

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: P195366

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-7060-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195366  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
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-T3R-7060-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24140 lumens  
Efficiency: N/A  
Efficacy: 125.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 193  
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

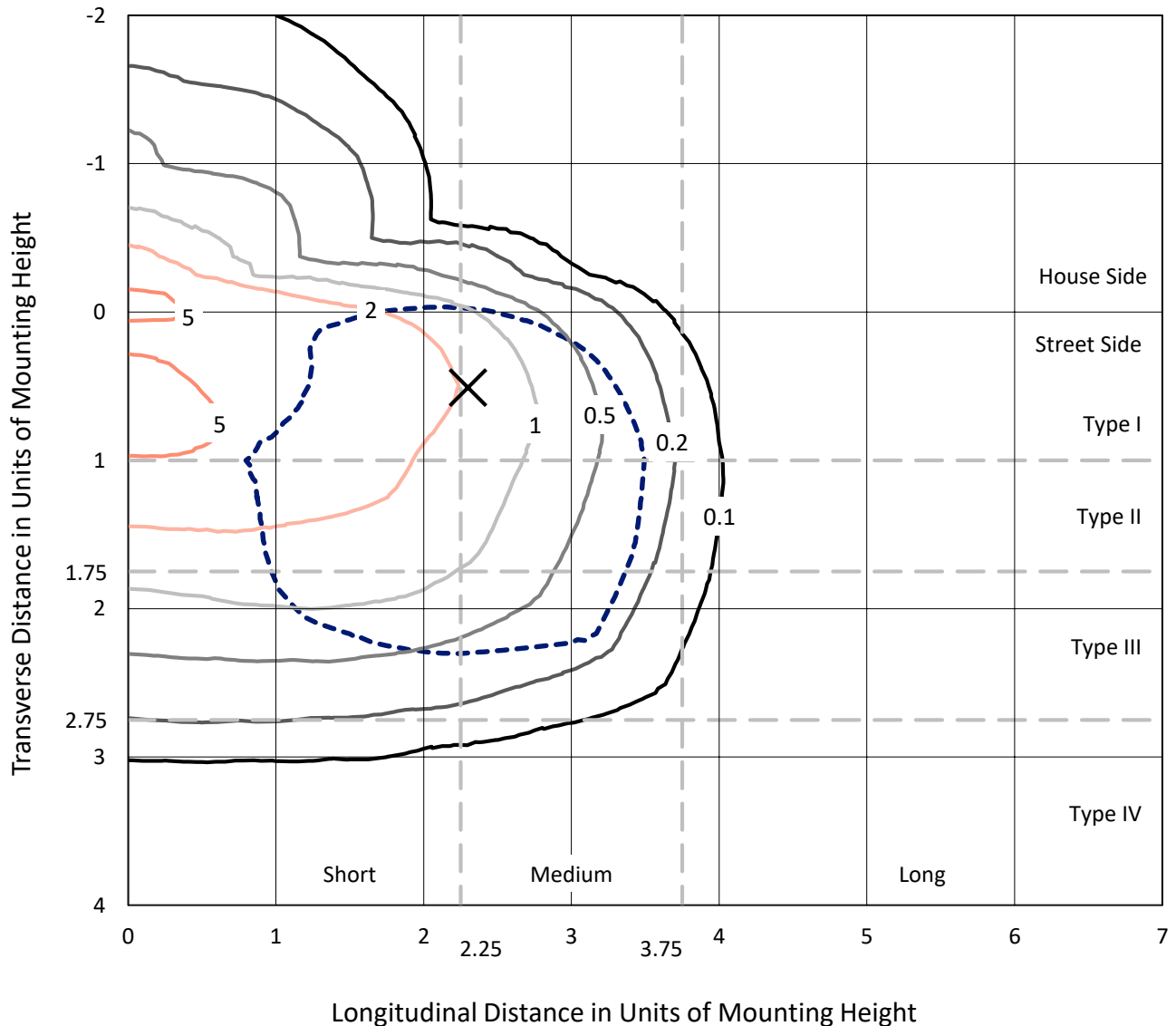


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### Iso-Footcandle Lines of Horizontal Illumination

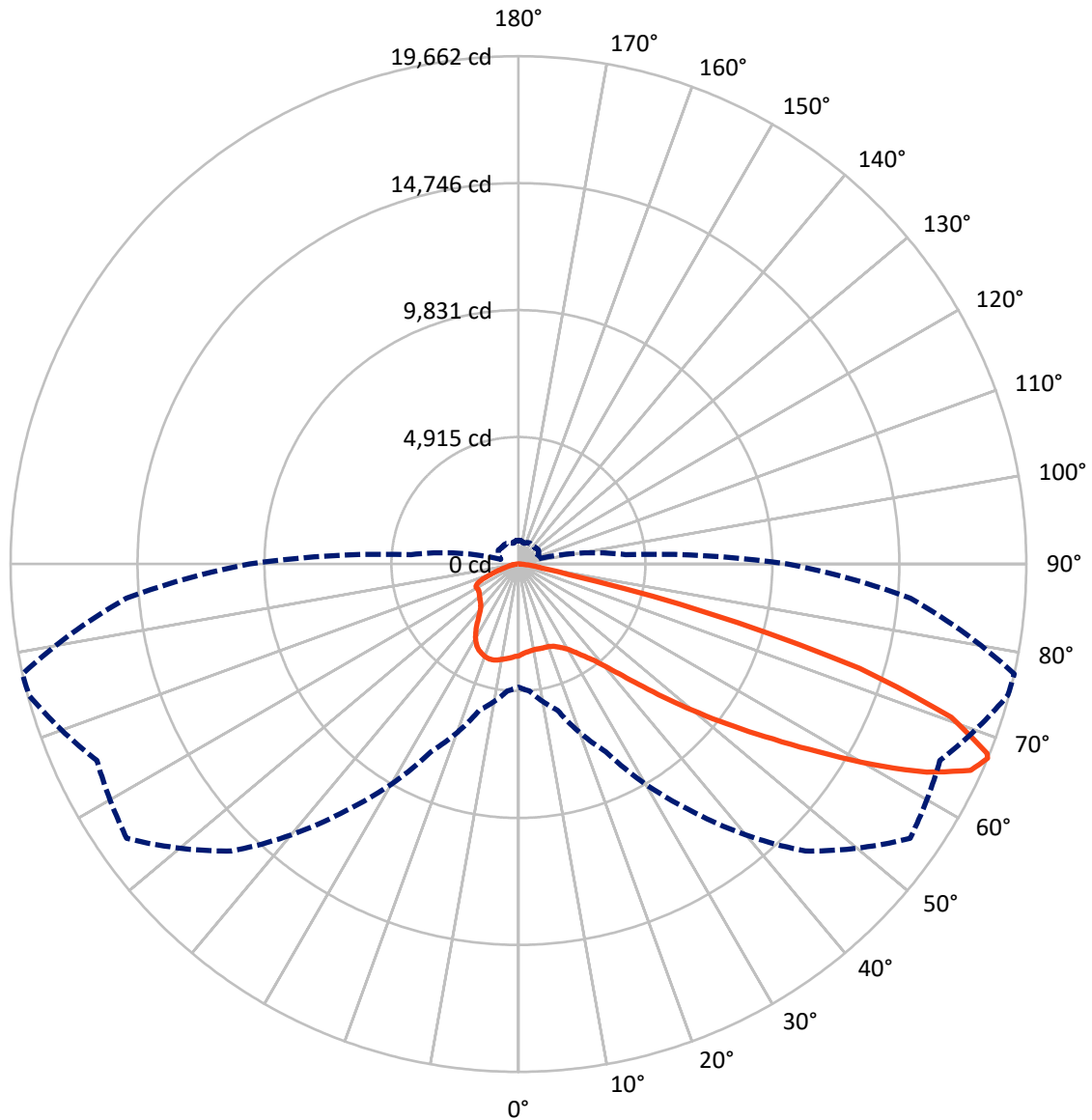
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.8 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4148.5	0.0	4148.5
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	19991.6	0.0	19991.6
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	24140.0	0.0	24140.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	316.4	1.3
10°-20°	876.3	3.6
20°-30°	1488.9	6.2
30°-40°	2381.9	9.9
40°-50°	3667.0	15.2
50°-60°	5087.6	21.1
60°-70°	6786.5	28.1
70°-80°	3229.7	13.4
80°-90°	305.8	1.3
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°	24140.0	100.0
0°-180°	24140.0	100.0



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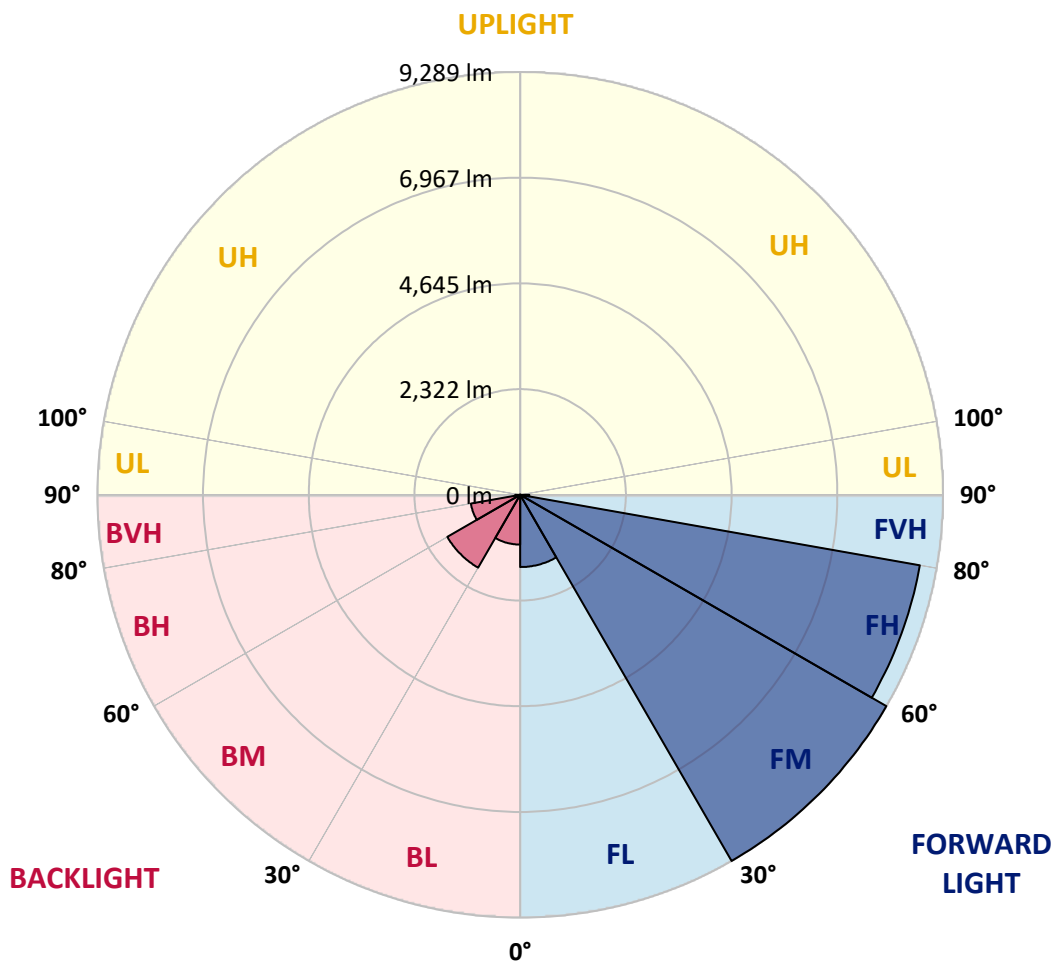
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1587.4	6.6			
FM	(30°-60°)	9289.3	38.5			
FH	(60°-80°)	8916.2	36.9			G4/12000
