

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: P196379

Luminaire Tested: **NAV-AF-05-D-UNV-T4W-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196379
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-05-D-UNV-T4W-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 24559 lumens
Efficiency: N/A
Efficacy: 116.9 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

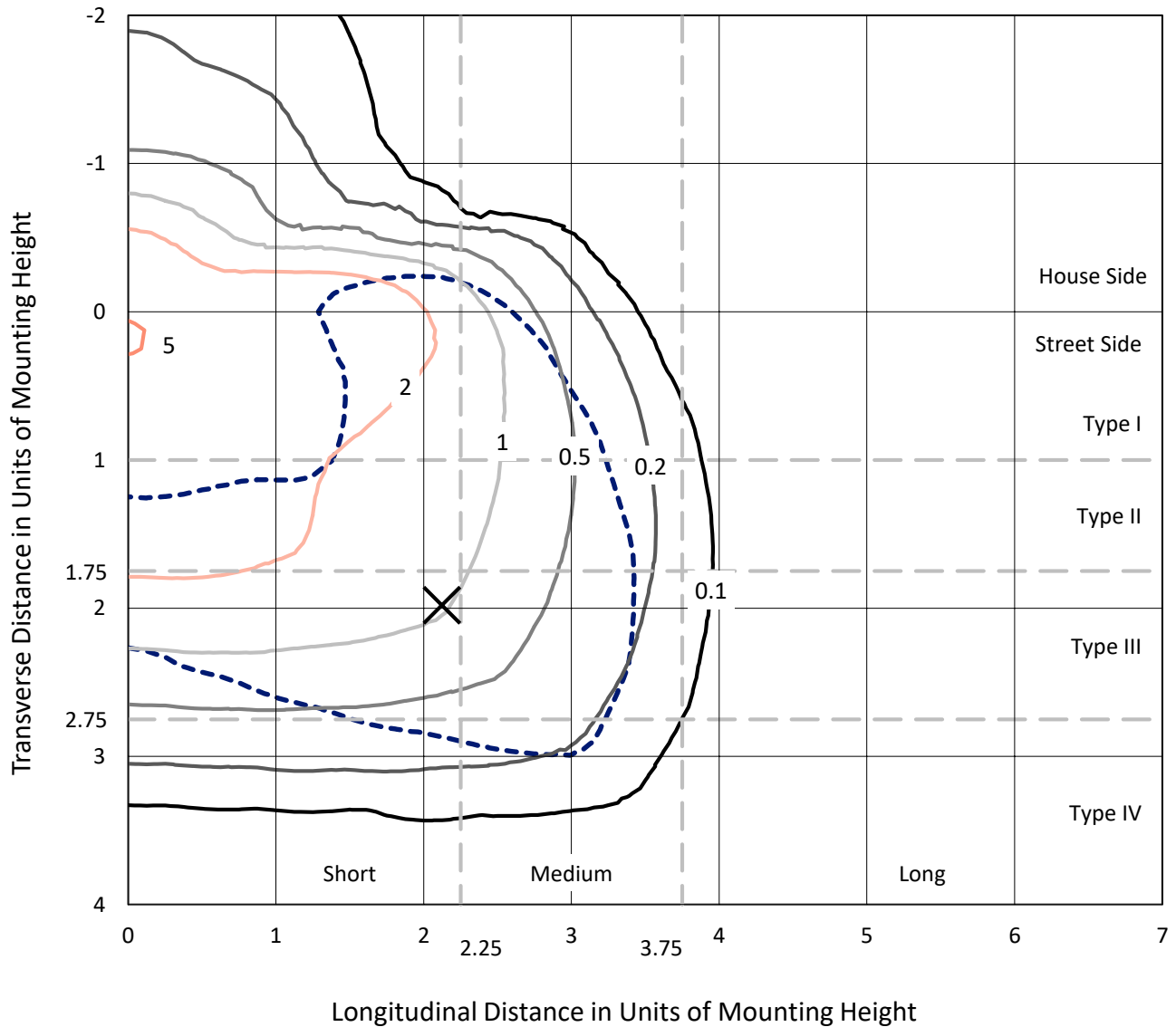
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196379
 CATALOG NUMBER: NAV-AF-05-D-UNV-T4W-800

