

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: P195551

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7050-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195551  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)  
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-AFL-7050-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33798 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B3 - U0 - G3

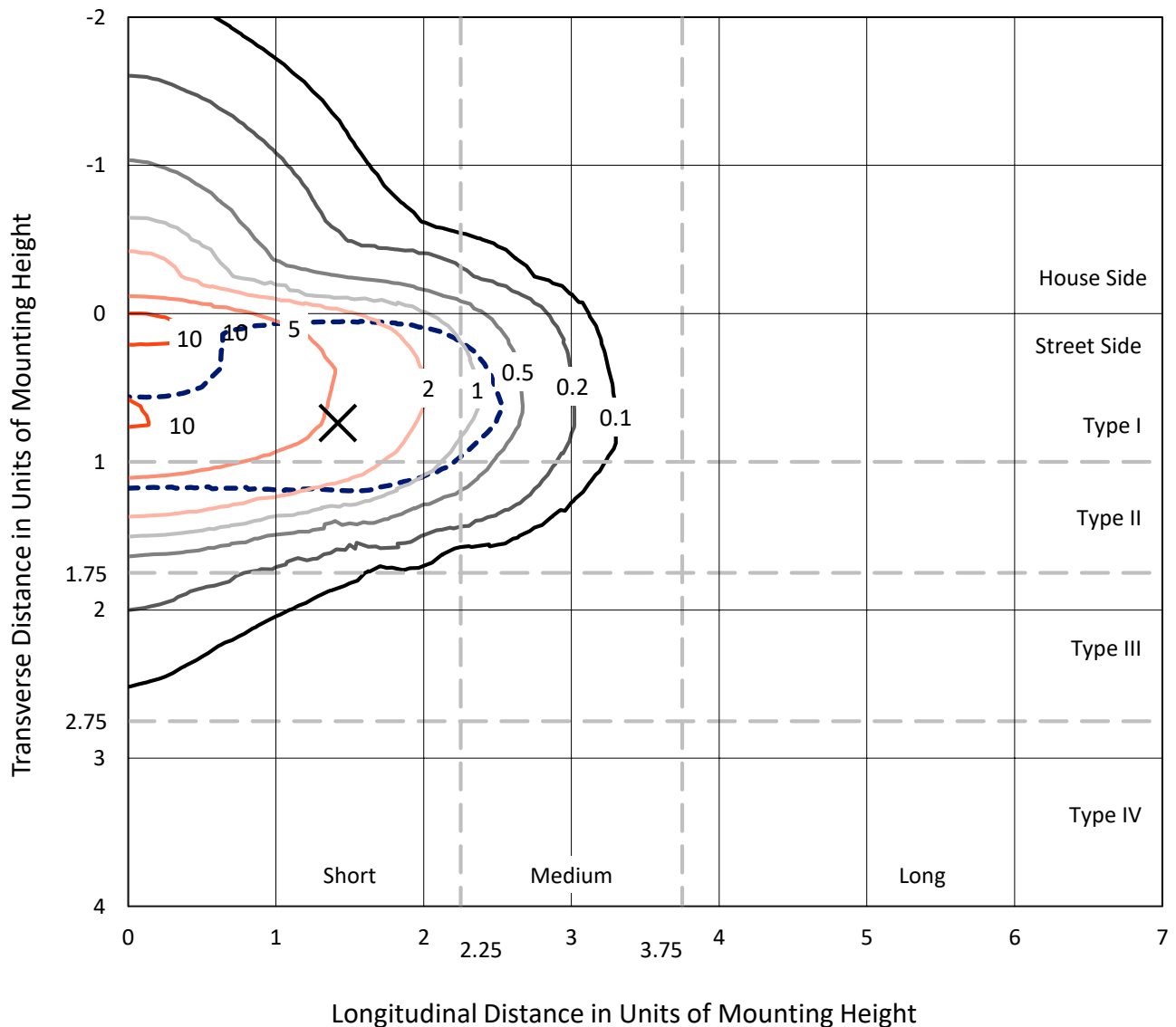
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

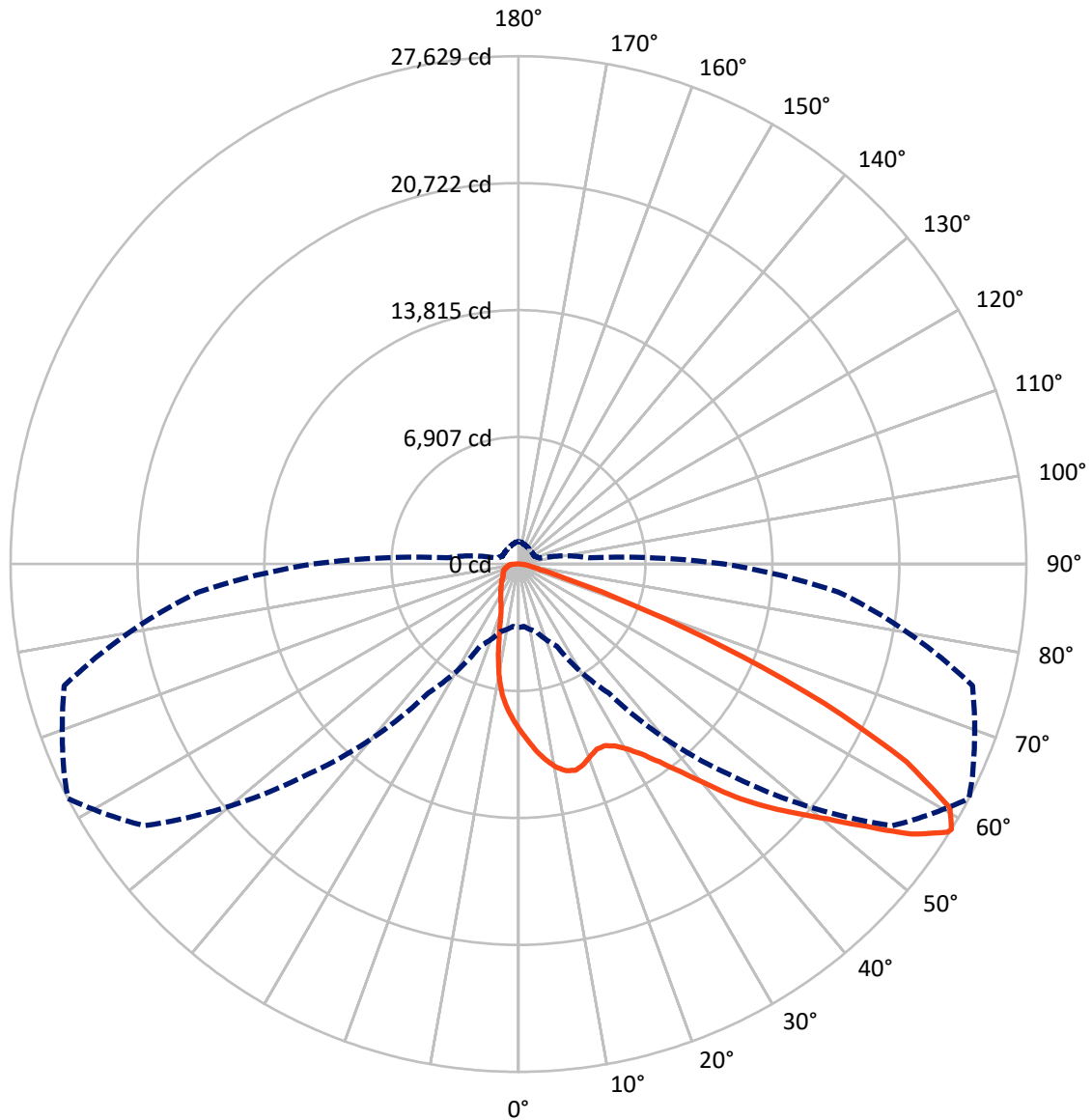
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.7 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5189.3	0.0	5189.3
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	28608.7	0.0	28608.7
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	33798.0	0.0	33798.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	806.6	2.4
10°-20°	2035.6	6.0
20°-30°	3298.9	9.8
30°-40°	5267.0	15.6
40°-50°	7661.1	22.7
50°-60°	8016.6	23.7
60°-70°	4887.2	14.5
70°-80°	1366.7	4.0
80°-90°	458.1	1.4
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°	33798.0	100.0
0°-180°	33798.0	100.0

**Coefficient of Utilization**



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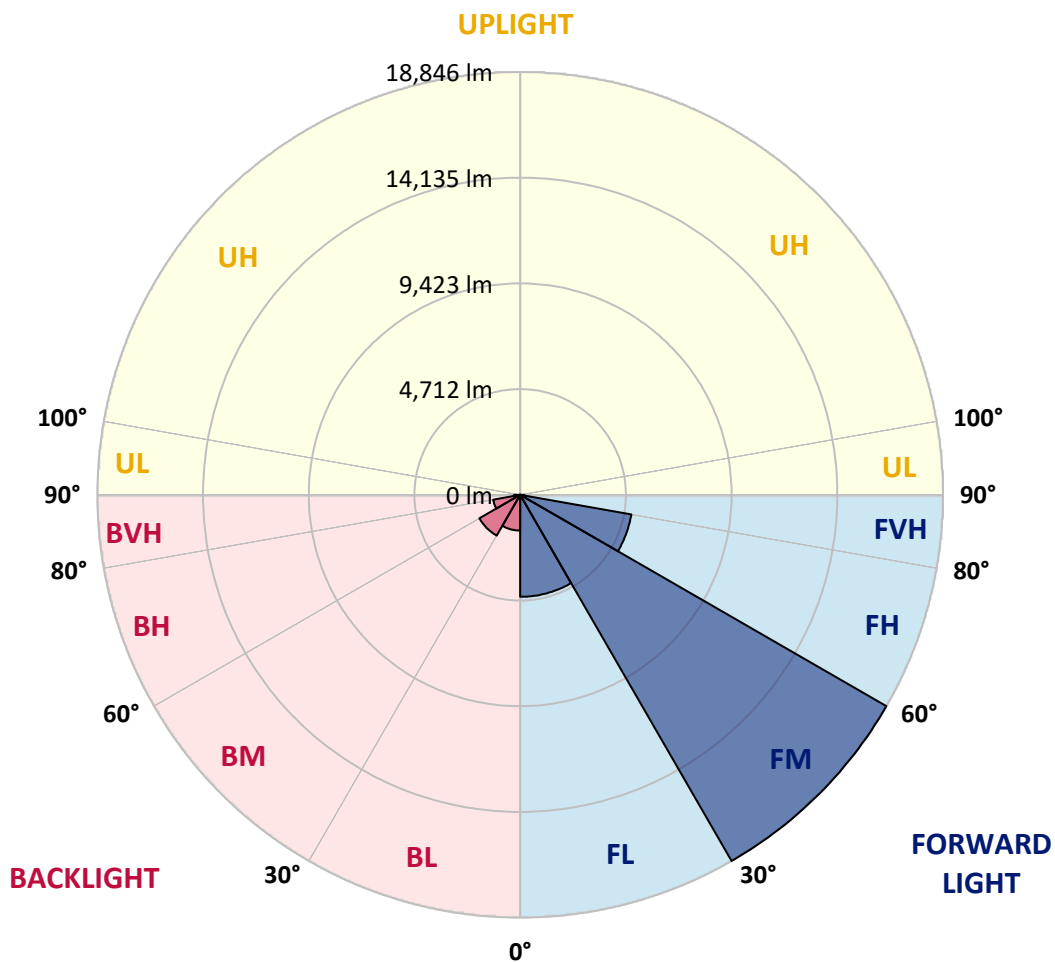
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4545.9	13.5			
FM (30°-60°)	18846.2	55.8			
FH (60°-80°)	5032.3	14.9			G3/7500
FVH (80°-90°)	184.3	0.5			G2/225
BL (0°-30°)	1595.2	4.7	B3/2500		
BM (30°-60°)	2098.6	6.2	B2/2500		
BH (60°-80°)	1221.6	3.6	B3/2500		G3/2500
BVH (80°-90°)	273.8	0.8			G3/500
