

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: P196986

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196986  
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-06-D-UNV-AFL-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30118 lumens  
Efficiency: N/A  
Efficacy: 90.4 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

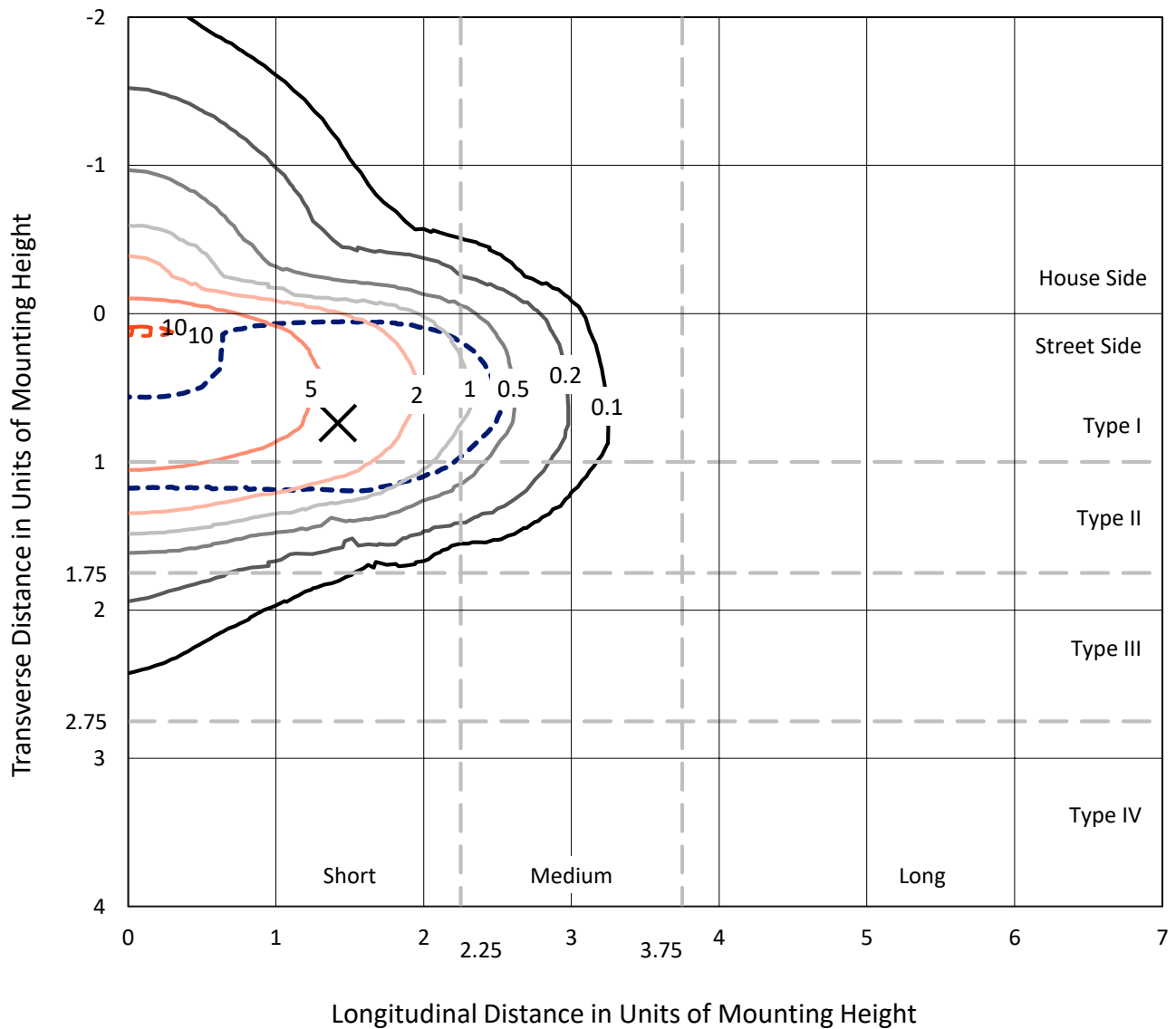
Input Watts (W): 333  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

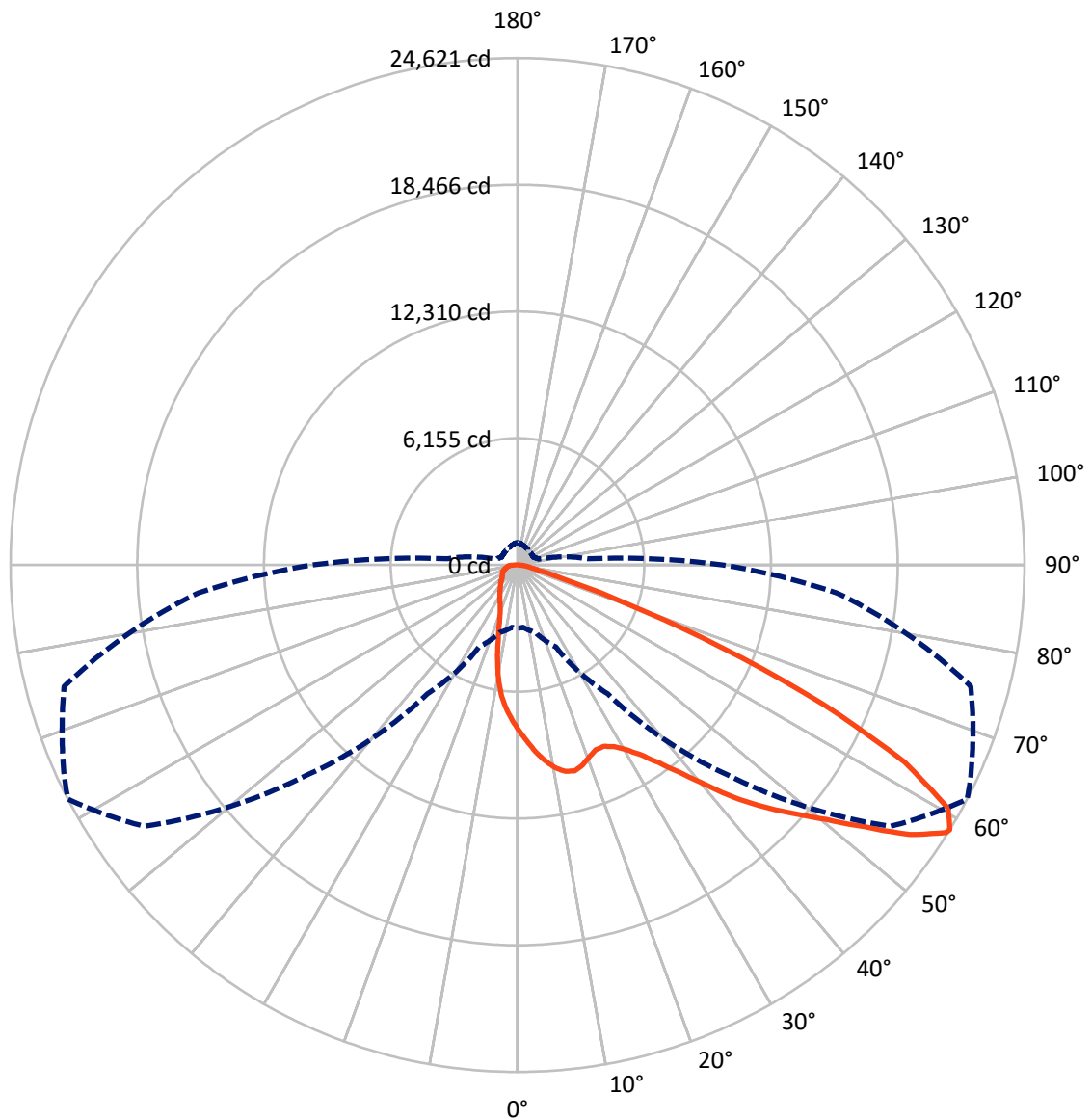
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.5 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	4624.3	0.0	4624.3
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	25493.7	0.0	25493.7
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	30118.0	0.0	30118.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	718.8	2.4
10°-20°	1814.0	6.0
20°-30°	2939.8	9.8
30°-40°	4693.6	15.6
40°-50°	6826.9	22.7
50°-60°	7143.8	23.7
60°-70°	4355.1	14.5
70°-80°	1217.9	4.0
80°-90°	408.3	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°	30118.0	100.0
0°-180°	30118.0	100.0



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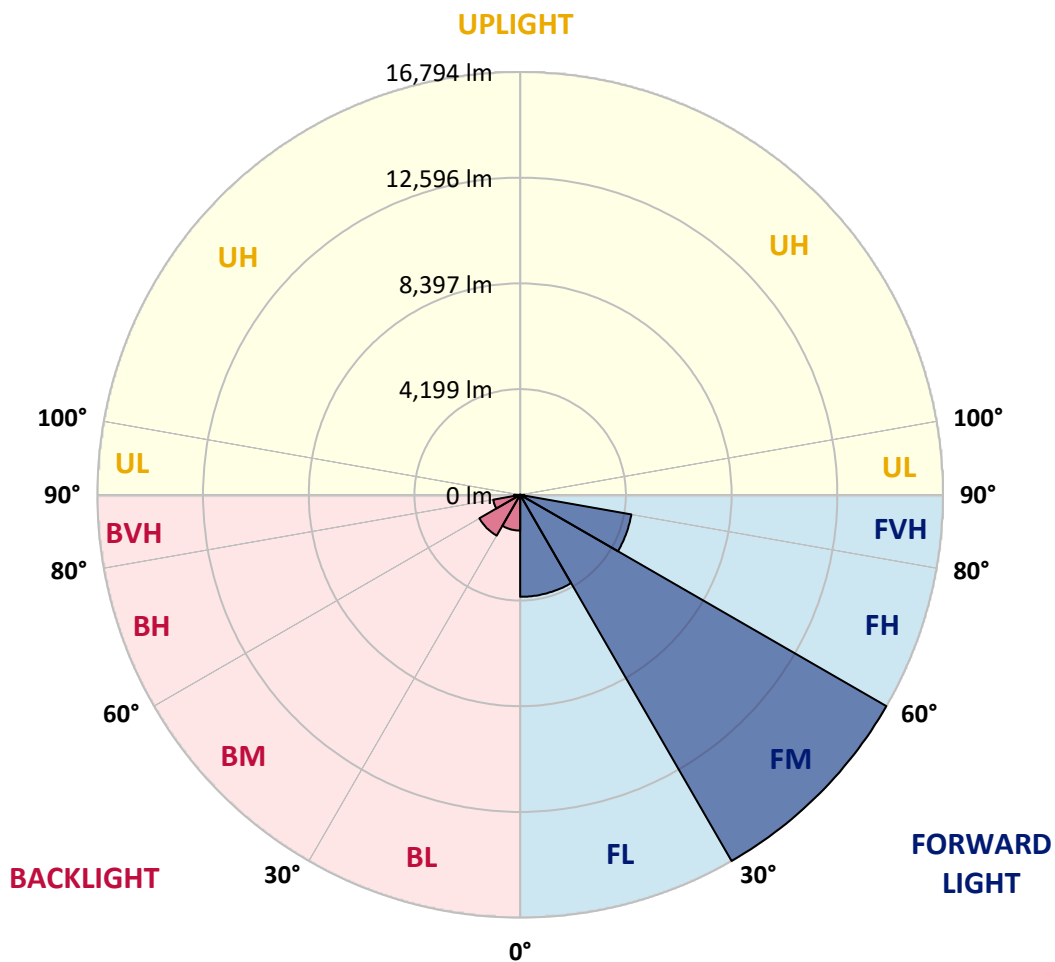
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4051.0	13.5			
FM	(30°-60°)	16794.2	55.8			
FH	(60°-80°)	4484.4	14.9			G2/5000
FVH	(80°-90°)	164.2	0.5			G2/225
BL	(0°-30°)	1421.5	4.7	B3/2500		
BM	(30°-60°)	1870.1	6.2	B2/2500		
BH	(60°-80°)	1088.6	3.6	B3/2500		G3/2500
BVH	(80°-90°)	244.0	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°	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3
