

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: P195840

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195840
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-T3-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39527 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

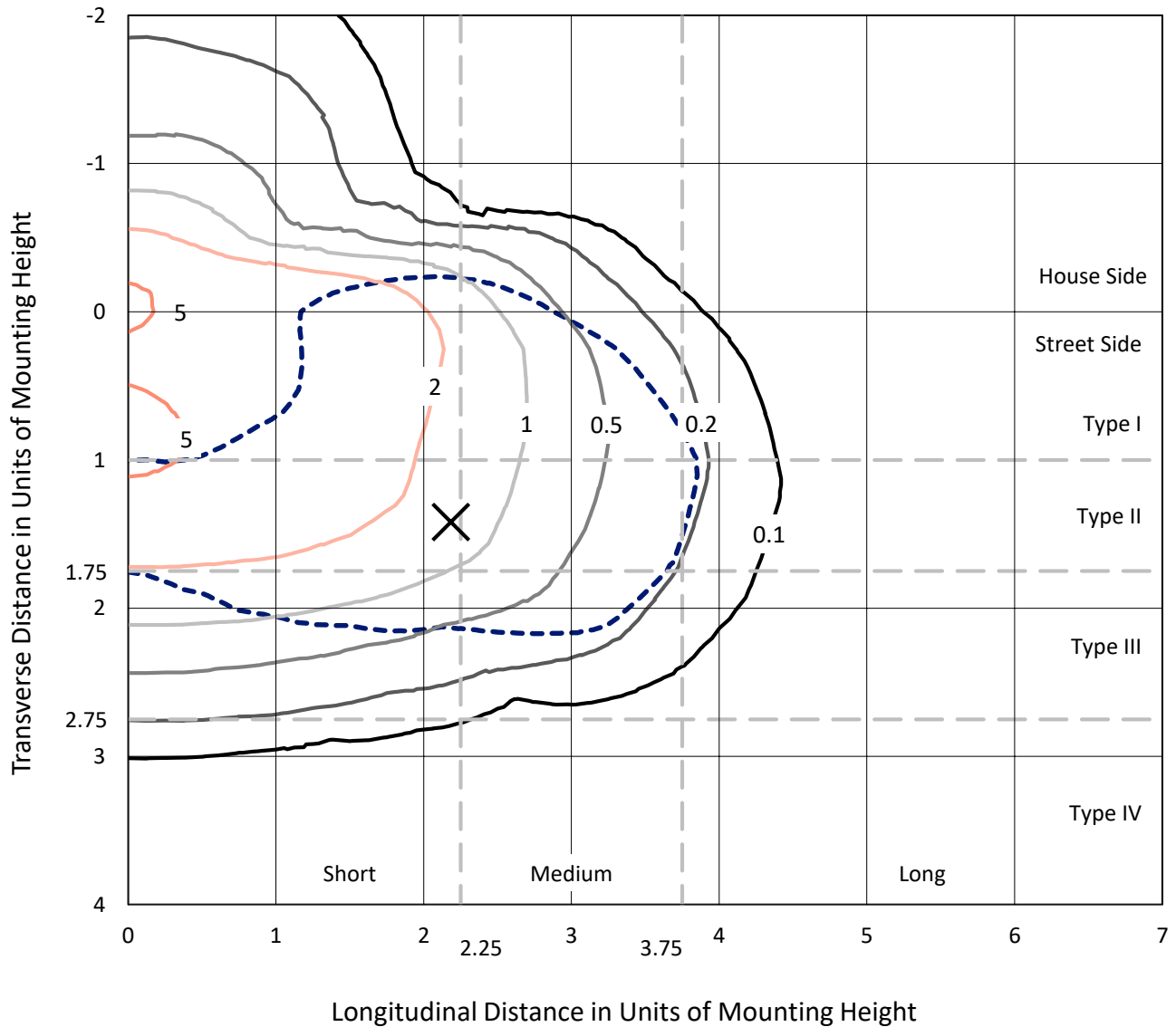
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

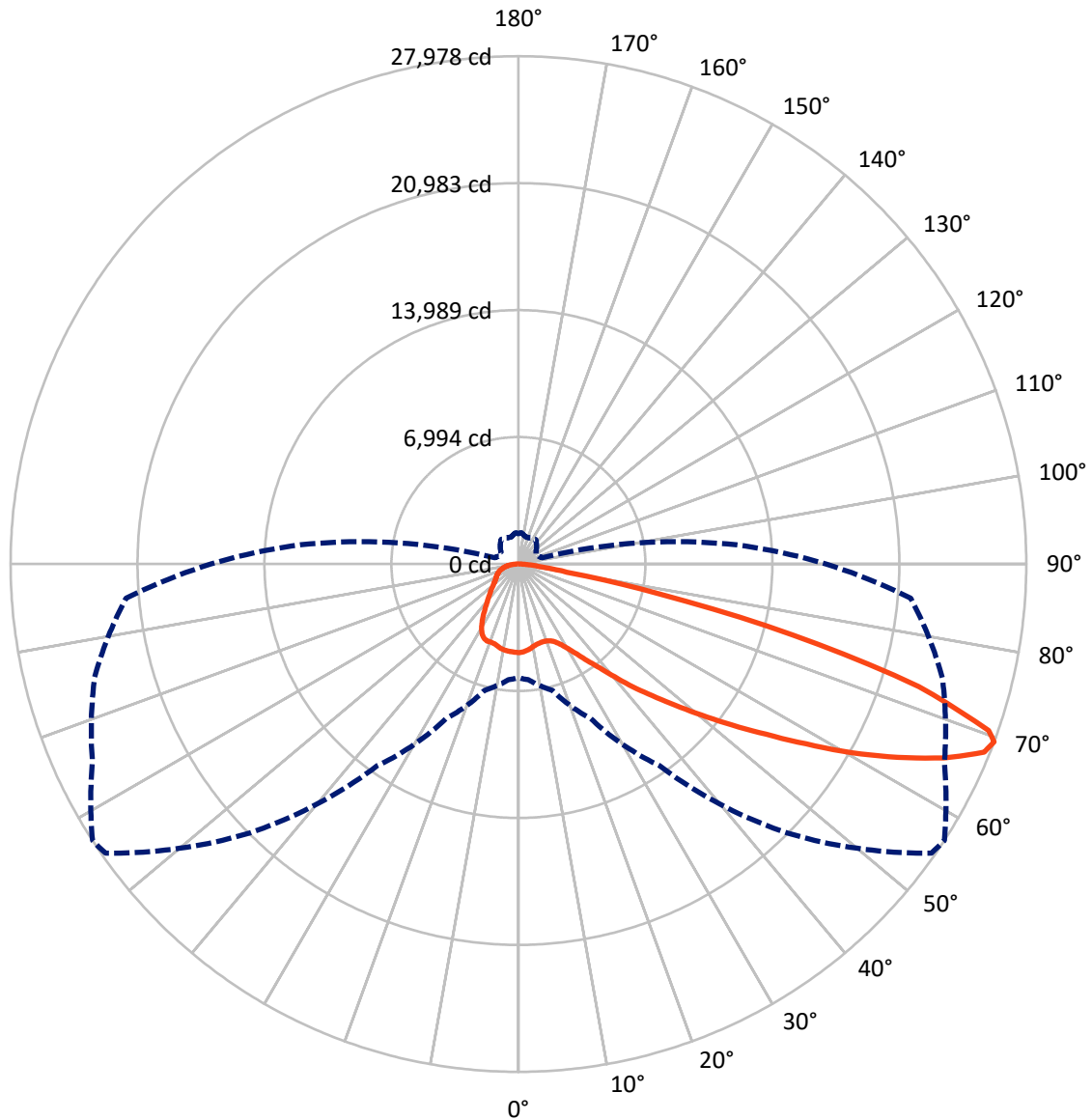
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.6 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
House Side	Lumens	8722.2	0.0	8722.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	30804.8	0.0	30804.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	39527.0	0.0	39527.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	457.2	1.2
10°-20°	1300.0	3.3
20°-30°	2162.6	5.5
30°-40°	3531.4	8.9
40°-50°	5960.3	15.1
50°-60°	9271.5	23.5
60°-70°	11044.4	27.9
70°-80°	5145.2	13.0
80°-90°	654.4	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°	39527.0	100.0
0°-180°	39527.0	100.0



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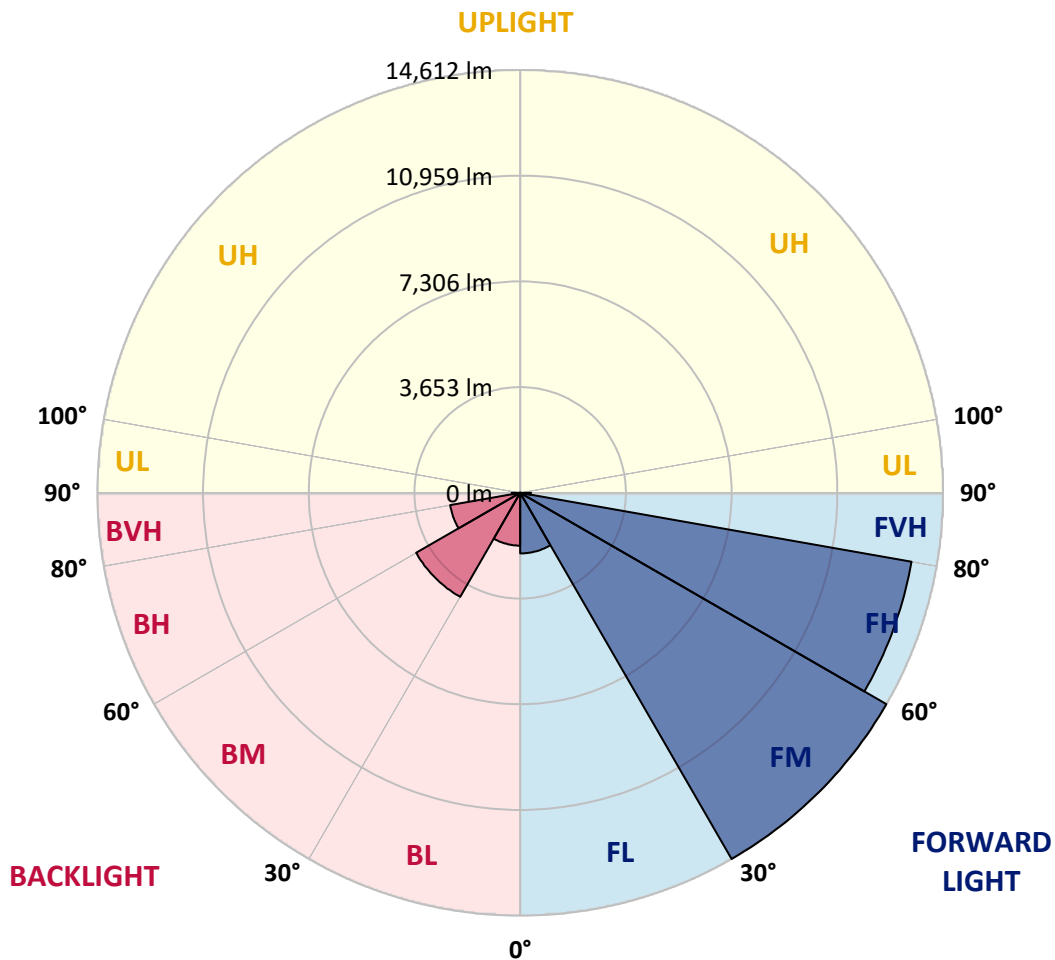
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2093.3	5.3			
FM	(30°-60°)	14611.9	37.0			
FH	(60°-80°)	13731.7	34.7			G5
FVH	(80°-90°)	367.8	0.9			G3/500
BL	(0°-30°)	1826.6	4.6	B3/2500		
BM	(30°-60°)	4151.3	10.5	B3/5000		
BH	(60°-80°)	2457.8	6.2	B3/2500		G3/2500
BVH	(80°-90°)	286.6	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9
2.5°	4856.1	4856.1	4868.8	4868.8	4868.8	4863.7	4848.5	4853.6	4843.5	4835.9	4823.2
