

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: P195857

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195857  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
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-T3R-7050  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30585 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G4

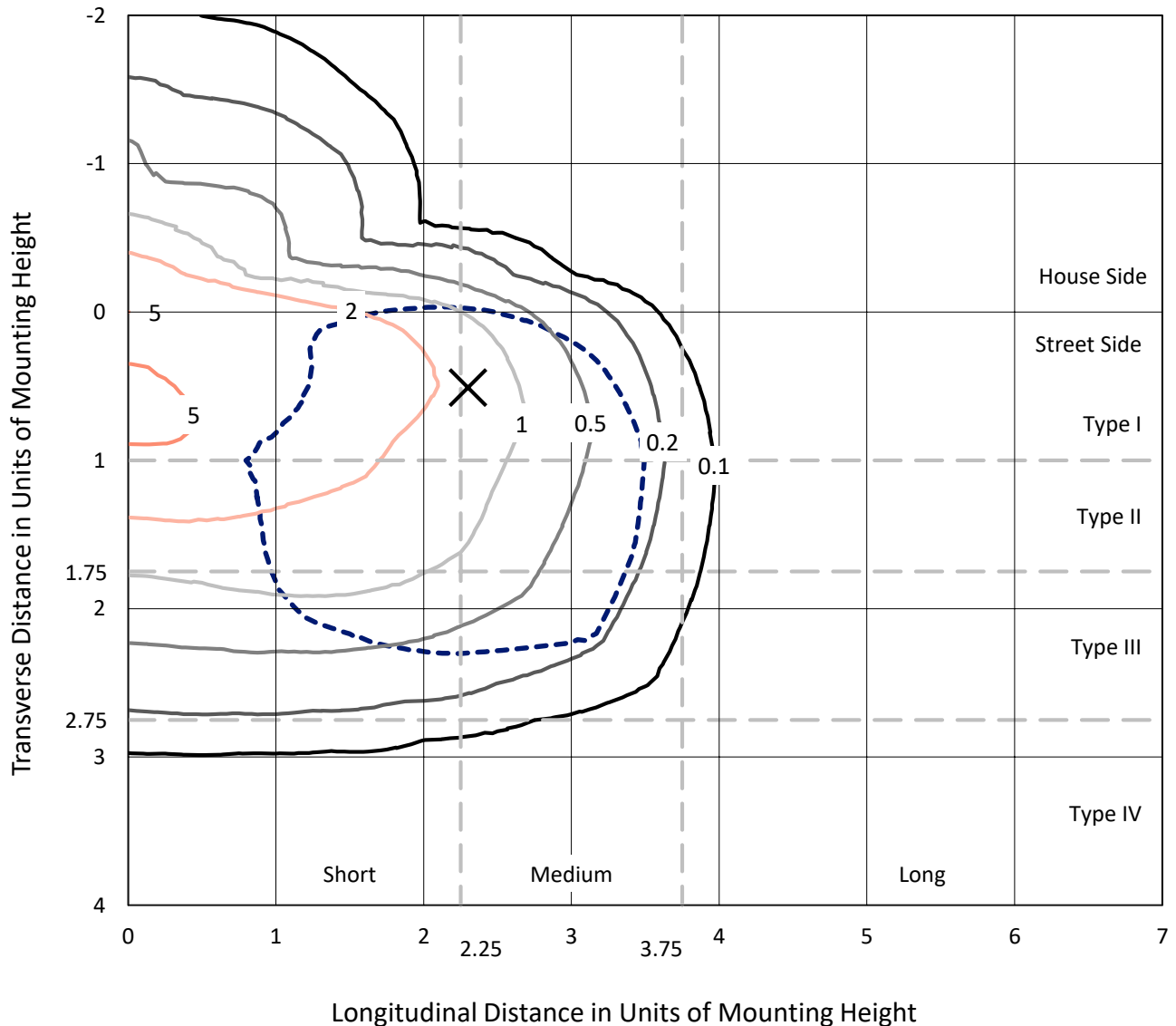
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

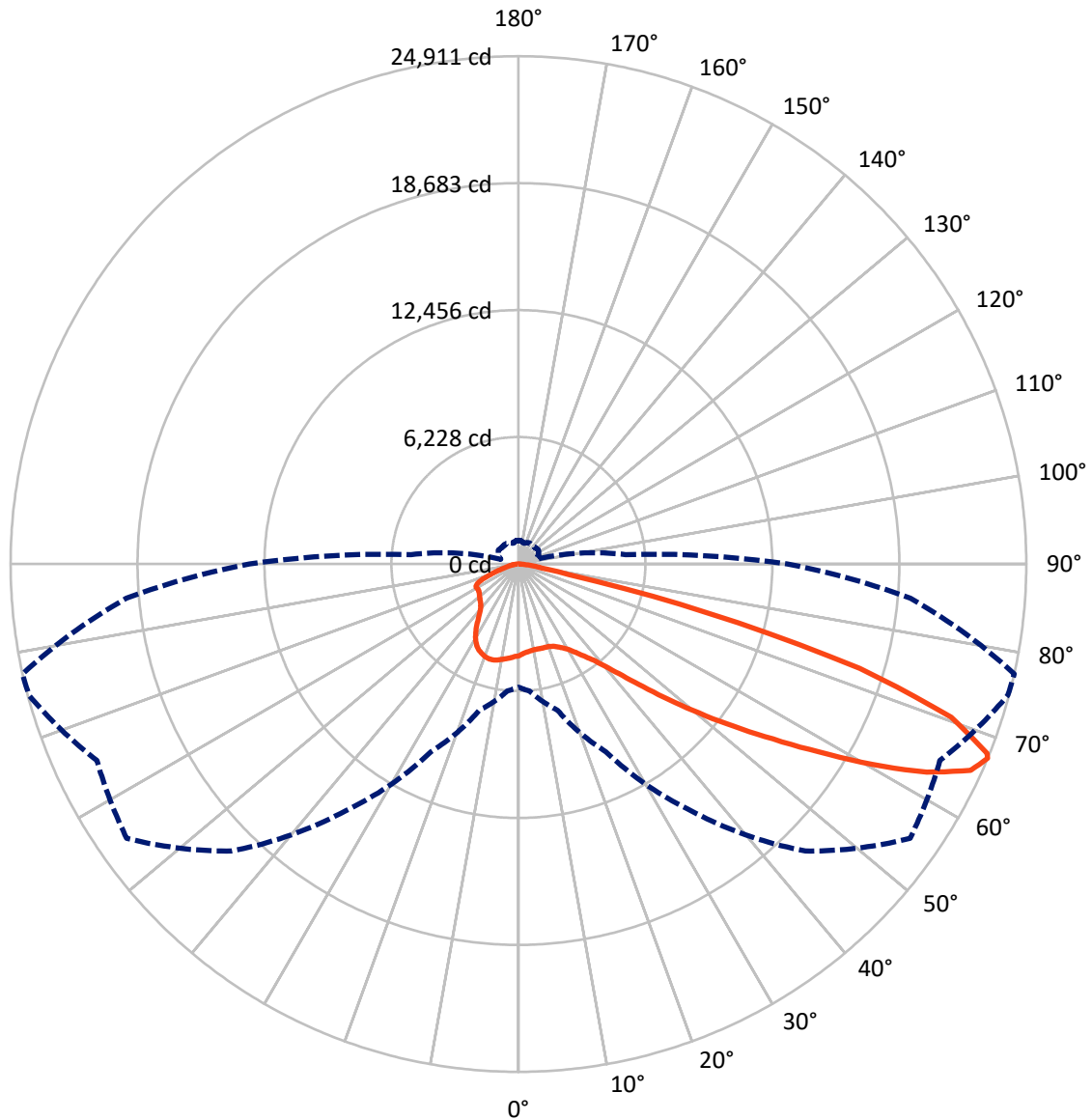
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5256.0	0.0	5256.0
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	25329.0	0.0	25329.0
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	30585.0	0.0	30585.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	400.9	1.3
10°-20°	1110.3	3.6
20°-30°	1886.4	6.2
30°-40°	3017.8	9.9
40°-50°	4646.0	15.2
50°-60°	6445.9	21.1
60°-70°	8598.3	28.1
70°-80°	4091.9	13.4
80°-90°	387.4	1.3
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°	30585.0	100.0
0°-180°	30585.0	100.0



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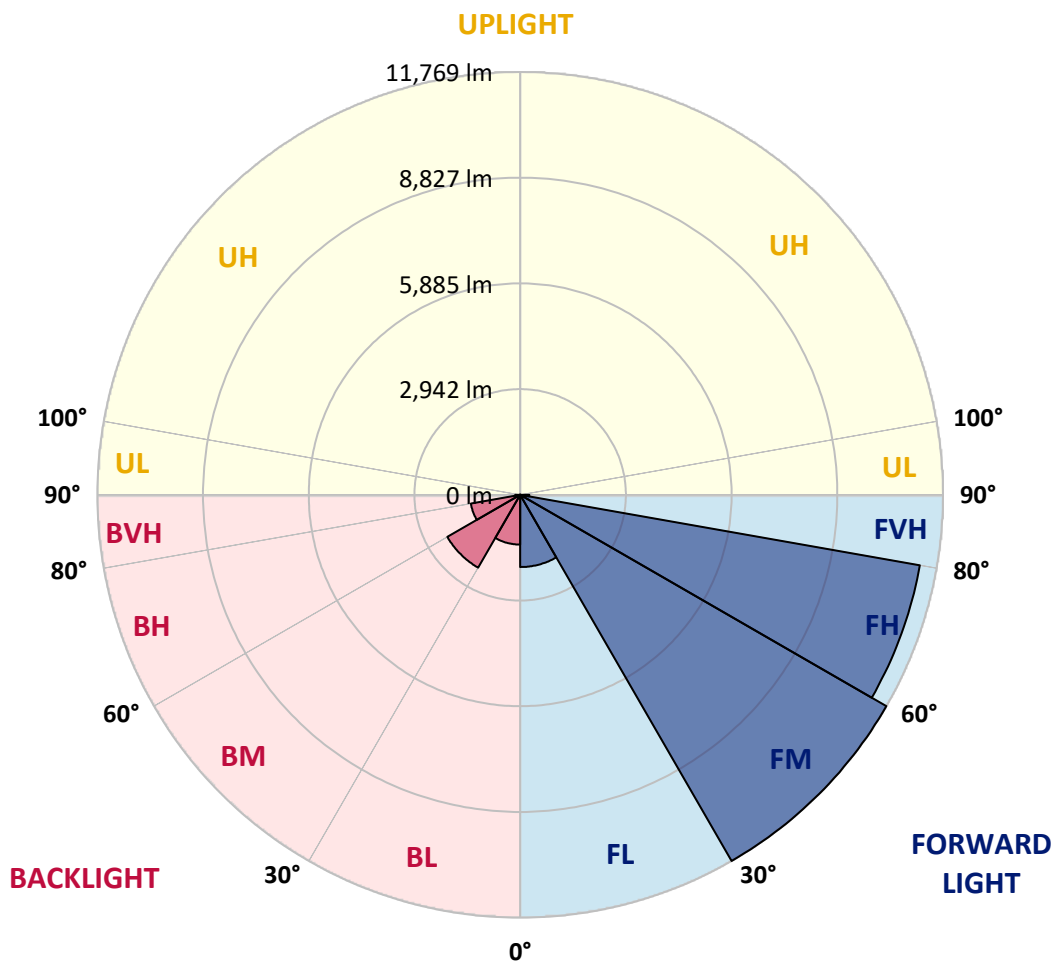
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2011.3	6.6			
FM	(30°-60°)	11769.4	38.5			
FH	(60°-80°)	11296.7	36.9			G4/12000
FVH	(80°-90°)	251.6	0.8			G3/500
BL	(0°-30°)	1386.3	4.5	B3/2500		
BM	(30°-60°)	2340.3	7.7	B2/2500		
BH	(60°-80°)	1393.6	4.6	B3/2500		G3/2500
BVH	(80°-90°)	135.8	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3