2.5°	9127.4	9121.8	9044.6	8993.8	8933.5	8794.2	8654.9	8551.4	8498.7	8297.3	8101.5
5°	9882.2	9859.6	9816.3	9761.8	9682.7	9507.6	9287.4	9097.3	9022.0	8664.4	8304.8
7.5°	9483.2	9518.9	9652.6	9803.2	9961.3	9972.6	9816.3	9590.5	9507.6	9029.5	8502.5
10°	8378.2	8363.2	8530.7	8824.4	9345.8	9861.5	10119.4	10008.3	9921.8	9375.9	8700.1
12.5°	8043.2	8039.4	8067.7	8143.0	8470.5	9178.2	10042.2	10283.2	10253.0	9742.9	8910.9
15°	8144.8	8148.6	8146.7	8156.1	8246.5	8583.4	9611.2	10375.4	10469.5	10106.2	9125.5
17.5°	8470.5	8457.3	8415.9	8370.7	8383.9	8504.4	9146.2	10217.3	10499.6	10430.0	9306.2
20°	8973.1	8973.1	8862.0	8735.9	8653.1	8679.4	8952.4	9946.2	10360.3	10704.8	9441.8
22.5°	9603.6	9613.1	9449.3	9219.6	9031.4	8959.9	9063.4	9744.8	10190.9	10958.9	9562.2
25°	10386.7	10384.8	10145.8	9816.3	9518.9	9347.6	9345.8	9754.2	10138.2	11256.3	9688.3
27.5°	11356.1	11267.6	10989.0	10520.3	10100.6	9838.9	9720.3	9991.4	10249.3	11621.5	9857.8
30°	12449.7	12359.4	11994.2	11391.9	10823.4	10441.3	10245.5	10401.7	10588.1	12086.4	10113.8
32.5°	13532.1	13552.8	13123.6	12444.1	11713.7	11175.4	10885.5	10981.5	11111.4	12654.9	10460.1
35°	15117.0	15115.1	14554.2	13705.2	12837.5	12092.1	11725.0	11775.8	11894.4	13456.8	10945.7
37.5°	16299.1	16280.3	15918.9	15167.8	14190.9	13296.8	12766.0	12773.5	12875.1	14463.8	11585.7
40°	16419.6	16415.8	16413.9	16306.6	15638.4	14795.1	14130.6	13993.2	14034.6	15533.0	12265.3
42.5°	15499.1	15636.5	16031.8	16637.9	16824.3	16381.9	15753.2	15446.4	15356.0	16760.3	12984.3