5°	4757.4	4762.5	4777.7	4782.7	4790.3	4792.8	4792.8	4790.3	4792.8	4792.8	4785.3
7.5°	4620.8	4625.8	4643.5	4653.7	4676.4	4696.7	4706.8	4706.8	4719.5	4729.6	4732.1
10°	4537.3	4537.3	4547.4	4547.4	4565.1	4575.2	4608.1	4605.6	4641.0	4673.9	4689.1
12.5°	4527.1	4527.1	4522.1	4504.4	4494.2	4491.7	4524.6	4529.7	4582.8	4641.0	4668.9
15°	4560.0	4560.0	4544.9	4509.4	4471.5	4453.8	4486.7	4496.8	4555.0	4623.3	4666.3
17.5°	4666.3	4663.8	4630.9	4560.0	4494.2	4466.4	4476.5	4486.7	4539.8	4618.2	4671.4
20°	4901.7	4901.7	4830.8	4701.7	4587.9	4522.1	4506.9	4514.5	4552.4	4625.8	4694.2
22.5°	5314.1	5321.7	5195.2	4982.6	4787.8	4648.6	4587.9	4595.5	4613.2	4684.0	4759.9
25°	5921.5	5901.2	5721.6	5420.4	5116.8	4878.9	4754.9	4762.5	4762.5	4828.3	4906.7
27.5°	6564.2	6569.3	6311.2	5987.3	5587.4	5233.2	5035.8	5033.2	5030.7	5094.0	5177.5
30°	7290.5	7293.0	6994.4	6619.9	6161.9	5708.9	5412.8	5410.3	5387.5	5466.0	5574.8
32.5°	8085.1	8082.6	7735.9	7313.3	6804.6	6290.9	5906.3	5903.8	5886.0	5992.3	6123.9
35°	8965.7	8965.7	8621.6	8100.3	7551.1	6979.2	6533.9	6531.3	6541.5	6685.7	6809.7
37.5°	10026.0	10048.8	9633.8	9001.1	8401.4	7791.5	7272.8	7257.6	7181.7	7424.6	7629.6
40°	11131.9	11195.1	10764.9	10026.0	9378.2	8748.1	8176.2	8166.1	8100.3	8358.4	8689.9
42.5°	12328.8	12473.0	11994.8	11240.7	10534.6	9853.9	9279.5	9251.7	8998.6	9401.0	9919.7
45°	13897.7	13991.4	13298.0	12614.8	11949.2	11172.3	10489.1	10339.8	10086.7	10603.0	11276.1
47.5°	14965.6	14920.1	14487.4	14029.3	13601.7	12857.7	11807.5	11617.7	11309.0	11992.2	12733.7