2.5°	4036.2	4055.1	4057.0	4111.9	4136.4	4198.8	4266.9	4327.4	4380.3	4399.2	4433.2
5°	3631.7	3631.7	3637.3	3673.3	3743.2	3843.4	3985.2	4140.2	4302.8	4342.5	4442.7
7.5°	3419.9	3423.7	3427.5	3463.4	3518.2	3607.1	3748.9	3960.6	4231.0	4297.1	4473.0
10°	3438.8	3433.2	3414.3	3406.7	3429.4	3486.1	3609.0	3826.4	4170.5	4272.6	4527.8
12.5°	3735.7	3724.3	3661.9	3571.2	3488.0	3467.2	3552.3	3758.3	4142.1	4272.6	4620.4
15°	4244.2	4251.8	4128.9	3939.8	3722.4	3575.0	3563.6	3733.8	4132.7	4283.9	4728.2
17.5°	4905.9	4909.7	4739.5	4465.4	4104.3	3799.9	3641.1	3733.8	4132.7	4295.2	4832.1
20°	5609.1	5582.7	5389.8	5045.8	4576.9	4111.9	3782.9	3756.4	4144.0	4312.3	4930.5
22.5°	6212.2	6187.6	5985.4	5624.3	5087.4	4480.5	3973.9	3832.1	4206.4	4382.2	5068.5
25°	6739.7	6754.8	6558.2	6151.7	5595.9	4896.4	4259.3	4006.0	4336.8	4508.9	5238.6
27.5°	7380.6	7352.2	7125.3	6737.8	6119.6	5327.5	4616.6	4225.3	4491.9	4662.0	5446.6
30°	8121.6	8108.4	7802.1	7403.2	6696.2	5809.5	4970.2	4461.6	4694.1	4871.8	5707.5
32.5°	9021.5	9019.6	8690.7	8201.0	7344.6	6354.0	5388.0	4784.9	4989.1	5168.7	6053.4
35°	10040.5	10038.6	9698.3	9051.8	8091.4	6957.1	5879.5	5178.1	5353.9	5543.0	6465.6
37.5°	10747.6	10736.2	10558.5	9930.9	8917.5	7658.5	6493.9	5707.5	5768.0	5979.7	6962.8
40°	10883.7	10951.7	11104.9	10734.3	9819.3	8437.4	7110.2	6276.5	6333.2	6605.4	7588.5
42.5°	10736.2	10825.1	11333.6	11437.6	10721.1	9380.7	7881.5	7064.8	7136.7	7475.1	8323.9
45°	10607.7	10685.2	11322.3	11827.0	11611.5	10409.2	8843.8	8027.1	8163.2	8582.9	9163.3
47.5°	10388.4	10460.2	11099.2	11897.0	12120.1	11399.8	10002.7	9184.1	9418.5	9927.1	10119.9
