

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: P195959

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195959  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
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-5NQ-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 34688.2 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

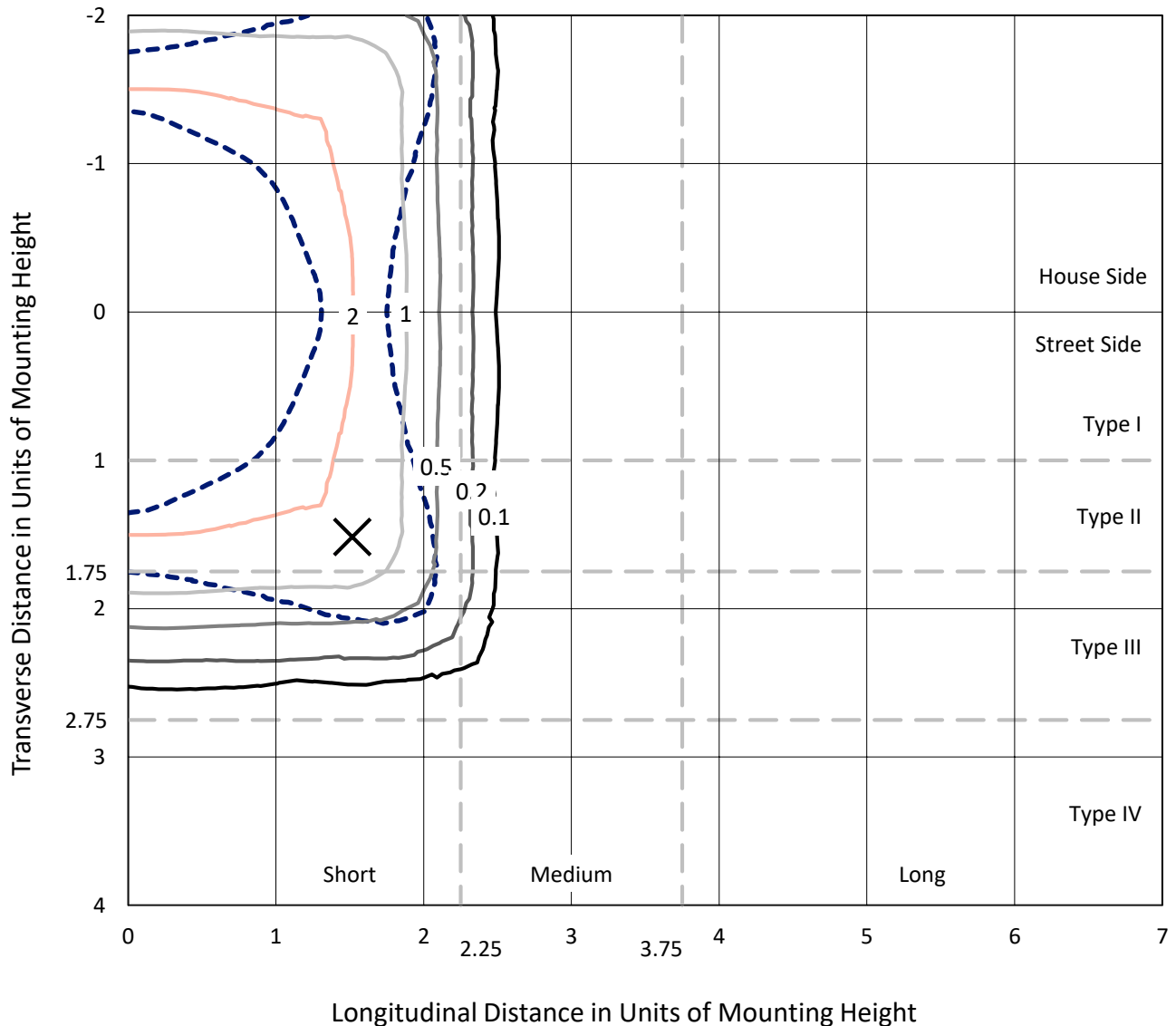
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

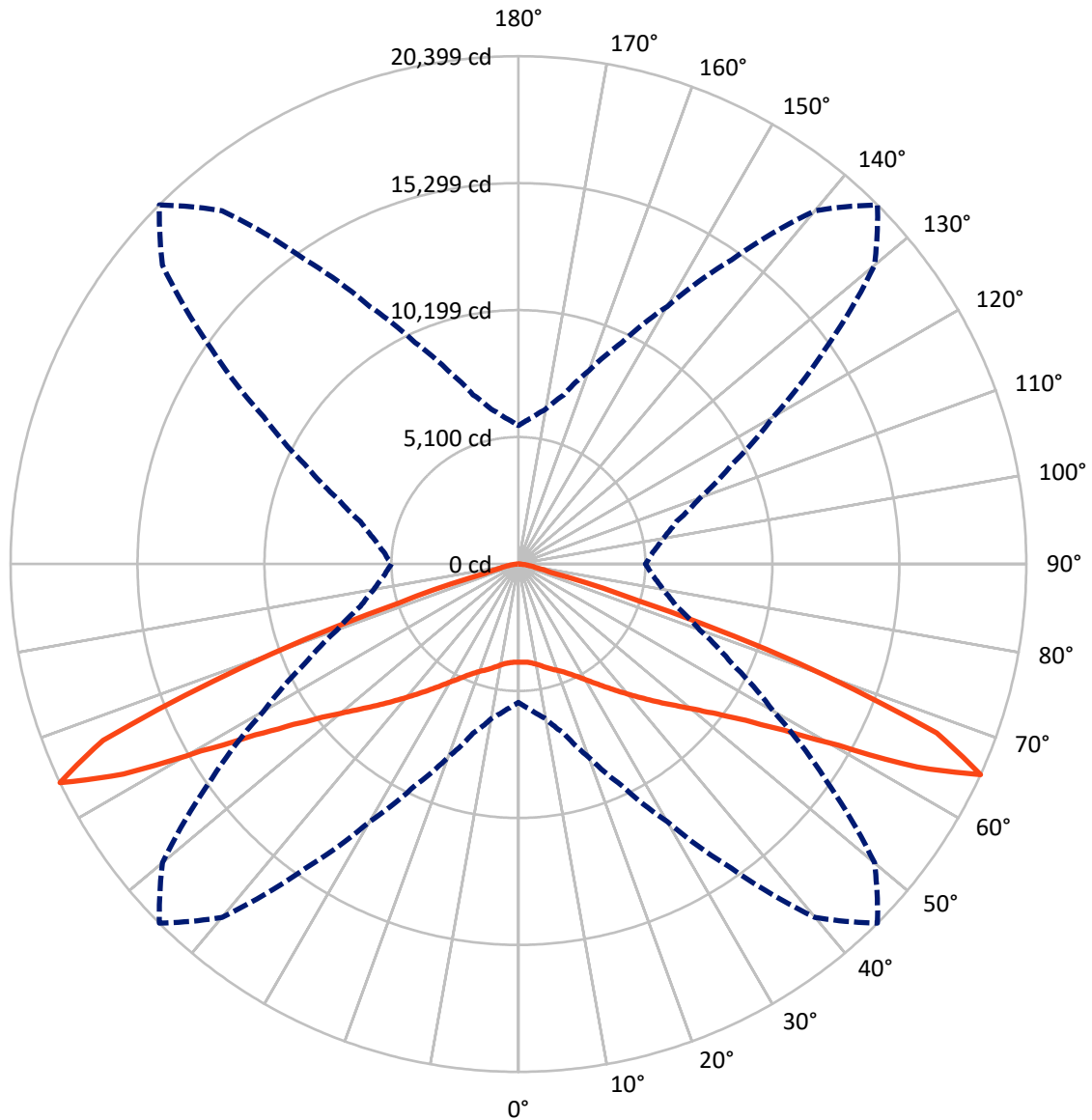
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.4 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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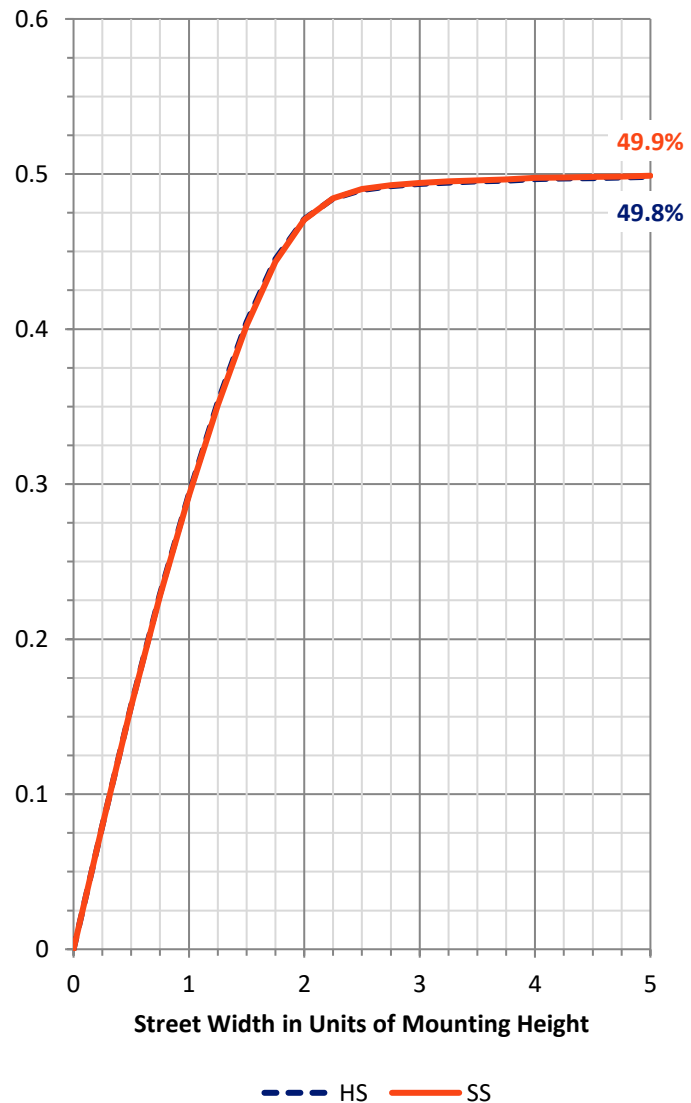
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	17344.1	0.0	17344.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	17344.1	0.0	17344.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	34688.2	0.0	34688.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	384.2	1.1
10°-20°	1231.5	3.6
20°-30°	2297.3	6.6
30°-40°	3873.7	11.2
40°-50°	6292.0	18.1
50°-60°	9858.4	28.4
60°-70°	9305.9	26.8
70°-80°	1254.1	3.6