45°	14187.1	14256.8	14949.5	16312.3	17421.0	17872.7	17400.2	16752.7	16598.4	17953.7	13569.7
47.5°	13577.2	13547.1	13948.1	15433.2	17362.6	19058.6	19092.5	18030.8	17769.2	18983.3	14068.5
50°	12269.0	12229.5	12735.8	14140.1	16726.4	19647.7	20829.8	19423.8	18940.0	19962.1	14520.3
52.5°	9662.0	9624.3	10303.9	12112.8	15303.3	19427.5	22294.3	21132.9	20308.4	20905.1	14941.9
55°	6287.0	6290.7	6938.3	8803.7	12383.8	18143.8	22981.4	23107.5	22183.2	21848.2	15282.6
57.5°	3461.6	3429.6	3890.8	5037.1	8519.4	15228.0	22409.1	24530.5	24048.6	22657.6	15529.2
58°	3077.6	3040.0	3395.7	4383.9	7638.5	14405.5	22121.1	24620.9	24287.7	22791.2	15565.0
60°	2192.9	2128.9	2074.3	2471.5	4400.9	10386.7	20201.2	24035.5	24357.3	23058.5	15531.1
62.5°	1848.4	1775.0	1579.3	1564.2	2072.4	5080.4	15975.3	21108.4	22010.1	22443.0	14985.2
65°	1716.7	1643.3	1385.4	1293.2	1406.1	2192.9	9878.5	16299.1	17503.8	20302.8	13611.1
67.5°	1622.6	1536.0	1259.3	1138.8	1161.4	1312.0	4191.9	10659.6	12056.3	15832.3	10919.4
70°	1537.9	1441.9	1159.5	1020.2	1001.4	997.6	1637.6	5566.0	6911.9	10360.3	7314.7
72.5°	1441.9	1347.7	1071.0	922.3	880.9	809.4	984.5	2300.2	3152.9	5078.5	3352.4
75°	1302.6	1225.4	973.2	841.4	769.9	656.9	726.6	1103.0	1359.0	1944.4	1556.7
77.5°	1146.3	1084.2	873.4	773.6	677.6	536.5	555.3	747.3	839.5	1095.5	901.6
80°	811.3	833.9	762.3	681.4	596.7	432.9	427.3	547.8	602.3	736.0	606.1
82.5°	559.1	576.0	621.2	538.3	481.9	336.9	314.3	380.2	408.5	444.2	293.6
85°	399.1	387.8	431.1	385.9	353.9	214.6	201.4	240.9	257.9	271.1	141.2