50°	10377.0	10409.2	10794.8	11662.6	12295.9	12152.2	11286.4	10537.7	10896.9	11483.0	11178.6
52.5°	10089.7	10314.6	10664.4	11288.2	12299.7	12590.8	12551.1	12021.8	12575.7	13224.1	12339.4
55°	8331.5	8590.5	10229.6	11104.9	12277.0	12967.0	13706.2	13600.3	14466.2	15148.7	13640.0
57.5°	7779.5	7889.1	8974.3	11159.7	12466.0	13589.0	14861.3	15296.1	16628.9	17373.8	15199.7
60°	7628.2	7743.5	8722.8	11186.2	12978.4	14721.4	16428.5	17211.2	19171.7	19961.9	16971.1
62.5°	7460.0	7609.3	8741.7	11210.7	13878.2	16396.4	18508.1	19288.9	21782.5	22487.6	18631.0
65°	6968.4	7166.9	8392.0	11055.7	14863.2	18498.7	21256.9	21455.4	23939.5	24387.6	19633.0
67°	6036.4	6253.8	7431.6	10159.6	14772.5	19914.7	23455.6	22810.9	24856.4	24911.3	19307.8
67.5°	5741.5	5966.5	7106.4	9787.2	14513.5	20099.9	23845.0	22998.1	24848.9	24788.4	19005.3
70°	3866.1	4119.4	5032.5	7185.8	11641.8	18706.6	23750.5	22421.5	23219.3	22525.4	16328.3
72.5°	1918.9	1926.4	2510.6	3936.0	7053.5	13417.0	19812.6	19181.1	18821.9	17511.8	11982.1
75°	924.5	941.5	1185.4	1739.3	2973.8	6926.8	13511.5	12942.4	11019.8	9541.4	5996.7
77.5°	705.2	722.2	920.7	1132.4	1240.2	2259.2	6692.4	5408.8	3193.1	2550.3	1690.1
80°	544.5	576.6	777.0	869.6	820.5	905.6	2104.1	1656.1	1242.1	1140.0	837.5
82.5°	425.4	444.3	659.8	659.8	567.2	606.9	979.3	956.6	771.3	695.7	449.9
85°	300.6	338.4	531.2	491.5	372.4	376.2	586.1	561.5	397.0	319.5	175.8
87.5°	134.2	172.0	378.1	321.4	198.5	153.1	240.1	206.1	156.9	121.0	81.3