80°-90°	191.0	0.6
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°	34688.2	100.0
0°-180°	34688.2	100.0



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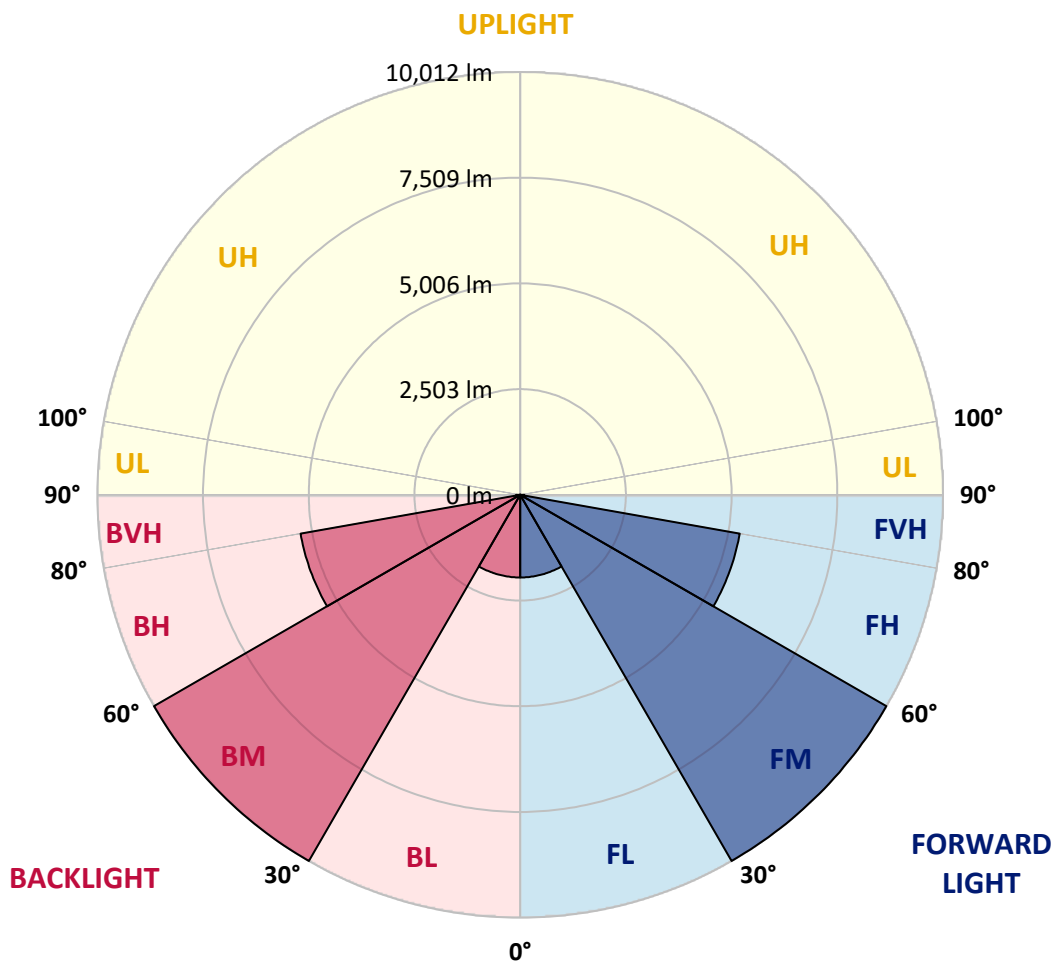
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1956.5	5.6			
FM	(30°-60°)	10012.1	28.9			
FH	(60°-80°)	5280.0	15.2			G3/7500
FVH	(80°-90°)	95.5	0.3			G1/100
BL	(0°-30°)	1956.5	5.6	B3/2500		
BM	(30°-60°)	10012.1	28.9	B5		
BH	(60°-80°)	5280.0	15.2	B5		G3/7500
BVH	(80°-90°)	95.5	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7
2.5°	3978.2	3978.2	3984.6	3982.4	3973.9	3967.3	3960.9	3952.3	3947.9	3943.6	3941.4
5°	3999.7	3999.7	4006.3	4004.1	3997.6	3989.0	3984.6	3978.2	3971.7	3967.3	3969.6
7.5°	4053.7	4056.0	4058.1	4056.0	4049.5	4043.0	4034.3	4032.2	4023.6	4017.0	4021.4
10°	4135.9	4135.9	4138.0	4140.2	4135.9	4120.8	4120.8	4116.5	4107.9	4099.2	4101.3
12.5°	4226.6	4226.6	4228.8	4228.8	4228.8	4220.2	4222.3	4220.2	4209.3	4205.0	4209.3
15°	4315.2	4317.5	4317.5	4321.8	4321.8	4323.9	4332.5	4332.5	4328.2	4326.1	4326.1
17.5°	4418.9	4423.3	4425.5	4431.9	4434.1	4438.4	4447.1	4449.2	4451.4	4444.9	4447.1
