

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: P196749

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196749  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-T2-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18811.2 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 191  
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

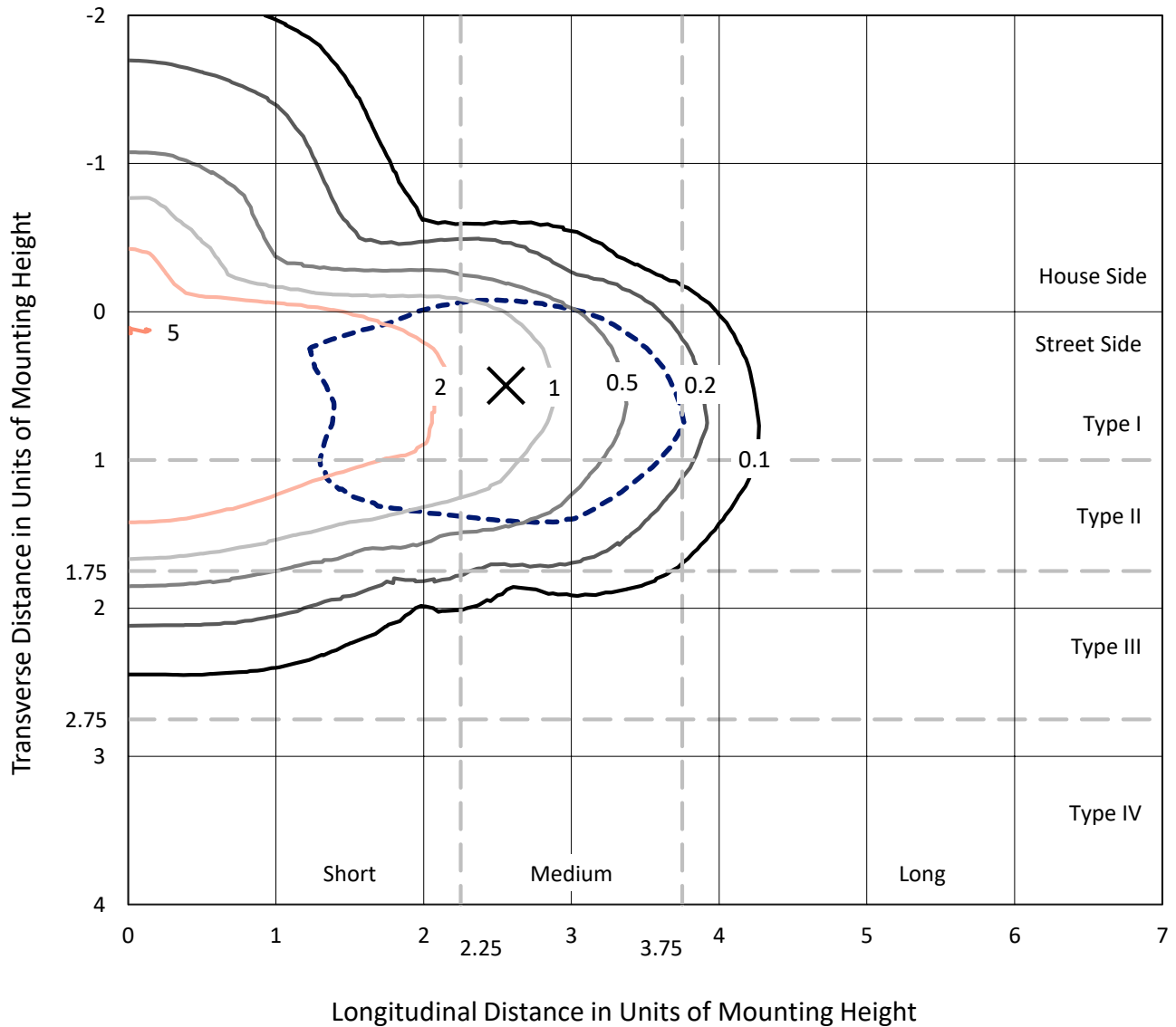


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### Iso-Footcandle Lines of Horizontal Illumination

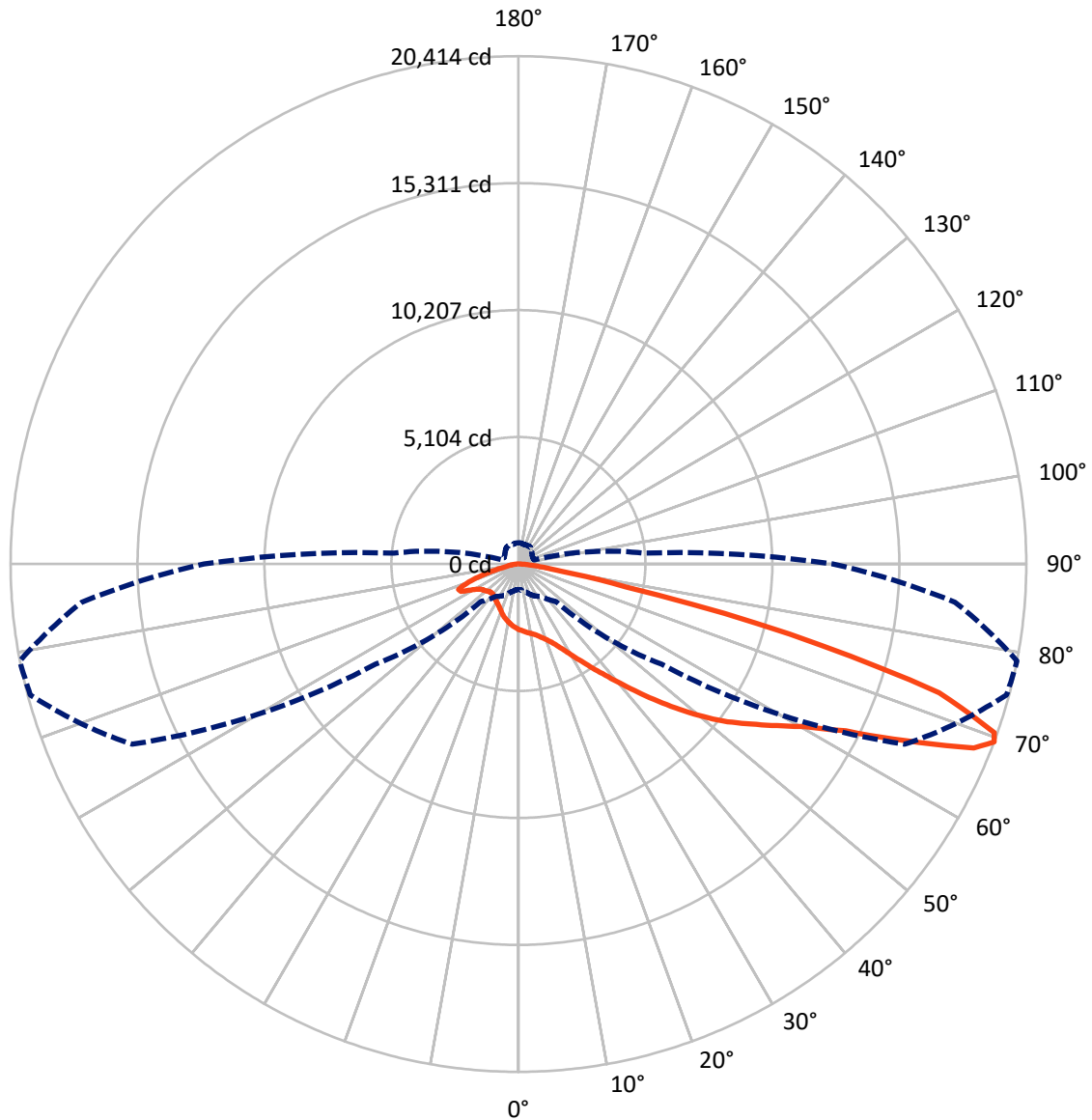
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3538.7	0.0	3538.7
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	15272.5	0.0	15272.5
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	18811.2	0.0	18811.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.7	1.3
10°-20°	701.6	3.7
20°-30°	1159.4	6.2
30°-40°	1877.3	10.0
40°-50°	2999.0	15.9
50°-60°	4294.9	22.8
60°-70°	4785.1	25.4
70°-80°	2393.9	12.7
80°-90°	355.3	1.9
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°	18811.2	100.0
0°-180°	18811.2	100.0

**Coefficient of Utilization**



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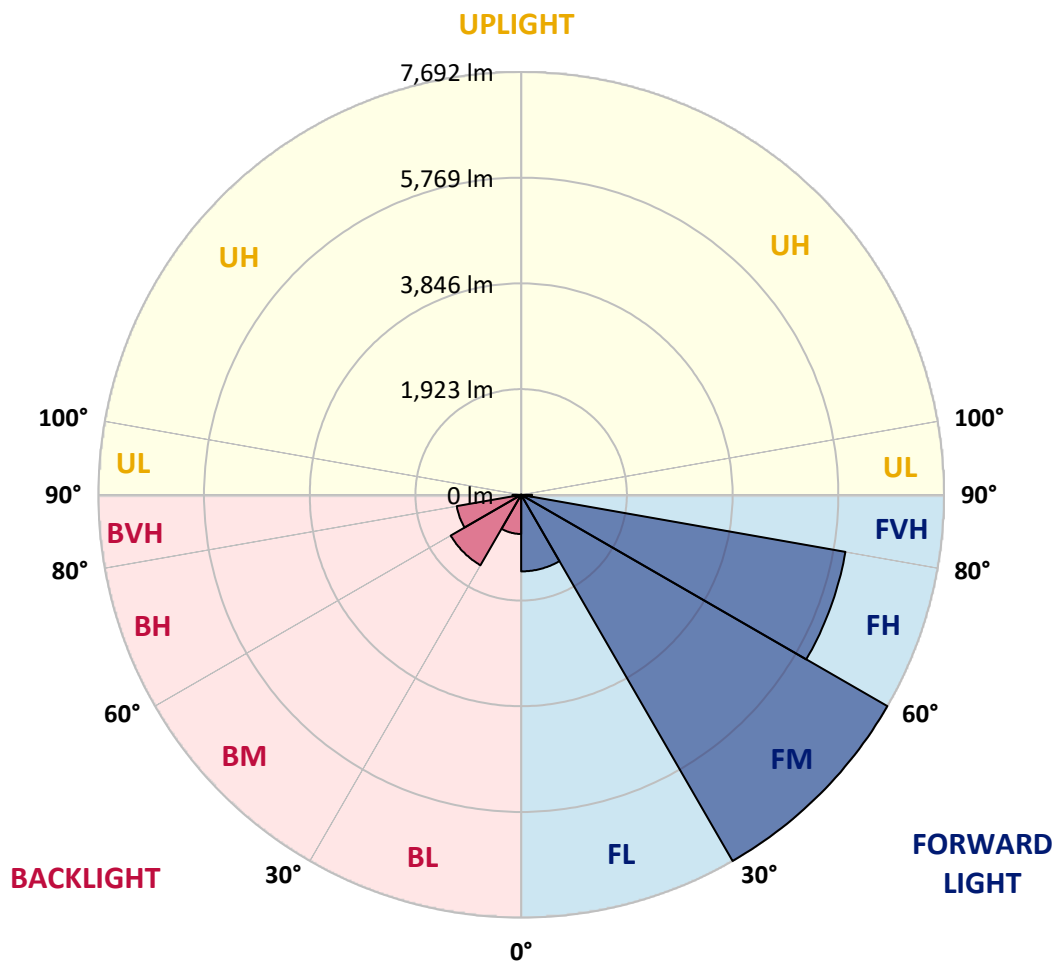
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1392.8	7.4			
FM (30°-60°)	7691.9	40.9			
FH (60°-80°)	5989.2	31.8			G3/7500
FVH (80°-90°)	198.5	1.1			G2/225
BL (0°-30°)	712.9	3.8	B2/1000		
BM (30°-60°)	1479.2	7.9	B2/2500		
BH (60°-80°)	1189.8	6.3	B3/2500		G3/2500
