

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: P196866

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196866  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 34427.6 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G5

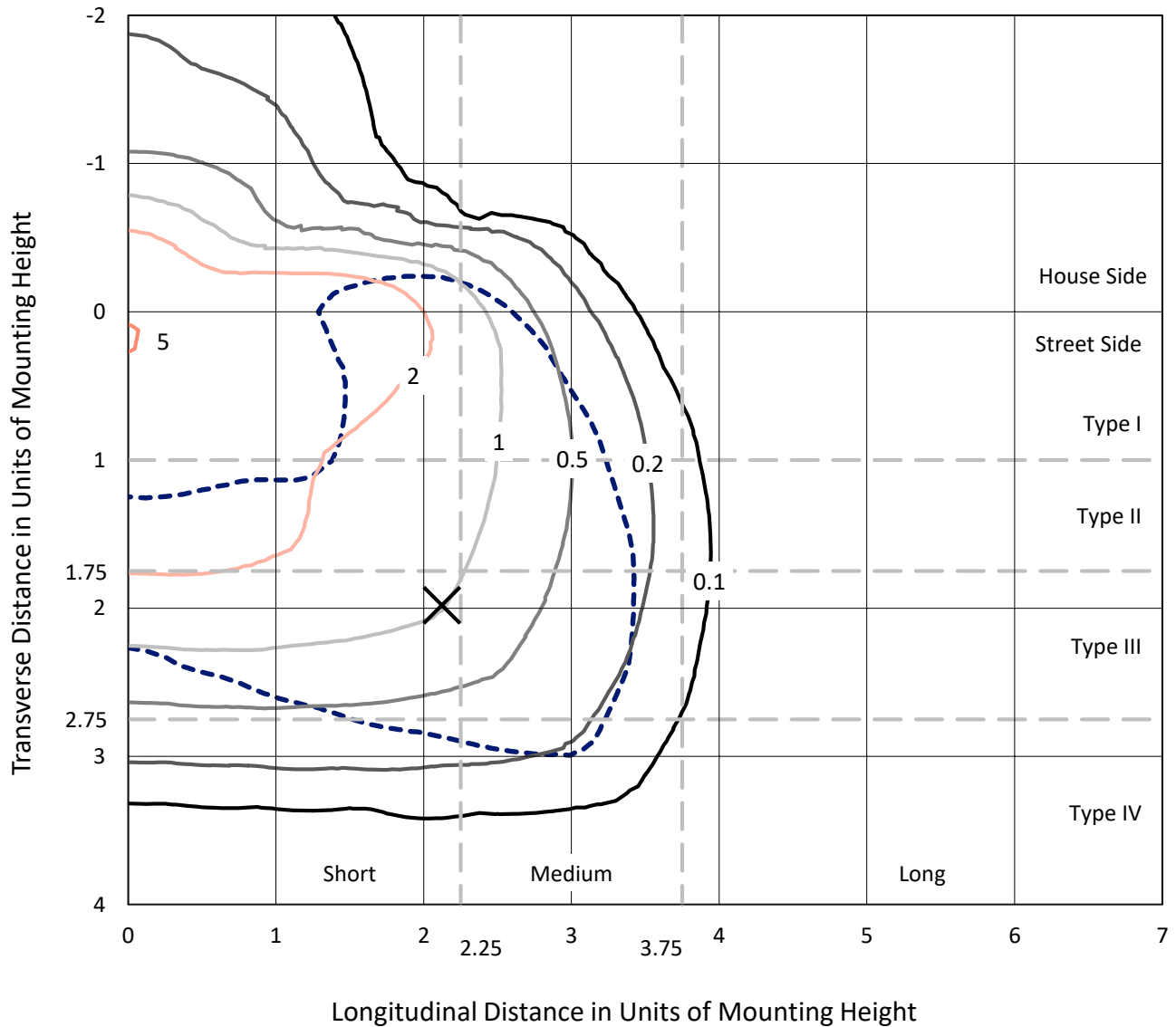
Input Watts (W): 333  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

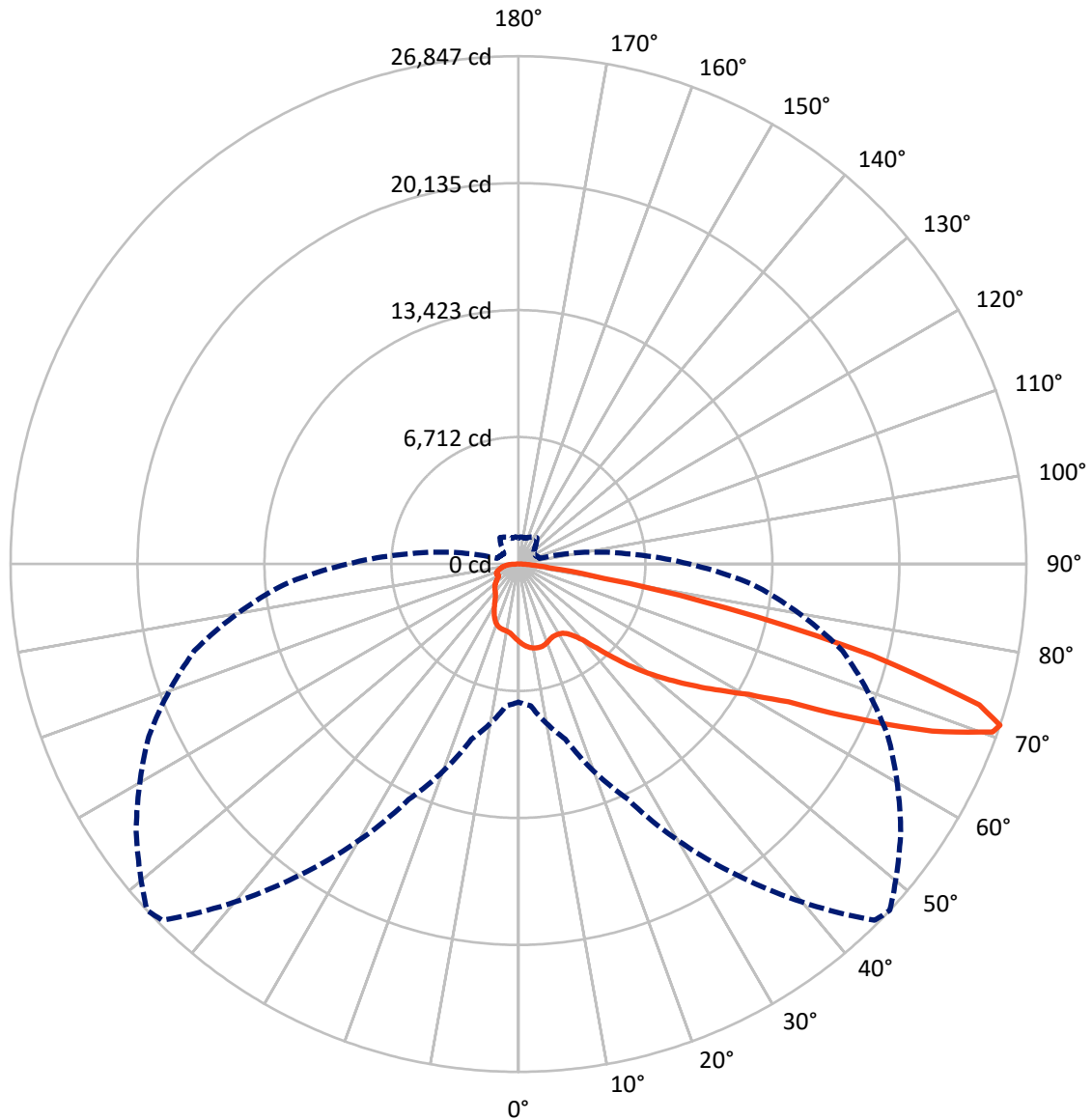
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.2 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral      - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7378.3	0.0	7378.3
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	27049.3	0.0	27049.3
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	34427.6	0.0	34427.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	390.9	1.1
10°-20°	1143.6	3.3
20°-30°	1699.3	4.9
30°-40°	2440.0	7.1
40°-50°	4326.2	12.6
50°-60°	7402.7	21.5
60°-70°	10509.3	30.5
70°-80°	5755.8	16.7
80°-90°	759.8	2.2
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°	34427.6	100.0
0°-180°	34427.6	100.0



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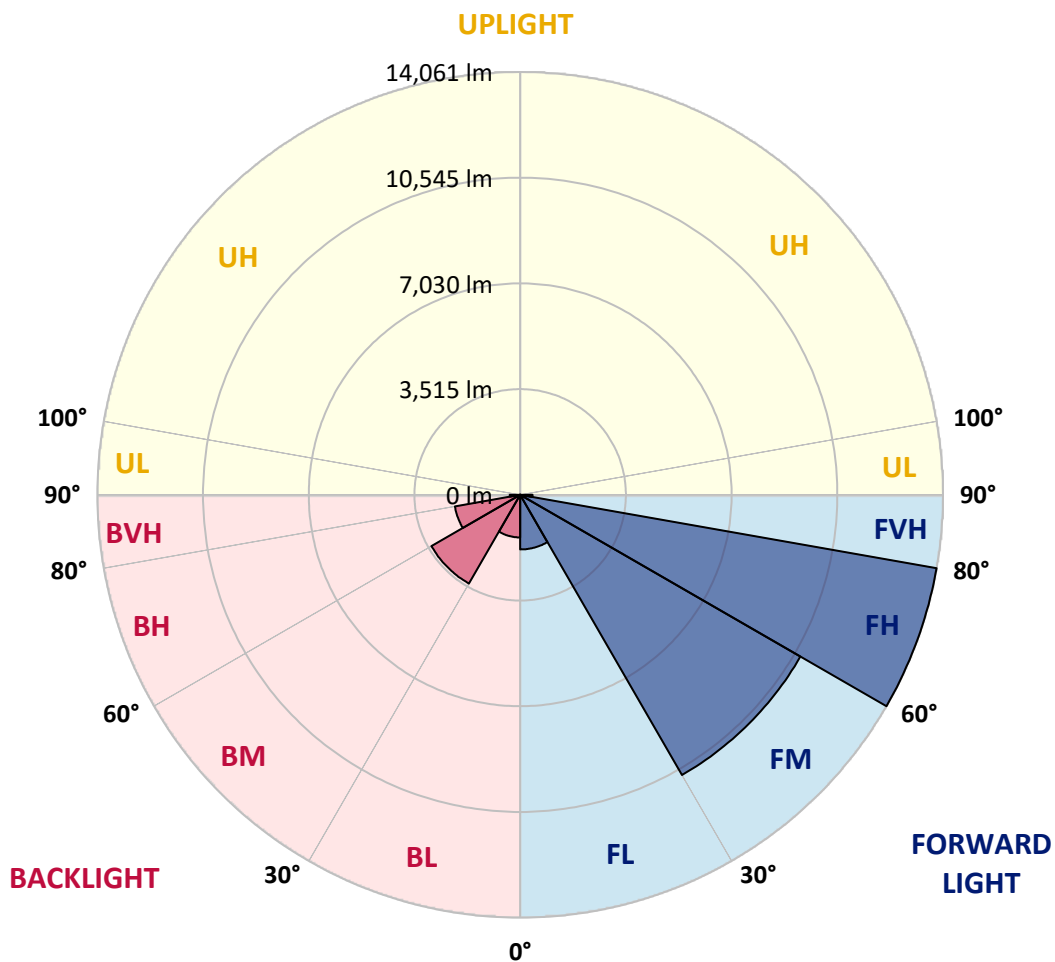
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1816.9	5.3			
FM	(30°-60°)	10759.7	31.3			
FH	(60°-80°)	14060.6	40.8			G5
FVH	(80°-90°)	412.1	1.2			G3/500
BL	(0°-30°)	1416.9	4.1	B3/2500		
BM	(30°-60°)	3409.2	9.9	B3/5000		
BH	(60°-80°)	2204.5	6.4	B3/2500		G3/2500
BVH	(80°-90°)	347.7	1.0			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1