20°	4557.2	4559.4	4565.9	4568.1	4576.7	4576.7	4581.1	4578.9	4574.5	4565.9	4565.9
22.5°	4712.8	4717.1	4730.1	4730.1	4741.0	4734.4	4736.7	4730.1	4719.4	4715.0	4710.7
25°	4916.0	4922.4	4933.3	4929.0	4933.3	4922.4	4922.4	4922.4	4916.0	4909.4	4907.3
27.5°	5173.2	5162.3	5173.2	5164.5	5162.3	5153.6	5155.9	5151.5	5145.0	5142.9	5134.2
30°	5441.1	5428.1	5434.6	5436.8	5432.4	5430.2	5421.6	5415.1	5404.4	5406.5	5400.1
32.5°	5748.0	5735.0	5741.4	5743.6	5739.3	5743.6	5741.4	5726.3	5713.4	5722.0	5722.0
35°	6113.1	6104.5	6121.7	6128.2	6115.3	6108.8	6100.2	6082.9	6063.4	6076.3	6078.5
37.5°	6551.8	6541.0	6553.9	6571.2	6547.4	6534.5	6499.9	6473.9	6461.0	6467.5	6476.1
40°	7007.7	7009.9	7046.6	7050.9	7025.0	7009.9	6975.3	6936.4	6899.7	6899.7	6910.4
42.5°	7487.4	7493.9	7537.1	7552.2	7543.5	7515.5	7468.0	7420.4	7372.9	7381.5	7394.5
45°	8029.8	8021.2	8066.5	8103.3	8096.8	8088.2	8042.7	7956.3	7913.1	7911.0	7932.6
47.5°	8600.3	8617.5	8665.1	8727.7	8725.6	8704.0	8645.7	8565.7	8485.8	8492.2	8518.1
50°	9265.8	9289.6	9369.5	9432.2	9440.8	9434.4	9365.2	9272.3	9159.9	9166.5	9201.0
52.5°	9862.2	9896.7	9989.7	10119.3	10199.3	10236.1	10190.6	10104.2	9989.7	9996.2	10032.9
