

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: P196050

Luminaire Tested: **NAV-AF-06-D-UNV-RW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196050  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
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-RW  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 37653.8 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B5 - 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

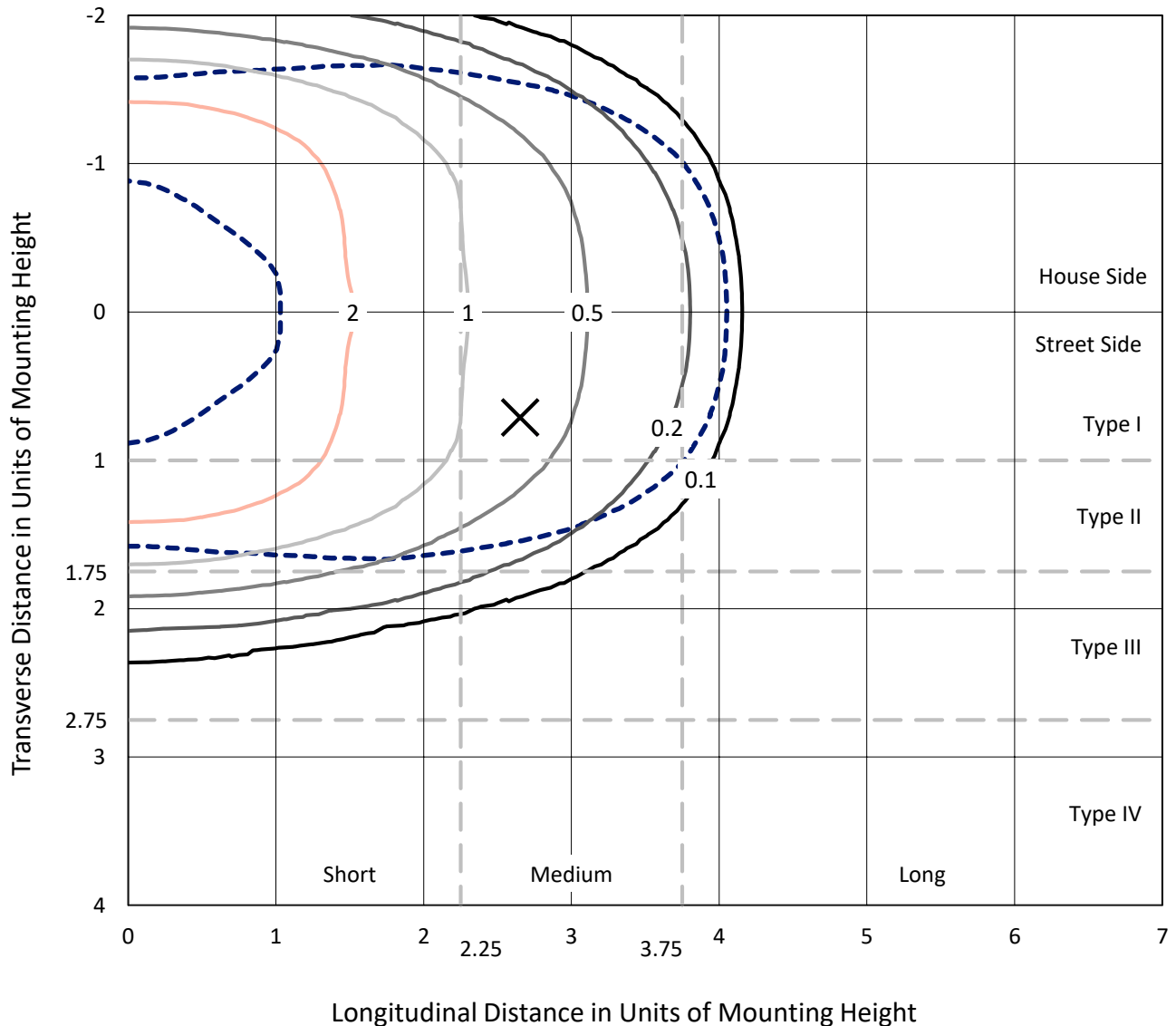


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### Iso-Footcandle Lines of Horizontal Illumination

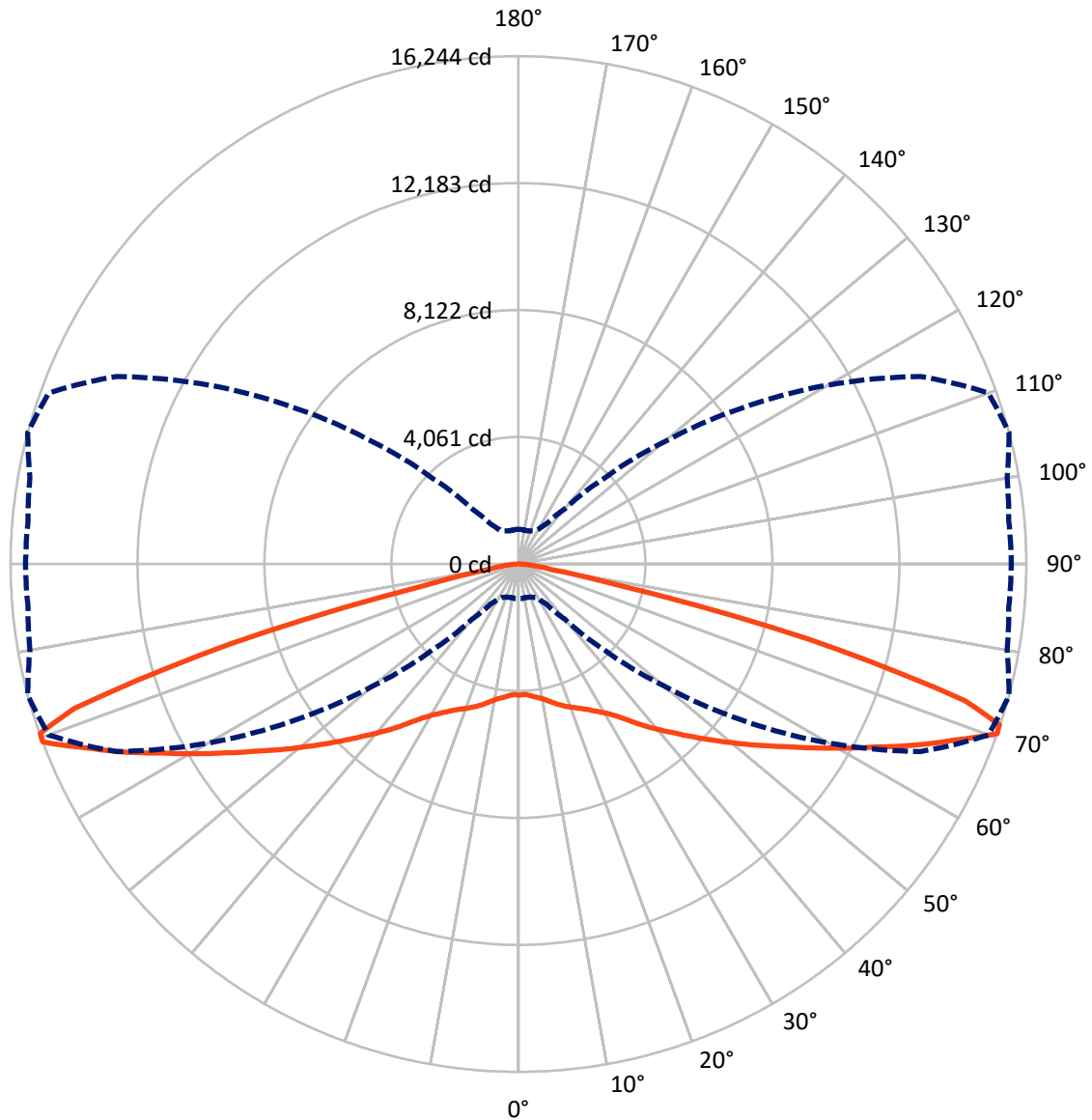
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.7 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	18826.9	0.0	18826.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	18826.9	0.0	18826.9
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	37653.8	0.0	37653.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	402.2	1.1
10°-20°	1247.3	3.3
20°-30°	2342.7	6.2
30°-40°	4126.8	11.0
40°-50°	6839.4	18.2
50°-60°	9514.6	25.3
60°-70°	8982.0	23.9
70°-80°	3836.3	10.2
80°-90°	362.5	1.0
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°	37653.8	100.0
0°-180°	37653.8	100.0



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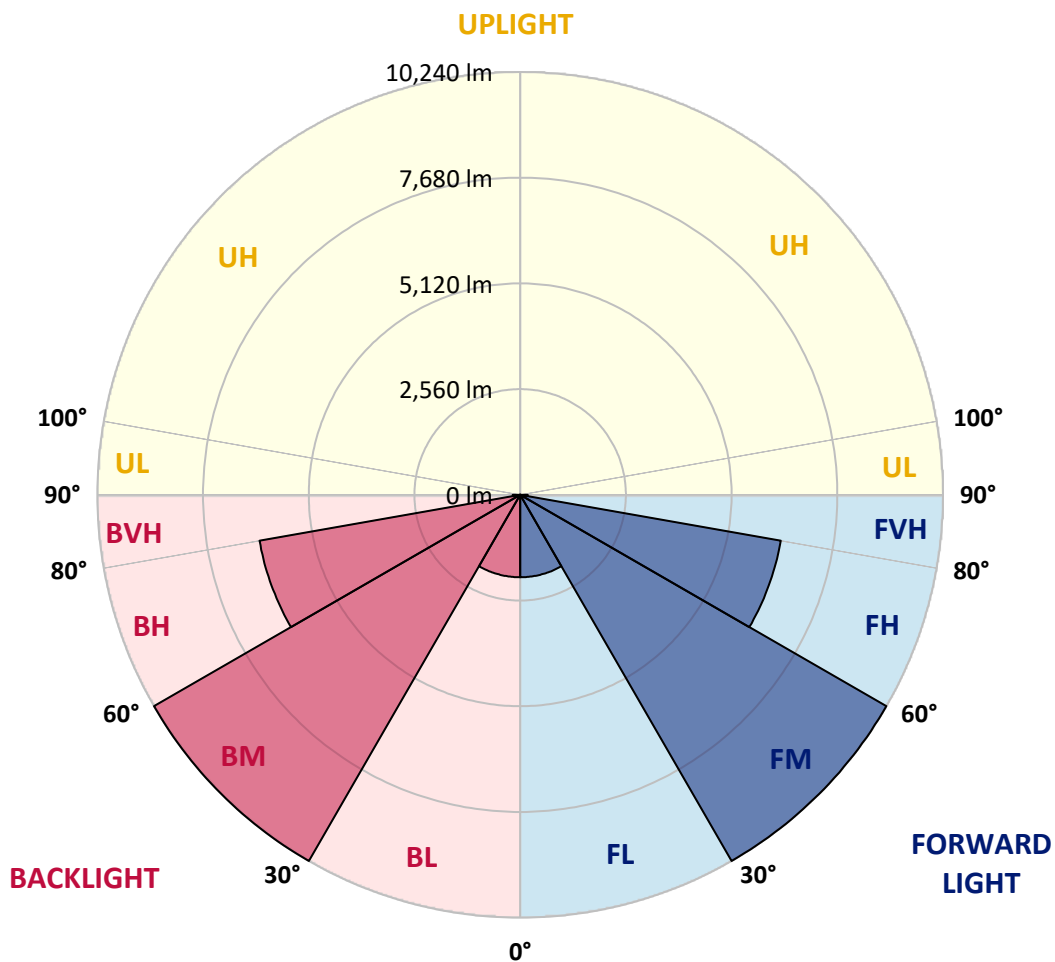
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1996.1	5.3			
