

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: P195876

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195876
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29334 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 249
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

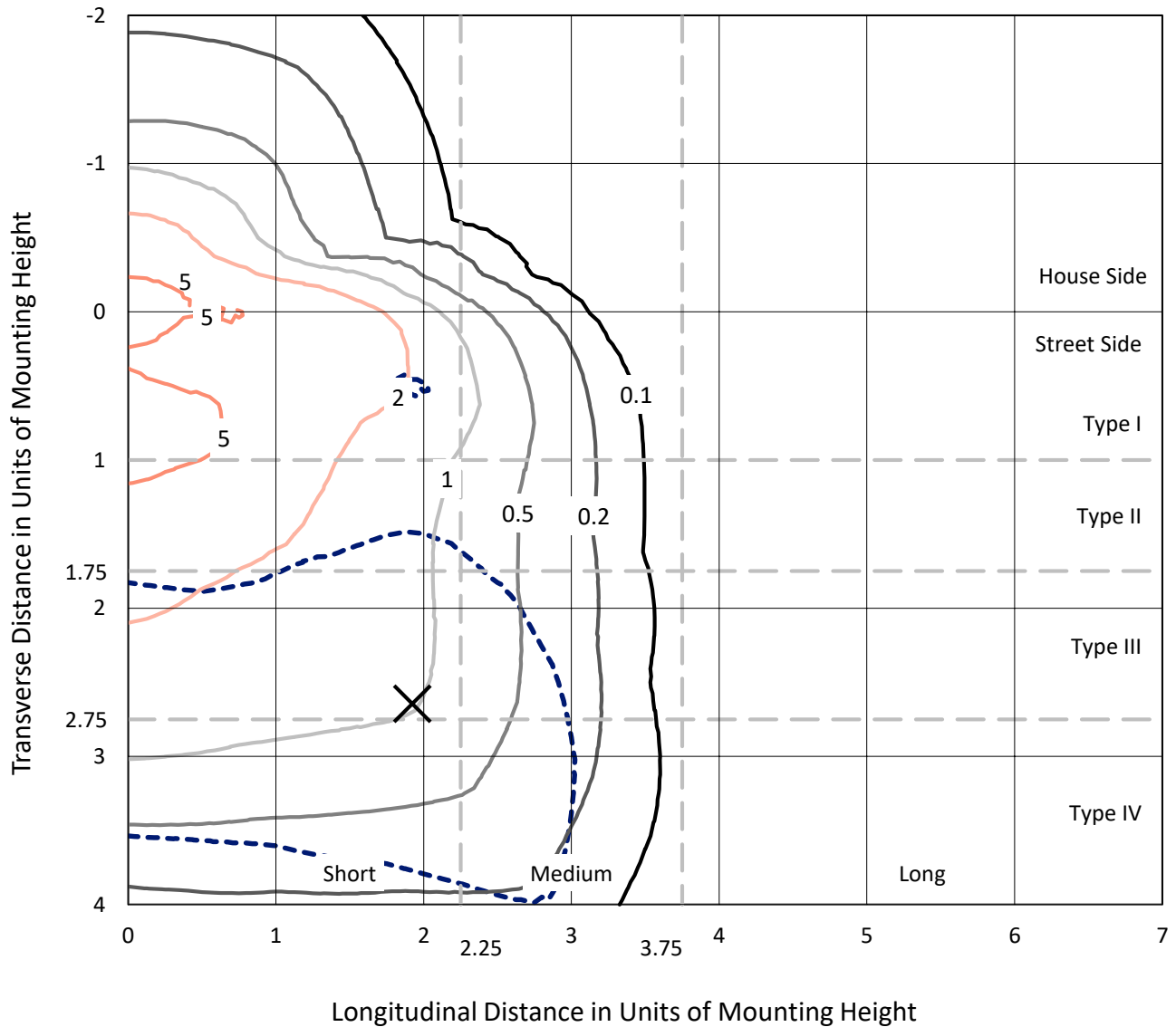


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Iso-Footcandle Lines of Horizontal Illumination

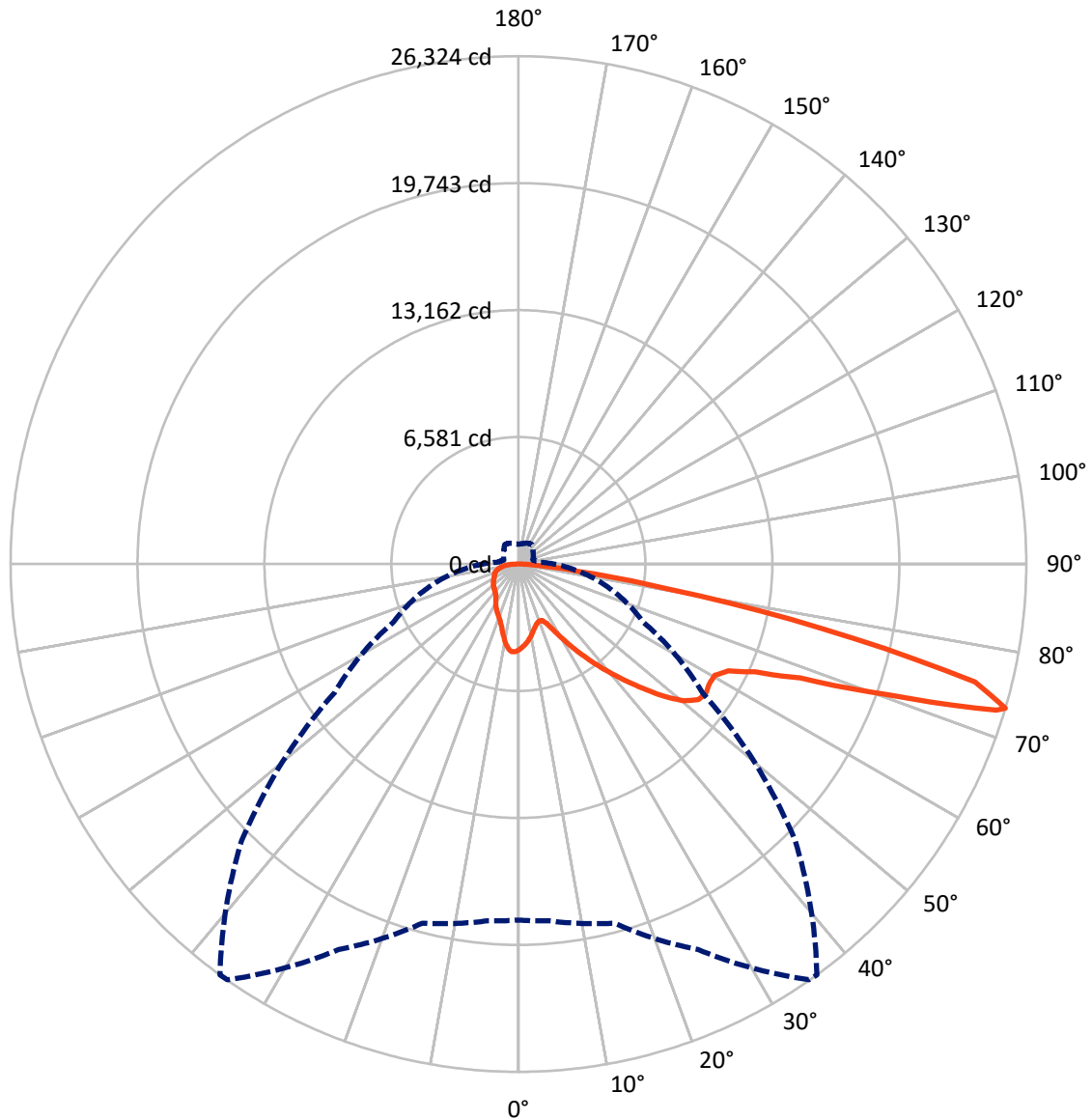
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5656.5	0.0	5656.5
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	23677.5	0.0	23677.5
	% Fixture	80.7	0.0	80.7
Total	Lumens	29334.0	0.0	29334.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.6	1.4
10°-20°	1013.6	3.5
20°-30°	1625.1	5.5
30°-40°	2688.0	9.2
40°-50°	4159.3	14.2
50°-60°	5568.1	19.0
60°-70°	7273.7	24.8
70°-80°	5941.3	20.3
80°-90°	661.3	2.3
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°	29334.0	100.0
0°-180°	29334.0	100.0



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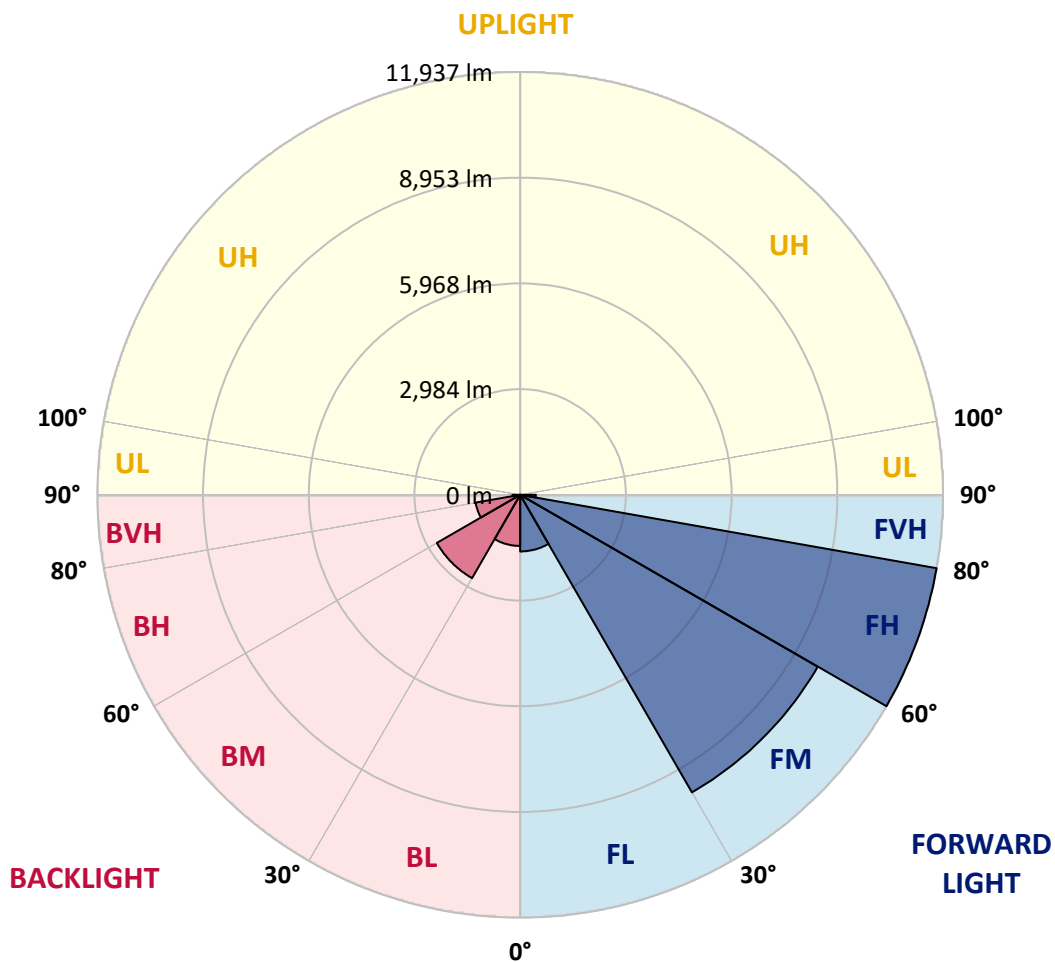
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1598.4	5.4			
FM	(30°-60°)	9698.9	33.1			
FH	(60°-80°)	11936.8	40.7			G4/12000
FVH	(80°-90°)	443.5	1.5			G3/500
BL	(0°-30°)	1443.9	4.9	B3/2500		
BM	(30°-60°)	2716.5	9.3	B3/5000		
BH	(60°-80°)	1278.2	4.4	B3/2500		G3/2500
BVH	(80°-90°)	217.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2
2.5°	4273.6	4284.8	4286.7	4299.7	4299.7	4297.9	4303.5	4325.8	4337.0	4363.1	4385.5