Iso-Footcandle Lines of Horizontal Illumination

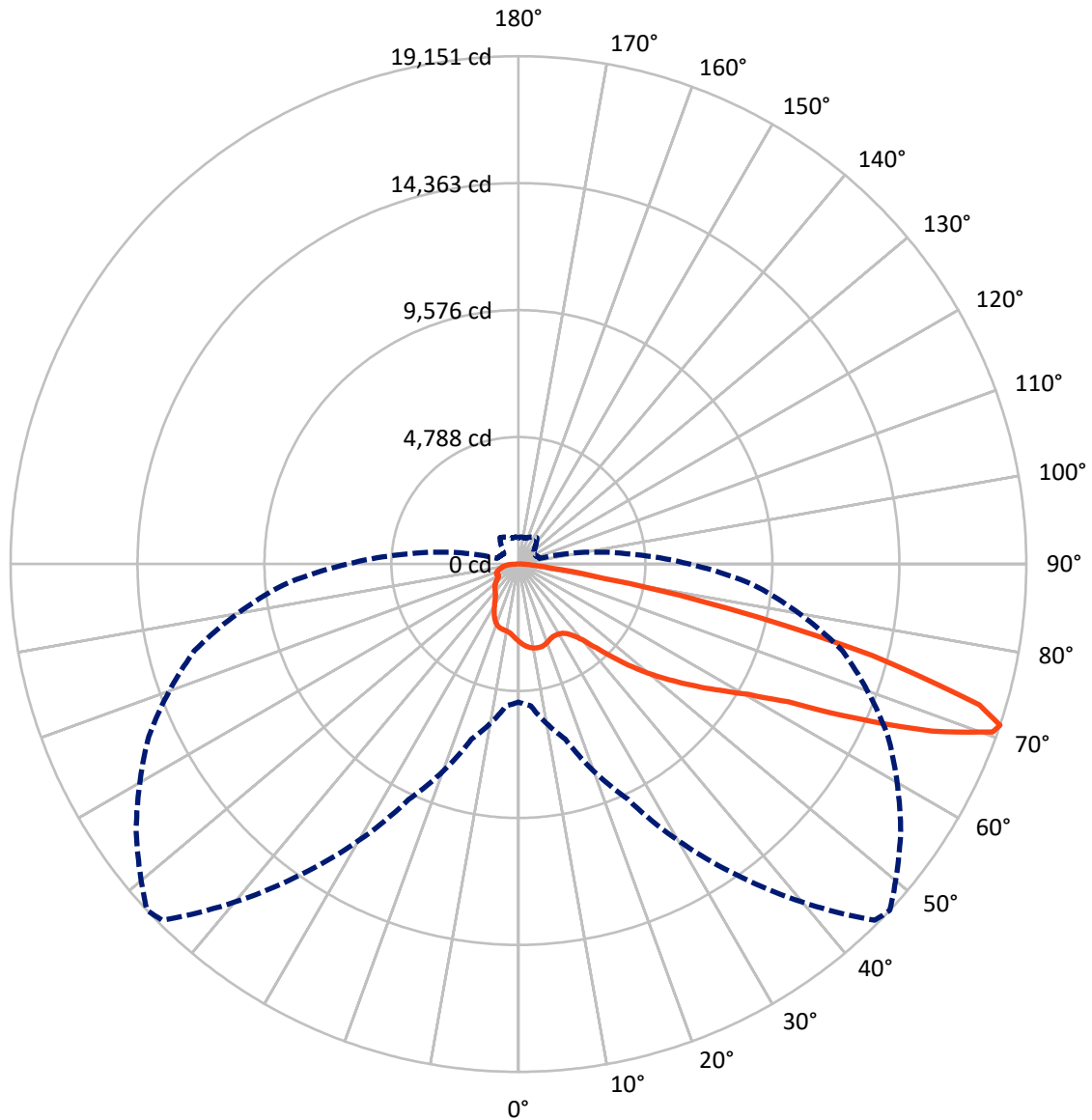
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P196379
CATALOG NUMBER: NAV-AF-05-D-UNV-T4W-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196379

