

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: P196380

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196380
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29419 lumens
Efficiency: N/A
Efficacy: 118.1 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 - G5

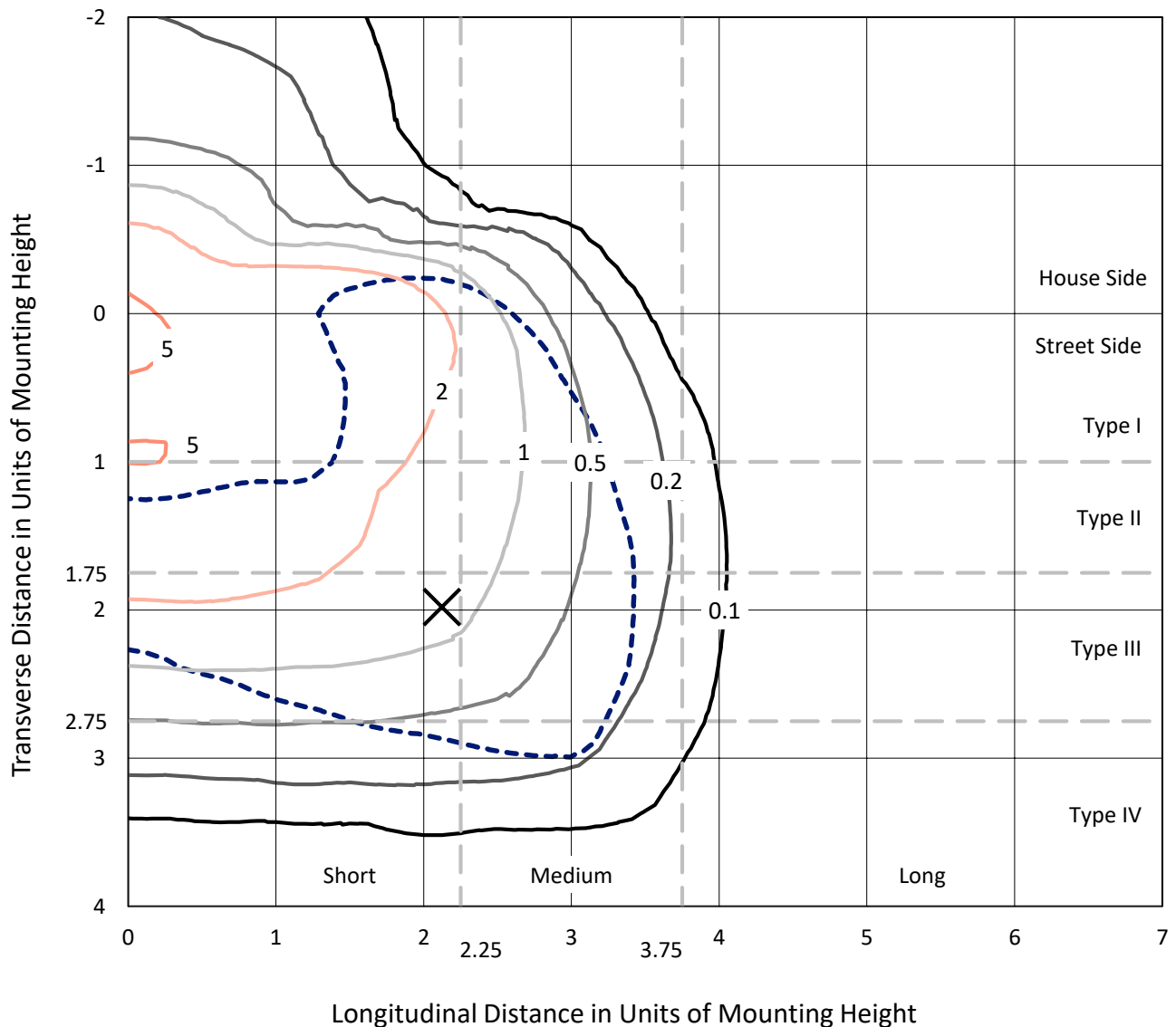
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

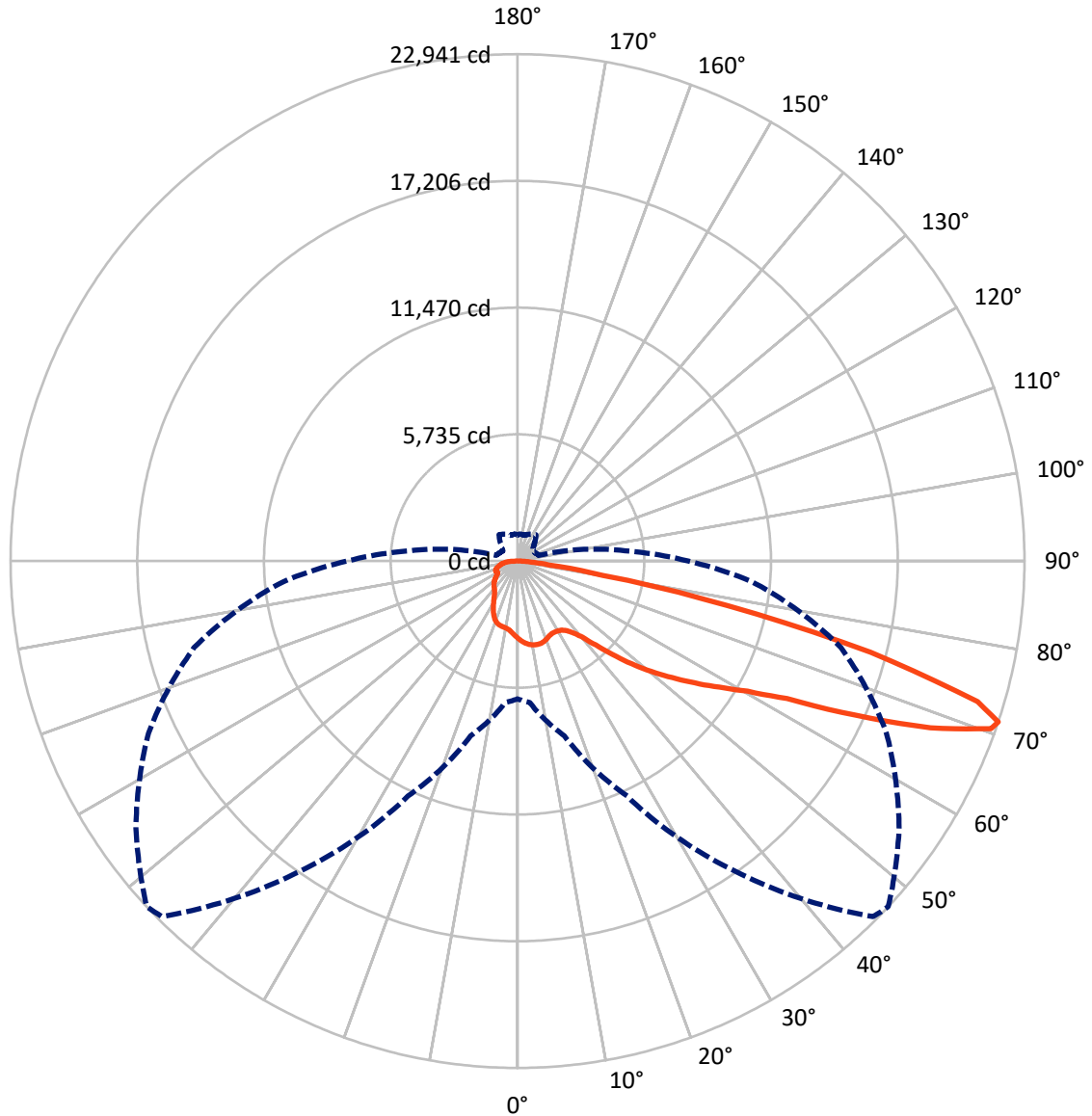
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 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	6304.9	0.0	6304.9
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	23114.1	0.0	23114.1
	% Fixture	78.6	0.0	78.6
Total	Lumens	29419.0	0.0	29419.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.0	1.1
10°-20°	977.2	3.3
20°-30°	1452.1	4.9
30°-40°	2085.0	7.1
40°-50°	3696.8	12.6
50°-60°	6325.8	21.5
60°-70°	8980.4	30.5
70°-80°	4918.5	16.7
80°-90°	649.3	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°	29419.0	100.0
0°-180°	29419.0	100.0



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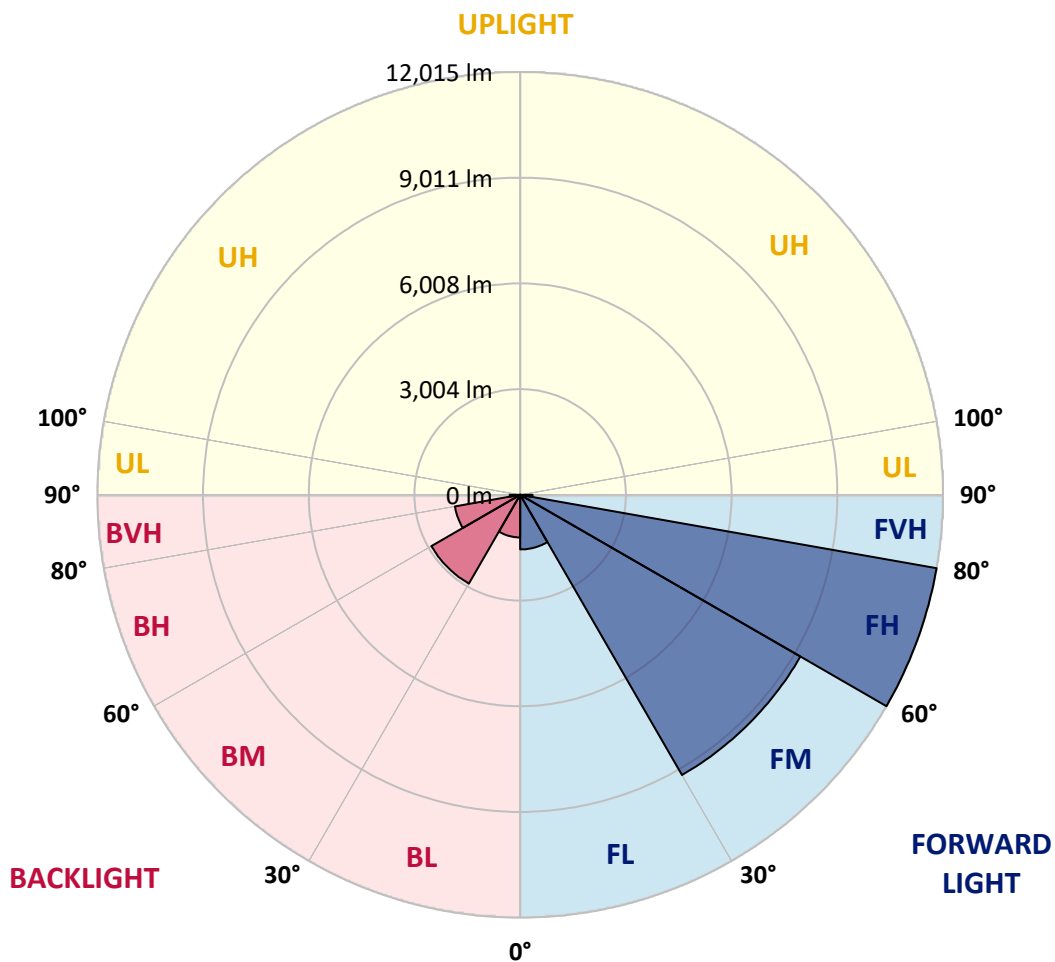
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1552.6	5.3			
FM	(30°-60°)	9194.3	31.3			
FH	(60°-80°)	12015.0	40.8			G5
FVH	(80°-90°)	352.2	1.2			G3/500
BL	(0°-30°)	1210.8	4.1	B3/2500		
BM	(30°-60°)	2913.2	9.9	B3/5000		
BH	(60°-80°)	1883.8	6.4	B3/2500		G3/2500
BVH	(80°-90°)	297.1	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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4
2.5°	3712.0	3704.3	3708.1	3694.8	3662.4	3628.1	3628.1	3591.8	3553.7	3515.6	3473.6