55°	10402.4	10456.4	10594.7	10772.0	10931.9	11080.9	11147.9	11145.8	11061.5	11080.9	11128.5
57.5°	10741.7	10817.3	11026.9	11312.2	11629.8	11930.2	12189.5	12433.7	12487.7	12589.3	12589.3
60°	10285.8	10462.9	10741.7	11230.1	11854.6	12528.7	13259.1	13970.0	14428.1	14789.0	14594.5
62.5°	8589.4	8850.9	9242.1	9886.0	10858.4	12062.0	13529.2	15182.2	16906.6	17961.2	17187.5
65°	5557.8	5886.2	6311.9	7035.8	8261.0	9810.3	11947.5	14918.6	18527.3	20398.7	18669.9
67.5°	2201.9	2424.5	2683.8	3198.1	4261.2	5782.5	8181.0	11845.9	16360.0	18125.4	16187.1
70°	1052.3	1089.0	1138.7	1249.0	1514.8	2044.2	3286.6	5836.5	10032.9	11893.4	9793.0
72.5°	760.7	767.1	790.8	827.6	905.4	1013.4	1231.7	1784.8	3459.5	5030.5	3463.9
75°	576.9	585.6	598.5	618.0	659.1	711.0	793.0	950.8	1184.2	1365.6	1182.0
77.5°	438.6	447.3	458.1	477.5	499.2	535.9	566.1	628.8	728.2	767.1	762.8
80°	319.8	334.9	352.2	369.5	384.6	401.9	404.1	434.3	490.5	527.2	516.5
82.5°	203.2	216.0	261.5	280.9	283.1	287.3	285.2	287.3	317.6	343.6	334.9
85°	129.6	138.3	162.0	183.7	179.3	188.0	188.0	183.7	170.7	146.9	175.0
87.5°	64.9	67.0	77.7	97.3	92.9	82.1	80.0	80.0	58.3	49.7	54.0
