

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: P195534

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195534  
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-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24318 lumens  
Efficiency: N/A  
Efficacy: 126.0 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 - G2

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

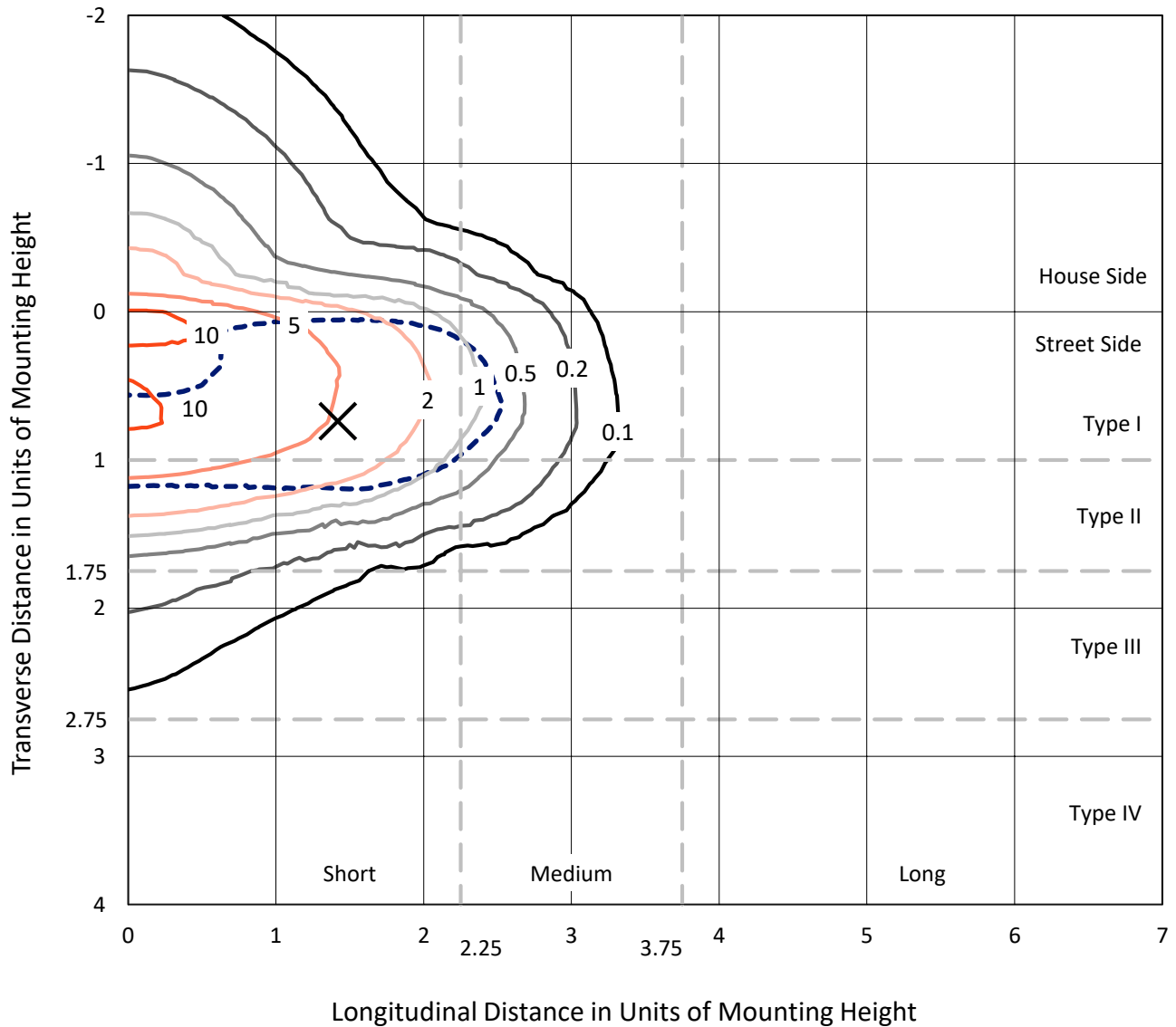


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

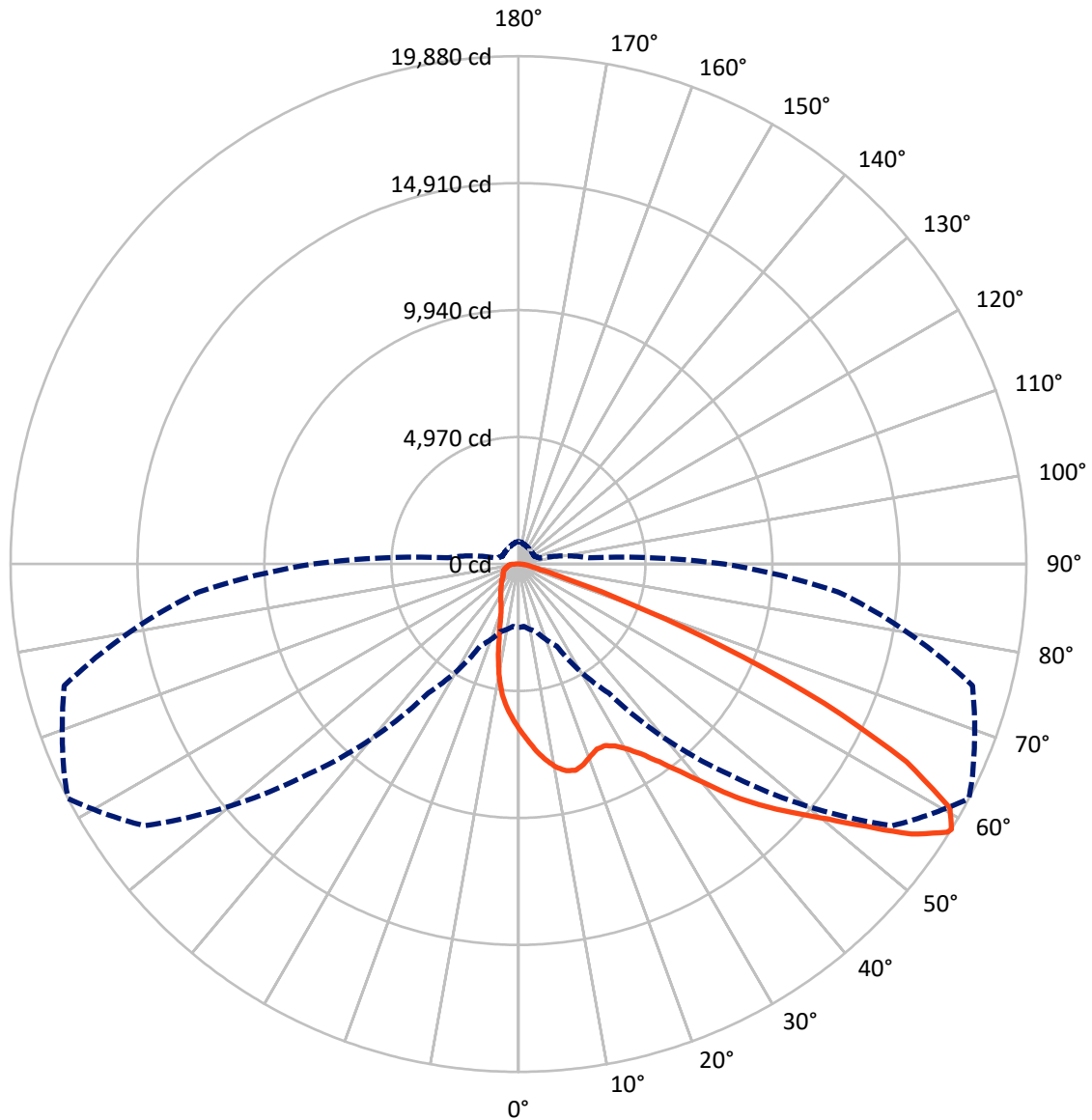


Based on 25 foot mounting height. Maximum calculated value = 12.2 fc  
 Type II - Short - Full Cutoff

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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	3733.7	0.0	3733.7
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	20584.3	0.0	20584.3
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	24318.0	0.0	24318.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	580.3	2.4
10°-20°	1464.6	6.0
20°-30°	2373.6	9.8
30°-40°	3789.7	15.6
40°-50°	5512.2	22.7
50°-60°	5768.1	23.7
60°-70°	3516.4	14.5
70°-80°	983.4	4.0
80°-90°	329.6	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°	24318.0	100.0
0°-180°	24318.0	100.0



