

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: P195833

Luminaire Tested: **NAV-AF-05-D-UNV-T3-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195833  
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-05-D-UNV-T3-7050  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30078 lumens  
Efficiency: N/A  
Efficacy: 107.8 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 - G4

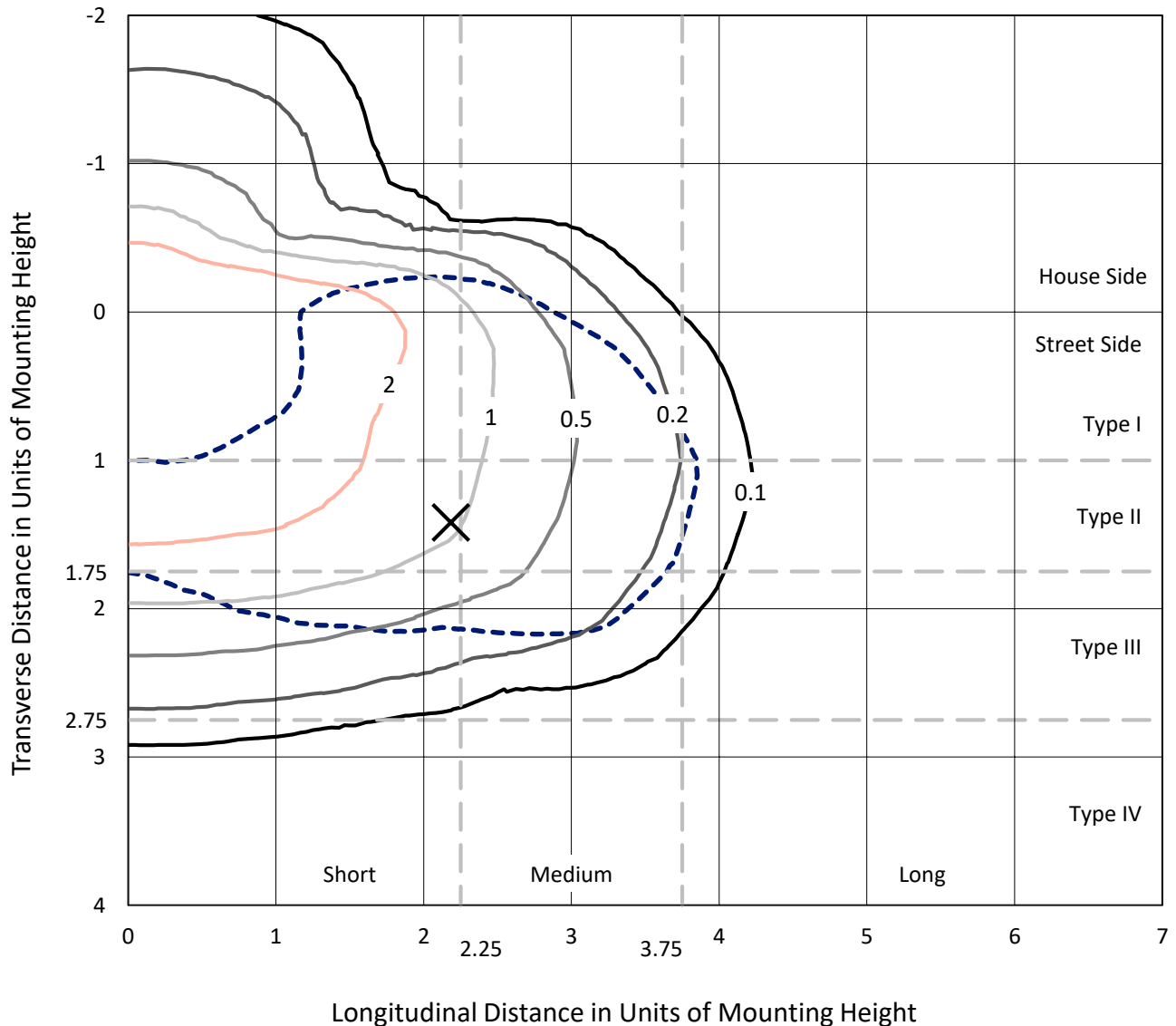
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

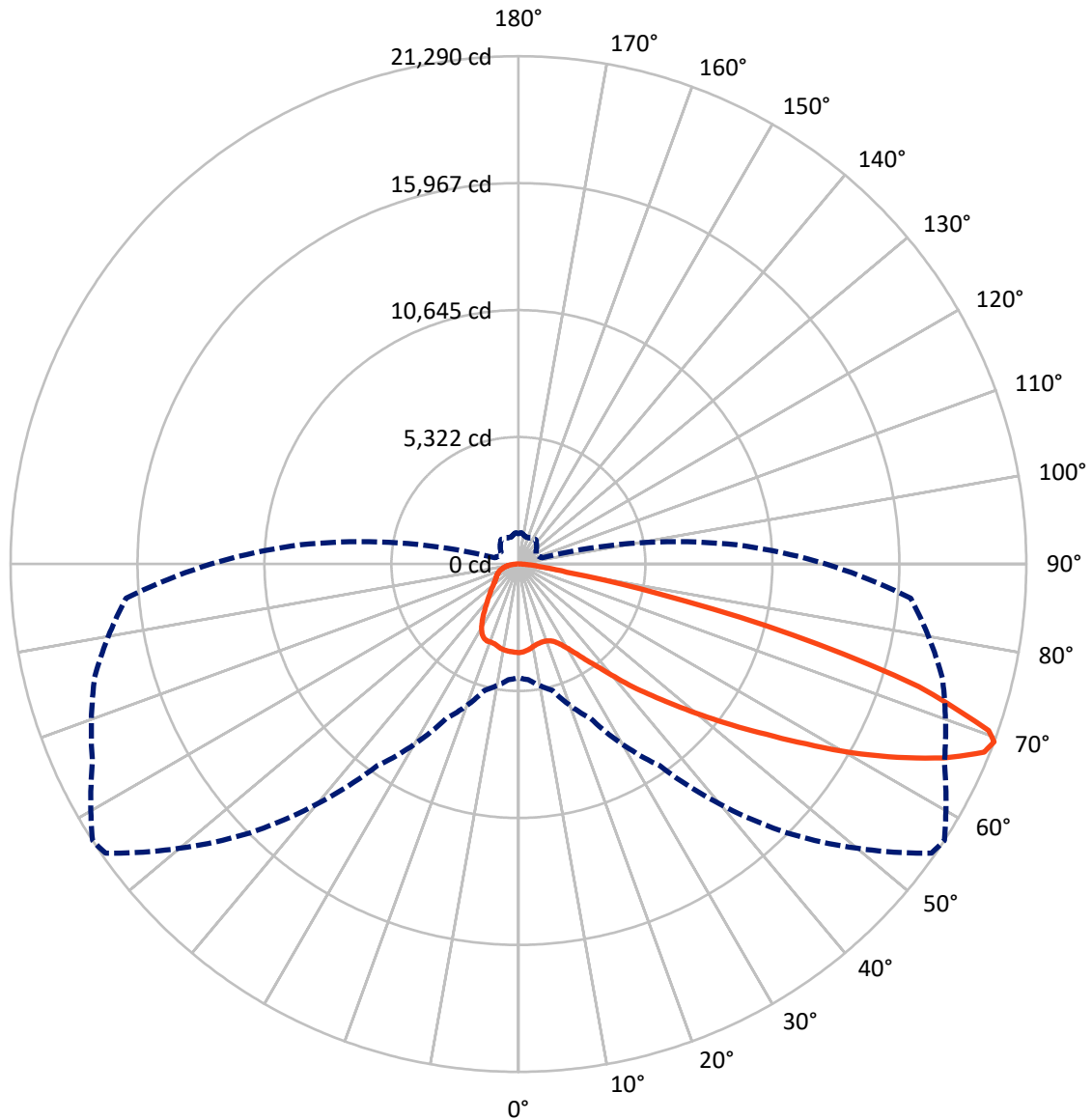
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.2 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
<b>House Side</b>	Lumens	6637.2	0.0	6637.2
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	23440.8	0.0	23440.8
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	30078.0	0.0	30078.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	347.9	1.2
10°-20°	989.3	3.3
20°-30°	1645.6	5.5
30°-40°	2687.2	8.9
40°-50°	4535.5	15.1
50°-60°	7055.1	23.5
60°-70°	8404.2	27.9
70°-80°	3915.2	13.0
80°-90°	498.0	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°	30078.0	100.0
0°-180°	30078.0	100.0



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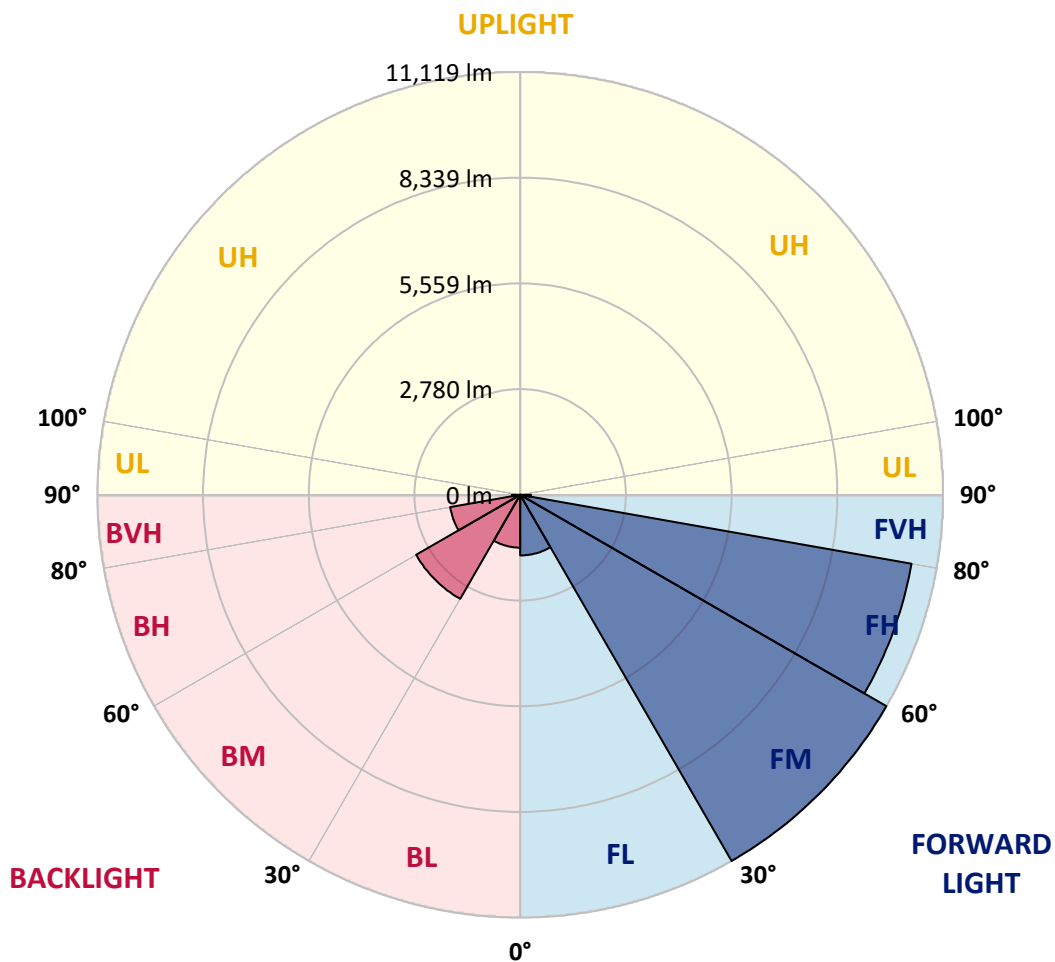
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1592.9	5.3			
FM	(30°-60°)	11118.9	37.0			
FH	(60°-80°)	10449.1	34.7			G4/12000
FVH	(80°-90°)	279.9	0.9			G3/500
BL	(0°-30°)	1389.9	4.6	B3/2500		
BM	(30°-60°)	3158.9	10.5	B3/5000		
BH	(60°-80°)	1870.3	6.2	B3/2500		G3/2500
