

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: P196512

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196512
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-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39159.6 lumens
Efficiency: N/A
Efficacy: 102.5 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

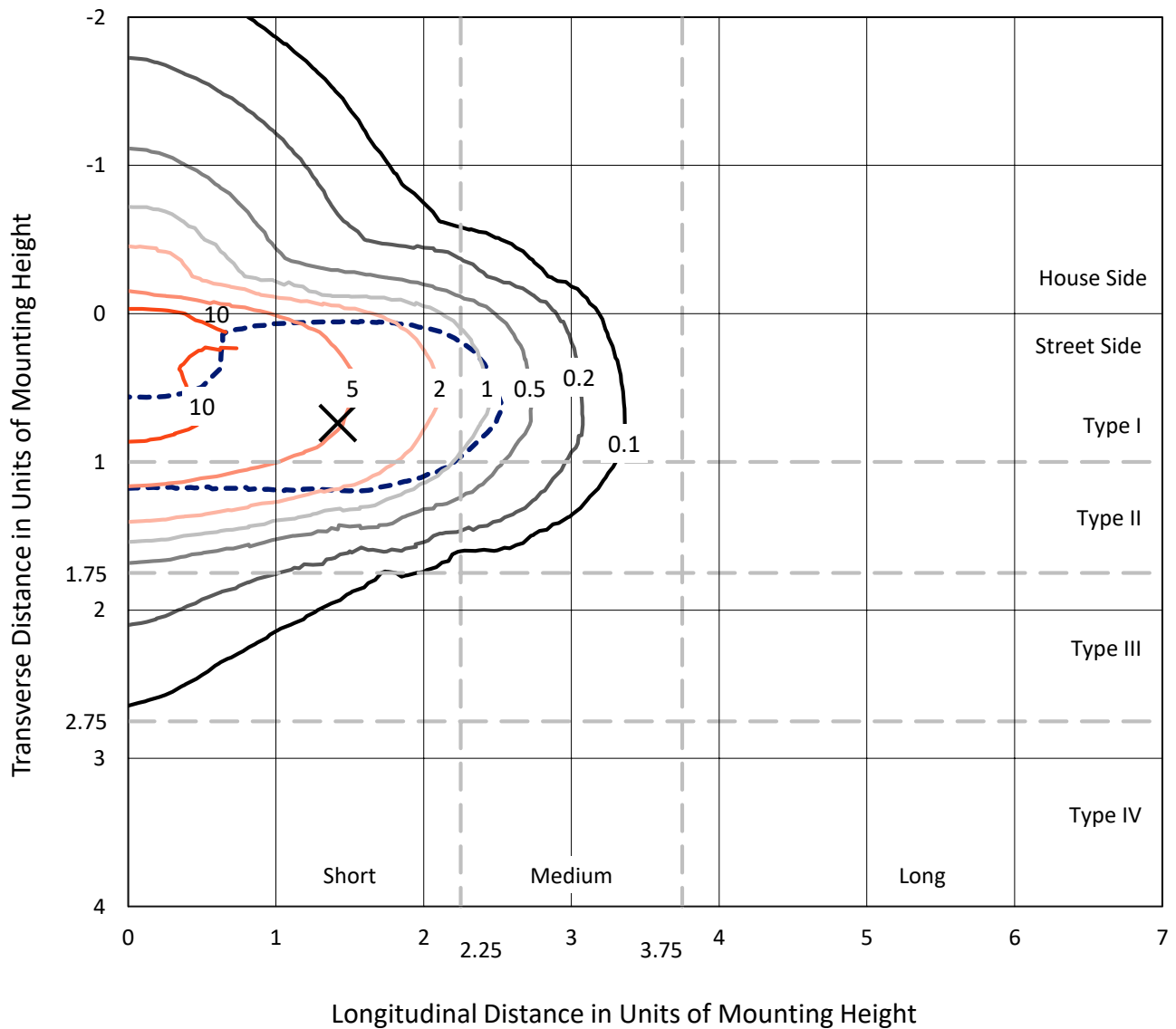
Input Watts (W): 382
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

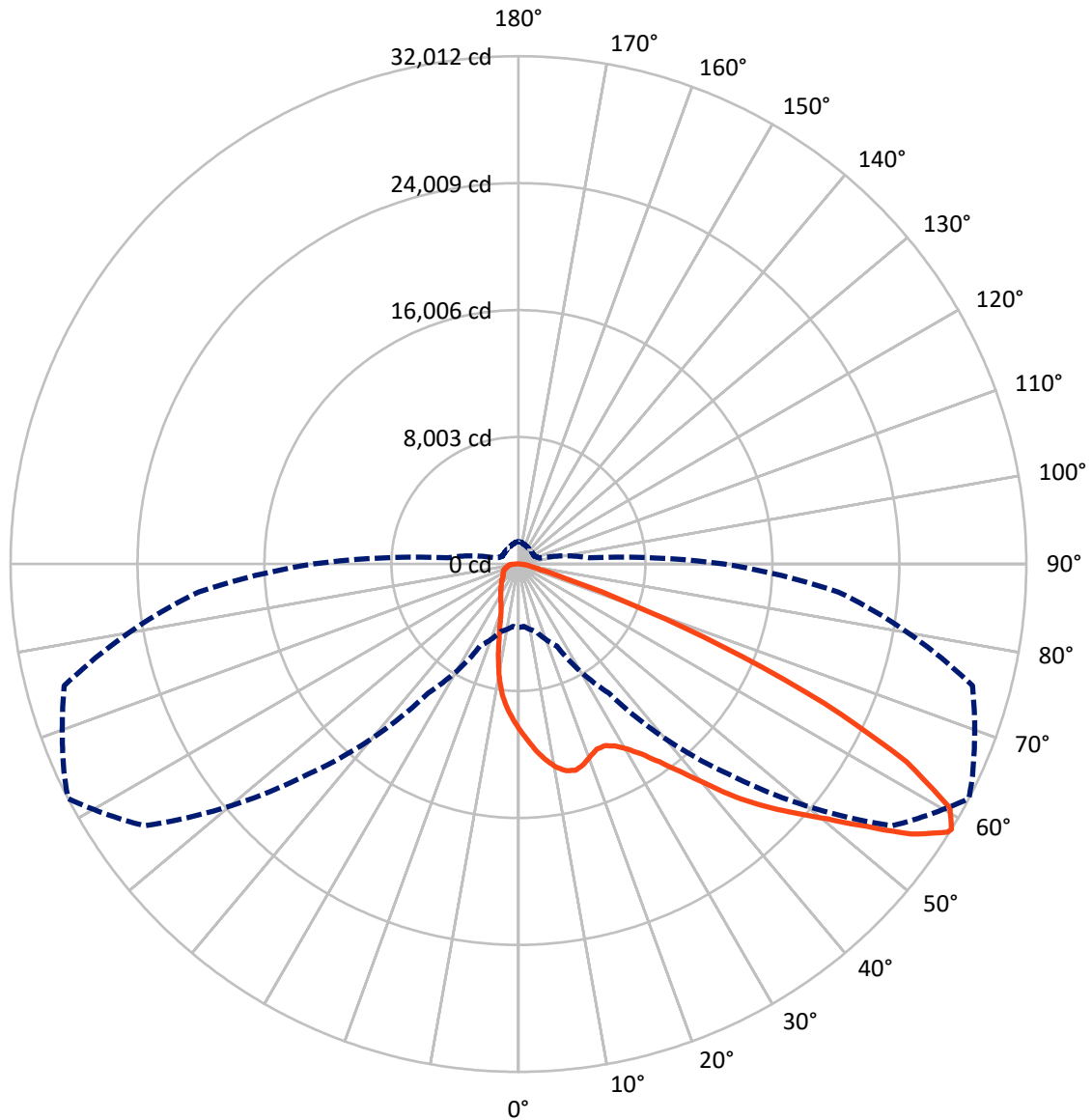
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.6 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
House Side	Lumens	6012.5	0.0	6012.5
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	33147.1	0.0	33147.1
	% Fixture	84.6	0.0	84.6
Total	Lumens	39159.6	0.0	39159.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	934.5	2.4
10°-20°	2358.5	6.0
20°-30°	3822.3	9.8
30°-40°	6102.6	15.6
40°-50°	8876.4	22.7
50°-60°	9288.4	23.7
60°-70°	5662.5	14.5
70°-80°	1583.5	4.0
80°-90°	530.8	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°	39159.6	100.0
0°-180°	39159.6	100.0

Coefficient of Utilization



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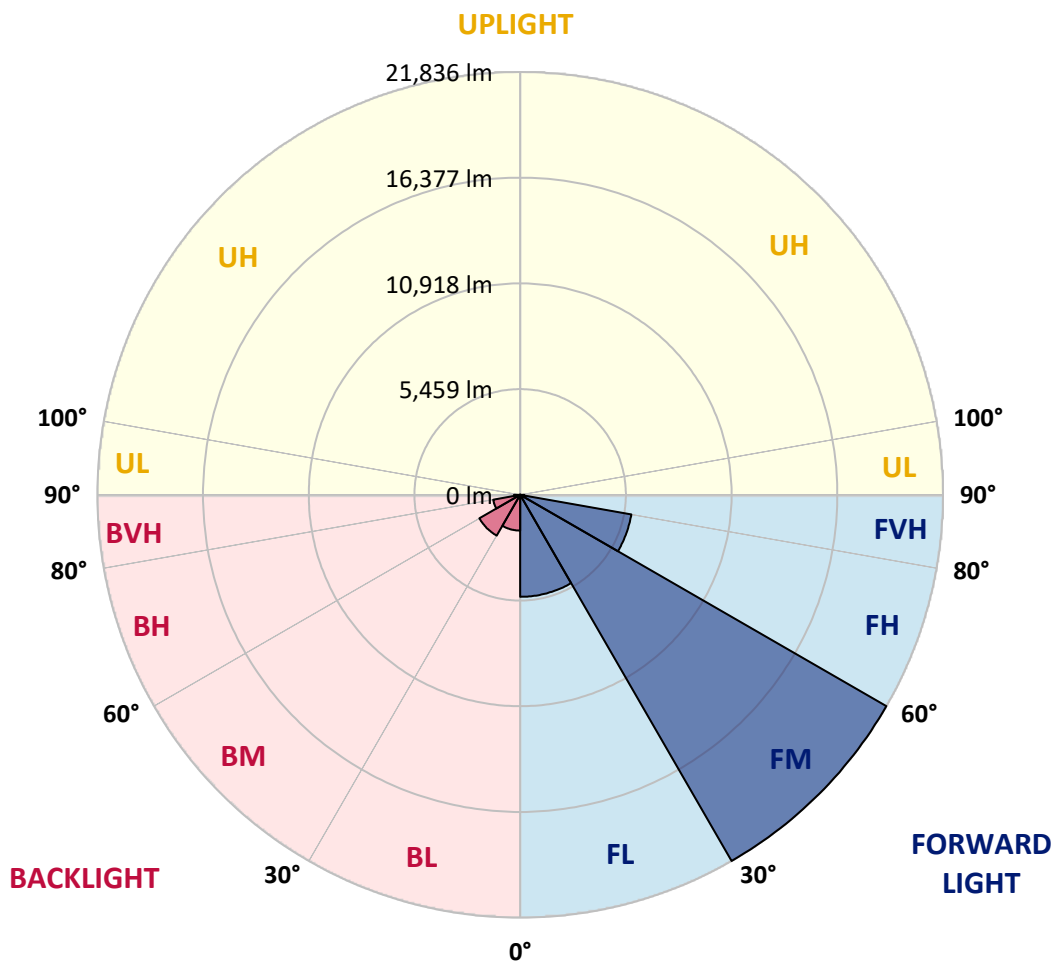
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	5267.1	13.5			
FM (30°-60°)	21835.9	55.8			
FH (60°-80°)	5830.6	14.9			G3/7500
FVH (80°-90°)	213.5	0.5			G2/225
BL (0°-30°)	1848.3	4.7	B3/2500		
BM (30°-60°)	2431.5	6.2	B2/2500		
BH (60°-80°)	1415.4	3.6	B3/2500		G3/2500
BVH (80°-90°)	317.3	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°	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3