50°	15628.6	15661.5	15418.6	15395.8	15373.0	14854.3	13295.5	13067.7	12710.9	13520.7	14386.1
52.5°	16066.4	15917.1	15960.1	16476.4	17101.4	16853.4	14978.3	14725.2	14358.3	15168.1	16144.9
55°	15884.2	15686.8	16084.1	17101.4	18571.6	18627.3	16825.6	16564.9	16251.1	16919.2	18260.4
57.5°	15130.1	15228.8	15856.4	17270.9	19576.3	20216.5	18948.7	18683.0	18065.5	18743.7	20269.6
60°	14069.8	14269.7	15228.8	17002.7	20279.8	21453.9	21279.3	21102.2	20039.4	20520.2	22380.1
62.5°	12931.1	13128.5	14307.7	16544.7	19963.4	22549.7	23566.9	23458.1	22218.2	22230.8	23718.8
65°	11248.3	11329.2	12533.8	15294.6	19085.3	23539.1	25857.1	25760.9	24300.8	23690.9	24093.3
67.5°	8495.0	8596.3	9585.7	12073.2	16413.1	23002.6	27686.7	27671.5	25553.4	24232.5	23202.5
69°	6273.2	6397.2	7204.5	9373.1	13571.3	20957.9	27772.7	27977.7	25892.5	24176.8	21696.9
70°	4590.4	4732.1	5478.6	7439.8	11303.9	18700.7	27036.3	27476.6	25763.4	23825.1	20522.7
72.5°	1951.0	1999.1	2366.1	3358.0	5734.2	11276.1	22144.8	23071.0	23268.3	21347.7	16033.5
75°	1222.3	1237.4	1381.7	1723.3	2550.8	4663.8	14340.6	15603.3	17372.2	16562.4	10734.6
77.5°	921.1	933.8	1017.3	1186.8	1584.1	1741.0	6652.8	7933.2	9950.1	9742.6	5342.0
80°	706.0	713.6	769.3	862.9	1116.0	1090.7	2158.6	2712.7	4152.6	3664.2	1890.3
82.5°	554.2	556.7	604.8	622.5	779.4	733.9	1083.1	1207.1	1677.7	1394.3	923.6
85°	490.9	498.5	546.6	455.5	498.5	442.8	594.7	645.3	890.8	840.1	349.2
87.5°	250.5	263.2	458.0	389.7	250.5	210.0	260.6	280.9	361.9	392.2	169.5