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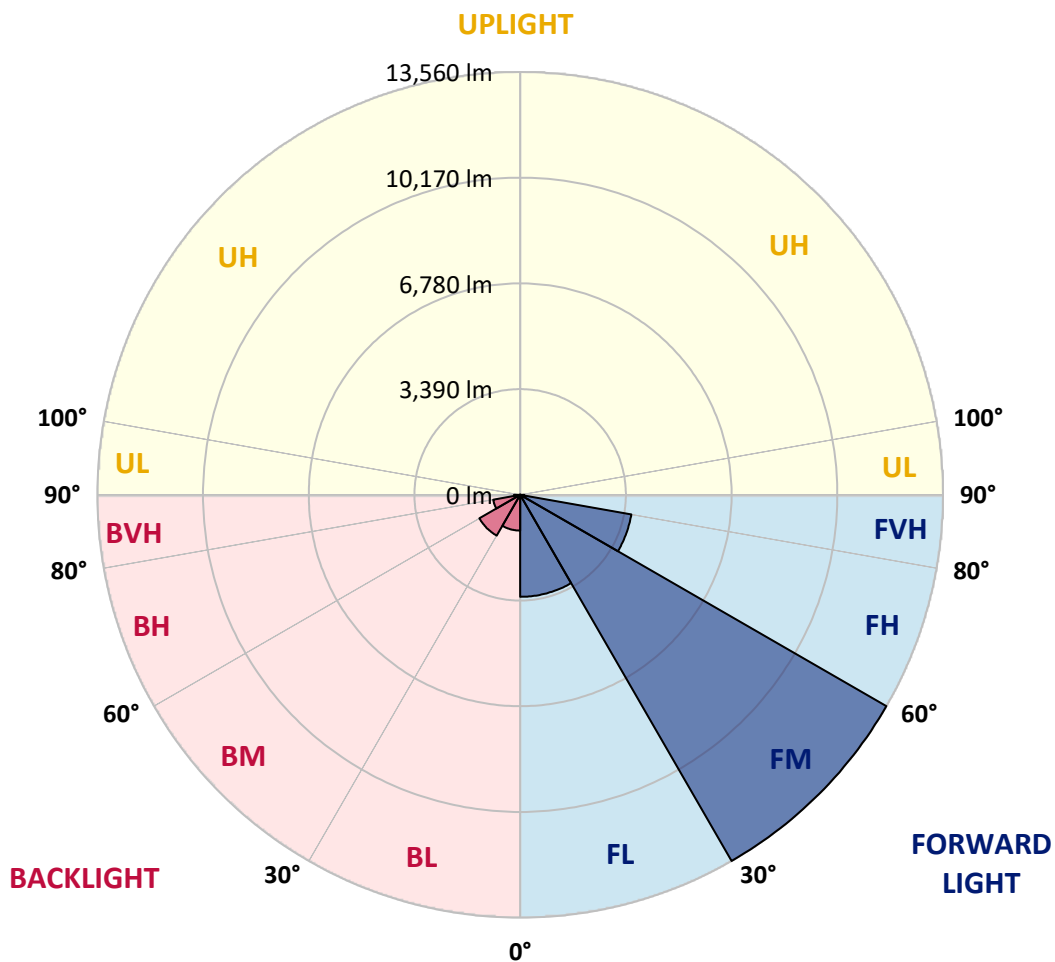
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3270.9	13.5			
FM (30°-60°)	13560.0	55.8			
FH (60°-80°)	3620.8	14.9			G2/5000
FVH (80°-90°)	132.6	0.5			G2/225
BL (0°-30°)	1147.8	4.7	B3/2500		
BM (30°-60°)	1510.0	6.2	B2/2500		
BH (60°-80°)	879.0	3.6	B2/1000		G2/1000
BVH (80°-90°)	197.0	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-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7
2.5°	7369.7	7365.1	7302.8	7261.8	7213.1	7100.7	6988.2	6904.6	6862.1	6699.4	6541.4
5°	7979.1	7960.9	7926.0	7881.9	7818.0	7676.7	7498.9	7345.4	7284.6	6995.8	6705.5
7.5°	7656.9	7685.8	7793.7	7915.3	8043.0	8052.1	7926.0	7743.6	7676.7	7290.7	6865.1
10°	6764.8	6752.6	6887.9	7125.0	7546.0	7962.4	8170.6	8081.0	8011.1	7570.3	7024.7
12.5°	6494.3	6491.2	6514.0	6574.8	6839.3	7410.7	8108.3	8302.9	8278.6	7866.7	7194.9
15°	6576.3	6579.4	6577.9	6585.5	6658.4	6930.5	7760.3	8377.3	8453.3	8160.0	7368.2
17.5°	6839.3	6828.6	6795.2	6758.7	6769.4	6866.6	7384.9	8249.7	8477.7	8421.4	7514.1
20°	7245.1	7245.1	7155.4	7053.6	6986.7	7008.0	7228.3	8030.8	8365.2	8643.3	7623.5
22.5°	7754.2	7761.8	7629.6	7444.2	7292.2	7234.4	7318.0	7868.2	8228.4	8848.5	7720.8
25°	8386.5	8384.9	8191.9	7926.0	7685.8	7547.5	7546.0	7875.8	8185.8	9088.6	7822.6
27.5°	9169.2	9097.7	8872.8	8494.4	8155.4	7944.2	7848.4	8067.3	8275.5	9383.5	7959.4
30°	10052.2	9979.3	9684.4	9198.1	8739.1	8430.5	8272.5	8398.6	8549.1	9758.9	8166.1
32.5°	10926.1	10942.8	10596.3	10047.6	9457.9	9023.3	8789.2	8866.7	8971.6	10217.9	8445.7
35°	12205.8	12204.3	11751.4	11065.9	10365.3	9763.4	9467.1	9508.1	9603.9	10865.3	8837.9
37.5°	13160.3	13145.1	12853.3	12246.9	11458.1	10736.1	10307.5	10313.6	10395.7	11678.4	9354.6
40°	13257.5	13254.5	13253.0	13166.4	12626.8	11945.9	11409.4	11298.5	11331.9	12541.7	9903.3
42.5°	12514.3	12625.3	12944.5	13433.8	13584.3	13227.1	12719.5	12471.8	12398.8	13532.6	10483.8
45°	11455.0	11511.3	12070.6	13170.9	14066.1	14430.9	14049.4	13526.6	13401.9	14496.2	10956.5
47.5°	10962.6	10938.3	11262.0	12461.1	14019.0	15388.4	15415.7	14558.5	14347.3	15327.6	11359.3