BVH	(80°-90°)	218.1	0.7			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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4
2.5°	3695.2	3695.2	3704.9	3704.9	3704.9	3701.0	3689.5	3693.3	3685.6	3679.8	3670.2
5°	3620.1	3624.0	3635.6	3639.4	3645.2	3647.1	3647.1	3645.2	3647.1	3647.1	3641.3
7.5°	3516.2	3520.0	3533.5	3541.2	3558.5	3573.9	3581.6	3581.6	3591.3	3599.0	3600.9
10°	3452.6	3452.6	3460.3	3460.3	3473.8	3481.5	3506.5	3504.6	3531.6	3556.6	3568.2
12.5°	3444.9	3444.9	3441.1	3427.6	3419.9	3418.0	3443.0	3446.8	3487.3	3531.6	3552.8
15°	3470.0	3470.0	3458.4	3431.4	3402.6	3389.1	3414.1	3421.8	3466.1	3518.1	3550.8
17.5°	3550.8	3548.9	3523.9	3470.0	3419.9	3398.7	3406.4	3414.1	3454.5	3514.2	3554.7
20°	3729.9	3729.9	3676.0	3577.8	3491.1	3441.1	3429.5	3435.3	3464.2	3520.0	3572.0
22.5°	4043.8	4049.6	3953.3	3791.5	3643.3	3537.3	3491.1	3496.9	3510.4	3564.3	3622.1
25°	4505.9	4490.5	4353.8	4124.7	3893.6	3712.6	3618.2	3624.0	3624.0	3674.1	3733.8
27.5°	4995.0	4998.9	4802.5	4556.0	4251.8	3982.2	3832.0	3830.0	3828.1	3876.3	3939.8
30°	5547.7	5549.6	5322.4	5037.4	4688.9	4344.2	4118.9	4117.0	4099.6	4159.3	4242.1
32.5°	6152.3	6150.4	5886.6	5565.0	5178.0	4787.1	4494.4	4492.5	4479.0	4559.8	4660.0
35°	6822.4	6822.4	6560.6	6163.9	5746.0	5310.8	4971.9	4970.0	4977.7	5087.5	5181.8
37.5°	7629.3	7646.6	7330.8	6849.4	6393.0	5929.0	5534.2	5522.7	5464.9	5649.7	5805.7
40°	8470.8	8518.9	8191.6	7629.3	7136.3	6656.8	6221.7	6213.9	6163.9	6360.3	6612.5
42.5°	9381.6	9491.3	9127.4	8553.6	8016.3	7498.3	7061.2	7040.0	6847.5	7153.6	7548.4