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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8
2.5°	10242.7	10236.3	10149.7	10092.7	10025.1	9868.8	9712.5	9596.3	9537.1	9311.1	9091.4
5°	11089.7	11064.3	11015.8	10954.5	10865.8	10669.3	10422.2	10208.9	10124.4	9723.0	9319.6
7.5°	10641.9	10682.0	10832.0	11001.0	11178.4	11191.1	11015.8	10762.3	10669.3	10132.8	9541.4
10°	9402.0	9385.1	9573.0	9902.6	10487.7	11066.5	11355.8	11231.2	11134.1	10521.5	9763.2
12.5°	9026.0	9021.7	9053.4	9137.9	9505.5	10299.7	11269.2	11539.6	11505.8	10933.4	9999.7
15°	9140.0	9144.2	9142.1	9152.7	9254.1	9632.2	10785.5	11643.1	11748.7	11341.1	10240.5
17.5°	9505.5	9490.7	9444.2	9393.5	9408.3	9543.5	10263.8	11465.7	11782.5	11704.4	10443.3
20°	10069.4	10069.4	9944.8	9803.3	9710.3	9739.9	10046.2	11161.5	11626.2	12012.8	10595.4
22.5°	10777.1	10787.6	10603.9	10346.2	10134.9	10054.7	10170.8	10935.5	11436.1	12297.9	10730.6
25°	11655.8	11653.7	11385.4	11015.8	10682.0	10489.8	10487.7	10946.1	11377.0	12631.7	10872.1
27.5°	12743.6	12644.4	12331.7	11805.8	11334.7	11041.1	10908.0	11212.2	11501.6	13041.5	11062.2
30°	13970.9	13869.5	13459.7	12783.8	12145.9	11717.1	11497.4	11672.7	11881.8	13563.2	11349.5
32.5°	15185.5	15208.7	14727.1	13964.6	13145.0	12540.9	12215.6	12323.3	12469.0	14201.1	11738.2
35°	16964.1	16962.0	16332.5	15379.8	14406.0	13569.6	13157.7	13214.7	13347.8	15101.0	12283.2
37.5°	18290.6	18269.5	17863.9	17021.1	15924.8	14921.5	14325.8	14334.2	14448.3	16231.1	13001.3
40°	18425.8	18421.6	18419.5	18299.1	17549.2	16602.9	15857.2	15703.0	15749.5	17430.9	13763.9