2.5°	4343.9	4335.0	4339.4	4323.8	4285.9	4245.7	4245.7	4203.3	4158.7	4114.0	4065.0
5°	4613.9	4600.5	4589.3	4540.3	4466.6	4384.0	4370.7	4285.9	4194.5	4102.9	4013.7
7.5°	4839.2	4825.8	4792.3	4703.1	4596.0	4473.3	4457.7	4346.2	4225.6	4098.6	3973.5
10°	4999.8	4991.0	4926.2	4812.5	4687.4	4542.5	4515.6	4401.9	4259.2	4100.7	3942.3
12.5°	5089.1	5075.6	4997.6	4863.7	4716.5	4569.2	4542.5	4433.2	4270.3	4096.2	3911.1
15°	5053.3	5046.6	4973.1	4837.0	4689.7	4562.5	4540.3	4428.8	4263.7	4080.7	3882.1
17.5°	4901.7	4917.3	4859.3	4725.5	4604.9	4515.6	4491.1	4386.3	4230.1	4042.7	3837.4
20°	4691.9	4709.8	4680.7	4544.7	4475.5	4417.6	4404.1	4319.3	4174.4	3987.0	3783.8
22.5°	4468.8	4484.4	4486.7	4359.6	4337.1	4314.8	4303.7	4243.5	4125.3	3953.4	3748.2
25°	4314.8	4332.7	4337.1	4225.6	4239.0	4245.7	4243.5	4201.1	4116.4	3953.4	3752.6
27.5°	4274.8	4283.6	4279.2	4176.6	4201.1	4239.0	4241.2	4232.3	4152.1	3998.2	3815.2
30°	4413.1	4417.6	4361.7	4207.8	4232.3	4281.5	4283.6	4279.2	4227.9	4114.0	3955.7
32.5°	5010.9	5006.5	4814.6	4417.6	4332.7	4350.6	4357.3	4397.4	4401.9	4306.0	4158.7
35°	5921.3	5919.0	5695.9	5017.7	4618.3	4524.7	4533.5	4596.0	4651.8	4587.0	4502.3
37.5°	6923.0	6929.7	6793.6	5874.5	5234.1	4843.7	4834.7	4881.6	4982.0	5004.3	5015.4
40°	8034.1	8067.6	8060.8	6858.3	6097.5	5388.0	5298.7	5245.2	5439.4	5562.1	5720.5
42.5°	9303.5	9294.6	9299.0	7938.1	7083.6	6244.8	6079.6	5829.7	6055.1	6267.1	6615.1
45°	10394.6	10430.2	10456.9	9087.2	8188.0	7224.2	7056.8	6601.8	6804.7	7121.6	7652.6
47.5°	11492.2	11429.8	11478.9	10365.5	9417.4	8342.0	8125.6	7512.0	7701.6	8147.9	8955.6