CATALOG NUMBER: NAV-AF-05-D-UNV-T4W-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5263.3	0.0	5263.3
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	19295.7	0.0	19295.7
	% Fixture	78.6	0.0	78.6
Total	Lumens	24559.0	0.0	24559.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.8	1.1
10°-20°	815.8	3.3
20°-30°	1212.2	4.9
30°-40°	1740.6	7.1
40°-50°	3086.1	12.6
50°-60°	5280.7	21.5
60°-70°	7496.8	30.5
70°-80°	4105.9	16.7
80°-90°	542.0	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°	24559.0	100.0
0°-180°	24559.0	100.0



REPORT NUMBER: P196379

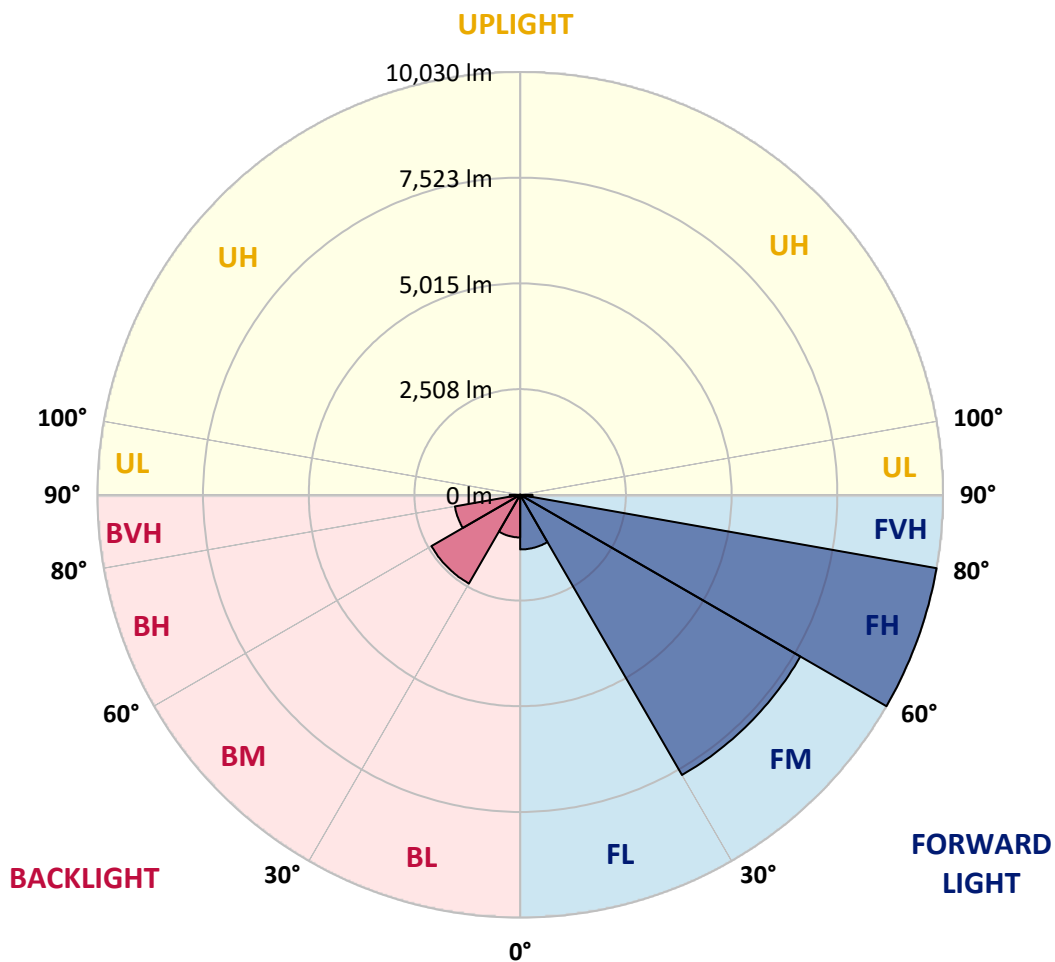
CATALOG NUMBER: NAV-AF-05-D-UNV-T4W-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1296.1	5.3			
FM	(30°-60°)	7675.4	31.3			
FH	(60°-80°)	10030.1	40.8			G4/12000
FVH	(80°-90°)	294.0	1.2			G3/500
BL	(0°-30°)	1010.7	4.1	B3/2500		
BM	(30°-60°)	2432.0	9.9	B2/2500		
BH	(60°-80°)	1572.6	6.4	B3/2500		G3/2500
BVH	(80°-90°)	248.0	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