5°	3942.7	3931.2	3921.7	3879.7	3816.8	3746.3	3734.8	3662.4	3584.2	3506.1	3429.7
7.5°	4135.2	4123.7	4095.2	4018.9	3927.4	3822.6	3809.2	3713.8	3610.9	3502.3	3395.5
10°	4272.5	4264.8	4209.5	4112.3	4005.6	3881.6	3858.8	3761.5	3639.5	3504.1	3368.8
12.5°	4348.7	4337.3	4270.5	4156.1	4030.3	3904.5	3881.6	3788.2	3649.1	3500.3	3342.1
15°	4318.2	4312.5	4249.5	4133.2	4007.4	3898.8	3879.7	3784.4	3643.3	3486.9	3317.3
17.5°	4188.6	4201.9	4152.4	4038.0	3935.0	3858.8	3837.8	3748.2	3614.7	3454.6	3279.2
20°	4009.4	4024.6	3999.8	3883.5	3824.4	3774.9	3763.4	3691.0	3567.0	3406.9	3233.4
22.5°	3818.7	3832.1	3833.9	3725.3	3706.3	3687.1	3677.6	3626.2	3525.1	3378.3	3203.0
25°	3687.1	3702.4	3706.3	3610.9	3622.4	3628.1	3626.2	3589.9	3517.5	3378.3	3206.7
27.5°	3652.9	3660.4	3656.6	3569.0	3589.9	3622.4	3624.2	3616.6	3548.0	3416.5	3260.1
30°	3771.0	3774.9	3727.2	3595.7	3616.6	3658.6	3660.4	3656.6	3612.9	3515.6	3380.2
32.5°	4282.0	4278.2	4114.2	3774.9	3702.4	3717.7	3723.3	3757.7	3761.5	3679.6	3553.7
35°	5059.8	5058.0	4867.3	4287.7	3946.4	3866.3	3874.0	3927.4	3975.1	3919.7	3847.3
37.5°	5915.8	5921.6	5805.2	5019.8	4472.6	4139.0	4131.4	4171.4	4257.2	4276.2	4285.8
40°	6865.3	6893.9	6888.1	5860.6	5210.4	4604.2	4527.9	4482.2	4648.1	4752.9	4888.3
42.5°	7950.1	7942.5	7946.3	6783.3	6053.1	5336.3	5195.2	4981.7	5174.2	5355.4	5652.7
45°	8882.4	8912.9	8935.8	7765.1	6996.9	6173.2	6030.2	5641.3	5814.8	6085.5	6539.3
47.5°	9820.3	9766.9	9808.9	8857.5	8047.3	7128.4	6943.5	6419.1	6581.3	6962.5	7652.7
