

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: P196320

Luminaire Tested: **NAV-AF-06-D-UNV-T3-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196320  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)  
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-T3-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 40434.2 lumens  
Efficiency: N/A  
Efficacy: 105.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G5

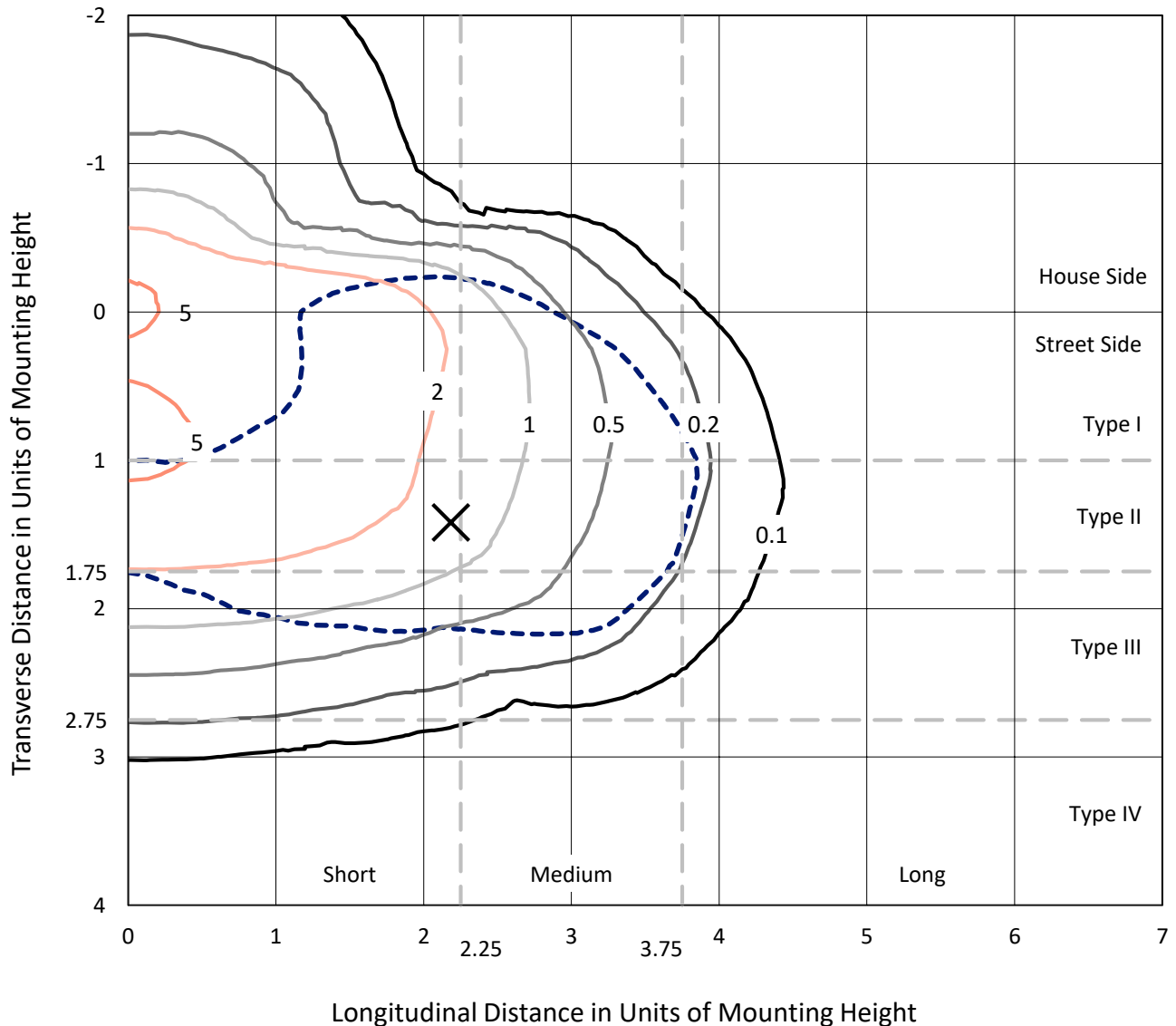
Input Watts (W): 382  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

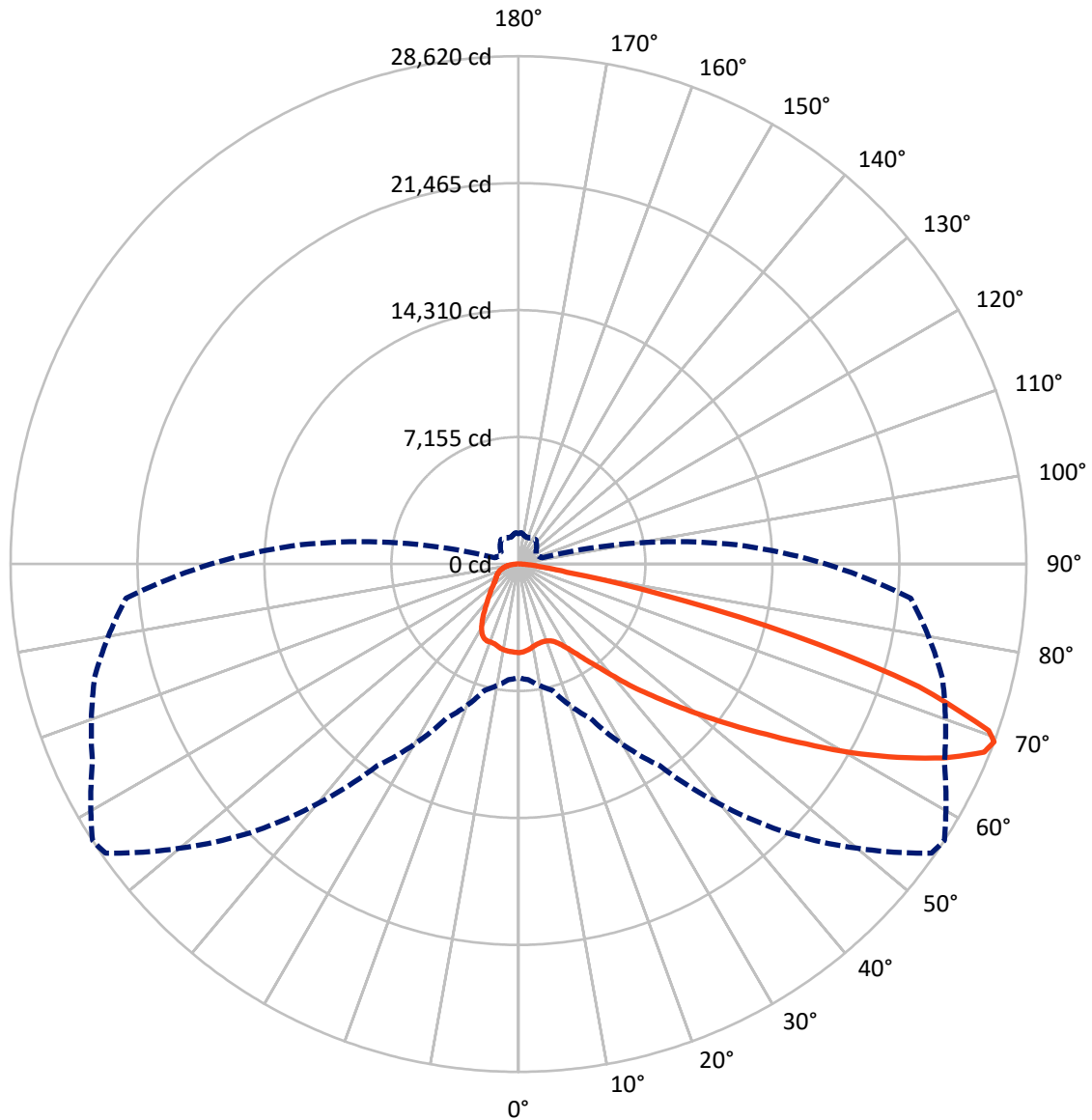
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.7 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8922.4	0.0	8922.4
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	31511.8	0.0	31511.8
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	40434.2	0.0	40434.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	467.7	1.2
10°-20°	1329.9	3.3
20°-30°	2212.2	5.5
30°-40°	3612.5	8.9
40°-50°	6097.1	15.1
50°-60°	9484.3	23.5
60°-70°	11297.8	27.9
70°-80°	5263.3	13.0
80°-90°	669.4	1.7
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°	40434.2	100.0
0°-180°	40434.2	100.0



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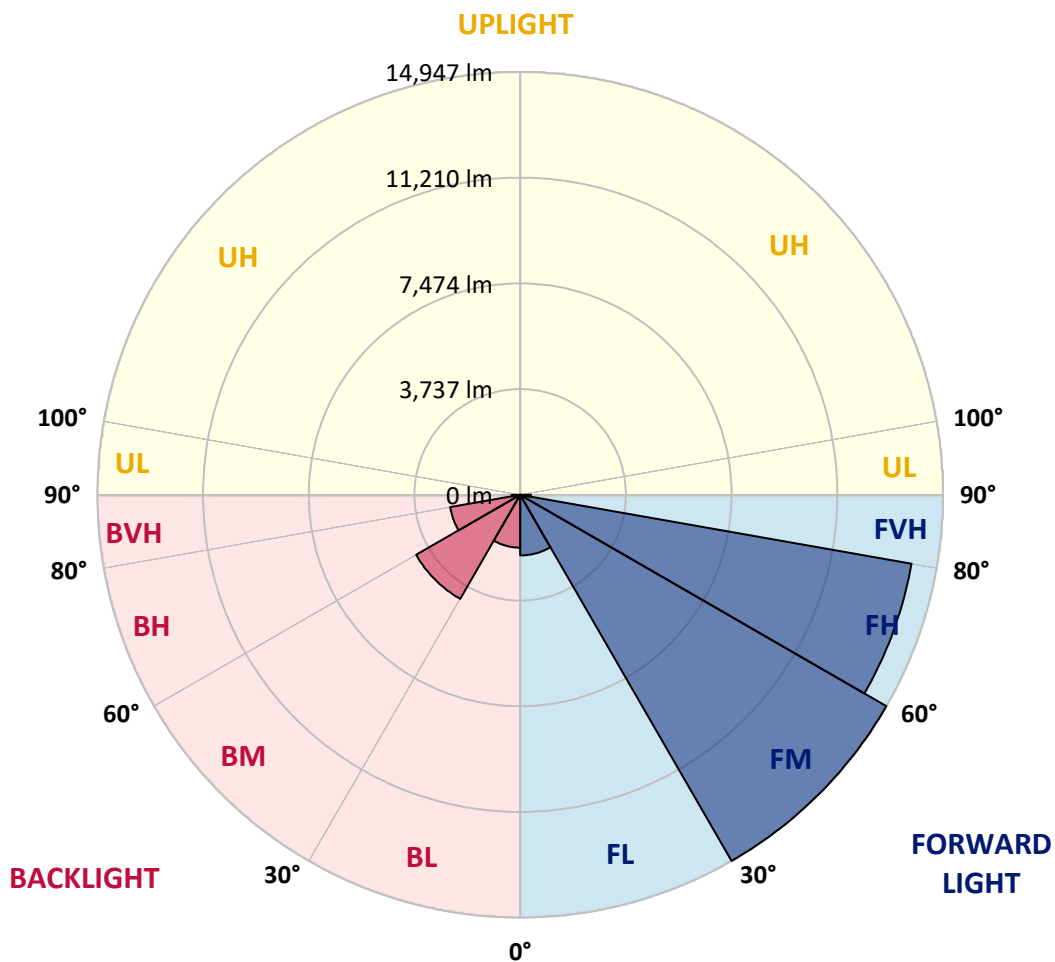
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2141.3	5.3			
FM	(30°-60°)	14947.3	37.0			
FH	(60°-80°)	14046.9	34.7			G5
FVH	(80°-90°)	376.3	0.9			G3/500
BL	(0°-30°)	1868.5	4.6	B3/2500		
BM	(30°-60°)	4246.5	10.5	B3/5000		
BH	(60°-80°)	2514.2	6.2	B4/5000		G4/5000
