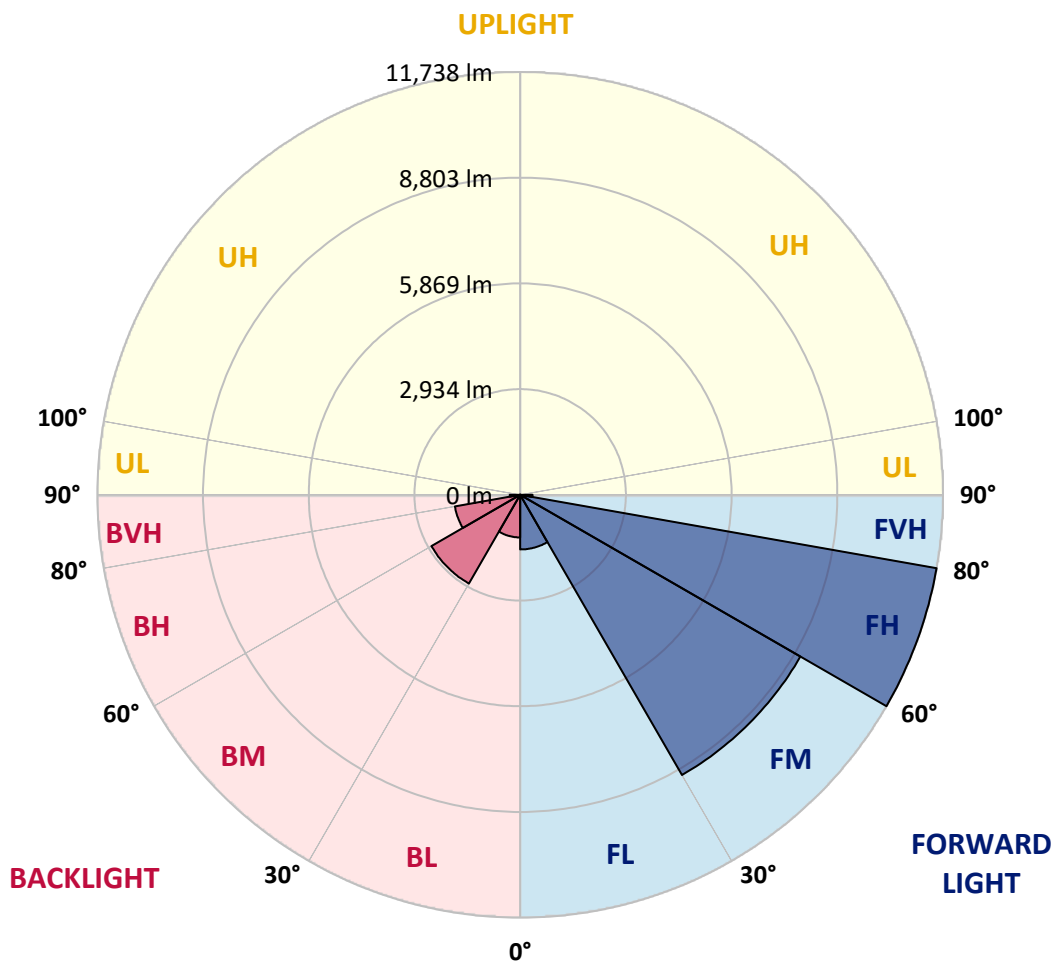
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1516.7	5.3			
FM	(30°-60°)	8982.0	31.3			
FH	(60°-80°)	11737.5	40.8			G4/12000
FVH	(80°-90°)	344.0	1.2			G3/500
BL	(0°-30°)	1182.8	4.1	B3/2500		
BM	(30°-60°)	2845.9	9.9	B3/5000		
BH	(60°-80°)	1840.3	6.4	B3/2500		G3/2500
BVH	(80°-90°)	290.2	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6
2.5°	3626.2	3618.7	3622.5	3609.5	3577.8	3544.3	3544.3	3508.9	3471.6	3434.3	3393.4
5°	3851.6	3840.4	3831.0	3790.1	3728.7	3659.7	3648.6	3577.8	3501.4	3425.1	3350.6
7.5°	4039.7	4028.5	4000.5	3926.0	3836.6	3734.3	3721.2	3628.1	3527.6	3421.4	3317.0
10°	4173.8	4166.3	4112.3	4017.4	3913.0	3792.0	3769.7	3674.6	3555.4	3423.2	3291.0
12.5°	4248.2	4237.1	4171.9	4060.2	3937.2	3814.3	3792.0	3700.7	3564.8	3419.5	3264.8
15°	4218.5	4212.9	4151.5	4037.7	3914.9	3808.8	3790.1	3697.0	3559.1	3406.4	3240.6
17.5°	4091.9	4104.9	4056.5	3944.7	3844.1	3769.7	3749.1	3661.6	3531.3	3374.8	3203.5
20°	3916.7	3931.7	3907.4	3793.8	3736.1	3687.7	3676.5	3605.8	3484.8	3328.2	3158.6
22.5°	3730.5	3743.6	3745.4	3639.2	3620.7	3602.0	3592.7	3542.4	3443.8	3300.2	3128.9
25°	3602.0	3616.9	3620.7	3527.6	3538.7	3544.3	3542.4	3507.0	3436.2	3300.2	3132.7
27.5°	3568.5	3575.9	3572.2	3486.6	3507.0	3538.7	3540.5	3533.1	3466.0	3337.6	3184.8
30°	3683.9	3687.7	3641.1	3512.5	3533.1	3574.1	3575.9	3572.2	3529.4	3434.3	3302.2
32.5°	4183.1	4179.3	4019.2	3687.7	3616.9	3631.8	3637.3	3670.9	3674.6	3594.5	3471.6
35°	4943.0	4941.1	4754.9	4188.7	3855.3	3777.1	3784.5	3836.6	3883.2	3829.2	3758.4
37.5°	5779.3	5784.8	5671.2	4903.9	4369.3	4043.3	4035.9	4075.1	4158.9	4177.5	4186.9
40°	6706.8	6734.6	6729.1	5725.1	5090.1	4497.8	4423.4	4378.7	4540.7	4643.1	4775.4
42.5°	7766.4	7759.0	7762.8	6626.7	5913.3	5213.0	5075.2	4866.6	5054.8	5231.7	5522.2
45°	8677.2	8707.0	8729.4	7585.8	6835.3	6030.7	5890.9	5511.0	5680.5	5945.1	6388.3
47.5°	9593.5	9541.4	9582.4	8653.0	7861.4	6963.7	6783.1	6270.9	6429.3	6801.7	7475.9
50°	10660.8	10636.5	10450.2	10046.1	9101.9	7909.9	7673.4	7064.2	7295.2	7792.5	8818.8
52.5°	11618.0	11487.6	11342.4	11141.2	10321.7	8867.2	8567.3	7889.4	8314.0	8930.6	10485.6
