

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: P196985

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196985  
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-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 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: 25141 lumens  
Efficiency: N/A  
Efficacy: 90.1 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

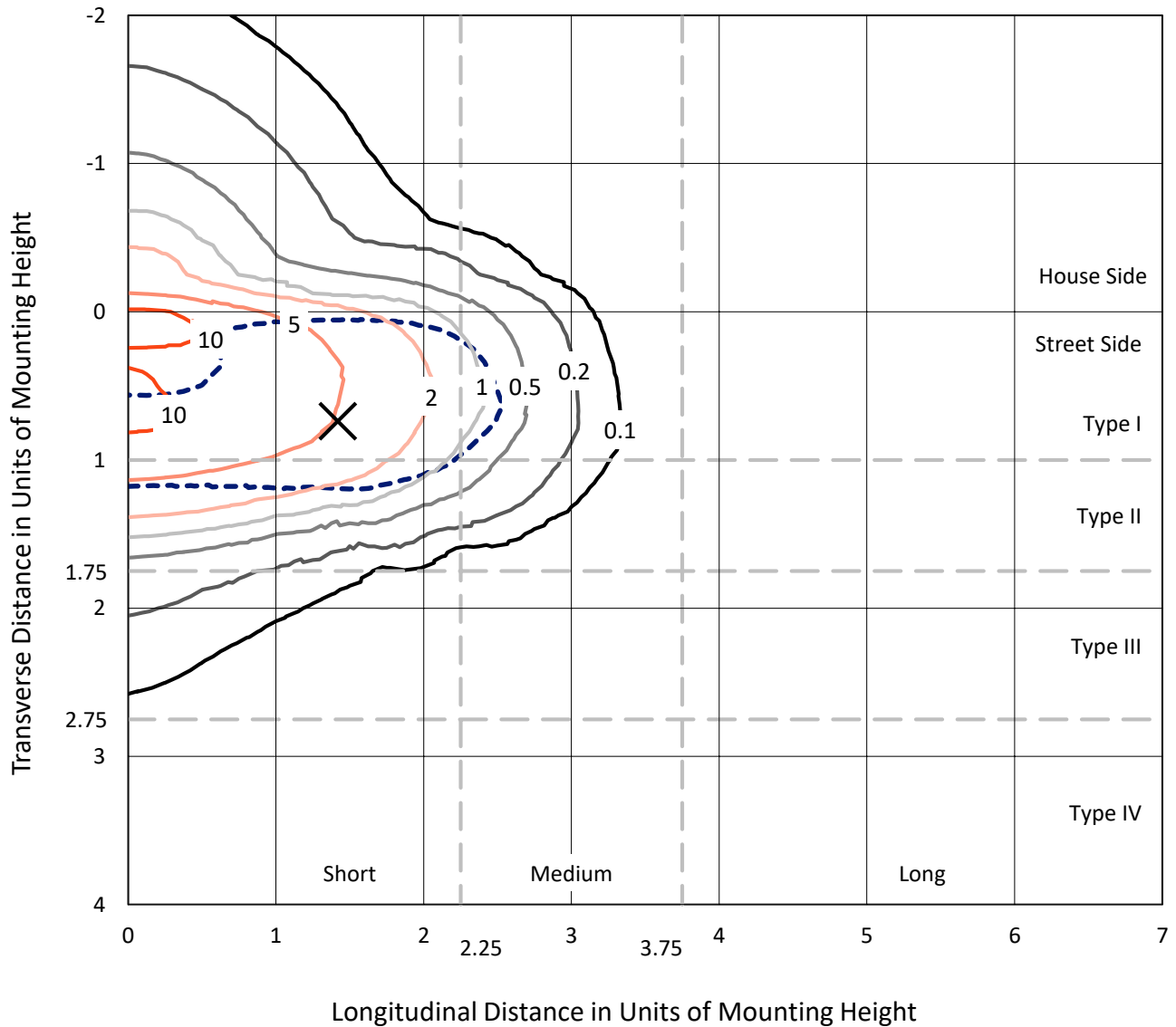
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

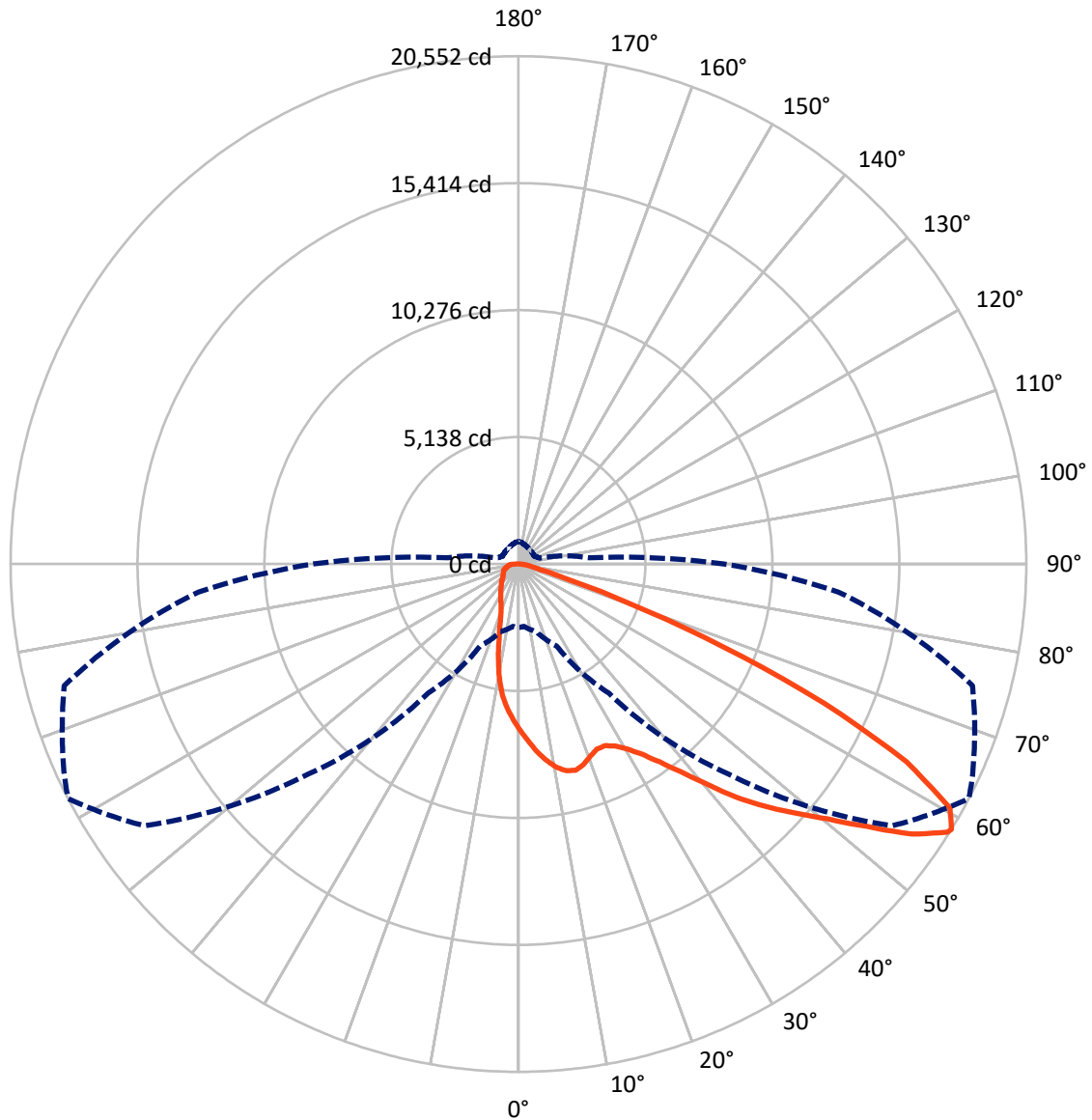
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.6 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	3860.1	0.0	3860.1
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	21280.9	0.0	21280.9
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	25141.0	0.0	25141.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	600.0	2.4
10°-20°	1514.2	6.0
20°-30°	2454.0	9.8
30°-40°	3917.9	15.6
40°-50°	5698.8	22.7
50°-60°	5963.3	23.7
60°-70°	3635.4	14.5
70°-80°	1016.7	4.0
80°-90°	340.8	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°	25141.0	100.0
0°-180°	25141.0	100.0



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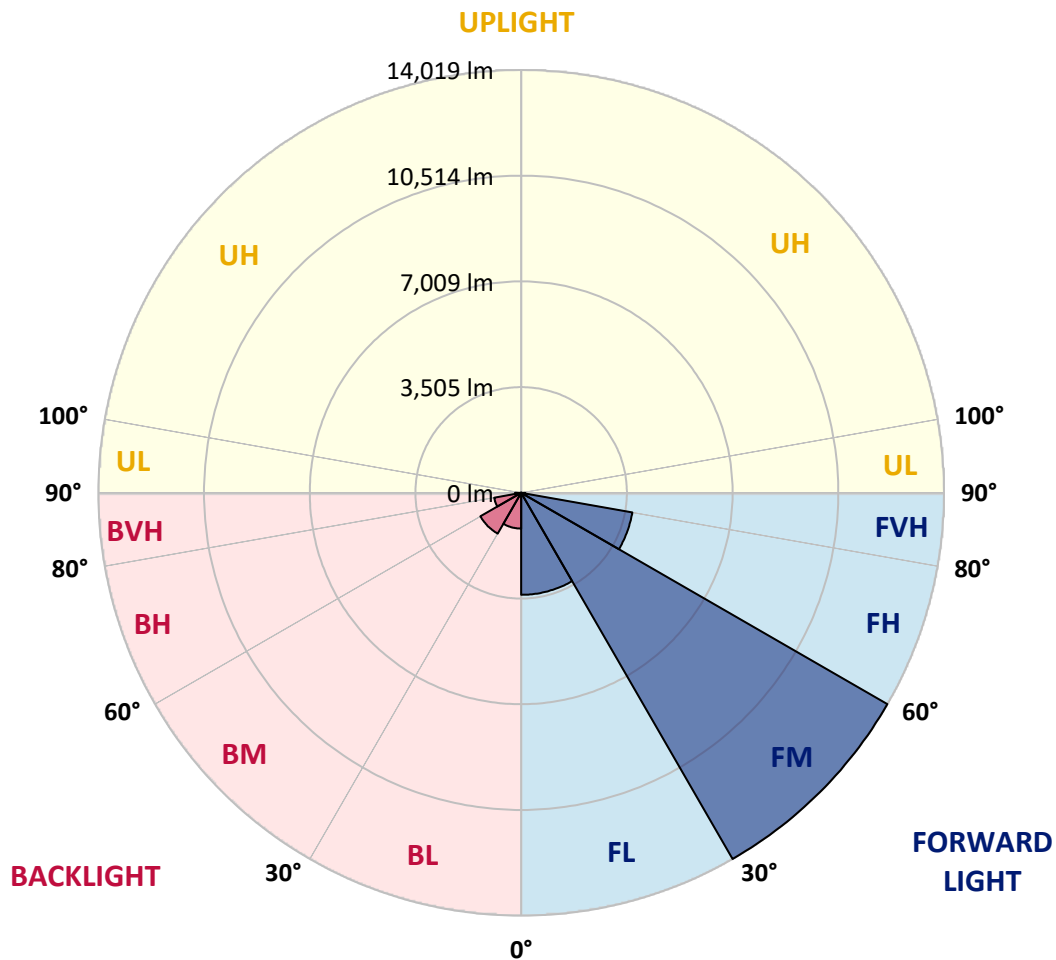
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3381.5	13.5			
FM	(30°-60°)	14018.9	55.8			
FH	(60°-80°)	3743.3	14.9			G2/5000
FVH	(80°-90°)	137.1	0.5			G2/225
BL	(0°-30°)	1186.6	4.7	B3/2500		
BM	(30°-60°)	1561.1	6.2	B2/2500		
BH	(60°-80°)	908.7	3.6	B2/1000		G2/1000