BVH (80°-90°)	156.8	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8
2.5°	2898.2	2892.1	2890.9	2872.4	2862.6	2841.7	2792.4	2742.0	2695.2	2670.6	2644.7
5°	3140.6	3128.4	3122.2	3091.5	3064.4	3017.6	2940.0	2860.1	2776.4	2733.3	2681.7
7.5°	3287.2	3288.3	3288.3	3263.8	3236.7	3180.1	3081.6	2972.1	2847.8	2791.1	2709.9
10°	3299.4	3300.7	3319.2	3325.3	3331.5	3302.0	3210.8	3073.0	2913.0	2839.2	2733.3
12.5°	3177.6	3186.2	3217.0	3261.3	3324.1	3356.0	3316.7	3181.3	2996.7	2906.9	2777.6
15°	3013.9	3022.5	3061.9	3129.6	3230.6	3337.6	3392.9	3305.6	3106.2	3000.4	2842.8
17.5°	2933.9	2943.8	2970.9	3025.0	3123.5	3267.4	3433.6	3438.5	3235.5	3113.6	2920.4
20°	2895.8	2903.1	2937.7	2981.9	3057.0	3194.8	3437.3	3578.8	3389.3	3247.7	3015.1
22.5°	2983.1	2985.6	3002.9	3027.5	3078.0	3183.9	3434.8	3724.0	3581.3	3416.3	3137.0
25°	3239.1	3223.1	3210.8	3180.1	3192.3	3267.4	3474.2	3879.1	3827.4	3637.9	3299.4
27.5°	3541.8	3539.5	3507.4	3436.1	3390.6	3438.5	3586.2	4052.7	4128.9	3919.6	3512.3
30°	3879.1	3880.4	3847.1	3759.7	3667.4	3672.3	3764.6	4253.3	4489.5	4259.4	3774.5
32.5°	4232.2	4254.4	4193.0	4105.5	3993.5	3957.8	4020.6	4495.7	4906.8	4660.6	4078.4
35°	4654.5	4658.2	4590.4	4462.4	4350.4	4293.8	4351.7	4798.4	5387.9	5131.9	4448.9
37.5°	5092.6	5095.0	5024.9	4861.2	4719.7	4682.8	4746.8	5166.5	5897.4	5668.5	4884.6
40°	5450.6	5476.5	5421.1	5267.3	5124.6	5102.4	5194.7	5606.9	6548.5	6303.5	5402.7
42.5°	5856.9	5886.4	5819.9	5659.8	5546.6	5539.2	5683.2	6109.1	7195.9	7038.3	5989.7