REPORT NUMBER: P196379

CATALOG NUMBER: NAV-AF-05-D-UNV-T4W-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5
2.5°	3098.7	3092.4	3095.6	3084.4	3057.4	3028.7	3028.7	2998.5	2966.7	2934.8	2899.8
5°	3291.3	3281.7	3273.7	3238.8	3186.3	3127.4	3117.9	3057.4	2992.1	2926.9	2863.1
7.5°	3452.0	3442.5	3418.6	3355.0	3278.6	3191.0	3179.9	3100.4	3014.3	2923.7	2834.5
10°	3566.6	3560.3	3514.1	3432.9	3343.8	3240.4	3221.3	3140.2	3038.3	2925.2	2812.3
12.5°	3630.4	3620.7	3565.1	3469.5	3364.5	3259.4	3240.4	3162.4	3046.2	2922.1	2790.0
15°	3604.9	3600.1	3547.6	3450.4	3345.5	3254.7	3238.8	3159.2	3041.4	2910.9	2769.2
17.5°	3496.7	3507.8	3466.4	3370.9	3284.9	3221.3	3203.8	3129.0	3017.6	2883.9	2737.4
20°	3347.0	3359.8	3339.0	3241.9	3192.6	3151.2	3141.7	3081.2	2977.8	2844.1	2699.3
22.5°	3187.8	3199.0	3200.6	3109.9	3093.9	3078.1	3070.1	3027.1	2942.7	2820.2	2673.8
25°	3078.1	3090.7	3093.9	3014.3	3023.9	3028.7	3027.1	2996.8	2936.4	2820.2	2677.0
27.5°	3049.4	3055.8	3052.6	2979.3	2996.8	3023.9	3025.5	3019.1	2961.9	2852.1	2721.6
30°	3148.0	3151.2	3111.5	3001.6	3019.1	3054.1	3055.8	3052.6	3016.0	2934.8	2821.8
32.5°	3574.6	3571.4	3434.6	3151.2	3090.7	3103.5	3108.2	3136.9	3140.2	3071.7	2966.7
35°	4224.0	4222.3	4063.2	3579.4	3294.5	3227.6	3234.1	3278.6	3318.4	3272.2	3211.8
37.5°	4938.5	4943.3	4846.2	4190.5	3733.8	3455.2	3448.9	3482.3	3553.9	3569.8	3577.8
40°	5731.2	5755.0	5750.2	4892.4	4349.7	3843.5	3779.9	3741.7	3880.2	3967.7	4080.8
42.5°	6636.7	6630.4	6633.5	5662.7	5053.2	4454.7	4336.9	4158.7	4319.4	4470.6	4718.9
45°	7415.0	7440.4	7459.6	6482.3	5840.9	5153.4	5034.0	4709.4	4854.2	5080.2	5459.0
47.5°	8198.0	8153.4	8188.5	7394.3	6717.9	5950.8	5796.3	5358.7	5494.0	5812.3	6388.4
50°	9110.0	9089.3	8930.2	8584.8	7777.9	6759.2	6557.1	6036.7	6234.1	6659.0	7536.0
52.5°	9928.0	9816.6	9692.5	9520.6	8820.3	7577.3	7321.1	6741.8	7104.6	7631.4	8960.3
55°	10227.3	10152.5	10302.0	10524.8	9923.2	8411.3	8124.8	7564.6	8086.6	8743.9	10636.2
