

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: P195839

Luminaire Tested: **NAV-AF-05-D-UNV-T3-7050-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195839  
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-T3-7050-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32995 lumens  
Efficiency: N/A  
Efficacy: 103.1 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): 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

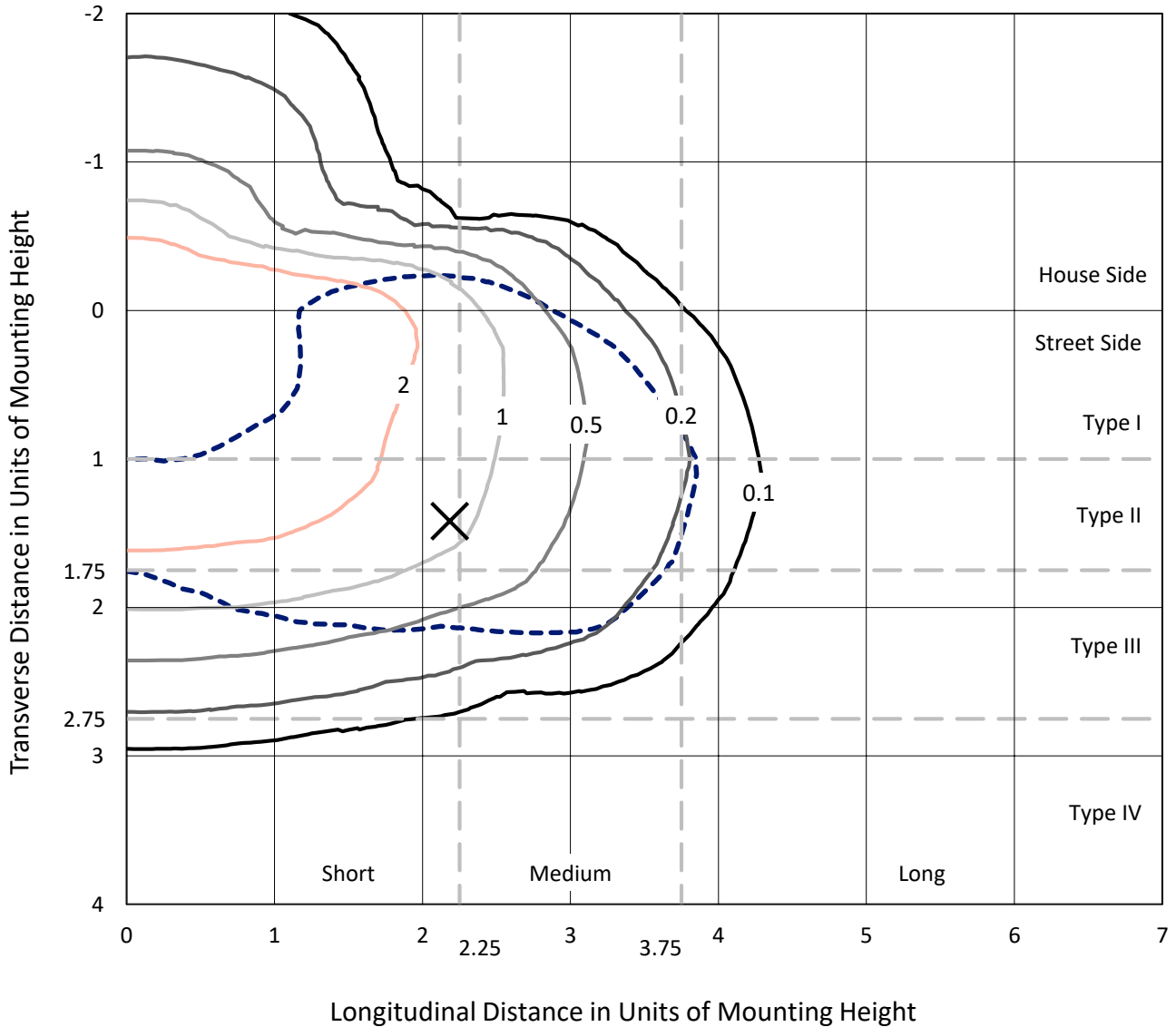


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### Iso-Footcandle Lines of Horizontal Illumination

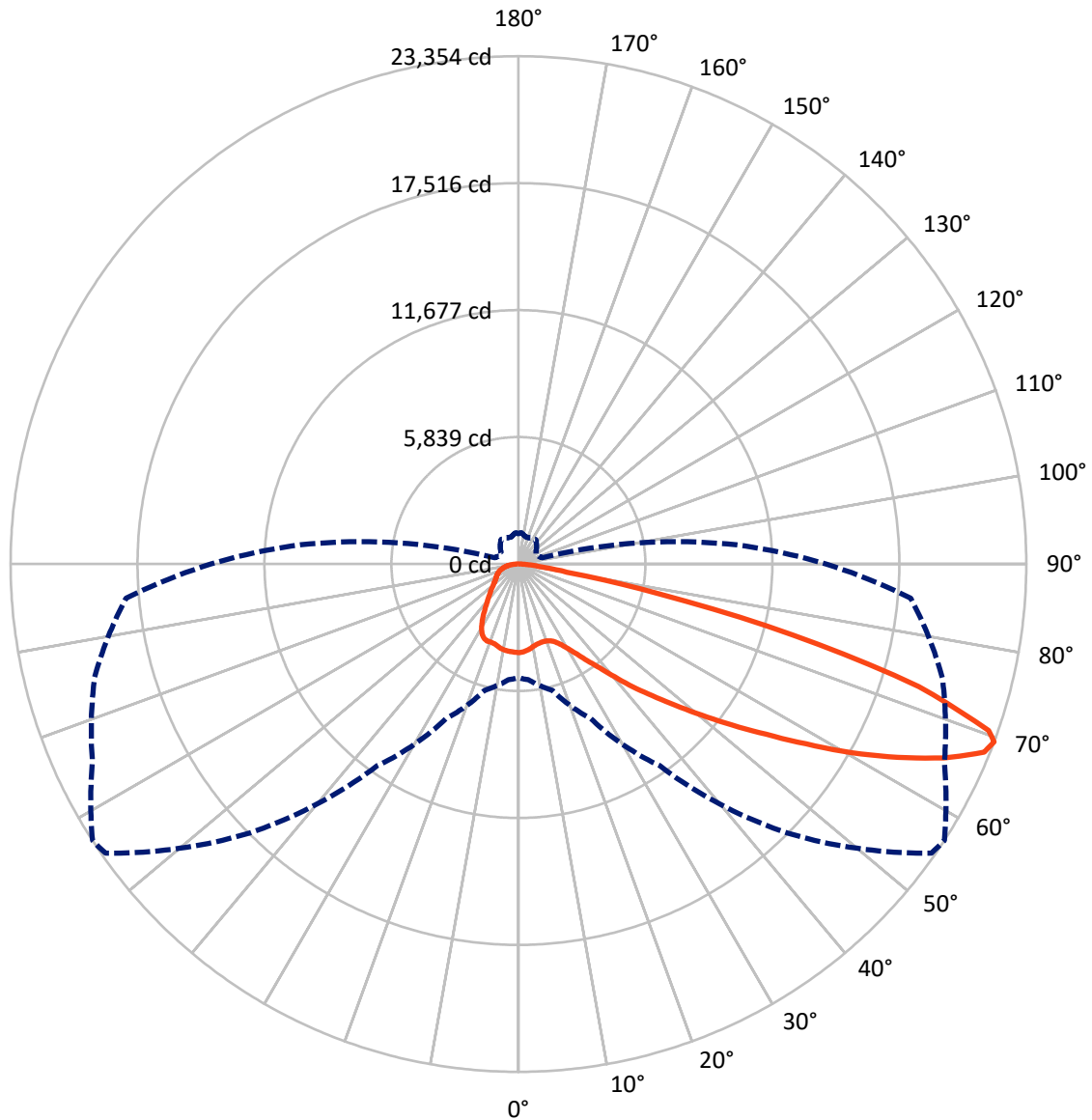
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.6 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	7280.8	0.0	7280.8
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	25714.2	0.0	25714.2
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	32995.0	0.0	32995.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	381.7	1.2
10°-20°	1085.2	3.3
20°-30°	1805.2	5.5
30°-40°	2947.9	8.9
40°-50°	4975.3	15.1
50°-60°	7739.3	23.5
60°-70°	9219.2	27.9
70°-80°	4294.9	13.0
80°-90°	546.3	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°	32995.0	100.0
0°-180°	32995.0	100.0



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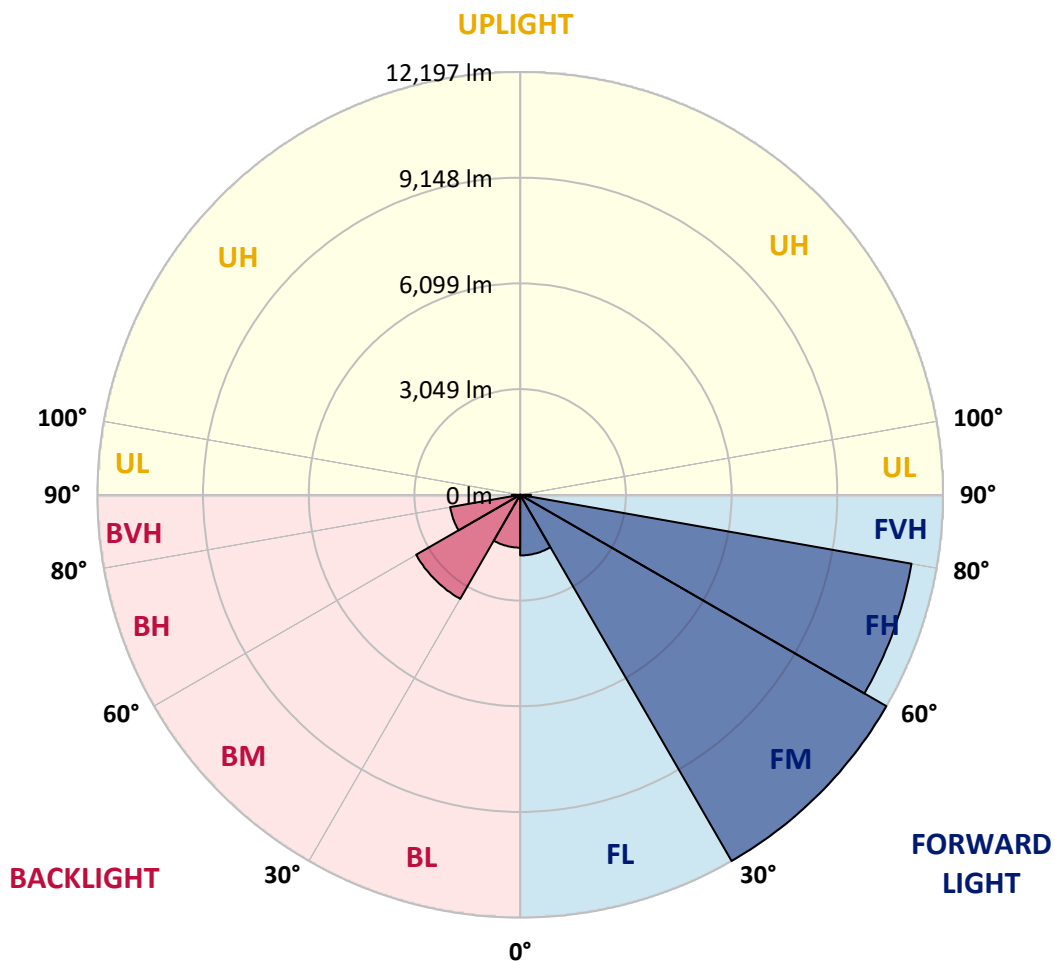
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1747.4	5.3			
FM	(30°-60°)	12197.2	37.0			
FH	(60°-80°)	11462.5	34.7			G4/12000
FVH	(80°-90°)	307.1	0.9			G3/500
BL	(0°-30°)	1524.7	4.6	B3/2500		
BM	(30°-60°)	3465.3	10.5	B3/5000		
