

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: P197346

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197346
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
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-T4W-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29046 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

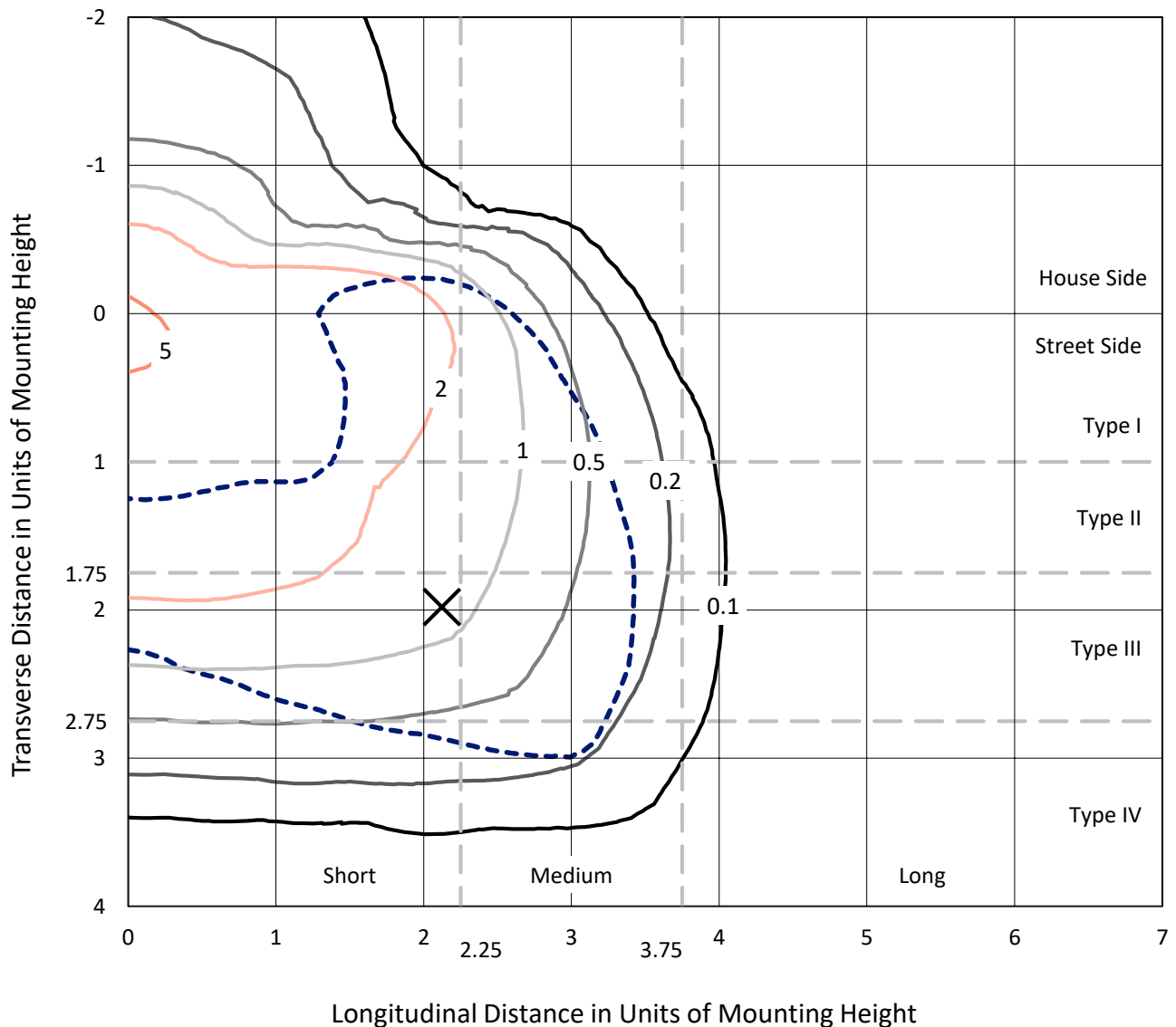
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

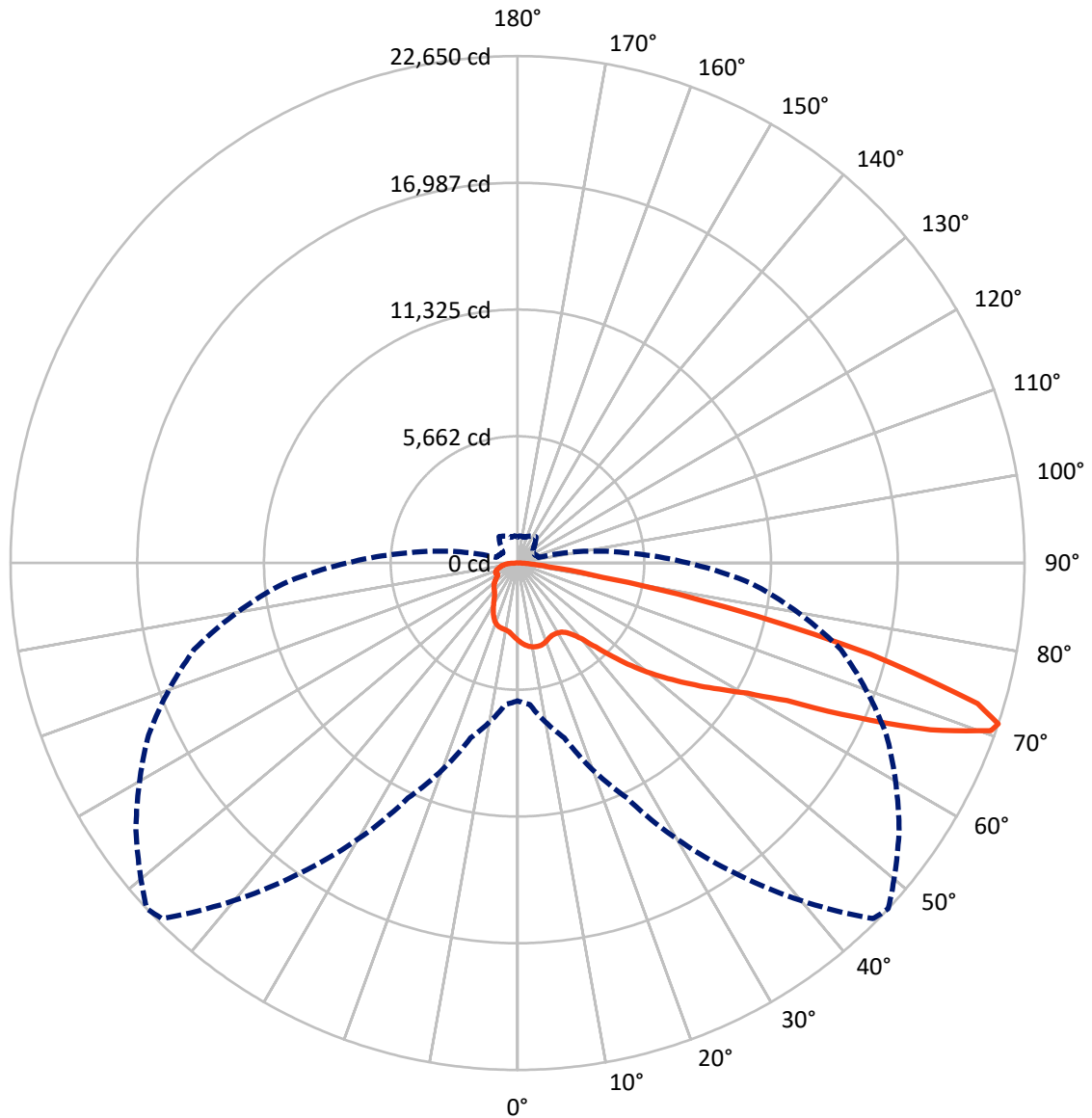
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6225.0	0.0	6225.0
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	22821.0	0.0	22821.0
	% Fixture	78.6	0.0	78.6
Total	Lumens	29046.0	0.0	29046.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.8	1.1
10°-20°	964.8	3.3
20°-30°	1433.7	4.9
30°-40°	2058.6	7.1
40°-50°	3649.9	12.6
50°-60°	6245.5	21.5
60°-70°	8866.5	30.5
70°-80°	4856.1	16.7
80°-90°	641.0	2.2
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°	29046.0	100.0
0°-180°	29046.0	100.0



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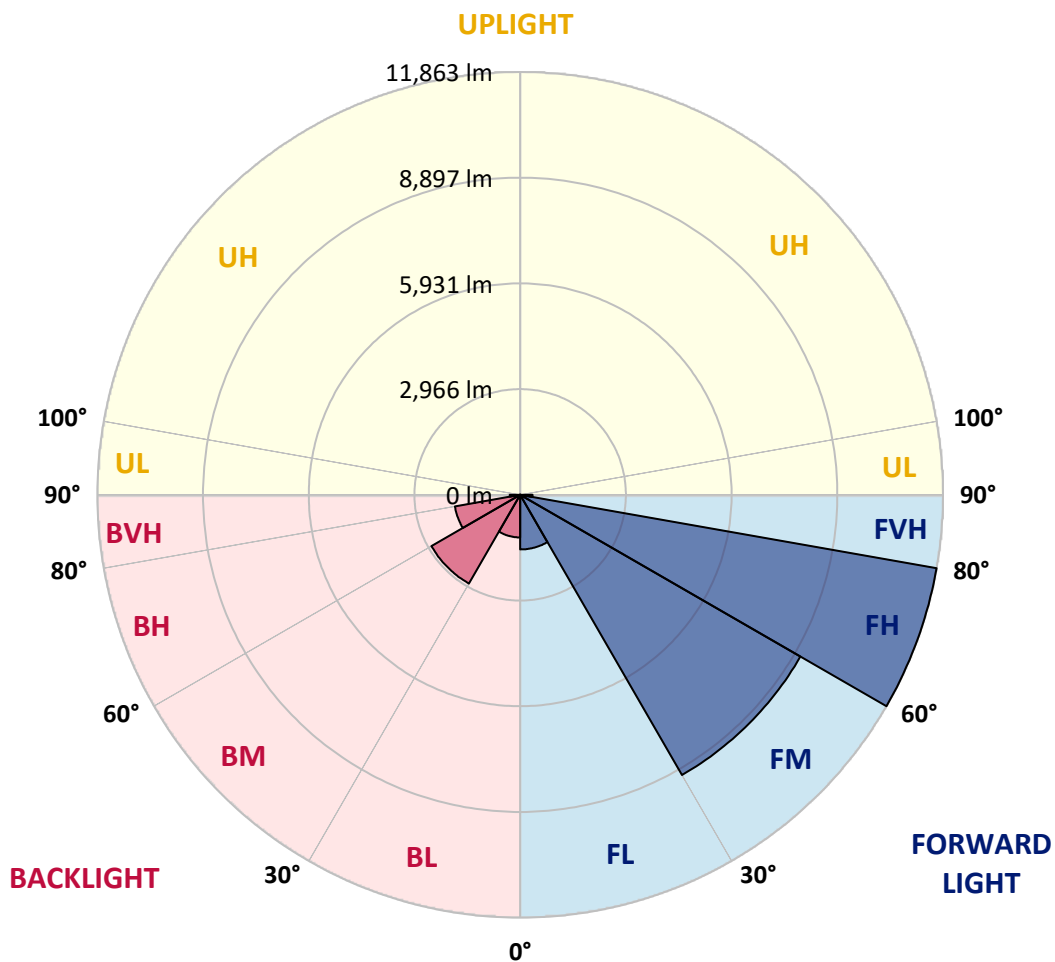
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1532.9	5.3			
FM	(30°-60°)	9077.7	31.3			
FH	(60°-80°)	11862.7	40.8			G4/12000
FVH	(80°-90°)	347.7	1.2			G3/500
BL	(0°-30°)	1195.4	4.1	B3/2500		
BM	(30°-60°)	2876.3	9.9	B3/5000		
BH	(60°-80°)	1859.9	6.4	B3/2500		G3/2500
BVH	(80°-90°)	293.3	1.0			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1
2.5°	3664.9	3657.3	3661.1	3647.9	3615.9	3582.1	3582.1	3546.3	3508.6	3471.0	3429.6