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°	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9	4883.9
2.5°	4825.7	4828.3	4835.9	4848.5	4868.8	4894.1	4924.4	4954.8	4972.5	4985.2	4980.1
5°	4785.3	4787.8	4803.0	4825.7	4851.0	4889.0	4939.6	4977.6	5005.4	5023.1	5020.6
7.5°	4734.6	4742.2	4772.6	4797.9	4833.3	4863.7	4904.2	4939.6	4967.5	4985.2	4982.6
10°	4696.7	4704.3	4742.2	4775.1	4805.5	4810.6	4803.0	4792.8	4790.3	4803.0	4797.9
12.5°	4679.0	4694.2	4729.6	4752.4	4739.7	4691.6	4636.0	4613.2	4605.6	4630.9	4633.4
15°	4684.0	4696.7	4727.1	4711.9	4643.5	4562.6	4532.2	4549.9	4565.1	4580.3	4582.8
17.5°	4696.7	4704.3	4711.9	4656.2	4560.0	4506.9	4496.8	4479.1	4433.5	4408.2	4405.7
20°	4719.5	4729.6	4716.9	4628.4	4542.3	4471.5	4350.0	4241.2	4137.4	4081.8	4059.0
22.5°	4797.9	4805.5	4767.5	4681.5	4549.9	4319.6	4074.2	3886.9	3727.5	3641.5	3608.6
25°	4952.3	4964.9	4911.8	4803.0	4458.8	4056.5	3709.8	3456.7	3256.8	3153.1	3125.2
27.5°	5223.0	5235.7	5177.5	4894.1	4246.2	3704.7	3284.6	3034.1	2862.0	2773.5	2760.8
30°	5627.9	5645.6	5592.5	4891.5	3922.3	3256.8	2869.6	2722.9	2624.2	2563.4	2560.9
32.5°	6189.7	6255.5	6037.9	4805.5	3522.5	2803.8	2555.8	2505.2	2457.2	2416.7	2416.7
35°	6903.3	7057.7	6478.2	4625.8	3082.2	2495.1	2381.2	2333.2	2272.4	2229.4	2224.3
37.5°	7756.1	7996.5	6792.0	4307.0	2702.6	2345.8	2275.0	2196.5	2100.3	2016.8	1996.6
40°	8927.8	8983.4	6946.3	3788.2	2419.2	2264.8	2176.3	2077.6	1956.1	1862.5	1852.4
42.5°	10104.5	9922.3	6916.0	3231.5	2257.2	2191.4	2075.0	1966.2	1857.4	1779.0	1779.0
45°	11443.1	10742.2	6685.7	2672.3	2110.5	2107.9	1981.4	1877.7	1794.2	1736.0	1723.3