BVH	(80°-90°)	203.7	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°	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5
2.5°	7619.1	7614.4	7550.0	7507.5	7457.3	7341.0	7224.7	7138.3	7094.3	6926.2	6762.8
5°	8249.2	8230.3	8194.2	8148.6	8082.6	7936.5	7752.7	7594.0	7531.1	7232.6	6932.5
7.5°	7916.1	7945.9	8057.5	8183.2	8315.2	8324.6	8194.2	8005.6	7936.5	7537.4	7097.4
10°	6993.7	6981.2	7121.0	7366.1	7801.4	8231.9	8447.2	8354.5	8282.2	7826.5	7262.4
12.5°	6714.1	6710.9	6734.5	6797.3	7070.7	7661.5	8382.7	8583.9	8558.7	8132.9	7438.4
15°	6798.9	6802.0	6800.5	6808.3	6883.8	7165.0	8022.9	8660.9	8739.4	8436.2	7617.5
17.5°	7070.7	7059.7	7025.2	6987.5	6998.5	7099.0	7634.8	8528.9	8764.6	8706.4	7768.4
20°	7490.3	7490.3	7397.6	7292.3	7223.1	7245.1	7473.0	8302.6	8648.3	8935.8	7881.5
22.5°	8016.6	8024.5	7887.8	7696.1	7539.0	7479.3	7565.7	8134.5	8506.9	9148.0	7982.1
25°	8670.3	8668.7	8469.2	8194.2	7945.9	7802.9	7801.4	8142.3	8462.9	9396.2	8087.3
27.5°	9479.5	9405.6	9173.1	8781.8	8431.5	8213.0	8114.1	8340.3	8555.6	9701.0	8228.8
30°	10392.4	10317.0	10012.2	9509.3	9034.8	8715.9	8552.4	8682.9	8838.4	10089.1	8442.5
32.5°	11295.9	11313.2	10954.9	10387.7	9778.0	9328.7	9086.7	9166.8	9275.2	10563.7	8731.6
35°	12618.9	12617.3	12149.1	11440.4	10716.1	10093.9	9787.5	9829.9	9928.9	11233.0	9137.0
37.5°	13605.7	13589.9	13288.3	12661.3	11845.8	11099.5	10656.4	10662.7	10747.5	12073.7	9671.2
40°	13706.2	13703.1	13701.5	13611.9	13054.1	12350.2	11795.6	11680.8	11715.4	12966.2	10238.4
42.5°	12937.9	13052.6	13382.5	13888.5	14044.0	13674.8	13150.0	12893.9	12818.5	13990.6	10838.6