2.5°	11867.5	11860.2	11759.8	11693.8	11615.5	11434.3	11253.2	11118.7	11050.1	10788.3	10533.6
5°	12848.9	12819.6	12763.2	12692.3	12589.5	12361.9	12075.6	11828.4	11730.5	11265.5	10798.0
7.5°	12330.1	12376.6	12550.4	12746.1	12951.7	12966.5	12763.2	12469.5	12361.9	11740.2	11055.0
10°	10893.4	10873.9	11091.7	11473.6	12151.4	12822.0	13157.3	13012.9	12900.4	12190.6	11311.9
12.5°	10457.9	10453.0	10489.7	10587.6	11013.4	11933.7	13056.9	13370.3	13331.0	12667.8	11586.1
15°	10590.0	10594.9	10592.4	10604.7	10722.1	11160.2	12496.5	13490.1	13612.5	13140.2	11865.1
17.5°	11013.4	10996.3	10942.5	10883.7	10900.8	11057.5	11892.0	13284.7	13651.7	13561.1	12100.0
20°	11666.8	11666.8	11522.5	11358.5	11250.8	11285.1	11639.9	12932.2	13470.6	13918.4	12276.3
22.5°	12486.7	12498.9	12285.9	11987.5	11742.7	11649.7	11784.2	12670.2	13250.3	14248.8	12432.8
25°	13504.9	13502.4	13191.5	12763.2	12376.6	12153.9	12151.4	12682.5	13181.8	14635.5	12596.8
27.5°	14765.3	14650.2	14288.1	13678.6	13132.9	12792.6	12638.4	12990.9	13326.2	15110.3	12817.1
30°	16187.2	16069.8	15594.9	14811.7	14072.6	13575.8	13321.3	13524.4	13766.6	15714.9	13150.0
32.5°	17594.4	17621.5	17063.3	16179.8	15230.3	14530.3	14153.5	14278.2	14447.2	16454.0	13600.3
35°	19655.2	19652.8	18923.3	17819.6	16691.4	15722.2	15245.0	15311.0	15465.2	17496.6	14231.7
37.5°	21192.2	21167.7	20697.7	19721.3	18451.0	17288.5	16598.3	16608.2	16740.3	18805.9	15063.8
40°	21348.8	21343.9	21341.5	21202.0	20333.1	19236.7	18372.7	18194.1	18247.9	20196.0	15947.4
42.5°	20152.0	20330.6	20844.6	21632.7	21875.1	21299.9	20482.4	20083.5	19966.0	21791.8	16882.3