BH	(60°-80°)	2051.6	6.2	B3/2500		G3/2500
BVH	(80°-90°)	239.2	0.7			G3/500
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°	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9
2.5°	4053.6	4053.6	4064.2	4064.2	4064.2	4060.0	4047.3	4051.5	4043.1	4036.7	4026.2
5°	3971.2	3975.5	3988.1	3992.4	3998.7	4000.8	4000.8	3998.7	4000.8	4000.8	3994.5
7.5°	3857.2	3861.4	3876.2	3884.6	3903.6	3920.5	3929.0	3929.0	3939.6	3948.0	3950.1
10°	3787.5	3787.5	3795.9	3795.9	3810.7	3819.1	3846.6	3844.5	3874.1	3901.5	3914.2
12.5°	3779.0	3779.0	3774.8	3760.0	3751.6	3749.4	3776.9	3781.1	3825.5	3874.1	3897.3
15°	3806.5	3806.5	3793.8	3764.2	3732.5	3717.8	3745.2	3753.7	3802.2	3859.3	3895.2
17.5°	3895.2	3893.1	3865.6	3806.5	3751.6	3728.3	3736.8	3745.2	3789.6	3855.1	3899.4
20°	4091.6	4091.6	4032.5	3924.8	3829.7	3774.8	3762.1	3768.4	3800.1	3861.4	3918.4
22.5°	4436.0	4442.3	4336.7	4159.2	3996.6	3880.4	3829.7	3836.0	3850.8	3910.0	3973.3
25°	4942.9	4926.0	4776.0	4524.7	4271.2	4072.6	3969.1	3975.5	3975.5	4030.4	4095.9
27.5°	5479.5	5483.7	5268.2	4997.8	4664.1	4368.4	4203.6	4201.5	4199.4	4252.2	4321.9
30°	6085.7	6087.8	5838.6	5525.9	5143.6	4765.5	4518.3	4516.2	4497.2	4562.7	4653.5
32.5°	6749.0	6746.9	6457.5	6104.7	5680.1	5251.3	4930.2	4928.1	4913.3	5002.1	5111.9
35°	7484.1	7484.1	7196.8	6761.7	6303.3	5825.9	5454.1	5452.0	5460.4	5580.9	5684.4
37.5°	8369.2	8388.2	8041.8	7513.7	7013.0	6504.0	6070.9	6058.2	5994.9	6197.7	6368.8
40°	9292.3	9345.1	8986.0	8369.2	7828.4	7302.4	6825.0	6816.6	6761.7	6977.1	7253.8
42.5°	10291.4	10411.8	10012.6	9383.1	8793.8	8225.5	7746.0	7722.8	7511.6	7847.4	8280.4