45°	11842.7	11900.8	12479.1	13616.7	14542.1	14919.2	14524.9	13984.3	13855.5	14986.8	11327.3
47.5°	11333.6	11308.5	11643.1	12882.9	14493.4	15909.1	15937.4	15051.2	14832.8	15846.3	11743.7
50°	10241.6	10208.6	10631.2	11803.4	13962.3	16401.0	17387.7	16214.0	15810.2	16663.4	12120.8
52.5°	8065.3	8033.9	8601.2	10111.1	12774.5	16217.1	18610.2	17640.7	16952.5	17450.6	12472.8
55°	5248.1	5251.2	5791.7	7348.8	10337.4	15145.5	19183.7	19289.0	18517.5	18237.8	12757.2
57.5°	2889.6	2862.9	3247.8	4204.7	7111.6	12711.6	18706.0	20476.8	20074.6	18913.4	12963.0
58°	2569.0	2537.6	2834.6	3659.5	6376.2	12025.0	18465.6	20552.3	20274.1	19025.0	12992.9
60°	1830.5	1777.1	1731.5	2063.1	3673.6	8670.3	16862.9	20063.6	20332.3	19248.1	12964.6
62.5°	1543.0	1481.7	1318.3	1305.7	1730.0	4240.9	13335.4	17620.3	18372.9	18734.3	12508.9
65°	1433.0	1371.7	1156.5	1079.5	1173.7	1830.5	8246.0	13605.7	14611.3	16947.8	11361.9
67.5°	1354.4	1282.2	1051.2	950.6	969.5	1095.2	3499.2	8898.1	10064.0	13216.0	9115.0
70°	1283.7	1203.6	967.9	851.6	835.9	832.8	1367.0	4646.3	5769.7	8648.3	6106.0
72.5°	1203.6	1125.0	894.1	769.9	735.4	675.6	821.8	1920.1	2631.9	4239.3	2798.4
75°	1087.3	1022.9	812.3	702.4	642.7	548.4	606.5	920.8	1134.5	1623.1	1299.4
77.5°	956.9	905.1	729.1	645.8	565.7	447.8	463.5	623.8	700.8	914.5	752.6
80°	677.2	696.1	636.4	568.8	498.1	361.4	356.7	457.2	502.8	614.4	506.0
82.5°	466.7	480.8	518.5	449.4	402.2	281.3	262.4	317.4	341.0	370.8	245.1
85°	333.1	323.7	359.8	322.1	295.4	179.1	168.1	201.1	215.3	226.3	117.8