FM	(30°-60°)	10240.4	27.2			
FH	(60°-80°)	6409.1	17.0			G3/7500
FVH	(80°-90°)	181.3	0.5			G2/225
BL	(0°-30°)	1996.1	5.3	B3/2500		
BM	(30°-60°)	10240.4	27.2	B5		
BH	(60°-80°)	6409.1	17.0	B5		G5
BVH	(80°-90°)	181.3	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1
2.5°	4219.1	4216.7	4219.1	4212.0	4214.4	4212.0	4212.0	4202.6	4202.6	4197.9	4190.7
5°	4171.9	4176.6	4176.6	4176.6	4183.7	4183.7	4193.1	4195.4	4202.6	4209.6	4214.4
7.5°	4094.1	4096.4	4103.5	4108.2	4122.3	4141.2	4160.0	4181.3	4200.2	4223.8	4249.7
10°	4028.0	4032.7	4044.4	4056.3	4082.2	4105.8	4138.9	4171.9	4204.9	4245.0	4285.1
12.5°	3992.6	3999.6	4018.5	4037.4	4077.5	4108.2	4153.0	4204.9	4249.7	4287.5	4332.3
15°	3997.3	3999.6	4025.6	4051.5	4108.2	4150.6	4214.4	4275.7	4329.9	4372.5	4424.4
17.5°	4065.7	4070.4	4096.4	4134.2	4188.4	4242.7	4311.1	4374.9	4448.0	4497.5	4558.9
20°	4200.2	4207.3	4235.6	4275.7	4334.7	4391.3	4462.1	4528.2	4603.7	4662.7	4724.1
22.5°	4374.9	4386.6	4417.3	4466.8	4525.8	4594.3	4667.4	4735.9	4806.6	4865.7	4917.5
25°	4608.4	4622.6	4655.7	4705.2	4764.2	4837.3	4912.8	4983.6	5056.8	5101.6	5144.0
27.5°	4922.2	4945.9	4981.3	5021.4	5073.2	5151.2	5222.0	5280.9	5351.7	5401.3	5429.6
30°	5344.6	5377.7	5406.0	5448.4	5486.2	5568.8	5625.4	5672.7	5726.9	5755.2	5762.3
32.5°	5861.4	5892.1	5920.4	5951.0	6003.0	6078.5	6132.8	6158.7	6187.0	6182.3	6156.3
35°	6444.3	6467.8	6484.4	6538.6	6623.6	6673.1	6713.2	6722.6	6727.4	6677.8	6628.3