45°	10575.5	10646.7	10119.1	9599.2	9092.7	8501.6	7981.7	7868.0	7675.5	8068.3	8580.5
47.5°	11388.1	11353.4	11024.1	10675.6	10350.2	9784.0	8984.9	8840.5	8605.6	9125.5	9689.7
50°	11892.6	11917.6	11732.8	11715.4	11698.1	11303.3	10117.2	9943.9	9672.3	10288.5	10947.1
52.5°	12225.7	12112.1	12144.8	12537.7	13013.3	12824.6	11397.7	11205.1	10925.9	11542.1	12285.4
55°	12087.1	11936.9	12239.2	13013.3	14132.1	14174.4	12803.4	12605.1	12366.3	12874.6	13895.2
57.5°	11513.2	11588.3	12065.9	13142.3	14896.5	15383.7	14419.0	14216.8	13746.9	14263.0	15424.1
60°	10706.4	10858.5	11588.3	12938.2	15431.9	16325.3	16192.5	16057.7	15248.9	15614.8	17030.1
62.5°	9839.9	9990.1	10887.4	12589.6	15191.1	17159.1	17933.2	17850.4	16906.9	16916.5	18048.8
65°	8559.3	8621.0	9537.6	11638.4	14523.0	17912.0	19675.9	19602.7	18491.6	18027.6	18333.7
67.5°	6464.3	6541.3	7294.2	9187.1	12489.5	17503.8	21068.1	21056.6	19444.8	18439.7	17655.9
69°	4773.6	4867.9	5482.2	7132.5	10327.1	15947.9	21133.6	21289.6	19702.9	18397.3	16510.2
70°	3493.1	3600.9	4168.9	5661.3	8601.7	14230.3	20573.2	20908.3	19604.7	18129.6	15616.7
72.5°	1484.6	1521.2	1800.4	2555.3	4363.4	8580.5	16851.0	17555.8	17706.0	16244.5	12200.7
75°	930.1	941.6	1051.4	1311.3	1941.0	3548.9	10912.4	11873.3	13219.3	12603.1	8168.4
77.5°	700.9	710.6	774.1	903.1	1205.4	1324.8	5062.4	6036.8	7571.5	7413.6	4065.0
80°	537.2	543.0	585.4	656.6	849.2	829.9	1642.5	2064.3	3159.9	2788.3	1438.4
82.5°	421.7	423.6	460.2	473.7	593.1	558.4	824.2	918.5	1276.7	1061.0	702.8
85°	373.6	379.3	415.9	346.6	379.3	337.0	452.5	491.0	677.8	639.3	265.7