BVH	(80°-90°)	293.1	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G5**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0
2.5°	4967.6	4967.6	4980.5	4980.5	4980.5	4975.3	4959.8	4965.0	4954.7	4946.9	4933.9
5°	4866.6	4871.8	4887.4	4892.5	4900.2	4902.8	4902.8	4900.2	4902.8	4902.8	4895.1
7.5°	4726.9	4732.0	4750.1	4760.5	4783.7	4804.5	4814.8	4814.8	4827.8	4838.1	4840.7
10°	4641.4	4641.4	4651.8	4651.8	4669.9	4680.2	4713.9	4711.3	4747.5	4781.2	4796.7
12.5°	4631.0	4631.0	4625.9	4607.8	4597.3	4594.8	4628.4	4633.7	4688.0	4747.5	4776.1
15°	4664.7	4664.7	4649.2	4612.9	4574.1	4556.0	4589.7	4600.0	4659.5	4729.4	4773.4
17.5°	4773.4	4770.8	4737.2	4664.7	4597.3	4568.9	4579.2	4589.7	4644.0	4724.2	4778.6
20°	5014.2	5014.2	4941.7	4809.6	4693.2	4625.9	4610.3	4618.1	4656.9	4732.0	4801.9
22.5°	5436.1	5443.8	5314.4	5097.0	4897.7	4755.3	4693.2	4701.0	4719.1	4791.5	4869.1
25°	6057.4	6036.6	5852.9	5544.8	5234.2	4990.9	4864.0	4871.8	4871.8	4939.1	5019.3
27.5°	6714.9	6720.1	6456.0	6124.7	5715.6	5353.3	5151.4	5148.7	5146.2	5210.9	5296.3
30°	7457.8	7460.4	7154.9	6771.8	6303.3	5839.9	5537.0	5534.5	5511.1	5591.4	5702.7
32.5°	8270.7	8268.1	7913.4	7481.1	6960.8	6435.3	6041.9	6039.3	6021.1	6129.8	6264.4
35°	9171.5	9171.5	8819.5	8286.2	7724.4	7139.4	6683.9	6681.2	6691.6	6839.1	6966.0
37.5°	10256.1	10279.4	9854.9	9207.7	8594.2	7970.3	7439.7	7424.2	7346.5	7595.0	7804.7
40°	11387.4	11452.0	11012.0	10256.1	9593.4	8948.9	8363.9	8353.5	8286.2	8550.2	8889.3
42.5°	12611.8	12759.3	12270.1	11498.7	10776.4	10080.1	9492.5	9464.0	9205.1	9616.8	10147.4
45°	14216.7	14312.5	13603.2	12904.3	12223.4	11428.7	10729.8	10577.1	10318.2	10846.3	11534.9