42.5°	17392.9	17547.1	17990.7	18670.8	18879.9	18383.5	17678.0	17333.7	17232.3	18808.1	14570.8
45°	15920.6	15998.7	16776.1	18305.4	19549.6	20056.5	19526.3	18799.7	18626.5	20147.3	15227.7
47.5°	15236.2	15202.4	15652.3	17318.9	19484.1	21387.3	21425.3	20233.9	19940.3	21302.8	15787.5
50°	13768.1	13723.8	14292.0	15867.8	18770.1	22048.4	23375.0	21797.1	21254.2	22401.2	16294.5
52.5°	10842.6	10800.3	11562.9	13592.8	17173.2	21801.3	25018.4	23715.1	22789.9	23459.5	16767.6
55°	7055.2	7059.4	7786.0	9879.3	13897.0	20360.7	25789.4	25930.9	24893.7	24517.7	17150.0
57.5°	3884.6	3848.7	4366.2	5652.6	9560.4	17088.7	25147.2	27527.8	26987.0	25426.0	17426.7
58°	3453.6	3411.4	3810.6	4919.6	8571.8	16165.6	24824.0	27629.2	27255.3	25576.0	17466.8
60°	2460.9	2389.0	2327.8	2773.5	4938.6	11655.8	22669.5	26972.3	27333.5	25876.0	17428.8
62.5°	2074.3	1991.9	1772.2	1755.3	2325.7	5701.2	17927.3	23687.6	24699.4	25185.2	16816.2
65°	1926.4	1844.1	1554.7	1451.2	1577.9	2460.9	11085.5	18290.6	19642.5	22783.5	15274.2
67.5°	1820.8	1723.7	1413.1	1278.0	1303.3	1472.3	4704.1	11962.1	13529.4	17766.7	12253.6
70°	1725.8	1618.0	1301.2	1144.9	1123.8	1119.5	1837.7	6246.1	7756.5	11626.2	8208.5
72.5°	1618.0	1512.4	1201.9	1035.0	988.6	908.3	1104.7	2581.3	3538.1	5699.0	3762.0
75°	1461.7	1375.1	1092.1	944.2	863.9	737.2	815.4	1237.8	1525.1	2182.0	1746.9
77.5°	1286.4	1216.7	980.1	868.2	760.4	602.0	623.1	838.6	942.1	1229.4	1011.8
80°	910.4	935.8	855.5	764.7	669.6	485.8	479.5	614.7	675.9	825.9	680.2
82.5°	627.4	646.4	697.1	604.1	540.8	378.1	352.8	426.7	458.4	498.5	329.5
85°	447.8	435.1	483.7	433.0	397.1	240.8	226.0	270.4	289.4	304.2	158.4