45°	11601.1	11679.2	11100.4	10530.1	9974.6	9326.1	8755.7	8631.1	8419.9	8850.8	9412.7
47.5°	12492.5	12454.5	12093.3	11710.9	11353.9	10732.9	9856.3	9697.8	9440.1	10010.5	10629.4
50°	13045.9	13073.4	12870.6	12851.6	12832.6	12399.6	11098.3	10908.2	10610.4	11286.3	12008.8
52.5°	13411.4	13286.7	13322.7	13753.6	14275.3	14068.3	12503.1	12291.8	11985.5	12661.5	13476.9
55°	13259.3	13094.5	13426.2	14275.3	15502.6	15549.1	14045.1	13827.5	13565.6	14123.2	15242.8
57.5°	12629.8	12712.2	13236.0	14416.9	16341.2	16875.6	15817.3	15595.6	15080.1	15646.2	16920.0
60°	11744.7	11911.6	12712.2	14192.9	16928.4	17908.6	17762.8	17615.0	16727.8	17129.1	18681.7
62.5°	10794.2	10958.9	11943.3	13810.6	16664.4	18823.2	19672.4	19581.6	18546.5	18557.1	19799.1
65°	9389.4	9457.0	10462.5	12767.1	15931.4	19649.2	21584.1	21503.8	20285.0	19775.9	20111.8
67.5°	7091.2	7175.7	8001.6	10078.1	13700.8	19201.3	23111.3	23098.7	21330.6	20228.0	19368.2
69°	5236.5	5340.0	6013.9	7824.2	11328.6	17494.6	23183.1	23354.2	21613.7	20181.5	18111.4
70°	3831.8	3950.1	4573.3	6210.3	9435.9	15610.3	22568.4	22936.0	21505.9	19887.9	17131.2
72.5°	1628.6	1668.8	1975.1	2803.1	4786.6	9412.7	18485.3	19258.4	19423.1	17819.9	13383.9
75°	1020.3	1032.9	1153.3	1438.5	2129.3	3893.1	11970.7	13024.8	14501.3	13825.4	8960.6
77.5°	768.9	779.5	849.2	990.7	1322.3	1453.3	5553.4	6622.2	8305.8	8132.6	4459.2
80°	589.3	595.7	642.2	720.3	931.6	910.4	1801.8	2264.4	3466.4	3058.7	1577.9
82.5°	462.6	464.7	504.9	519.6	650.6	612.6	904.1	1007.6	1400.5	1163.9	771.0
85°	409.8	416.1	456.3	380.2	416.1	369.7	496.4	538.7	743.6	701.3	291.5