50°	10912.7	10888.0	10697.3	10283.6	9317.0	8096.9	7854.7	7231.3	7467.7	7976.8	9027.2
52.5°	11892.7	11759.2	11610.6	11404.7	10565.8	9076.8	8769.9	8075.9	8510.5	9141.6	10733.5
55°	12251.2	12161.6	12340.8	12607.7	11887.0	10075.9	9732.7	9061.6	9686.9	10474.3	12741.1
57.5°	12632.4	12662.9	13067.1	13606.7	13137.7	11141.6	10769.8	10228.4	10977.6	11965.1	14985.0
60°	12823.1	12945.1	13751.5	14763.9	14327.3	12310.2	11953.7	11568.7	12409.4	13612.4	17223.2
62.5°	12855.5	13019.4	14161.4	15170.0	15965.0	14100.5	13688.6	13271.2	14197.6	15433.1	18843.8
65°	12260.7	12512.3	14125.2	15669.5	17457.8	17091.8	16830.5	16102.3	16592.3	17036.4	19120.3
67.5°	10512.5	10786.9	12727.8	15463.5	18655.0	20195.5	20145.9	19070.7	18441.6	17656.0	17070.8
70°	7715.6	7936.8	9801.3	13219.6	18132.6	22632.0	22719.7	20994.3	18958.1	16340.5	12693.5
71°	6240.0	6430.6	8188.4	11736.4	17114.6	22757.8	22940.8	21080.2	18420.6	15152.8	10626.8
72.5°	3883.5	3990.3	5437.3	8857.5	14737.2	21461.4	21770.2	19982.0	16727.6	12807.9	7511.6
75°	1466.1	1508.0	2017.1	3906.4	8796.6	16123.2	16496.9	15101.3	11751.7	7311.4	3143.8
77.5°	787.4	808.3	1001.0	1624.3	3525.1	9242.7	9723.1	8613.6	5637.5	2558.5	1284.9
80°	528.1	541.4	692.0	962.8	1620.6	3519.4	3919.7	3458.4	2110.4	1460.4	915.1
82.5°	341.3	348.9	470.9	633.0	1046.7	1237.4	1412.7	1475.6	1317.4	1046.7	552.9
85°	224.9	230.7	310.8	404.2	648.2	610.1	625.3	817.8	897.9	690.2	282.1
87.5°	129.6	133.5	186.8	207.8	291.6	228.7	247.9	388.9	533.8	449.9	162.0