50°	9906.3	9874.4	10283.2	11417.0	13505.3	15864.1	16818.5	15683.2	15292.6	16117.9	11724.0
52.5°	7801.3	7770.9	8319.6	9780.2	12356.3	15686.2	18001.0	17063.2	16397.5	16879.3	12064.5
55°	5076.3	5079.3	5602.1	7108.3	9999.0	14649.7	18555.7	18657.5	17911.3	17640.8	12339.6
57.5°	2795.0	2769.1	3141.5	4067.1	6878.8	12295.5	18093.7	19806.5	19417.4	18294.3	12538.7
58°	2484.9	2454.5	2741.8	3539.7	6167.5	11631.3	17861.1	19879.5	19610.5	18402.2	12567.5
60°	1770.6	1718.9	1674.9	1995.5	3553.4	8386.5	16310.9	19406.8	19666.7	18618.0	12540.2
62.5°	1492.5	1433.2	1275.1	1263.0	1673.3	4102.0	12898.9	17043.5	17771.5	18121.0	12099.4
65°	1386.1	1326.8	1118.6	1044.1	1135.3	1770.6	7976.1	13160.3	14133.0	16393.0	10989.9
67.5°	1310.1	1240.2	1016.8	919.5	937.7	1059.3	3384.7	8606.8	9734.6	12783.4	8816.6
70°	1241.7	1164.2	936.2	823.8	808.6	805.5	1322.3	4494.2	5580.8	8365.2	5906.1
72.5°	1164.2	1088.2	864.8	744.7	711.3	653.5	794.9	1857.2	2545.7	4100.5	2706.8
75°	1051.7	989.4	785.8	679.4	621.6	530.4	586.7	890.6	1097.3	1570.0	1256.9
77.5°	925.6	875.4	705.2	624.7	547.1	433.2	448.4	603.4	677.8	884.5	728.0
80°	655.1	673.3	615.5	550.2	481.8	349.6	345.0	442.3	486.3	594.3	489.4
82.5°	451.4	465.1	501.5	434.7	389.1	272.1	253.8	307.0	329.8	358.7	237.1
85°	322.2	313.1	348.0	311.6	285.7	173.3	162.6	194.5	208.2	218.9	114.0
87.5°	196.1	194.5	200.6	161.1	148.9	88.2	80.6	92.7	98.8	95.7	54.7
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°	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7	6492.7
2.5°	6482.1	6407.6	6245.0	6114.3	5973.0	5865.1	5757.1	5696.4	5629.5	5591.5	5586.9
5°	6553.5	6401.6	6055.0	5732.8	5401.5	5103.6	4811.8	4596.0	4419.7	4319.4	4313.3
7.5°	6632.6	6394.0	5859.0	5301.2	4711.5	4124.8	3606.6	3240.3	3004.7	2895.3	2887.7
10°	6693.4	6362.0	5620.4	4752.5	3817.8	3042.7	2571.6	2355.7	2284.3	2266.1	2263.0
12.5°	6766.3	6339.2	5319.4	4048.8	2918.1	2316.2	2173.4	2159.7	2174.9	2184.0	2185.5
15°	6834.7	6295.2	4913.6	3269.2	2284.3	2070.0	2073.1	2101.9	2132.3	2146.0	2147.5
17.5°	6866.6	6187.3	4380.2	2576.1	1998.6	1959.1	1994.0	2032.0	2059.4	2070.0	2070.0
20°	6866.6	6014.0	3761.6	2086.7	1849.6	1857.2	1899.8	1928.7	1934.8	1925.6	1921.1