87.5°	209.1	219.7	382.3	325.3	209.1	175.3	217.6	234.5	302.1	327.4	141.5
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°	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9	4076.9
2.5°	4028.3	4030.4	4036.7	4047.3	4064.2	4085.3	4110.7	4136.0	4150.8	4161.3	4157.1
5°	3994.5	3996.6	4009.3	4028.3	4049.4	4081.1	4123.3	4155.0	4178.2	4193.0	4190.9
7.5°	3952.2	3958.6	3983.9	4005.0	4034.6	4060.0	4093.8	4123.3	4146.6	4161.3	4159.2
10°	3920.5	3926.9	3958.6	3986.0	4011.4	4015.6	4009.3	4000.8	3998.7	4009.3	4005.0
12.5°	3905.8	3918.4	3948.0	3967.0	3956.4	3916.3	3869.8	3850.8	3844.5	3865.6	3867.7
15°	3910.0	3920.5	3945.9	3933.2	3876.2	3808.6	3783.2	3798.0	3810.7	3823.4	3825.5
17.5°	3920.5	3926.9	3933.2	3886.7	3806.5	3762.1	3753.7	3738.9	3700.9	3679.7	3677.6
20°	3939.6	3948.0	3937.4	3863.5	3791.7	3732.5	3631.1	3540.3	3453.7	3407.2	3388.2
22.5°	4005.0	4011.4	3979.7	3907.9	3798.0	3605.8	3400.9	3244.6	3111.5	3039.7	3012.2
25°	4133.9	4144.4	4100.1	4009.3	3722.0	3386.1	3096.7	2885.5	2718.6	2632.0	2608.8
27.5°	4359.9	4370.5	4321.9	4085.3	3544.5	3092.5	2741.8	2532.7	2389.1	2315.1	2304.6
30°	4697.9	4712.7	4668.3	4083.2	3274.2	2718.6	2395.4	2272.9	2190.5	2139.8	2137.7
32.5°	5166.8	5221.8	5040.1	4011.4	2940.4	2340.5	2133.5	2091.2	2051.1	2017.3	2017.3
35°	5762.5	5891.4	5407.6	3861.4	2572.9	2082.8	1987.7	1947.6	1896.9	1861.0	1856.8
37.5°	6474.4	6675.1	5669.6	3595.2	2256.0	1958.2	1899.0	1833.5	1753.3	1683.6	1666.7
40°	7452.4	7498.9	5798.4	3162.2	2019.4	1890.6	1816.6	1734.2	1632.9	1554.7	1546.2
42.5°	8434.7	8282.6	5773.1	2697.5	1884.2	1829.3	1732.1	1641.3	1550.5	1485.0	1485.0