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°	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3	4501.3
2.5°	4471.1	4501.3	4548.6	4576.9	4614.7	4629.9	4645.0	4671.5	4692.3	4686.6	4677.1
5°	4512.7	4563.7	4622.3	4641.2	4641.2	4622.3	4611.0	4612.8	4607.2	4603.4	4592.1
7.5°	4573.1	4643.1	4684.7	4665.8	4607.2	4533.4	4463.5	4421.9	4382.2	4357.6	4365.2
10°	4658.2	4735.7	4737.6	4654.4	4514.5	4353.8	4215.8	4127.0	4041.9	4004.1	4015.4
12.5°	4781.1	4858.6	4792.4	4612.8	4367.1	4115.6	3862.3	3678.9	3514.5	3474.8	3463.4
15°	4913.4	4973.9	4826.5	4524.0	4155.3	3741.3	3316.0	3041.8	2858.5	2826.3	2815.0
17.5°	5028.8	5062.8	4809.5	4365.2	3820.7	3168.5	2673.2	2487.9	2450.1	2469.0	2469.0
20°	5130.8	5119.5	4735.7	4119.4	3293.3	2533.3	2245.9	2244.0	2295.1	2342.3	2346.1
22.5°	5259.4	5170.5	4618.5	3754.6	2663.7	2113.6	2064.4	2113.6	2170.3	2223.2	2228.9
25°	5412.5	5227.3	4461.6	3234.7	2141.9	1918.9	1939.7	1981.3	2017.2	2058.8	2060.7
27.5°	5565.7	5270.7	4240.4	2624.0	1858.4	1794.1	1816.8	1833.8	1843.2	1869.7	1869.7
30°	5743.4	5304.8	3920.9	2102.2	1727.9	1684.4	1671.2	1663.7	1671.2	1707.1	1709.0
32.5°	5966.5	5365.3	3484.2	1803.5	1667.4	1606.9	1538.9	1501.1	1527.5	1591.8	1603.2
35°	6219.8	5437.1	2960.5	1684.4	1646.6	1569.1	1444.4	1385.7	1395.2	1453.8	1463.3
37.5°	6537.4	5529.7	2444.4	1656.1	1667.4	1565.3	1400.9	1317.7	1276.1	1278.0	1276.1
40°	6943.8	5622.4	2036.1	1663.7	1712.8	1574.8	1380.1	1249.6	1162.7	1166.4	1174.0
42.5°	7369.2	5682.9	1777.1	1686.3	1767.6	1588.0	1372.5	1183.5	1107.8	1172.1	1230.7