50°	12770.7	12741.7	12518.6	12034.4	10903.2	9475.4	9192.0	8462.4	8739.1	9334.8	10564.2
52.5°	13917.5	13761.2	13587.3	13346.2	12364.7	10622.1	10262.9	9450.8	9959.5	10698.0	12561.0
55°	14336.9	14232.0	14441.8	14754.1	13910.8	11791.3	11389.6	10604.2	11336.0	12257.5	14910.3
57.5°	14783.1	14818.9	15291.8	15923.1	15374.3	13038.4	12603.3	11969.7	12846.4	14002.2	17536.2
60°	15006.2	15149.1	16092.7	17277.3	16766.5	14406.1	13988.8	13538.1	14522.0	15929.9	20155.5
62.5°	15044.1	15235.9	16572.5	17752.7	18683.0	16501.0	16019.0	15530.4	16614.8	18060.5	22051.9
65°	14348.0	14642.5	16530.1	18337.2	20430.0	20001.5	19695.9	18843.6	19417.0	19936.9	22375.4
67.5°	12302.1	12623.4	14894.7	18096.2	21831.1	23633.8	23575.8	22317.4	21581.1	20661.9	19977.1
70°	9029.1	9287.9	11469.9	15470.2	21219.7	26485.1	26587.7	24568.6	22185.7	19122.5	14854.5
71°	7302.4	7525.4	9582.5	13734.4	20028.4	26632.3	26846.5	24669.0	21556.7	17732.6	12436.0
72.5°	4544.7	4669.6	6363.0	10365.5	17246.1	25115.2	25476.6	23383.8	19575.4	14988.3	8790.5
75°	1715.7	1764.7	2360.4	4571.5	10294.2	18868.2	19305.4	17672.3	13752.4	8556.2	3679.1
77.5°	921.4	945.9	1171.3	1900.9	4125.3	10816.2	11378.5	10079.9	6597.3	2994.1	1503.7
80°	618.0	633.6	809.8	1126.7	1896.4	4118.5	4587.0	4047.2	2469.8	1709.1	1071.0
82.5°	399.4	408.3	551.1	740.7	1224.9	1448.0	1653.2	1726.9	1541.6	1224.9	647.1
85°	263.4	270.0	363.7	473.0	758.6	713.9	731.8	957.1	1050.8	807.7	330.2
87.5°	151.8	156.1	218.6	243.2	341.3	267.6	290.1	455.2	624.8	526.5	189.7