5°	4063.0	4076.1	4081.7	4104.0	4132.0	4133.9	4154.4	4197.2	4238.2	4296.0	4344.5
7.5°	3826.3	3841.2	3856.2	3902.8	3943.8	3947.5	3986.6	4055.6	4109.6	4180.5	4268.1
10°	3597.1	3600.8	3615.7	3675.4	3729.4	3735.0	3790.9	3869.2	3941.9	4040.7	4139.5
12.5°	3408.9	3420.0	3416.3	3461.0	3507.6	3511.4	3585.9	3684.7	3790.9	3902.8	4020.2
15°	3343.6	3341.8	3302.6	3300.8	3321.3	3325.0	3397.7	3513.2	3632.5	3770.4	3921.4
17.5°	3388.3	3373.4	3270.9	3207.6	3194.5	3198.2	3252.3	3379.0	3505.8	3664.2	3845.0
20°	3634.4	3576.6	3336.2	3183.3	3140.5	3140.5	3172.2	3274.7	3414.4	3599.0	3826.3
22.5°	4217.7	4128.3	3615.7	3343.6	3192.7	3177.7	3153.5	3231.8	3386.5	3608.3	3902.8
25°	4952.1	4909.2	4128.3	3770.4	3459.2	3410.7	3250.4	3278.4	3444.3	3708.9	4111.5
27.5°	5632.3	5557.8	4801.1	4391.1	3951.2	3876.7	3537.5	3423.8	3582.2	3895.3	4413.4
30°	6029.3	5979.0	5492.6	5101.2	4577.4	4482.4	3995.9	3710.8	3828.2	4202.8	4842.1
32.5°	6461.7	6431.9	6185.9	5829.9	5255.9	5145.9	4588.6	4178.6	4204.7	4611.0	5358.4
35°	6881.1	6920.2	6780.4	6519.5	5986.5	5883.9	5384.5	4789.9	4668.8	5069.5	5910.0
37.5°	7384.3	7393.6	7306.0	7136.4	6754.3	6670.5	6258.6	5442.2	5173.8	5557.8	6443.1
40°	8388.9	8241.6	7898.7	7764.5	7537.1	7484.9	7015.3	6040.5	5643.5	6059.1	6946.3
42.5°	9475.4	9246.2	8709.4	8489.5	8398.2	8349.7	7645.2	6439.4	6083.4	6560.5	7440.2
45°	10351.4	10165.0	9639.5	9367.4	9378.5	9300.3	8195.0	6795.3	6560.5	7063.7	7991.9
47.5°	11214.4	10903.1	10314.2	10275.0	10405.5	10289.9	8720.6	7151.3	7058.1	7611.7	8543.6