FVH	(80°-90°)	198.6	0.8			G2/225
BL	(0°-30°)	1094.2	4.5	B3/2500		
BM	(30°-60°)	1847.1	7.7	B2/2500		
BH	(60°-80°)	1099.9	4.6	B3/2500		G3/2500
BVH	(80°-90°)	107.2	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8
2.5°	3185.7	3200.6	3202.1	3245.4	3264.8	3314.0	3367.7	3415.5	3457.3	3472.2	3499.1
5°	2866.4	2866.4	2870.9	2899.2	2954.4	3033.5	3145.4	3267.8	3396.1	3427.4	3506.5
7.5°	2699.3	2702.3	2705.2	2733.6	2776.9	2847.0	2958.9	3126.0	3339.4	3391.6	3530.4
10°	2714.2	2709.7	2694.8	2688.8	2706.7	2751.5	2848.5	3020.1	3291.7	3372.2	3573.7
12.5°	2948.5	2939.5	2890.3	2818.6	2753.0	2736.6	2803.7	2966.4	3269.3	3372.2	3646.8
15°	3349.8	3355.8	3258.8	3109.6	2938.0	2821.6	2812.7	2947.0	3261.8	3381.2	3731.8
17.5°	3872.1	3875.1	3740.8	3524.4	3239.4	2999.2	2873.9	2947.0	3261.8	3390.1	3813.9
20°	4427.2	4406.3	4254.1	3982.5	3612.5	3245.4	2985.8	2964.9	3270.8	3403.6	3891.5
22.5°	4903.2	4883.8	4724.1	4439.1	4015.3	3536.4	3136.5	3024.6	3320.0	3458.8	4000.4
25°	5319.5	5331.4	5176.2	4855.4	4416.7	3864.6	3361.8	3161.8	3423.0	3558.7	4134.7
27.5°	5825.3	5802.9	5623.9	5318.0	4830.0	4204.8	3643.8	3334.9	3545.3	3679.6	4298.8
30°	6410.2	6399.8	6158.0	5843.2	5285.1	4585.3	3922.8	3521.4	3705.0	3845.2	4504.8
32.5°	7120.5	7119.0	6859.3	6472.9	5796.9	5015.1	4252.6	3776.6	3937.7	4079.5	4777.8
35°	7924.7	7923.2	7654.7	7144.3	6386.3	5491.1	4640.5	4087.0	4225.7	4374.9	5103.1
37.5°	8482.8	8473.8	8333.6	7838.2	7038.4	6044.6	5125.5	4504.8	4552.5	4719.6	5495.5
40°	8590.2	8643.9	8764.8	8472.3	7750.1	6659.4	5611.9	4953.9	4998.7	5213.5	5989.4