37.5°	7057.7	7086.1	7100.2	7185.2	7265.4	7322.1	7340.9	7362.2	7348.0	7265.4	7175.7
40°	7720.8	7751.5	7794.0	7867.1	7961.5	8015.7	8039.4	8037.0	8025.3	7928.5	7782.2
42.5°	8372.0	8409.8	8445.3	8572.6	8650.5	8742.5	8754.3	8752.0	8726.1	8615.1	8445.3
45°	8924.2	8969.0	9042.3	9183.8	9308.9	9419.7	9464.6	9481.1	9455.1	9337.2	9143.6
47.5°	9379.6	9410.3	9502.4	9674.7	9835.1	9997.9	10087.5	10151.3	10148.9	10064.0	9858.7
50°	9691.1	9726.5	9839.8	10033.3	10233.8	10425.0	10602.0	10745.9	10814.3	10753.0	10561.9
52.5°	9780.8	9825.6	9974.3	10205.6	10439.1	10696.4	10960.6	11215.4	11368.9	11406.6	11258.0
55°	9403.3	9452.8	9669.9	9990.9	10375.4	10755.3	11156.5	11519.9	11836.1	11982.3	11923.4
57.5°	8303.6	8339.0	8615.1	9030.4	9580.2	10248.0	10922.9	11588.3	12131.0	12510.9	12577.0
60°	6566.9	6611.7	6913.8	7352.7	7978.0	8822.7	9766.6	10856.8	11921.0	12791.7	13223.6
62.5°	4431.4	4462.1	4752.3	5153.5	5837.8	6651.8	7704.3	9084.7	10602.0	12157.0	13374.6
65°	2326.6	2326.6	2522.5	2803.3	3348.3	4077.5	5155.9	6571.6	8376.8	10318.8	12355.2
67.5°	1349.7	1347.3	1392.2	1455.9	1628.1	1923.1	2517.8	3558.3	5266.8	7527.3	9844.5
70°	1113.8	1106.7	1099.6	1099.6	1125.6	1170.4	1283.7	1569.2	2295.9	3881.7	6057.2
71°	1064.2	1059.5	1040.6	1033.5	1045.4	1068.9	1118.5	1250.7	1630.5	2647.5	4523.5
72.5°	1005.3	993.4	965.1	953.3	955.6	965.1	979.3	1031.1	1146.8	1505.5	2579.1