55°	11968.1	11880.7	12055.6	12316.5	11612.4	9843.0	9507.8	8852.3	9463.2	10232.3	12446.9
57.5°	12340.7	12370.5	12765.3	13292.4	12834.2	10884.2	10521.0	9992.1	10724.1	11688.8	14638.9
60°	12526.9	12646.1	13434.0	14422.9	13996.4	12025.9	11677.6	11301.4	12122.8	13298.0	16825.5
62.5°	12558.6	12718.8	13834.4	14819.6	15596.2	13774.8	13372.5	12964.6	13869.7	15076.5	18408.5
65°	11977.4	12223.4	13799.0	15307.6	17054.5	16697.0	16441.8	15730.4	16208.9	16642.9	18678.6
67.5°	10269.6	10537.8	12433.8	15106.4	18224.2	19729.1	19680.7	18630.3	18015.5	17248.2	16676.5
70°	7537.4	7753.5	9574.9	12914.3	17713.8	22109.2	22194.9	20509.4	18520.3	15963.1	12400.3
71°	6095.8	6282.1	7999.3	11465.3	16719.3	22232.2	22410.9	20593.1	17995.1	14802.9	10381.4
72.5°	3793.8	3898.2	5311.7	8653.0	14396.8	20965.8	21267.5	19520.5	16341.3	12512.1	7338.1
75°	1432.3	1473.3	1970.5	3816.2	8593.4	15750.9	16115.8	14752.5	11480.2	7142.5	3071.2
77.5°	769.1	789.7	977.8	1586.8	3443.8	9029.1	9498.6	8414.6	5507.3	2499.5	1255.3
80°	515.9	529.0	676.1	940.5	1583.0	3438.1	3829.2	3378.6	2061.7	1426.6	894.0
82.5°	333.3	340.8	460.0	618.3	1022.4	1208.7	1380.1	1441.5	1287.0	1022.4	540.1
85°	219.7	225.4	303.6	394.9	633.2	596.0	610.9	799.0	877.3	674.2	275.7
87.5°	126.6	130.3	182.6	203.0	284.9	223.6	242.1	379.9	521.5	439.6	158.3
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°	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6	3417.6
2.5°	3374.8	3359.8	3326.4	3305.8	3296.6	3292.8	3289.1	3296.6	3296.6	3292.8	3285.4
5°	3313.3	3285.4	3229.4	3190.4	3169.9	3164.3	3171.8	3181.1	3186.6	3186.6	3181.1
7.5°	3268.6	3227.6	3153.1	3099.1	3067.5	3058.1	3078.6	3112.1	3134.5	3145.7	3147.5
10°	3231.4	3175.5	3093.5	3037.6	3011.6	3007.9	3033.9	3076.7	3123.4	3143.8	3147.5
12.5°	3197.8	3134.5	3045.2	2992.9	2974.4	2983.7	3019.1	3058.1	3112.1	3142.0	3143.8
15°	3166.3	3101.0	3006.0	2951.9	2948.3	2963.2	2996.7	3028.3	3069.3	3106.6	3106.6
17.5°	3128.9	3058.1	2959.4	2909.1	2909.1	2922.2	2944.5	2961.4	2987.3	3022.7	3020.9
20°	3084.3	3011.6	2911.0	2858.9	2847.8	2840.3	2840.3	2844.0	2866.3	2898.0	2903.6
22.5°	3050.7	2976.2	2870.0	2806.8	2756.4	2708.0	2687.6	2680.1	2700.6	2730.4	2737.8
25°	3050.7	2976.2	2857.0	2750.8	2627.9	2534.9	2495.7	2484.5	2505.0	2532.9	2544.1