42.5°	8473.8	8544.0	8945.4	9027.4	8461.9	7404.0	6220.7	5576.1	5632.8	5899.9	6569.9
45°	8372.4	8433.5	8936.4	9334.8	9164.7	8215.7	6980.2	6335.6	6443.0	6774.3	7232.4
47.5°	8199.3	8256.0	8760.3	9390.0	9566.1	8997.6	7894.9	7248.8	7433.8	7835.2	7987.4
50°	8190.3	8215.7	8520.1	9205.0	9704.8	9591.4	8908.0	8317.2	8600.7	9063.2	8823.0
52.5°	7963.5	8141.1	8417.1	8909.5	9707.8	9937.6	9906.3	9488.5	9925.7	10437.5	9739.2
55°	6575.8	6780.3	8073.9	8764.8	9689.9	10234.6	10818.0	10734.4	11417.8	11956.5	10765.8
57.5°	6140.1	6226.7	7083.2	8808.1	9839.1	10725.5	11729.7	12072.9	13124.8	13712.7	11996.8
60°	6020.8	6111.8	6884.7	8829.0	10243.5	11619.3	12966.7	13584.4	15131.7	15755.5	13394.9
62.5°	5888.0	6005.8	6899.6	8848.4	10953.8	12941.3	14608.0	15224.3	17192.4	17748.9	14705.0
65°	5500.0	5656.7	6623.6	8726.0	11731.2	14600.5	16777.6	16934.2	18894.9	19248.5	15495.8
67°	4764.4	4936.0	5865.6	8018.7	11659.5	15718.2	18512.9	18004.1	19618.6	19661.9	15239.2
67.5°	4531.6	4709.2	5608.9	7724.8	11455.1	15864.4	18820.3	18151.8	19612.6	19564.9	15000.4
70°	3051.4	3251.4	3972.1	5671.6	9188.6	14764.7	18745.7	17696.7	18326.4	17778.8	12887.6
72.5°	1514.5	1520.5	1981.6	3106.6	5567.2	10589.7	15637.6	15139.2	14855.7	13821.6	9457.2
75°	729.7	743.1	935.6	1372.8	2347.1	5467.2	10664.3	10215.2	8697.7	7530.8	4733.1
77.5°	556.6	570.0	726.7	893.8	978.8	1783.1	5282.2	4269.0	2520.2	2012.9	1334.0
80°	429.7	455.1	613.3	686.4	647.6	714.7	1660.7	1307.1	980.3	899.8	661.0
82.5°	335.7	350.7	520.8	520.8	447.6	479.0	772.9	755.0	608.8	549.1	355.1
85°	237.2	267.1	419.3	388.0	294.0	296.9	462.6	443.2	313.3	252.2	138.8