75°	915.5	887.2	851.8	835.3	828.3	825.9	825.9	840.0	866.0	908.5	1057.1
77.5°	811.7	771.6	733.9	717.3	705.5	698.5	693.8	684.3	679.5	698.5	752.7
80°	686.7	644.2	613.5	604.1	597.0	582.9	564.0	545.1	533.3	542.7	575.7
82.5°	530.9	488.5	493.2	495.5	483.8	460.1	441.3	420.0	398.7	394.0	410.6
85°	422.4	401.1	387.0	417.7	391.7	363.4	337.5	302.1	252.5	207.7	226.5
87.5°	181.7	184.0	264.3	398.7	349.2	280.8	233.6	188.7	120.3	89.7	92.1
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1	4193.1
2.5°	4188.4	4188.4	4181.3	4176.6	4176.6	4176.6	4171.9	4174.3
5°	4216.7	4221.4	4226.1	4223.8	4230.8	4238.0	4235.6	4233.3
7.5°	4263.9	4278.1	4292.2	4299.3	4308.8	4318.2	4320.5	4313.5
10°	4311.1	4339.5	4360.6	4379.6	4391.3	4400.7	4407.9	4405.4
12.5°	4370.0	4410.2	4448.0	4485.7	4511.6	4525.8	4540.0	4535.3
15°	4466.8	4511.6	4558.9	4608.4	4648.5	4669.8	4691.0	4686.2
17.5°	4599.0	4639.1	4676.8	4726.4	4776.0	4799.6	4823.1	4820.8
20°	4764.2	4794.9	4816.1	4844.4	4891.5	4917.5	4938.8	4931.6
22.5°	4952.9	4962.3	4964.7	4974.2	5011.9	5042.6	5070.9	5078.0
25°	5158.2	5151.2	5137.0	5129.9	5155.9	5188.9	5224.3	5233.7
27.5°	5413.0	5389.4	5354.0	5325.8	5332.8	5375.3	5415.4	5424.8
30°	5733.9	5679.7	5604.2	5549.9	5540.5	5585.3	5627.8	5642.0
32.5°	6099.8	6026.6	5922.8	5840.1	5804.7	5844.8	5882.7	5903.9
35°	6533.9	6453.7	6328.6	6222.4	6165.8	6191.7	6257.8	6281.4
37.5°	7048.3	6937.4	6798.2	6663.7	6569.3	6574.0	6644.8	6673.1