5°	3892.6	3881.3	3871.9	3830.5	3768.4	3698.8	3687.5	3615.9	3538.8	3461.6	3386.3
7.5°	4082.8	4071.5	4043.2	3967.9	3877.6	3774.1	3760.9	3666.8	3565.1	3457.8	3352.4
10°	4218.3	4210.7	4156.2	4060.2	3954.8	3832.4	3809.8	3713.8	3593.3	3459.7	3326.1
12.5°	4293.6	4282.3	4216.4	4103.5	3979.2	3855.0	3832.4	3740.2	3602.8	3455.9	3299.7
15°	4263.5	4257.8	4195.7	4080.9	3956.6	3849.3	3830.5	3736.4	3597.1	3442.8	3275.2
17.5°	4135.5	4148.6	4099.7	3986.8	3885.1	3809.8	3789.1	3700.6	3568.9	3410.8	3237.6
20°	3958.5	3973.6	3949.1	3834.3	3775.9	3727.0	3715.7	3644.2	3521.8	3363.7	3192.4
22.5°	3770.3	3783.5	3785.3	3678.1	3659.2	3640.4	3631.0	3580.2	3480.4	3335.5	3162.3
25°	3640.4	3655.5	3659.2	3565.1	3576.4	3582.1	3580.2	3544.4	3472.9	3335.5	3166.1
27.5°	3606.5	3614.1	3610.3	3523.7	3544.4	3576.4	3578.3	3570.8	3503.0	3373.1	3218.8
30°	3723.2	3727.0	3679.9	3550.1	3570.8	3612.2	3614.1	3610.3	3567.0	3471.0	3337.4
32.5°	4227.7	4223.9	4062.0	3727.0	3655.5	3670.5	3676.2	3710.1	3713.8	3632.9	3508.6
35°	4995.7	4993.8	4805.6	4233.3	3896.4	3817.3	3824.9	3877.6	3924.6	3870.0	3798.5
37.5°	5840.8	5846.5	5731.7	4956.1	4415.9	4086.5	4079.0	4118.5	4203.2	4222.0	4231.5
40°	6778.2	6806.5	6800.8	5786.2	5144.4	4545.8	4470.5	4425.3	4589.1	4692.6	4826.3
42.5°	7849.3	7841.7	7845.5	6697.3	5976.4	5268.6	5129.3	4918.5	5108.6	5287.4	5581.1
45°	8769.7	8799.8	8822.4	7666.7	6908.1	6094.9	5953.8	5569.8	5741.1	6008.4	6456.4
47.5°	9695.8	9643.1	9684.5	8745.3	7945.3	7038.0	6855.4	6337.8	6497.8	6874.2	7555.6