45°	18446.1	18536.7	19437.3	21209.3	22650.9	23238.3	22623.9	21782.0	21581.3	23343.5	17643.4
47.5°	17653.2	17614.0	18135.4	20066.3	22574.9	24780.1	24824.1	23443.8	23103.6	24682.2	18291.9
50°	15952.3	15900.8	16559.3	18384.9	21747.7	25546.1	27083.0	25254.8	24626.0	25954.9	18879.4
52.5°	12562.6	12513.7	13397.2	15749.0	19897.5	25259.7	28987.1	27477.2	26405.1	27181.0	19427.6
55°	8174.3	8179.2	9021.2	11446.5	16101.5	23590.6	29880.5	30044.4	28842.8	28407.2	19870.6
57.5°	4500.8	4459.2	5058.8	6549.3	11077.0	19799.6	29136.5	31894.8	31268.2	29459.6	20191.2
58°	4001.5	3952.6	4415.1	5700.0	9931.6	18730.1	28762.1	32012.2	31578.9	29633.3	20237.6
60°	2851.2	2768.0	2697.1	3213.5	5722.0	13504.9	26265.7	31251.1	31669.6	29980.8	20193.7
62.5°	2403.3	2307.9	2053.4	2033.8	2694.6	6605.6	20771.2	27445.3	28617.6	29180.5	19483.8
65°	2232.0	2136.6	1801.2	1681.4	1828.2	2851.2	12844.1	21192.2	22758.4	26397.8	17697.3
67.5°	2109.7	1997.0	1637.4	1480.7	1510.1	1705.9	5450.4	13859.7	15675.7	20585.2	14197.4
70°	1999.6	1874.7	1507.6	1326.5	1302.1	1297.1	2129.3	7237.0	8986.9	13470.6	9510.7
72.5°	1874.7	1752.3	1392.6	1199.2	1145.4	1052.3	1280.0	2990.8	4099.4	6603.1	4358.9
75°	1693.6	1593.2	1265.3	1094.0	1001.1	854.2	944.6	1434.1	1767.0	2528.2	2024.0
77.5°	1490.6	1409.7	1135.6	1005.8	881.0	697.5	721.9	971.7	1091.5	1424.4	1172.4
80°	1054.8	1084.2	991.2	886.0	775.8	562.9	555.6	712.2	783.2	956.9	788.1
82.5°	726.9	748.9	807.7	700.0	626.5	438.1	408.7	494.4	531.1	577.6	381.8
85°	518.9	504.1	560.5	501.7	460.1	279.0	261.9	313.2	335.3	352.5	183.5