87.5°	242.8	240.9	248.5	199.5	184.5	109.2	99.8	114.8	122.4	118.6	67.8
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°	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3	8041.3
2.5°	8028.1	7935.9	7734.5	7572.6	7397.6	7263.9	7130.3	7055.0	6972.1	6925.1	6919.4
5°	8116.6	7928.4	7499.2	7100.1	6689.8	6320.9	5959.5	5692.2	5473.8	5349.6	5342.0
7.5°	8214.5	7919.0	7256.4	6565.6	5835.2	5108.6	4466.8	4013.1	3721.4	3585.8	3576.4
10°	8289.8	7879.4	6960.9	5886.0	4728.4	3768.4	3184.9	2917.6	2829.1	2806.6	2802.8
12.5°	8380.1	7851.2	6588.2	5014.5	3614.1	2868.7	2691.7	2674.8	2693.6	2704.9	2706.8
15°	8464.8	7796.6	6085.6	4048.9	2829.1	2563.7	2567.5	2603.3	2640.9	2657.8	2659.7
17.5°	8504.4	7663.0	5424.9	3190.5	2475.3	2426.3	2469.6	2516.7	2550.6	2563.7	2563.7
20°	8504.4	7448.4	4658.8	2584.4	2290.8	2300.2	2352.9	2388.7	2396.2	2384.9	2379.3
22.5°	8468.6	7183.0	3913.4	2255.0	2140.2	2176.0	2217.4	2192.9	2104.4	2036.7	2023.5
25°	8436.6	6868.6	3196.2	2053.6	2008.4	2055.5	2038.6	1871.0	1735.5	1665.9	1654.6
27.5°	8383.9	6488.4	2597.6	1888.0	1880.4	1918.1	1750.6	1588.7	1520.9	1483.3	1475.7
30°	8370.7	6076.2	2174.1	1741.2	1754.3	1701.6	1509.6	1456.9	1441.9	1421.2	1411.7
32.5°	8414.0	5663.9	1908.7	1620.7	1633.9	1460.7	1387.3	1394.8	1392.9	1366.6	1357.2
35°	8532.6	5263.0	1739.3	1511.5	1473.9	1308.2	1317.6	1340.2	1340.2	1308.2	1296.9
37.5°	8739.7	4890.3	1632.0	1419.3	1289.4	1229.2	1253.6	1283.7	1283.7	1261.2	1251.7
40°	8959.9	4527.0	1551.0	1345.9	1172.7	1174.6	1199.0	1221.6	1231.0	1234.8	1227.3
42.5°	9159.4	4150.5	1464.5	1266.8	1120.0	1133.2	1144.5	1161.4	1200.9	1227.3	1223.5