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7	3945.7
2.5°	3935.0	3939.3	3932.7	3932.7	3930.6	3935.0	3928.4	3928.4
5°	3965.2	3971.7	3969.6	3969.6	3973.9	3978.2	3976.0	3973.9
7.5°	4019.2	4023.6	4027.9	4030.0	4034.3	4032.2	4036.5	4034.3
10°	4101.3	4097.0	4103.5	4097.0	4099.2	4094.9	4097.0	4097.0
12.5°	4205.0	4198.6	4194.2	4189.9	4189.9	4181.3	4181.3	4183.5
15°	4323.9	4313.1	4304.5	4300.2	4295.8	4295.8	4289.3	4293.6
17.5°	4440.6	4429.8	4414.6	4414.6	4408.2	4403.8	4399.5	4410.4
20°	4563.8	4552.9	4544.4	4542.1	4529.2	4524.8	4527.1	4540.0
22.5°	4706.4	4699.8	4699.8	4695.5	4687.0	4680.4	4680.4	4695.5
25°	4898.7	4885.7	4887.9	4890.0	4885.7	4885.7	4881.4	4892.2
27.5°	5134.2	5123.4	5129.9	5134.2	5129.9	5136.3	5129.9	5138.6
30°	5410.8	5404.4	5410.8	5417.3	5406.5	5406.5	5402.2	5408.6
32.5°	5741.4	5732.8	5737.1	5737.1	5722.0	5709.0	5691.7	5704.7
35°	6104.5	6093.6	6102.3	6108.8	6091.5	6078.5	6052.6	6063.4
37.5°	6504.2	6508.5	6519.4	6547.4	6543.1	6521.5	6502.1	6510.7
40°	6951.6	6973.1	7020.7	7040.2	7035.8	7014.2	6988.3	6992.6
42.5°	7457.2	7485.2	7535.0	7567.4	7552.2	7522.0	7489.5	7502.5