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°	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1	4094.1
2.5°	4042.7	4024.9	3984.6	3960.1	3948.9	3944.6	3940.1	3948.9	3948.9	3944.6	3935.6
5°	3969.1	3935.6	3868.7	3821.8	3797.3	3790.6	3799.5	3810.6	3817.4	3817.4	3810.6
7.5°	3915.6	3866.4	3777.2	3712.5	3674.6	3663.5	3687.9	3728.2	3754.9	3768.3	3770.5
10°	3870.9	3804.0	3705.8	3638.9	3607.6	3603.2	3634.4	3685.8	3741.5	3766.0	3770.5
12.5°	3830.7	3754.9	3647.8	3585.4	3563.1	3574.2	3616.6	3663.5	3728.2	3763.9	3766.0
15°	3792.8	3714.7	3600.9	3536.2	3531.8	3549.7	3589.8	3627.7	3676.8	3721.5	3721.5
17.5°	3748.2	3663.5	3545.1	3485.0	3485.0	3500.5	3527.3	3547.4	3578.7	3621.1	3618.7
20°	3694.6	3607.6	3487.1	3424.7	3411.3	3402.4	3402.4	3406.8	3433.6	3471.5	3478.3
22.5°	3654.5	3565.2	3438.1	3362.2	3302.1	3244.0	3219.5	3210.5	3235.0	3270.7	3279.6
25°	3654.5	3565.2	3422.4	3295.3	3148.1	3036.6	2989.7	2976.2	3000.8	3034.2	3047.7
27.5°	3714.7	3625.4	3458.2	3235.0	2965.1	2786.6	2730.8	2719.7	2742.0	2768.7	2782.2
30°	3855.3	3768.3	3560.8	3165.9	2762.1	2527.8	2465.3	2454.2	2465.3	2476.5	2492.1
32.5°	4089.6	4016.0	3728.2	3103.4	2556.7	2293.6	2217.6	2199.8	2204.3	2206.5	2219.9
35°	4471.1	4437.6	3951.3	3029.8	2362.7	2101.7	2023.6	1987.9	1985.7	1996.8	2012.4
37.5°	5055.7	5075.6	4239.0	2922.6	2202.1	1965.6	1887.5	1851.8	1833.9	1856.2	1874.2
40°	5881.1	5928.0	4571.5	2777.7	2070.5	1885.3	1802.7	1769.2	1744.7	1738.0	1746.9
42.5°	6954.3	6940.9	4910.5	2592.5	1927.7	1831.7	1744.7	1709.1	1668.8	1617.5	1606.3
45°	8225.9	8034.1	5193.9	2364.9	1764.7	1780.4	1691.2	1642.0	1579.6	1503.7	1494.7