50°	11270.3	10987.0	10748.4	11061.5	11285.2	11141.7	9197.7	7617.3	7574.4	8275.2	9255.5
52.5°	10590.0	10549.0	10912.4	11439.9	11810.8	11682.2	9587.3	8096.3	8101.8	9104.6	10122.2
55°	10342.1	10289.9	10726.0	11374.6	11876.0	11799.6	9878.0	8636.7	8687.1	10111.0	11052.2
57.5°	10759.6	10629.1	10714.9	11251.6	11723.2	11678.4	10180.0	9236.9	9328.2	11270.3	11911.4
60°	12054.9	11788.4	11333.6	11434.3	11728.8	11702.7	10612.4	9906.0	10058.8	12478.0	12455.6
62.5°	13995.1	13693.2	12766.9	12319.6	12254.3	12204.0	11326.2	10727.9	10804.3	13350.2	12138.8
65°	16123.5	15799.3	14697.8	13965.3	13581.4	13473.3	12478.0	11719.4	11240.4	13348.4	10905.0
67.5°	18512.9	18170.0	17072.2	16373.3	15957.7	15773.2	14347.4	12520.9	11098.8	12218.9	8726.2
70°	20960.1	20633.9	20130.7	20374.8	20557.5	20276.0	17292.1	12787.4	10081.2	9579.8	5859.7
72.5°	19661.0	19634.9	20017.0	22331.8	25852.5	25908.4	20233.2	12034.4	7788.7	5693.8	3123.7
73°	18455.1	18565.1	19273.3	22042.9	26305.4	26324.0	20291.0	11644.9	7151.3	4905.5	2743.5
75°	9561.2	10306.7	12934.6	17873.6	24357.7	24445.3	17886.7	8815.7	4262.5	2724.8	1848.9
77.5°	2560.8	2527.3	4167.4	8707.6	16239.1	16123.5	11302.0	4268.1	2042.7	1709.1	1297.2
80°	877.8	889.0	1418.3	3185.2	7580.0	7850.2	4905.5	1861.9	1343.8	1191.0	918.8
82.5°	447.3	462.2	741.8	1355.0	3170.3	3103.2	1578.6	1095.9	900.2	723.1	514.4
85°	238.6	246.0	408.2	702.6	1163.0	1176.0	555.4	585.2	572.2	410.0	253.5
87.5°	117.4	121.1	195.7	309.4	430.5	415.6	193.8	253.5	281.4	231.1	139.8