87.5°	202.7	201.1	207.4	166.6	154.0	91.1	83.3	95.8	102.1	99.0	56.6
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°	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5	6712.5
2.5°	6701.5	6624.5	6456.4	6321.2	6175.1	6063.5	5952.0	5889.1	5820.0	5780.7	5776.0
5°	6775.3	6618.2	6260.0	5926.8	5584.3	5276.3	4974.7	4751.5	4569.3	4465.6	4459.3
7.5°	6857.0	6610.3	6057.3	5480.6	4870.9	4264.4	3728.6	3350.0	3106.4	2993.3	2985.4
10°	6919.9	6577.4	5810.6	4913.4	3947.0	3145.7	2658.6	2435.5	2361.6	2342.8	2339.6
12.5°	6995.3	6553.8	5499.5	4185.9	3016.8	2394.6	2246.9	2232.8	2248.5	2257.9	2259.5
15°	7066.0	6508.2	5079.9	3379.8	2361.6	2140.1	2143.2	2173.1	2204.5	2218.6	2220.2
17.5°	7099.0	6396.7	4528.4	2663.3	2066.2	2025.4	2061.5	2100.8	2129.1	2140.1	2140.1
20°	7099.0	6217.5	3888.9	2157.4	1912.2	1920.1	1964.1	1993.9	2000.2	1990.8	1986.1
22.5°	7069.2	5996.0	3266.7	1882.4	1786.5	1816.4	1851.0	1830.5	1756.7	1700.1	1689.1
25°	7042.4	5733.6	2668.0	1714.3	1676.5	1715.8	1701.7	1561.8	1448.7	1390.6	1381.1
27.5°	6998.5	5416.2	2168.4	1576.0	1569.7	1601.1	1461.3	1326.2	1269.6	1238.2	1231.9
30°	6987.5	5072.1	1814.8	1453.4	1464.4	1420.4	1260.2	1216.2	1203.6	1186.3	1178.5
32.5°	7023.6	4728.0	1593.3	1352.9	1363.9	1219.3	1158.0	1164.3	1162.7	1140.7	1132.9
35°	7122.6	4393.3	1451.9	1261.7	1230.3	1092.0	1099.9	1118.7	1118.7	1092.0	1082.6
37.5°	7295.4	4082.2	1362.3	1184.7	1076.3	1026.0	1046.5	1071.6	1071.6	1052.8	1044.9
40°	7479.3	3778.9	1294.7	1123.5	978.9	980.5	1000.9	1019.8	1027.6	1030.8	1024.5