47.5°	9727.5	9198.7	5367.9	2121.7	1613.1	1713.5	1630.9	1555.1	1463.6	1414.5	1407.8
50°	11536.9	10561.9	5490.8	1874.2	1476.9	1628.7	1546.1	1445.7	1356.5	1343.2	1340.8
52.5°	13678.7	12170.5	5642.3	1651.0	1369.9	1519.4	1461.4	1358.7	1287.3	1294.0	1294.0
55°	15956.7	13834.9	5646.8	1474.8	1276.1	1392.2	1398.8	1316.3	1260.6	1282.8	1289.6
57.5°	18033.8	15289.5	5202.8	1349.8	1186.9	1291.8	1378.9	1332.0	1289.6	1367.6	1374.4
60°	19845.5	16409.5	4248.0	1247.2	1113.4	1253.9	1423.4	1427.9	1419.0	1630.9	1646.5
62.5°	20508.0	16420.7	3016.4	1160.2	1073.2	1276.1	1517.2	1523.8	1523.8	1720.2	1749.1
65°	19580.0	15053.0	2007.9	1108.9	1046.3	1325.2	1593.0	1563.9	1494.7	1630.9	1599.7
67.5°	16309.1	11717.6	1468.0	1075.3	1008.5	1327.5	1659.8	1586.3	1468.0	1584.0	1530.5
70°	11208.9	7456.3	1229.2	1044.2	963.7	1269.5	1695.6	1579.6	1427.9	1476.9	1405.6
71°	9022.4	5950.3	1166.9	1032.9	945.9	1236.0	1700.1	1570.7	1407.8	1439.1	1374.4
72.5°	5943.6	3665.6	1091.0	1008.5	919.2	1178.1	1688.9	1550.6	1381.0	1383.2	1340.8
75°	2344.8	1519.4	981.7	952.6	843.4	1084.3	1639.9	1508.3	1329.6	1285.1	1267.3
77.5°	1184.7	992.8	863.4	874.6	754.1	988.4	1570.7	1439.1	1258.3	1198.1	1184.7
80°	865.7	754.1	738.5	758.6	653.7	894.7	1483.6	1345.3	1166.9	1229.2	1202.5
82.5°	526.5	459.7	577.9	626.9	546.7	798.6	1381.0	1236.0	1050.8	968.2	937.0
85°	249.8	270.0	417.3	461.8	403.8	638.1	1262.8	1115.5	917.0	792.0	805.5
87.5°	122.7	149.4	238.7	276.7	265.5	468.5	952.6	865.7	722.9	595.7	582.4
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)