47.5°	15309.1	15262.5	14819.9	14351.3	13913.9	13152.8	12078.5	11884.3	11568.6	12267.4	13025.9
50°	15987.3	16020.9	15772.5	15749.1	15725.8	15195.2	13600.6	13367.6	13002.6	13831.0	14716.3
52.5°	16435.1	16282.4	16326.4	16854.5	17493.9	17240.2	15322.1	15063.2	14687.8	15516.2	16515.4
55°	16248.8	16046.8	16453.2	17493.9	18997.8	19054.8	17211.8	16945.1	16624.1	17307.5	18679.5
57.5°	15477.3	15578.3	16220.3	17667.3	20025.6	20680.5	19383.6	19111.8	18480.1	19173.9	20734.8
60°	14392.7	14597.2	15578.3	17392.9	20745.2	21946.3	21767.7	21586.5	20499.3	20991.2	22893.7
62.5°	13227.9	13429.8	14636.1	16924.4	20421.6	23067.2	24107.8	23996.5	22728.1	22741.0	24263.2
65°	11506.5	11589.2	12821.5	15645.6	19523.3	24079.3	26450.5	26352.1	24858.5	24234.6	24646.3
67.5°	8690.0	8793.6	9805.7	12350.3	16789.8	23530.5	28322.1	28306.6	26139.9	24788.7	23735.0
69°	6417.2	6544.0	7369.8	9588.2	13882.8	21438.9	28410.1	28619.8	26486.8	24731.7	22194.9
70°	4695.8	4840.7	5604.3	7610.5	11563.3	19129.9	27656.8	28107.2	26354.7	24371.9	20993.7
72.5°	1995.8	2045.0	2420.4	3435.1	5865.8	11534.9	22653.0	23600.5	23802.3	21837.6	16401.5
75°	1250.4	1265.8	1413.4	1762.9	2609.3	4770.8	14669.7	15961.4	17770.9	16942.5	10981.0
77.5°	942.2	955.2	1040.6	1214.0	1620.5	1781.0	6805.5	8115.3	10178.5	9966.2	5464.6
80°	722.2	730.0	787.0	882.7	1141.6	1115.7	2208.1	2775.0	4247.9	3748.3	1933.7
82.5°	566.9	569.5	618.7	636.8	797.3	750.7	1108.0	1234.8	1716.2	1426.3	944.8
85°	502.2	509.9	559.1	466.0	509.9	453.0	608.3	660.1	911.2	859.4	357.2
87.5°	256.2	269.2	468.5	398.6	256.2	214.8	266.6	287.3	370.2	401.2	173.4