22.5°	6837.7	5799.7	3159.7	1820.8	1728.1	1756.9	1790.4	1770.6	1699.2	1644.5	1633.8
25°	6811.9	5545.9	2580.7	1658.1	1621.7	1659.7	1646.0	1510.7	1401.3	1345.1	1335.9
27.5°	6769.4	5238.9	2097.4	1524.4	1518.3	1548.7	1413.4	1282.7	1228.0	1197.6	1191.6
30°	6758.7	4906.0	1755.4	1405.8	1416.5	1373.9	1218.9	1176.4	1164.2	1147.5	1139.9
32.5°	6793.7	4573.2	1541.1	1308.6	1319.2	1179.4	1120.1	1126.2	1124.7	1103.4	1095.8
35°	6889.4	4249.5	1404.3	1220.4	1190.0	1056.3	1063.9	1082.1	1082.1	1056.3	1047.2
37.5°	7056.6	3948.5	1317.7	1146.0	1041.1	992.5	1012.2	1036.5	1036.5	1018.3	1010.7
40°	7234.4	3655.2	1252.3	1086.7	946.9	948.4	968.1	986.4	994.0	997.0	990.9
42.5°	7395.5	3351.2	1182.4	1022.9	904.3	914.9	924.1	937.7	969.7	990.9	987.9
45°	7489.8	3045.8	1106.4	943.8	875.4	880.0	876.9	901.3	939.3	971.2	971.2
47.5°	7576.4	2795.0	1044.1	864.8	846.5	846.5	837.4	861.7	896.7	934.7	937.7
50°	7658.5	2632.4	1000.1	804.0	810.1	805.5	802.5	825.3	872.4	918.0	925.6
52.5°	7742.1	2577.6	960.5	759.9	772.1	766.0	769.0	801.0	854.1	901.3	908.9
55°	7859.1	2612.6	919.5	729.5	735.6	734.1	746.2	782.7	829.8	876.9	880.0
57.5°	8003.5	2740.3	884.5	706.7	700.6	709.8	729.5	764.5	810.1	866.3	870.9
58°	8032.3	2770.7	878.5	700.6	693.0	706.7	726.5	759.9	807.0	866.3	870.9
60°	8076.4	2878.6	863.3	688.5	667.2	691.5	715.8	749.3	801.0	873.9	883.0
62.5°	7863.6	2899.9	858.7	674.8	639.9	670.2	699.1	737.1	794.9	899.7	919.5
65°	7126.5	2681.0	826.8	652.0	617.1	653.5	683.9	728.0	813.1	977.3	986.4
67.5°	5720.7	2226.6	749.3	617.1	591.2	633.8	671.8	728.0	820.7	989.4	995.5
70°	3933.3	1673.3	652.0	579.1	560.8	609.5	667.2	744.7	794.9	936.2	918.0
72.5°	2054.8	1164.2	571.5	535.0	524.3	588.2	711.3	728.0	764.5	873.9	855.7
75°	1035.0	791.8	503.1	484.8	483.3	580.6	796.4	700.6	732.6	822.2	861.7
77.5°	611.0	620.1	448.4	437.7	445.3	566.9	797.9	673.3	696.1	756.9	799.4
80°	418.0	512.2	405.8	402.8	408.8	521.3	735.6	639.9	653.5	715.8	761.4
82.5°	235.6	282.7	355.6	375.4	372.4	427.1	635.3	582.1	598.8	846.5	895.2
85°	114.0	170.2	297.9	351.1	317.6	284.2	516.7	516.7	521.3	606.4	614.0
87.5°	42.6	76.0	200.6	278.1	221.9	170.2	351.1	366.3	407.3	419.5	428.6
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)