50°	10774.4	10749.9	10561.7	10153.2	9198.9	7994.2	7755.2	7139.6	7373.0	7875.6	8912.8
52.5°	11741.9	11610.1	11463.3	11260.0	10431.8	8961.7	8658.7	7973.5	8402.7	9025.7	10597.5
55°	12095.8	12007.3	12184.3	12447.8	11736.3	9948.1	9609.2	8946.7	9564.1	10341.5	12579.5
57.5°	12472.2	12502.4	12901.4	13434.1	12971.1	11000.3	10633.2	10098.6	10838.4	11813.4	14795.0
60°	12660.5	12780.9	13577.2	14576.7	14145.6	12154.1	11802.1	11421.9	12252.0	13439.8	17004.9
62.5°	12692.5	12854.4	13981.9	14977.6	15762.5	13921.6	13515.1	13102.8	14017.6	15237.4	18604.8
65°	12105.2	12353.7	13946.1	15470.8	17236.4	16875.0	16617.1	15898.1	16381.8	16820.4	18877.8
67.5°	10379.1	10650.2	12566.4	15267.5	18418.5	19939.4	19890.5	18828.8	18207.7	17432.2	16854.3
70°	7617.7	7836.1	9677.0	13052.0	17902.7	22345.0	22431.6	20728.1	18717.8	16133.4	12532.5
71°	6160.8	6349.1	8084.6	11587.6	16897.6	22469.2	22649.9	20812.8	18187.0	14960.7	10492.0
72.5°	3834.3	3939.7	5368.4	8745.3	14550.3	21189.3	21494.2	19728.6	16515.5	12645.4	7416.3
75°	1447.5	1488.9	1991.5	3856.9	8685.0	15918.8	16287.7	14909.9	11602.6	7218.7	3103.9
77.5°	777.4	798.1	988.2	1603.7	3480.4	9125.5	9599.8	8504.3	5566.0	2526.1	1268.7
80°	521.4	534.6	683.3	950.6	1600.0	3474.8	3870.0	3414.5	2083.7	1441.9	903.5
82.5°	336.9	344.5	464.9	624.9	1033.4	1221.6	1394.8	1456.9	1300.7	1033.4	545.9
85°	222.1	227.8	306.8	399.1	640.0	602.3	617.4	807.5	886.6	681.4	278.6
87.5°	128.0	131.8	184.5	205.2	288.0	225.9	244.7	384.0	527.0	444.2	160.0