45°	6314.6	6356.4	6264.2	6084.4	5988.5	6151.0	6159.5	6665.4	7941.5	7860.3	6650.6
47.5°	6814.3	6848.7	6773.6	6580.4	6475.8	6710.9	6625.9	7267.2	8747.7	8741.5	7365.6
50°	7199.4	7237.7	7245.0	7160.1	7050.5	7080.1	7137.9	7899.7	9551.3	9647.3	8105.3
52.5°	7129.2	7166.2	7332.4	7555.2	7731.0	7654.8	7724.9	8571.7	10327.8	10531.0	8807.9
55°	6563.2	6582.9	6894.3	7423.4	8172.9	8537.2	8542.1	9302.7	11066.3	11350.5	9475.0
57.5°	5542.9	5545.5	5950.4	6730.6	7915.8	9109.5	9831.9	10220.7	11836.6	12256.2	10301.9
60°	3922.2	3932.0	4403.3	5423.6	6993.9	9040.5	11218.8	11863.7	12728.9	13274.1	11367.8
62.5°	2328.5	2350.6	2706.3	3524.7	5194.7	8154.4	12038.5	14786.6	14043.2	14766.9	13073.5
65°	1515.0	1533.5	1746.3	2157.4	3069.3	5933.1	11769.0	17617.2	16530.5	17115.0	15524.9
67.5°	1166.7	1181.4	1348.8	1597.4	1883.0	3207.2	9409.7	18210.4	19558.0	19740.1	17593.8
69°	1025.2	1037.4	1160.6	1399.3	1585.2	2122.9	7012.4	17133.5	20314.8	20414.4	17619.5
70°	950.1	960.0	1075.6	1282.3	1455.9	1694.6	5367.1	15883.1	20037.9	20292.6	17111.3
72.5°	782.8	791.4	873.7	1032.5	1190.1	1207.4	2377.7	11597.9	16872.6	17687.3	14480.1
75°	653.5	658.4	712.6	828.3	963.6	961.2	1214.6	6569.3	10295.8	11266.9	8940.9
77.5°	545.2	548.9	584.5	656.0	760.6	756.8	855.3	2835.5	4546.2	4386.1	3078.0
80°	481.2	483.7	502.1	520.6	587.0	583.3	633.8	1302.1	1849.8	1709.4	1164.2
82.5°	365.5	370.4	464.0	472.5	455.4	439.3	441.9	758.1	947.6	862.7	625.2
85°	206.7	208.0	297.8	348.3	396.3	297.8	286.7	391.3	467.6	409.8	273.2
87.5°	92.4	96.0	142.8	164.9	214.1	174.7	163.7	166.2	201.8	167.3	108.2