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°	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4	3498.4
2.5°	3454.6	3439.4	3405.0	3384.0	3374.5	3370.7	3366.8	3374.5	3374.5	3370.7	3363.1
5°	3391.7	3363.1	3305.9	3265.9	3244.9	3239.2	3246.7	3256.3	3262.0	3262.0	3256.3
7.5°	3345.9	3303.9	3227.7	3172.4	3139.9	3130.4	3151.4	3185.8	3208.6	3220.0	3222.0
10°	3307.8	3250.5	3166.6	3109.5	3082.8	3079.0	3105.7	3149.6	3197.2	3218.2	3222.0
12.5°	3273.4	3208.6	3117.1	3063.7	3044.7	3054.2	3090.4	3130.4	3185.8	3216.3	3218.2
15°	3241.0	3174.3	3077.0	3021.8	3018.0	3033.3	3067.5	3100.0	3141.9	3180.0	3180.0
17.5°	3203.0	3130.4	3029.5	2977.9	2977.9	2991.3	3014.1	3031.3	3058.0	3094.2	3092.4
20°	3157.1	3082.8	2979.9	2926.5	2915.0	2907.4	2907.4	2911.2	2934.1	2966.5	2972.2
22.5°	3122.9	3046.6	2937.9	2873.1	2821.6	2772.0	2751.0	2743.5	2764.4	2794.9	2802.6
25°	3122.9	3046.6	2924.5	2815.9	2690.1	2594.7	2554.7	2543.3	2564.2	2592.9	2604.2
27.5°	3174.3	3098.0	2955.1	2764.4	2533.7	2381.2	2333.6	2324.0	2343.1	2366.0	2377.4
30°	3294.4	3220.0	3042.8	2705.3	2360.3	2160.1	2106.7	2097.2	2106.7	2116.2	2129.6
32.5°	3494.6	3431.7	3185.8	2651.9	2184.8	1959.9	1895.0	1879.8	1883.7	1885.5	1897.0
35°	3820.6	3792.0	3376.4	2589.0	2019.0	1795.9	1729.2	1698.7	1696.8	1706.3	1719.7
37.5°	4320.1	4337.3	3622.4	2497.5	1881.7	1679.6	1612.9	1582.4	1567.2	1586.2	1601.4
40°	5025.6	5065.6	3906.4	2373.6	1769.2	1610.9	1540.5	1511.8	1490.8	1485.1	1492.8
42.5°	5942.5	5931.1	4196.1	2215.3	1647.3	1565.2	1490.8	1460.4	1426.1	1382.2	1372.7
45°	7029.2	6865.3	4438.3	2020.8	1508.0	1521.3	1445.1	1403.2	1349.8	1284.9	1277.4