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°	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1	3454.1
2.5°	3410.8	3395.7	3361.8	3341.1	3331.7	3327.9	3324.2	3331.7	3331.7	3327.9	3320.4
5°	3348.6	3320.4	3263.9	3224.4	3203.7	3198.1	3205.6	3215.0	3220.6	3220.6	3215.0
7.5°	3303.5	3262.1	3186.8	3132.2	3100.2	3090.8	3111.5	3145.4	3167.9	3179.2	3181.1
10°	3265.8	3209.4	3126.5	3070.1	3043.7	3039.9	3066.3	3109.6	3156.6	3177.4	3181.1
12.5°	3231.9	3167.9	3077.6	3024.9	3006.1	3015.5	3051.2	3090.8	3145.4	3175.5	3177.4
15°	3199.9	3134.1	3038.1	2983.5	2979.7	2994.8	3028.7	3060.7	3102.1	3139.7	3139.7
17.5°	3162.3	3090.8	2991.0	2940.2	2940.2	2953.4	2975.9	2992.9	3019.2	3055.0	3053.1
20°	3117.1	3043.7	2942.1	2889.4	2878.1	2870.5	2870.5	2874.3	2896.9	2928.9	2934.5
22.5°	3083.2	3007.9	2900.7	2836.7	2785.8	2736.9	2716.2	2708.7	2729.4	2759.5	2767.0
25°	3083.2	3007.9	2887.5	2780.2	2656.0	2561.8	2522.3	2511.0	2531.7	2560.0	2571.2
27.5°	3134.1	3058.8	2917.6	2729.4	2501.6	2351.0	2304.0	2294.5	2313.4	2336.0	2347.3
30°	3252.6	3179.2	3004.2	2671.0	2330.3	2132.7	2080.0	2070.6	2080.0	2089.4	2102.6
32.5°	3450.3	3388.2	3145.4	2618.3	2157.1	1935.0	1871.0	1856.0	1859.7	1861.6	1872.9
35°	3772.2	3743.9	3333.6	2556.2	1993.4	1773.1	1707.3	1677.1	1675.3	1684.7	1697.9
37.5°	4265.3	4282.3	3576.4	2465.8	1857.8	1658.3	1592.4	1562.3	1547.3	1566.1	1581.1
40°	4961.8	5001.3	3856.9	2343.5	1746.8	1590.6	1520.9	1492.7	1472.0	1466.3	1473.9
42.5°	5867.2	5855.9	4143.0	2187.3	1626.3	1545.4	1472.0	1441.9	1408.0	1364.7	1355.3
45°	6940.1	6778.2	4382.0	1995.3	1488.9	1502.1	1426.8	1385.4	1332.7	1268.7	1261.2