87.5°	272.5	270.4	278.8	223.9	207.0	122.5	112.0	128.9	137.3	133.1	76.0
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°	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8	9023.8
2.5°	9009.1	8905.6	8679.5	8497.9	8301.4	8151.5	8001.5	7917.0	7824.0	7771.2	7764.9
5°	9108.3	8897.1	8415.5	7967.7	7507.2	7093.2	6687.6	6387.7	6142.6	6003.2	5994.8
7.5°	9218.2	8886.5	8143.0	7367.8	6548.2	5732.8	5012.5	4503.5	4176.1	4024.0	4013.4
10°	9302.7	8842.2	7811.4	6605.2	5306.2	4228.9	3574.1	3274.1	3174.8	3149.5	3145.2
12.5°	9404.1	8810.5	7393.1	5627.2	4055.7	3219.2	3020.6	3001.6	3022.7	3035.4	3037.5
15°	9499.1	8749.2	6829.1	4543.6	3174.8	2877.0	2881.2	2921.3	2963.6	2982.6	2984.7
17.5°	9543.5	8599.3	6087.7	3580.4	2777.7	2722.8	2771.4	2824.2	2862.2	2877.0	2877.0
20°	9543.5	8358.5	5228.0	2900.2	2570.7	2581.3	2640.4	2680.5	2689.0	2676.3	2670.0
22.5°	9503.3	8060.6	4391.5	2530.6	2401.7	2441.8	2488.3	2460.9	2361.6	2285.5	2270.7
25°	9467.4	7707.9	3586.7	2304.5	2253.8	2306.7	2287.6	2099.6	1947.6	1869.4	1856.7
27.5°	9408.3	7281.2	2915.0	2118.7	2110.2	2152.5	1964.5	1782.8	1706.8	1664.5	1656.1
30°	9393.5	6818.6	2439.7	1953.9	1968.7	1909.5	1694.1	1634.9	1618.0	1594.8	1584.2
32.5°	9442.1	6356.0	2141.9	1818.7	1833.5	1639.2	1556.8	1565.2	1563.1	1533.5	1523.0
35°	9575.2	5906.1	1951.8	1696.2	1653.9	1468.1	1478.6	1504.0	1504.0	1468.1	1455.4
37.5°	9807.5	5487.8	1831.4	1592.7	1446.9	1379.3	1406.8	1440.6	1440.6	1415.3	1404.7
40°	10054.7	5080.1	1740.6	1510.3	1316.0	1318.1	1345.5	1370.9	1381.5	1385.7	1377.2
42.5°	10278.6	4657.7	1643.4	1421.6	1256.8	1271.6	1284.3	1303.3	1347.7	1377.2	1373.0