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°	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8	2639.8
2.5°	2620.1	2599.2	2550.0	2499.6	2449.0	2417.1	2383.8	2353.0	2340.8	2339.6	2316.2
5°	2631.2	2581.9	2470.0	2346.9	2230.0	2139.0	2062.6	2013.4	1965.3	1956.8	1935.8
7.5°	2634.9	2554.9	2372.8	2175.8	1997.4	1871.8	1795.5	1762.4	1739.0	1732.8	1725.4
10°	2633.7	2520.4	2264.4	1995.0	1791.9	1697.2	1668.8	1676.1	1686.0	1690.9	1690.9
12.5°	2653.4	2504.4	2156.1	1825.0	1659.0	1613.4	1635.6	1673.8	1703.3	1715.6	1718.0
15°	2689.0	2494.6	2036.8	1677.4	1565.4	1576.5	1630.7	1686.0	1727.8	1746.3	1751.2
17.5°	2733.3	2481.1	1898.9	1555.6	1511.3	1549.4	1619.5	1689.7	1740.2	1763.6	1767.3
20°	2782.5	2461.4	1756.2	1464.5	1463.3	1511.3	1581.4	1660.2	1714.4	1740.2	1739.0
22.5°	2849.1	2442.9	1623.3	1398.1	1410.3	1454.7	1512.4	1583.9	1634.3	1657.7	1652.8
25°	2937.7	2425.7	1503.9	1339.0	1350.0	1379.6	1420.2	1474.4	1510.1	1522.3	1513.7
27.5°	3057.0	2412.1	1410.3	1284.8	1283.6	1297.1	1321.7	1351.3	1368.5	1364.8	1351.3
30°	3203.5	2398.6	1341.4	1236.9	1219.6	1218.4	1229.5	1246.6	1257.8	1235.6	1224.6
32.5°	3367.2	2375.2	1279.9	1195.0	1164.2	1153.1	1158.0	1181.4	1227.0	1204.8	1196.2
35°	3560.3	2348.1	1218.4	1149.4	1126.0	1105.1	1108.9	1159.4	1297.1	1281.2	1272.6
37.5°	3792.9	2323.5	1161.8	1100.2	1099.0	1073.2	1070.7	1131.0	1315.6	1281.2	1273.8
40°	4072.3	2318.6	1111.2	1046.0	1065.8	1055.9	1047.4	1084.2	1213.5	1143.3	1129.7
42.5°	4409.4	2340.8	1074.3	994.4	1027.6	1051.0	1035.0	1043.7	1096.5	1033.8	1022.6