47.5°	8206.9	7760.8	4528.9	1790.1	1360.9	1445.6	1376.0	1312.0	1234.8	1193.4	1187.7
50°	9733.5	8910.9	4632.4	1581.1	1246.1	1374.1	1304.4	1219.7	1144.5	1133.2	1131.3
52.5°	11540.5	10268.1	4760.4	1392.9	1155.7	1281.9	1232.9	1146.3	1086.1	1091.7	1091.7
55°	13462.3	11672.3	4764.2	1244.2	1076.7	1174.6	1180.2	1110.6	1063.5	1082.3	1088.0
57.5°	15214.8	12899.5	4389.6	1138.8	1001.4	1089.9	1163.3	1123.7	1088.0	1153.9	1159.5
60°	16743.2	13844.5	3583.9	1052.2	939.3	1057.9	1200.9	1204.7	1197.2	1376.0	1389.2
62.5°	17302.3	13853.9	2544.9	978.8	905.4	1076.7	1280.0	1285.6	1285.6	1451.3	1475.7
65°	16519.2	12700.0	1694.1	935.5	882.8	1118.1	1344.0	1319.5	1261.2	1376.0	1349.6
67.5°	13759.8	9885.9	1238.6	907.3	850.8	1120.0	1400.4	1338.3	1238.6	1336.4	1291.3
70°	9456.8	6290.7	1037.2	880.9	813.2	1071.0	1430.6	1332.7	1204.7	1246.1	1185.9
71°	7612.1	5020.1	984.5	871.5	798.1	1042.8	1434.3	1325.2	1187.7	1214.1	1159.5
72.5°	5014.5	3092.7	920.5	850.8	775.5	993.9	1424.9	1308.2	1165.2	1167.0	1131.3
75°	1978.3	1281.9	828.2	803.8	711.5	914.8	1383.5	1272.4	1121.9	1084.2	1069.2
77.5°	999.5	837.6	728.5	737.9	636.2	833.9	1325.2	1214.1	1061.6	1010.8	999.5
80°	730.3	636.2	623.0	640.0	551.5	754.8	1251.7	1135.0	984.5	1037.2	1014.6
82.5°	444.2	387.8	487.5	528.9	461.2	673.9	1165.2	1042.8	886.6	816.9	790.6
85°	210.8	227.8	352.0	389.6	340.7	538.3	1065.4	941.2	773.6	668.2	679.5
87.5°	103.5	126.1	201.4	233.4	224.0	395.3	803.8	730.3	609.9	502.6	491.3
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)