40°	7617.0	7456.5	7279.5	7112.1	6975.2	6965.7	7029.4	7050.7
42.5°	8209.3	8004.0	7796.3	7576.9	7407.0	7376.3	7458.8	7461.2
45°	8846.4	8582.0	8324.9	8070.1	7893.1	7838.8	7919.1	7928.5
47.5°	9525.9	9195.6	8891.2	8615.1	8424.0	8339.0	8416.9	8431.1
50°	10233.8	9891.7	9537.8	9231.0	9006.8	8903.0	8995.0	9004.4
52.5°	10934.6	10611.4	10259.8	9908.2	9636.8	9518.9	9627.4	9660.4
55°	11640.2	11328.8	10998.4	10646.8	10304.6	10200.8	10318.8	10354.2
57.5°	12374.0	12074.4	11774.7	11420.7	11088.1	10929.9	11057.4	11106.9
60°	13183.4	12919.2	12636.0	12279.7	11951.6	11767.6	11876.2	11932.8
62.5°	13978.6	13924.4	13667.1	13296.7	12881.4	12697.4	12789.3	12829.4
65°	14044.7	14924.9	14913.1	14544.9	13964.5	13655.4	13681.4	13700.2
67.5°	12258.4	14278.3	15569.0	15684.7	15038.1	14554.3	14497.8	14509.5
70°	8678.8	11451.4	14191.0	15989.0	16243.9	15868.7	15746.0	15764.9
71°	6953.9	9825.6	12841.3	15260.0	16225.0	16116.5	16048.1	16097.6
72.5°	4438.5	7239.4	10174.9	13067.8	14920.1	15451.1	15528.9	15559.6
75°	1611.7	3114.8	5271.5	7553.3	9573.2	10963.0	11727.5	11788.9
77.5°	866.0	1116.1	1724.9	2576.7	3237.4	3591.4	3633.8	3650.4
80°	637.1	738.6	844.8	965.1	1040.6	1054.8	1028.8	974.6
82.5°	450.7	509.7	552.2	594.6	625.3	599.3	497.9	379.9
85°	261.9	287.9	311.5	332.7	337.5	318.5	210.0	172.3
87.5°	103.8	113.2	110.9	125.1	120.3	110.9	82.6	70.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)