87.5°	105.9	135.8	298.4	253.7	156.7	120.9	189.5	162.6	123.8	95.5	64.2
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°	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8	3552.8
2.5°	3528.9	3552.8	3590.1	3612.5	3642.3	3654.2	3666.2	3687.1	3703.5	3699.0	3691.5
5°	3561.7	3602.0	3648.3	3663.2	3663.2	3648.3	3639.3	3640.8	3636.3	3633.3	3624.4
7.5°	3609.5	3664.7	3697.5	3682.6	3636.3	3578.1	3522.9	3490.1	3458.8	3439.4	3445.3
10°	3676.6	3737.8	3739.3	3673.6	3563.2	3436.4	3327.5	3257.3	3190.2	3160.3	3169.3
12.5°	3773.6	3834.8	3782.6	3640.8	3446.8	3248.4	3048.4	2903.7	2773.9	2742.5	2733.6
15°	3878.1	3925.8	3809.4	3570.7	3279.7	2952.9	2617.2	2400.8	2256.1	2230.7	2221.8
17.5°	3969.1	3995.9	3796.0	3445.3	3015.6	2500.8	2109.9	1963.6	1933.8	1948.7	1948.7
20°	4049.7	4040.7	3737.8	3251.4	2599.3	1999.5	1772.7	1771.2	1811.5	1848.8	1851.7
22.5°	4151.1	4081.0	3645.3	2963.4	2102.4	1668.2	1629.4	1668.2	1713.0	1754.8	1759.2
25°	4272.0	4125.8	3521.4	2553.0	1690.6	1514.5	1530.9	1563.8	1592.1	1624.9	1626.4
27.5°	4392.8	4160.1	3346.9	2071.1	1466.8	1416.0	1433.9	1447.4	1454.8	1475.7	1475.7
30°	4533.1	4186.9	3094.7	1659.3	1363.8	1329.5	1319.0	1313.1	1319.0	1347.4	1348.9
32.5°	4709.2	4234.7	2750.0	1423.5	1316.1	1268.3	1214.6	1184.8	1205.6	1256.4	1265.3
35°	4909.1	4291.4	2336.7	1329.5	1299.6	1238.5	1140.0	1093.7	1101.2	1147.5	1154.9
37.5°	5159.8	4364.5	1929.3	1307.1	1316.1	1235.5	1105.7	1040.0	1007.2	1008.7	1007.2
40°	5480.6	4437.6	1607.0	1313.1	1351.9	1242.9	1089.3	986.3	917.7	920.6	926.6