87.5°	190.6	200.3	348.5	296.5	190.6	159.8	198.3	213.7	275.4	298.5	129.0
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4	3716.4
2.5°	3672.1	3674.1	3679.8	3689.5	3704.9	3724.1	3747.2	3770.3	3783.8	3793.5	3789.6
5°	3641.3	3643.3	3654.8	3672.1	3691.4	3720.3	3758.8	3787.7	3808.9	3822.3	3820.4
7.5°	3602.8	3608.6	3631.7	3651.0	3677.9	3701.0	3731.8	3758.8	3780.0	3793.5	3791.5
10°	3573.9	3579.7	3608.6	3633.6	3656.7	3660.6	3654.8	3647.1	3645.2	3654.8	3651.0
12.5°	3560.5	3572.0	3599.0	3616.3	3606.7	3570.1	3527.7	3510.4	3504.6	3523.9	3525.8
15°	3564.3	3573.9	3597.0	3585.5	3533.5	3471.9	3448.8	3462.2	3473.8	3485.4	3487.3
17.5°	3573.9	3579.7	3585.5	3543.1	3470.0	3429.5	3421.8	3408.3	3373.7	3354.4	3352.5
20°	3591.3	3599.0	3589.3	3521.9	3456.5	3402.6	3310.1	3227.3	3148.4	3106.0	3088.7
22.5°	3651.0	3656.7	3627.9	3562.4	3462.2	3287.0	3100.2	2957.7	2836.4	2771.0	2745.9
25°	3768.4	3778.0	3737.6	3654.8	3392.9	3086.8	2822.9	2630.4	2478.3	2399.3	2378.1
27.5°	3974.5	3984.1	3939.8	3724.1	3231.2	2819.1	2499.4	2308.8	2177.9	2110.5	2100.8
30°	4282.6	4296.0	4255.6	3722.2	2984.7	2478.3	2183.6	2072.0	1996.9	1950.6	1948.7
32.5°	4710.0	4760.1	4594.5	3656.7	2680.5	2133.6	1944.9	1906.4	1869.8	1839.0	1839.0
35°	5253.1	5370.5	4929.6	3520.0	2345.4	1898.7	1812.0	1775.4	1729.2	1696.5	1692.6
37.5°	5902.0	6084.9	5168.3	3277.4	2056.6	1785.0	1731.1	1671.4	1598.3	1534.7	1519.3
40°	6793.6	6835.9	5285.8	2882.6	1840.9	1723.4	1656.0	1580.9	1488.5	1417.3	1409.5
42.5°	7689.0	7550.3	5262.7	2459.0	1717.6	1667.6	1579.0	1496.2	1413.4	1353.7	1353.7