27.5°	3101.0	3026.5	2886.8	2700.6	2475.2	2326.2	2279.7	2270.3	2289.0	2311.3	2322.6
30°	3218.3	3145.7	2972.5	2642.9	2305.7	2110.2	2058.0	2048.7	2058.0	2067.3	2080.4
32.5°	3414.0	3352.4	3112.1	2590.6	2134.4	1914.7	1851.3	1836.4	1840.2	1842.0	1853.1
35°	3732.4	3704.4	3298.4	2529.3	1972.3	1754.4	1689.2	1659.4	1657.6	1666.9	1680.0
37.5°	4220.3	4237.1	3538.7	2439.9	1838.3	1640.8	1575.6	1545.8	1530.9	1549.6	1564.5
40°	4909.4	4948.6	3816.2	2318.8	1728.4	1573.8	1504.8	1476.9	1456.4	1450.9	1458.3
42.5°	5805.3	5794.1	4099.3	2164.2	1609.2	1529.1	1456.4	1426.6	1393.2	1350.3	1340.9
45°	6867.0	6706.8	4335.9	1974.2	1473.3	1486.3	1411.7	1370.7	1318.6	1255.3	1247.8
47.5°	8120.3	7679.0	4481.0	1771.2	1346.5	1430.4	1361.5	1298.1	1221.7	1180.8	1175.2
50°	9630.7	8816.9	4583.5	1564.5	1233.0	1359.6	1290.7	1206.9	1132.4	1121.2	1119.4
52.5°	11418.8	10159.7	4710.1	1378.2	1143.5	1268.3	1219.9	1134.2	1074.7	1080.2	1080.2
55°	13320.4	11549.1	4713.9	1231.2	1065.3	1162.2	1167.8	1098.8	1052.2	1071.0	1076.5
57.5°	15054.3	12763.4	4343.3	1126.8	990.9	1078.4	1151.0	1111.9	1076.5	1141.6	1147.2
60°	16566.6	13698.4	3546.1	1041.1	929.4	1046.7	1188.3	1192.0	1184.5	1361.5	1374.5
62.5°	17119.8	13707.6	2518.1	968.5	895.8	1065.3	1266.5	1272.1	1272.1	1436.0	1460.1
65°	16344.9	12566.0	1676.2	925.7	873.5	1106.2	1329.8	1305.5	1247.8	1361.5	1335.3
67.5°	13614.6	9781.7	1225.5	897.7	841.9	1108.2	1385.6	1324.2	1225.5	1322.4	1277.7
70°	9357.0	6224.4	1026.2	871.7	804.5	1059.7	1415.5	1318.6	1192.0	1233.0	1173.3
71°	7531.8	4967.2	974.0	862.3	789.7	1031.9	1419.2	1311.2	1175.2	1201.3	1147.2
72.5°	4961.6	3060.1	910.7	841.9	767.3	983.4	1409.9	1294.4	1152.9	1154.8	1119.4
75°	1957.5	1268.3	819.5	795.3	703.9	905.1	1368.9	1259.0	1110.1	1072.8	1057.8
77.5°	989.1	828.8	720.8	730.1	629.6	825.0	1311.2	1201.3	1050.4	1000.2	989.1
80°	722.6	629.6	616.4	633.2	545.8	746.9	1238.6	1123.0	974.0	1026.2	1003.9
82.5°	439.6	383.7	482.4	523.4	456.2	666.8	1152.9	1031.9	877.3	808.3	782.2
85°	208.5	225.4	348.3	385.5	337.1	532.6	1054.2	931.2	765.5	661.1	672.4
87.5°	102.4	124.8	199.3	231.0	221.7	391.1	795.3	722.6	603.4	497.2	486.1
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)