87.5°	315.8	313.2	323.1	259.4	239.9	141.9	129.7	149.2	159.1	154.2	88.1
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°	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3	10455.3
2.5°	10438.2	10318.3	10056.4	9845.9	9618.3	9444.6	9270.7	9172.9	9065.2	9004.0	8996.7
5°	10553.3	10308.5	9750.6	9231.7	8698.1	8218.4	7748.5	7401.0	7117.0	6955.6	6945.7
7.5°	10680.5	10296.3	9434.7	8536.5	7587.0	6642.3	5807.6	5217.9	4838.5	4662.3	4650.1
10°	10778.4	10244.9	9050.5	7653.1	6147.9	4899.7	4141.0	3793.5	3678.4	3649.2	3644.3
12.5°	10895.9	10208.2	8565.9	6519.9	4699.0	3729.9	3499.8	3477.8	3502.3	3516.9	3519.3
15°	11006.0	10137.2	7912.4	5264.4	3678.4	3333.4	3338.3	3384.8	3433.7	3455.8	3458.2
17.5°	11057.5	9963.5	7053.4	4148.3	3218.3	3154.8	3211.0	3272.2	3316.2	3333.4	3333.4
20°	11057.5	9684.4	6057.4	3360.3	2978.5	2990.8	3059.3	3105.8	3115.5	3100.9	3093.5
22.5°	11010.9	9339.4	5088.2	2932.0	2782.8	2829.2	2883.1	2851.2	2736.2	2648.1	2631.0
25°	10969.3	8930.7	4155.6	2670.1	2611.4	2672.6	2650.5	2432.7	2256.5	2165.9	2151.4
27.5°	10900.8	8436.2	3377.4	2454.7	2445.0	2494.0	2276.1	2065.6	1977.5	1928.5	1918.8
30°	10883.7	7900.2	2826.7	2263.9	2281.0	2212.5	1962.9	1894.3	1874.7	1847.8	1835.5
32.5°	10939.9	7364.3	2481.8	2107.2	2124.3	1899.2	1803.8	1813.4	1811.1	1776.8	1764.5
35°	11094.1	6843.0	2261.4	1965.2	1916.3	1700.9	1713.1	1742.5	1742.5	1700.9	1686.3
37.5°	11363.4	6358.4	2122.0	1845.4	1676.5	1598.1	1629.9	1669.2	1669.2	1639.8	1627.5
40°	11649.7	5886.1	2016.7	1749.9	1524.7	1527.2	1559.0	1588.4	1600.6	1605.4	1595.7
42.5°	11909.1	5396.6	1904.1	1647.1	1456.2	1473.4	1488.0	1510.1	1561.5	1595.7	1590.9