42.5°	7645.8	3464.7	1222.5	1057.5	934.9	945.9	955.3	969.5	1002.5	1024.5	1021.3
45°	7743.2	3148.8	1143.9	975.8	905.1	909.8	906.6	931.8	971.0	1004.0	1004.0
47.5°	7832.8	2889.6	1079.5	894.1	875.2	875.2	865.8	890.9	927.1	966.3	969.5
50°	7917.6	2721.4	1033.9	831.2	837.5	832.8	829.6	853.2	901.9	949.0	956.9
52.5°	8004.1	2664.9	993.0	785.6	798.2	791.9	795.1	828.1	883.1	931.8	939.6
55°	8125.1	2701.0	950.6	754.2	760.5	758.9	771.5	809.2	857.9	906.6	909.8
57.5°	8274.3	2833.0	914.5	730.6	724.4	733.8	754.2	790.4	837.5	895.6	900.3
58°	8304.2	2864.4	908.2	724.4	716.5	730.6	751.1	785.6	834.3	895.6	900.3
60°	8349.7	2976.0	892.5	711.8	689.8	714.9	740.1	774.6	828.1	903.5	912.9
62.5°	8129.8	2998.0	887.8	697.6	661.5	692.9	722.8	762.1	821.8	930.2	950.6
65°	7367.7	2771.7	854.8	674.1	637.9	675.6	707.1	752.6	840.6	1010.3	1019.8
67.5°	5914.3	2301.9	774.6	637.9	611.2	655.2	694.5	752.6	848.5	1022.9	1029.2
70°	4066.5	1730.0	674.1	598.7	579.8	630.1	689.8	769.9	821.8	967.9	949.0
72.5°	2124.4	1203.6	590.8	553.1	542.1	608.1	735.4	752.6	790.4	903.5	884.6
75°	1070.0	818.6	520.1	501.2	499.7	600.2	823.3	724.4	757.4	850.1	890.9
77.5°	631.7	641.1	463.5	452.5	460.4	586.1	824.9	696.1	719.6	782.5	826.5
80°	432.1	529.5	419.5	416.4	422.7	538.9	760.5	661.5	675.6	740.1	787.2
82.5°	243.5	292.3	367.7	388.1	385.0	441.5	656.8	601.8	619.1	875.2	925.5
85°	117.8	176.0	308.0	363.0	328.4	293.8	534.2	534.2	538.9	626.9	634.8
87.5°	44.0	78.6	207.4	287.5	229.4	176.0	363.0	378.7	421.1	433.7	443.1
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)