45°	9276.1	3772.2	1370.3	1168.9	1084.2	1089.9	1086.1	1116.2	1163.3	1202.8	1202.8
47.5°	9383.4	3461.6	1293.2	1071.0	1048.5	1048.5	1037.2	1067.3	1110.6	1157.6	1161.4
50°	9485.1	3260.2	1238.6	995.8	1003.3	997.6	993.9	1022.1	1080.5	1136.9	1146.3
52.5°	9588.6	3192.4	1189.6	941.2	956.2	948.7	952.5	992.0	1057.9	1116.2	1125.6
55°	9733.5	3235.7	1138.8	903.5	911.0	909.2	924.2	969.4	1027.8	1086.1	1089.9
57.5°	9912.3	3393.8	1095.5	875.3	867.8	879.0	903.5	946.8	1003.3	1072.9	1078.6
58°	9948.1	3431.5	1088.0	867.8	858.3	875.3	899.8	941.2	999.5	1072.9	1078.6
60°	10002.7	3565.1	1069.2	852.7	826.3	856.5	886.6	928.0	992.0	1082.3	1093.6
62.5°	9739.2	3591.5	1063.5	835.8	792.5	830.1	865.9	912.9	984.5	1114.3	1138.8
65°	8826.2	3320.4	1024.0	807.5	764.2	809.4	847.0	901.6	1007.0	1210.3	1221.6
67.5°	7085.1	2757.6	928.0	764.2	732.2	784.9	832.0	901.6	1016.5	1225.4	1232.9
70°	4871.5	2072.4	807.5	717.2	694.6	754.8	826.3	922.3	984.5	1159.5	1136.9
72.5°	2544.9	1441.9	707.8	662.6	649.4	728.5	880.9	901.6	946.8	1082.3	1059.8
75°	1281.9	980.7	623.1	600.5	598.6	719.0	986.3	867.8	907.3	1018.3	1067.3
77.5°	756.7	768.0	555.3	542.1	551.5	702.1	988.2	833.9	862.1	937.4	990.1
80°	517.6	634.3	502.6	498.8	506.3	645.6	911.0	792.5	809.4	886.6	943.0
82.5°	291.8	350.1	440.5	464.9	461.2	528.9	786.8	720.9	741.6	1048.5	1108.7
85°	141.2	210.8	368.9	434.8	393.4	352.0	640.0	640.0	645.6	751.0	760.5
87.5°	52.7	94.1	248.5	344.5	274.8	210.8	434.8	453.6	504.5	519.5	530.8
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)