45°	8707.6	8174.2	5087.5	2033.4	1606.0	1604.0	1507.8	1428.8	1365.3	1321.0	1311.3
47.5°	9682.0	8734.6	4785.1	1719.6	1490.4	1540.5	1461.5	1398.0	1340.2	1297.9	1290.2
50°	10864.3	9383.5	4463.6	1500.1	1378.7	1484.6	1442.3	1409.5	1353.7	1280.5	1272.8
52.5°	12038.9	10142.2	4215.2	1334.4	1280.5	1440.4	1453.8	1457.7	1405.7	1263.2	1253.6
55°	13300.2	10952.9	3953.3	1205.4	1199.7	1419.2	1480.8	1476.9	1451.9	1267.1	1251.6
57.5°	14499.9	11767.4	3562.4	1114.9	1136.1	1398.0	1486.6	1425.0	1380.7	1286.3	1261.3
60°	15493.5	12441.4	2988.5	1051.4	1082.2	1355.6	1448.1	1355.6	1280.5	1282.5	1259.3
62.5°	15976.8	12630.1	2285.7	978.2	1037.9	1286.3	1392.2	1303.6	1234.3	1290.2	1276.7
65°	15609.0	12092.8	1629.1	910.8	984.0	1205.4	1359.5	1259.3	1211.2	1328.7	1313.3
67.5°	14288.0	10629.4	1182.3	851.1	932.0	1122.6	1297.9	1218.9	1188.1	1357.6	1322.9
69°	12884.3	9177.5	1024.4	816.5	895.4	1078.3	1257.4	1197.7	1170.8	1317.1	1267.1
70°	11717.3	8058.7	945.5	795.3	864.6	1053.3	1226.6	1184.3	1153.4	1269.0	1209.3
72.5°	8401.4	5208.8	795.3	731.7	783.7	997.5	1159.2	1134.2	1088.0	1145.7	1107.2
75°	5075.9	2719.0	675.9	666.3	699.0	920.4	1080.3	1049.5	1003.2	1009.0	989.8
77.5°	2331.9	1255.5	566.1	589.2	610.4	824.2	984.0	949.3	907.0	891.6	893.5
80°	1022.5	733.7	473.7	502.6	514.1	741.4	880.0	841.5	795.3	878.1	814.5
82.5°	552.7	425.6	369.7	389.0	421.7	645.1	764.5	714.4	670.1	779.9	629.7
85°	223.4	217.6	250.3	269.6	292.7	464.1	639.3	587.3	533.4	477.6	466.0
87.5°	96.3	104.0	123.2	130.9	156.0	288.8	429.4	375.5	377.4	323.5	317.7
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)