45°	10409.5	4233.1	1537.8	1311.8	1216.7	1223.0	1218.8	1252.6	1305.4	1349.8	1349.8
47.5°	10529.9	3884.6	1451.2	1201.9	1176.6	1176.6	1163.9	1197.7	1246.3	1299.1	1303.3
50°	10644.0	3658.5	1389.9	1117.4	1125.9	1119.5	1115.3	1147.0	1212.5	1275.8	1286.4
52.5°	10760.2	3582.5	1335.0	1056.2	1073.1	1064.6	1068.8	1113.2	1187.1	1252.6	1263.2
55°	10922.8	3631.1	1278.0	1013.9	1022.4	1020.3	1037.2	1087.8	1153.3	1218.8	1223.0
57.5°	11123.5	3808.5	1229.4	982.2	973.8	986.5	1013.9	1062.5	1125.9	1204.0	1210.4
58°	11163.6	3850.8	1220.9	973.8	963.2	982.2	1009.7	1056.2	1121.6	1204.0	1210.4
60°	11224.9	4000.7	1199.8	956.9	927.3	961.1	994.9	1041.4	1113.2	1214.6	1227.3
62.5°	10929.2	4030.3	1193.5	937.9	889.3	931.5	971.7	1024.5	1104.7	1250.5	1278.0
65°	9904.7	3726.1	1149.1	906.2	857.6	908.3	950.5	1011.8	1130.1	1358.2	1370.9
67.5°	7950.8	3094.6	1041.4	857.6	821.7	880.8	933.6	1011.8	1140.7	1375.1	1383.6
70°	5466.7	2325.7	906.2	804.8	779.4	847.0	927.3	1035.0	1104.7	1301.2	1275.8
72.5°	2855.9	1618.0	794.2	743.5	728.8	817.5	988.6	1011.8	1062.5	1214.6	1189.2
75°	1438.5	1100.5	699.2	673.8	671.7	806.9	1106.9	973.8	1018.1	1142.8	1197.7
77.5°	849.2	861.8	623.1	608.3	618.9	787.9	1109.0	935.8	967.4	1051.9	1111.1
80°	580.9	711.9	564.0	559.8	568.2	724.5	1022.4	889.3	908.3	994.9	1058.3
82.5°	327.4	392.9	494.3	521.7	517.5	593.6	883.0	809.0	832.3	1176.6	1244.2
85°	158.4	236.6	414.0	487.9	441.5	395.0	718.2	718.2	724.5	842.8	853.4
87.5°	59.1	105.6	278.8	386.6	308.4	236.6	487.9	509.1	566.1	583.0	595.7
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)