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°	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0	4996.0
2.5°	4936.5	4939.1	4946.9	4959.8	4980.5	5006.4	5037.4	5068.5	5086.6	5099.6	5094.4
5°	4895.1	4897.7	4913.2	4936.5	4962.3	5001.2	5053.0	5091.8	5120.3	5138.4	5135.8
7.5°	4843.3	4851.0	4882.1	4908.0	4944.2	4975.3	5016.8	5053.0	5081.5	5099.6	5097.0
10°	4804.5	4812.3	4851.0	4884.7	4915.8	4921.0	4913.2	4902.8	4900.2	4913.2	4908.0
12.5°	4786.4	4801.9	4838.1	4861.5	4848.5	4799.3	4742.4	4719.1	4711.3	4737.2	4739.7
15°	4791.5	4804.5	4835.6	4820.0	4750.1	4667.3	4636.2	4654.3	4669.9	4685.4	4688.0
17.5°	4804.5	4812.3	4820.0	4763.1	4664.7	4610.3	4600.0	4581.9	4535.3	4509.4	4506.8
20°	4827.8	4838.1	4825.2	4734.6	4646.5	4574.1	4449.8	4338.5	4232.4	4175.5	4152.2
22.5°	4908.0	4915.8	4876.9	4788.9	4654.3	4418.7	4167.7	3976.1	3813.0	3725.1	3691.4
25°	5066.0	5078.8	5024.5	4913.2	4561.1	4149.6	3794.9	3536.0	3331.5	3225.5	3196.9
27.5°	5342.9	5355.9	5296.3	5006.4	4343.7	3789.7	3360.0	3103.7	2927.7	2837.2	2824.2
30°	5757.1	5775.2	5720.9	5003.8	4012.3	3331.5	2935.5	2785.4	2684.4	2622.2	2619.7
32.5°	6331.8	6399.1	6176.5	4915.8	3603.3	2868.1	2614.5	2562.7	2513.6	2472.2	2472.2
35°	7061.7	7219.7	6626.9	4732.0	3152.9	2552.4	2435.9	2386.7	2324.6	2280.6	2275.3
37.5°	7934.1	8180.0	6947.9	4405.8	2764.6	2399.6	2327.2	2246.9	2148.5	2063.1	2042.4
40°	9132.7	9189.6	7105.7	3875.1	2474.7	2316.8	2226.2	2125.3	2001.0	1905.2	1894.9
42.5°	10336.4	10150.0	7074.7	3305.7	2309.0	2241.7	2122.6	2011.3	1900.0	1819.8	1819.8