45°	12060.9	4904.6	1781.7	1519.8	1409.7	1417.1	1412.1	1451.3	1512.4	1563.9	1563.9
47.5°	12200.3	4500.8	1681.4	1392.6	1363.2	1363.2	1348.5	1387.7	1444.0	1505.1	1510.1
50°	12332.5	4238.9	1610.4	1294.7	1304.4	1297.1	1292.2	1328.9	1404.8	1478.3	1490.6
52.5°	12467.1	4150.9	1546.8	1223.7	1243.3	1233.5	1238.4	1289.8	1375.5	1451.3	1463.5
55°	12655.6	4207.1	1480.7	1174.7	1184.6	1182.0	1201.7	1260.5	1336.2	1412.1	1417.1
57.5°	12888.1	4412.7	1424.4	1138.1	1128.2	1143.0	1174.7	1231.1	1304.4	1395.0	1402.4
58°	12934.5	4461.6	1414.6	1128.2	1116.0	1138.1	1169.8	1223.7	1299.5	1395.0	1402.4
60°	13005.5	4635.5	1390.1	1108.7	1074.4	1113.6	1152.6	1206.5	1289.8	1407.3	1421.9
62.5°	12662.9	4669.6	1382.7	1086.7	1030.4	1079.3	1125.8	1187.0	1280.0	1448.9	1480.7
65°	11475.9	4317.3	1331.5	1050.0	993.6	1052.3	1101.4	1172.4	1309.4	1573.7	1588.4
67.5°	9212.0	3585.5	1206.5	993.6	952.0	1020.6	1081.7	1172.4	1321.6	1593.2	1603.1
70°	6333.9	2694.6	1050.0	932.4	903.1	981.3	1074.4	1199.2	1280.0	1507.6	1478.3
72.5°	3308.9	1874.7	920.2	861.5	844.3	947.2	1145.4	1172.4	1231.1	1407.3	1377.9
75°	1666.6	1275.0	810.0	780.7	778.3	934.9	1282.4	1128.2	1179.7	1324.0	1387.7
77.5°	983.9	998.5	721.9	704.8	717.1	912.9	1284.9	1084.2	1120.9	1218.8	1287.3
80°	673.0	824.8	653.5	648.6	658.4	839.4	1184.6	1030.4	1052.3	1152.6	1226.1
82.5°	379.3	455.2	572.7	604.5	599.7	687.7	1023.0	937.3	964.3	1363.2	1441.5
85°	183.5	274.1	479.6	565.3	511.6	457.7	832.1	832.1	839.4	976.6	988.8
87.5°	68.5	122.4	323.1	447.9	357.3	274.1	565.3	589.8	655.9	675.4	690.2
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)