45°	4803.4	2401.1	1047.4	948.8	987.0	1047.4	1028.9	1021.5	1030.1	995.6	988.2
47.5°	5262.4	2508.1	1028.9	910.6	948.8	1037.4	1026.4	1011.6	1007.9	988.2	983.4
50°	5753.4	2652.2	1016.5	876.3	914.4	1020.3	1025.2	1004.2	998.1	989.5	987.0
52.5°	6240.8	2808.4	1001.8	846.8	886.1	999.2	1026.4	996.9	988.2	983.4	980.8
55°	6725.7	2970.9	974.7	820.9	865.2	974.7	1025.2	987.0	977.1	977.1	977.1
57.5°	7354.6	3218.2	939.0	799.9	838.1	942.7	1009.1	975.9	962.3	963.6	964.9
60°	8262.7	3633.0	899.6	776.5	802.4	905.8	984.5	956.2	940.2	945.2	946.4
62.5°	9780.3	4357.8	845.4	743.3	765.5	866.4	952.5	929.1	914.4	923.0	924.3
65°	11803.4	5235.2	774.1	701.5	727.3	822.0	911.9	897.1	881.1	902.1	900.9
67.5°	13037.8	5492.5	699.0	657.2	690.4	775.3	861.5	855.3	844.2	881.1	878.7
69°	12632.9	5027.3	656.0	628.9	664.6	743.3	829.5	827.0	818.4	854.1	851.6
70°	12004.0	4592.9	628.9	610.4	651.0	723.7	808.5	808.5	799.9	830.7	824.6
72.5°	9642.3	3406.4	566.1	563.7	604.3	669.5	751.9	758.1	753.2	764.3	758.1
75°	5661.2	2052.8	504.6	512.0	547.6	611.7	689.2	694.2	689.2	687.9	689.2
77.5°	1963.0	920.5	445.6	456.6	487.3	552.6	620.3	630.1	622.7	614.1	616.6
80°	768.0	535.4	381.6	397.4	423.4	486.1	551.3	557.6	546.4	545.2	535.4
82.5°	461.5	326.1	296.6	322.5	354.4	422.1	476.3	473.8	465.2	515.7	451.7
85°	200.6	181.0	216.6	242.4	258.4	316.3	402.4	391.3	370.4	326.1	318.7
87.5°	81.2	93.5	119.4	144.0	155.0	204.4	275.7	265.8	269.6	221.5	220.2
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)