45°	11705.7	10988.7	6839.1	2733.6	2158.9	2156.3	2026.9	1920.8	1835.4	1775.8	1762.9
47.5°	13015.6	11741.9	6432.7	2311.7	2003.6	2070.9	1964.8	1879.4	1801.7	1744.7	1734.4
50°	14605.0	12614.3	6000.4	2016.5	1853.5	1995.8	1938.9	1894.9	1819.8	1721.4	1711.1
52.5°	16184.0	13634.3	5666.5	1793.9	1721.4	1936.2	1954.4	1959.6	1889.7	1698.1	1685.2
55°	17879.6	14724.0	5314.4	1620.5	1612.7	1907.8	1990.7	1985.4	1951.8	1703.3	1682.7
57.5°	19492.3	15819.0	4788.9	1498.8	1527.3	1879.4	1998.4	1915.6	1856.0	1729.2	1695.5
60°	20828.0	16725.0	4017.5	1413.4	1454.8	1822.4	1946.7	1822.4	1721.4	1724.0	1693.0
62.5°	21477.8	16978.7	3072.7	1315.0	1395.3	1729.2	1871.6	1752.5	1659.3	1734.4	1716.2
65°	20983.4	16256.5	2189.9	1224.4	1322.8	1620.5	1827.6	1693.0	1628.2	1786.2	1765.4
67.5°	19207.5	14289.2	1589.5	1144.2	1252.9	1509.2	1744.7	1638.6	1597.1	1824.9	1778.4
69°	17320.5	12337.4	1377.1	1097.5	1203.7	1449.6	1690.3	1610.1	1573.9	1770.6	1703.3
70°	15751.7	10833.4	1271.0	1069.1	1162.3	1416.0	1649.0	1592.0	1550.6	1705.9	1625.7
72.5°	11294.2	7002.2	1069.1	983.7	1053.5	1340.9	1558.4	1524.7	1462.6	1540.3	1488.5
75°	6823.6	3655.1	908.6	895.7	939.7	1237.4	1452.2	1410.8	1348.7	1356.4	1330.6
77.5°	3134.8	1687.8	761.1	792.1	820.6	1108.0	1322.8	1276.2	1219.3	1198.5	1201.1
80°	1374.5	986.2	636.8	675.7	691.2	996.7	1183.0	1131.2	1069.1	1180.4	1095.0
82.5°	743.0	572.0	497.1	522.9	566.9	867.2	1027.7	960.3	900.8	1048.4	846.5
85°	300.2	292.6	336.6	362.4	393.4	623.9	859.4	789.5	717.1	642.0	626.5
87.5°	129.4	139.7	165.7	176.0	209.7	388.3	577.3	504.8	507.4	434.9	427.1
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)