45°	9552.1	8967.0	5580.9	2230.7	1761.7	1759.6	1654.0	1567.4	1497.7	1449.1	1438.5
47.5°	10620.9	9581.7	5249.2	1886.3	1635.0	1689.9	1603.3	1533.6	1470.2	1423.7	1415.3
50°	11917.9	10293.5	4896.4	1645.5	1512.4	1628.6	1582.2	1546.2	1485.0	1404.7	1396.3
52.5°	13206.5	11125.8	4624.0	1463.9	1404.7	1580.0	1594.8	1599.1	1542.0	1385.7	1375.1
55°	14590.1	12015.1	4336.7	1322.3	1316.0	1556.8	1624.4	1620.2	1592.7	1389.9	1373.0
57.5°	15906.1	12908.6	3907.9	1223.1	1246.3	1533.6	1630.7	1563.1	1514.6	1411.1	1383.6
60°	16996.0	13648.0	3278.4	1153.3	1187.1	1487.1	1588.5	1487.1	1404.7	1406.8	1381.5
62.5°	17526.2	13855.0	2507.4	1073.1	1138.6	1411.1	1527.2	1430.1	1354.0	1415.3	1400.5
65°	17122.8	13265.6	1787.1	999.1	1079.4	1322.3	1491.3	1381.5	1328.7	1457.5	1440.6
67.5°	15673.7	11660.2	1297.0	933.7	1022.4	1231.5	1423.7	1337.1	1303.3	1489.2	1451.2
69°	14133.8	10067.5	1123.8	895.6	982.2	1182.9	1379.4	1313.9	1284.3	1444.9	1389.9
70°	12853.7	8840.2	1037.2	872.4	948.4	1155.5	1345.6	1299.1	1265.3	1392.0	1326.6
72.5°	9216.2	5713.9	872.4	802.7	859.7	1094.2	1271.6	1244.2	1193.5	1256.9	1214.6
75°	5568.2	2982.7	741.4	730.9	766.8	1009.7	1185.0	1151.2	1100.5	1106.9	1085.8
77.5°	2558.1	1377.3	621.0	646.4	669.6	904.1	1079.4	1041.4	994.9	978.0	980.1
80°	1121.7	804.8	519.6	551.3	564.0	813.3	965.3	923.1	872.4	963.2	893.5
82.5°	606.2	466.8	405.6	426.7	462.6	707.6	838.6	783.7	735.1	855.5	690.7
85°	245.0	238.7	274.6	295.7	321.1	509.1	701.3	644.3	585.1	523.9	511.2
87.5°	105.6	114.1	135.2	143.6	171.1	316.9	471.1	411.9	414.0	354.9	348.5
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)