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°	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2	4443.2
2.5°	4413.4	4413.4	4437.7	4478.7	4508.5	4536.4	4555.1	4584.9	4601.7	4599.8	4597.9
5°	4383.6	4402.2	4450.7	4501.0	4534.6	4556.9	4556.9	4570.0	4570.0	4564.4	4556.9
7.5°	4314.6	4346.3	4417.2	4461.9	4471.2	4447.0	4398.5	4361.2	4314.6	4290.4	4281.1
10°	4204.7	4245.7	4335.1	4355.7	4307.2	4221.5	4104.0	4003.4	3913.9	3872.9	3859.9
12.5°	4096.6	4150.6	4234.5	4202.8	4087.3	3919.5	3738.7	3600.8	3500.2	3461.0	3448.0
15°	4007.1	4072.4	4137.6	4038.8	3837.5	3604.5	3405.1	3276.5	3200.1	3170.3	3162.8
17.5°	3947.5	4023.9	4046.3	3861.7	3582.2	3321.3	3144.2	3060.3	3026.8	3013.7	3010.0
20°	3951.2	4036.9	3982.9	3690.3	3336.2	3073.4	2956.0	2931.7	2931.7	2931.7	2929.9
22.5°	4053.7	4128.3	3956.8	3530.0	3099.5	2864.6	2814.3	2834.8	2849.7	2849.7	2847.9
25°	4266.2	4307.2	3975.4	3375.3	2877.7	2683.8	2685.7	2724.8	2737.9	2737.9	2734.2
27.5°	4590.5	4556.9	4009.0	3203.8	2659.6	2519.8	2545.9	2581.3	2590.7	2585.1	2583.2
30°	4996.8	4862.6	4036.9	3002.5	2454.6	2367.0	2389.4	2409.9	2402.4	2389.4	2387.5
32.5°	5451.6	5173.8	4020.2	2777.0	2273.8	2208.6	2221.6	2232.8	2221.6	2189.9	2189.9
35°	5902.6	5455.3	3928.8	2531.0	2130.3	2055.7	2053.9	2089.3	2087.4	2050.2	2052.0
37.5°	6297.7	5677.1	3751.8	2305.5	2007.3	1943.9	1951.4	1973.7	1984.9	1934.6	1929.0
40°	6642.5	5829.9	3502.0	2113.5	1908.5	1912.2	1891.7	1856.3	1843.3	1820.9	1817.2
42.5°	6966.8	5936.1	3237.4	1953.2	1858.2	1901.1	1832.1	1748.2	1712.8	1733.3	1746.4