42.5°	5816.3	4485.4	1402.6	1331.0	1395.1	1253.4	1083.3	934.1	874.4	925.1	971.4
45°	6208.8	4471.9	1296.7	1347.4	1428.0	1257.9	1060.9	928.1	878.9	1031.1	1117.6
47.5°	6659.4	4413.7	1237.0	1354.9	1436.9	1256.4	1044.5	947.5	916.2	1180.3	1278.8
50°	7148.8	4322.7	1189.2	1342.9	1432.4	1250.4	1062.4	971.4	931.1	1213.1	1289.2
52.5°	7684.5	4239.2	1140.0	1316.1	1410.1	1232.5	1084.8	960.9	889.3	1117.6	1175.8
55°	8318.7	4219.8	1084.8	1269.8	1372.8	1213.1	1072.8	928.1	843.1	990.8	1026.6
57.5°	9043.8	4340.6	1013.2	1213.1	1322.0	1174.3	1044.5	910.2	826.6	901.2	920.6
60°	9964.5	4607.7	937.1	1153.4	1259.4	1116.1	1019.1	914.7	831.1	887.8	892.3
62.5°	10683.7	4847.9	868.4	1080.3	1175.8	1046.0	992.3	919.2	844.5	905.7	898.3
65°	10944.8	4730.1	783.4	971.4	1057.9	968.4	955.0	922.1	844.5	916.2	899.8
67°	10409.1	4167.5	702.8	862.5	946.0	899.8	919.2	910.2	829.6	914.7	886.3
67.5°	10154.0	3969.1	681.9	844.5	916.2	878.9	910.2	904.2	825.2	911.7	878.9
70°	8373.9	2847.0	576.0	708.8	767.0	774.4	855.0	865.4	789.3	856.5	796.8
72.5°	5958.1	1781.6	496.9	549.1	619.2	662.5	780.4	813.2	741.6	744.6	695.3
75°	2948.5	956.5	443.2	423.8	482.0	552.1	680.4	741.6	671.5	620.7	604.3
77.5°	995.3	541.6	374.5	341.7	374.5	443.2	564.0	647.6	592.4	525.2	514.8
80°	514.8	393.9	292.5	274.6	295.4	343.2	441.7	538.7	505.8	508.8	419.3
82.5°	320.8	240.2	210.4	208.9	223.8	262.6	325.3	437.2	434.2	371.5	270.1
85°	149.2	138.8	134.3	138.8	143.2	149.2	211.9	311.9	329.8	199.9	177.6
87.5°	62.7	61.2	53.7	58.2	64.2	62.7	85.1	132.8	185.0	125.3	114.9
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)