45°	8008.2	8051.4	8116.2	8148.6	8129.2	8096.8	8051.4	8075.2
47.5°	8591.7	8678.1	8764.4	8807.7	8801.3	8755.8	8697.5	8704.0
50°	9289.6	9404.1	9514.3	9557.5	9525.1	9456.0	9373.8	9371.7
52.5°	10158.2	10281.4	10372.2	10361.4	10281.4	10173.3	10080.5	10076.2
55°	11243.0	11284.1	11271.1	11178.2	11037.7	10869.2	10750.3	10730.9
57.5°	12554.7	12416.4	12213.2	11932.3	11616.8	11297.1	11080.9	11001.0
60°	14158.0	13533.5	12807.4	12042.5	11344.5	10821.6	10491.0	10290.1
62.5°	15482.7	13674.0	12051.2	10722.3	9635.3	8989.2	8537.5	8258.9
65°	15028.9	11813.4	9462.5	7748.9	6562.5	5894.9	5417.3	5099.6
67.5°	11610.4	7893.7	5492.9	3807.4	2887.0	2443.9	2134.9	1934.0
70°	5853.8	3027.4	1834.6	1294.3	1106.3	1028.6	976.7	946.4
72.5°	1717.8	1147.4	953.0	842.7	775.7	728.2	698.0	682.8
75°	950.8	775.7	685.0	622.4	579.1	546.7	527.2	514.2
77.5°	654.8	564.0	518.6	477.5	442.9	419.2	404.1	391.1
80°	458.1	412.8	393.3	371.6	345.8	326.3	304.6	296.0
82.5°	304.6	285.2	280.9	263.6	248.5	226.9	188.0	175.0
85°	179.3	177.2	177.2	170.7	159.9	140.5	112.3	112.3
87.5°	62.7	64.9	67.0	71.3	69.2	58.3	47.6	45.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)