45°	7285.5	6055.4	2982.0	1820.9	1794.8	1867.5	1772.5	1679.3	1638.3	1647.6	1660.6
47.5°	7675.0	6221.3	2674.5	1679.3	1697.9	1806.0	1735.2	1634.5	1573.0	1535.8	1524.6
50°	8187.6	6461.7	2275.7	1526.4	1595.4	1738.9	1703.5	1569.3	1502.2	1427.7	1409.0
52.5°	8828.7	6689.1	1873.1	1403.4	1511.5	1681.1	1651.3	1513.4	1431.4	1341.9	1327.0
55°	9468.0	6720.8	1526.4	1297.2	1416.5	1602.8	1587.9	1468.7	1353.1	1280.4	1265.5
57.5°	9915.3	6420.7	1293.5	1207.7	1325.1	1505.9	1530.2	1414.6	1287.9	1232.0	1222.6
60°	9922.8	5703.2	1151.8	1148.1	1256.2	1422.1	1470.5	1351.2	1246.9	1209.6	1202.1
62.5°	9134.4	4596.1	1060.5	1103.4	1205.9	1353.1	1425.8	1315.8	1237.5	1222.6	1215.2
65°	7656.4	3395.8	987.8	1062.4	1159.3	1295.3	1388.5	1304.6	1233.8	1228.2	1222.6
67.5°	5652.8	2327.9	926.3	1010.2	1107.1	1235.7	1353.1	1287.9	1211.5	1233.8	1226.4
70°	3556.1	1554.4	868.5	950.5	1038.1	1166.7	1306.5	1258.1	1183.5	1170.5	1146.2
72.5°	2007.3	1123.9	799.6	874.1	948.7	1075.4	1243.1	1207.7	1120.1	1067.9	1043.7
73°	1813.5	1064.2	782.8	855.5	928.2	1056.8	1228.2	1192.8	1101.5	1043.7	1021.4
75°	1327.0	870.4	706.4	779.1	842.4	971.0	1157.4	1118.3	1019.5	950.5	935.6
77.5°	961.7	671.0	607.6	672.8	728.7	851.7	1051.2	1006.4	909.5	872.2	857.3
80°	693.3	508.8	503.2	566.6	615.0	739.9	937.5	890.9	797.7	907.7	883.4
82.5°	413.8	326.2	369.0	439.9	490.2	620.6	814.5	760.4	671.0	678.4	577.8
85°	197.6	184.5	229.2	288.9	324.3	424.9	678.4	635.5	536.8	439.9	430.5
87.5°	87.6	83.9	110.0	128.6	173.3	255.3	464.1	411.9	389.5	233.0	182.7
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)