45°	7866.4	5665.9	1642.9	1707.1	1809.2	1593.7	1344.2	1175.9	1113.5	1306.3	1416.0
47.5°	8437.4	5592.1	1567.2	1716.6	1820.6	1591.8	1323.4	1200.5	1160.8	1495.4	1620.2
50°	9057.4	5476.8	1506.7	1701.5	1814.9	1584.2	1346.0	1230.7	1179.7	1537.0	1633.4
52.5°	9736.1	5370.9	1444.4	1667.4	1786.5	1561.6	1374.4	1217.5	1126.7	1416.0	1489.7
55°	10539.6	5346.4	1374.4	1608.8	1739.3	1537.0	1359.3	1175.9	1068.1	1255.3	1300.7
57.5°	11458.4	5499.5	1283.7	1537.0	1675.0	1487.8	1323.4	1153.2	1047.3	1141.9	1166.4
60°	12624.8	5837.9	1187.2	1461.4	1595.6	1414.1	1291.2	1158.9	1053.0	1124.9	1130.5
62.5°	13536.1	6142.3	1100.3	1368.7	1489.7	1325.2	1257.2	1164.6	1070.0	1147.5	1138.1
65°	13866.9	5992.9	992.5	1230.7	1340.4	1226.9	1209.9	1168.3	1070.0	1160.8	1140.0
67°	13188.2	5280.2	890.4	1092.7	1198.6	1140.0	1164.6	1153.2	1051.1	1158.9	1123.0
67.5°	12864.9	5028.8	864.0	1070.0	1160.8	1113.5	1153.2	1145.7	1045.5	1155.1	1113.5
70°	10609.6	3607.1	729.7	898.0	971.7	981.2	1083.3	1096.5	1000.1	1085.2	1009.5
72.5°	7548.8	2257.3	629.5	695.7	784.6	839.4	988.7	1030.3	939.6	943.4	881.0
75°	3735.7	1211.8	561.5	536.9	610.6	699.5	862.1	939.6	850.7	786.5	765.7
77.5°	1261.0	686.3	474.5	432.9	474.5	561.5	714.6	820.5	750.5	665.5	652.2
80°	652.2	499.1	370.5	347.9	374.3	434.8	559.6	682.5	640.9	644.7	531.2
82.5°	406.5	304.4	266.6	264.7	283.6	332.7	412.1	553.9	550.1	470.7	342.2
85°	189.1	175.8	170.1	175.8	181.5	189.1	268.5	395.1	417.8	253.3	225.0
87.5°	79.4	77.5	68.1	73.7	81.3	79.4	107.8	168.3	234.4	158.8	145.6
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)