47.5°	12723.6	11478.5	6288.4	2259.8	1958.6	2024.4	1920.7	1837.2	1761.3	1705.6	1695.5
50°	14277.3	12331.3	5865.8	1971.3	1811.9	1951.0	1895.4	1852.4	1779.0	1682.8	1672.7
52.5°	15820.9	13328.4	5539.4	1753.7	1682.8	1892.8	1910.6	1915.6	1847.3	1660.0	1647.4
55°	17478.5	14393.7	5195.2	1584.1	1576.5	1865.0	1946.0	1940.9	1908.0	1665.1	1644.9
57.5°	19055.0	15464.1	4681.5	1465.2	1493.0	1837.2	1953.6	1872.6	1814.4	1690.4	1657.5
60°	20360.7	16349.8	3927.4	1381.7	1422.2	1781.5	1903.0	1781.5	1682.8	1685.3	1655.0
62.5°	20995.9	16597.8	3003.8	1285.5	1364.0	1690.4	1829.6	1713.2	1622.1	1695.5	1677.7
65°	20512.6	15891.8	2140.8	1196.9	1293.1	1584.1	1786.6	1655.0	1591.7	1746.1	1725.8
67.5°	18776.6	13968.6	1553.8	1118.5	1224.8	1475.3	1705.6	1601.8	1561.3	1784.0	1738.5
69°	16931.9	12060.6	1346.2	1072.9	1176.7	1417.1	1652.4	1574.0	1538.6	1730.9	1665.1
70°	15398.3	10590.3	1242.5	1045.1	1136.2	1384.2	1612.0	1556.3	1515.8	1667.6	1589.2
72.5°	11040.8	6845.1	1045.1	961.6	1029.9	1310.8	1523.4	1490.5	1429.8	1505.7	1455.1
75°	6670.5	3573.1	888.2	875.6	918.6	1209.6	1419.6	1379.1	1318.4	1326.0	1300.7
77.5°	3064.5	1649.9	744.0	774.3	802.2	1083.1	1293.1	1247.6	1191.9	1171.6	1174.2
80°	1343.7	964.1	622.5	660.5	675.7	974.3	1156.5	1105.8	1045.1	1153.9	1070.4
82.5°	726.3	559.2	485.9	511.2	554.2	847.7	1004.6	938.8	880.6	1024.9	827.5
85°	293.5	286.0	329.0	354.3	384.6	609.9	840.1	771.8	701.0	627.6	612.4
87.5°	126.5	136.6	162.0	172.1	205.0	379.6	564.3	493.5	496.0	425.1	417.5
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)