47.5°	8312.3	7860.5	4587.0	1813.1	1378.4	1464.1	1393.7	1328.8	1250.7	1208.7	1203.0
50°	9858.5	9025.4	4691.9	1601.4	1262.1	1391.7	1321.2	1235.4	1159.1	1147.8	1145.8
52.5°	11688.7	10399.9	4821.5	1410.9	1170.6	1298.3	1248.7	1161.0	1100.1	1105.8	1105.8
55°	13635.2	11822.1	4825.4	1260.2	1090.5	1189.7	1195.4	1124.8	1077.2	1096.2	1101.9
57.5°	15410.2	13065.2	4445.9	1153.5	1014.3	1103.9	1178.2	1138.1	1101.9	1168.7	1174.4
60°	16958.3	14022.3	3629.9	1065.7	951.3	1071.4	1216.4	1220.2	1212.5	1393.7	1407.0
62.5°	17524.5	14031.8	2577.5	991.3	917.0	1090.5	1296.4	1302.1	1302.1	1469.9	1494.7
65°	16731.4	12863.1	1715.8	947.6	894.2	1132.4	1361.2	1336.5	1277.4	1393.7	1367.0
67.5°	13936.5	10012.9	1254.4	918.9	861.7	1134.4	1418.4	1355.5	1254.4	1353.6	1307.8
70°	9578.2	6371.6	1050.5	892.2	823.6	1084.8	1448.9	1349.8	1220.2	1262.1	1201.0
71°	7709.9	5084.6	997.1	882.7	808.3	1056.2	1452.8	1342.2	1203.0	1229.7	1174.4
72.5°	5079.0	3132.4	932.3	861.7	785.5	1006.6	1443.2	1325.0	1180.1	1182.0	1145.8
75°	2003.8	1298.3	838.8	814.1	720.7	926.6	1401.2	1288.8	1136.3	1098.1	1082.9
77.5°	1012.3	848.4	737.9	747.4	644.4	844.5	1342.2	1229.7	1075.2	1023.8	1012.3
80°	739.7	644.4	631.1	648.2	558.6	764.6	1267.8	1149.6	997.1	1050.5	1027.6
82.5°	449.9	392.7	493.8	535.7	467.1	682.5	1180.1	1056.2	897.9	827.5	800.8
85°	213.5	230.7	356.5	394.7	345.0	545.2	1079.1	953.3	783.6	676.8	688.2
87.5°	104.9	127.8	204.0	236.4	226.9	400.4	814.1	739.7	617.7	509.0	497.6
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)