57.5°	10545.5	10571.0	10908.4	11358.8	10967.3	9301.0	8990.6	8538.6	9164.1	9988.5	12509.5
60°	10704.7	10806.6	11479.8	12324.9	11960.4	10276.6	9979.0	9657.5	10359.3	11363.6	14378.0
62.5°	10731.8	10868.6	11821.9	12663.9	13327.5	11771.0	11427.3	11078.8	11852.2	12883.6	15730.8
65°	10235.2	10445.2	11791.8	13080.9	14573.8	14268.1	14050.1	13442.2	13851.2	14222.0	15961.5
67.5°	8775.8	9004.9	10625.1	12909.0	15573.2	16859.2	16817.8	15920.2	15395.0	14739.3	14250.6
70°	6441.0	6625.6	8182.1	11035.7	15137.1	18893.2	18966.4	17526.0	15826.3	13641.0	10596.4
71°	5209.1	5368.2	6835.7	9797.5	14287.2	18998.2	19151.0	17597.6	15377.5	12649.6	8871.2
72.5°	3241.9	3331.1	4539.0	7394.3	12302.6	17916.0	18173.8	16681.0	13964.2	10692.0	6270.7
75°	1223.9	1258.9	1683.9	3261.1	7343.4	13459.7	13771.6	12606.6	9810.3	6103.5	2624.5
77.5°	657.3	674.8	835.5	1356.0	2942.7	7715.8	8116.8	7190.6	4706.2	2135.8	1072.7
80°	440.9	452.0	577.8	803.7	1352.9	2938.0	3272.2	2887.1	1761.8	1219.2	763.9
82.5°	284.9	291.2	393.1	528.4	873.8	1032.9	1179.4	1231.8	1099.8	873.8	461.6
85°	187.8	192.6	259.4	337.4	541.1	509.3	522.0	682.8	749.6	576.1	235.6
87.5°	108.2	111.4	156.0	173.5	243.5	191.0	206.9	324.7	445.6	375.6	135.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196379
 CATALOG NUMBER: NAV-AF-05-D-UNV-T4W-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5	2920.5
2.5°	2883.9	2871.1	2842.5	2825.0	2817.0	2813.8	2810.7	2817.0	2817.0	2813.8	2807.5
5°	2831.3	2807.5	2759.7	2726.3	2708.8	2704.1	2710.4	2718.4	2723.1	2723.1	2718.4
7.5°	2793.2	2758.2	2694.5	2648.3	2621.3	2613.3	2630.8	2659.5	2678.6	2688.1	2689.7
10°	2761.4	2713.6	2643.5	2595.8	2573.5	2570.4	2592.7	2629.2	2669.0	2686.5	2689.7
12.5°	2732.7	2678.6	2602.2	2557.6	2541.7	2549.6	2579.9	2613.3	2659.5	2684.9	2686.5
15°	2705.6	2650.0	2568.7	2522.6	2519.4	2532.1	2560.8	2587.9	2622.8	2654.7	2654.7
17.5°	2673.8	2613.3	2528.9	2486.0	2486.0	2497.1	2516.3	2530.6	2552.9	2583.1	2581.5
20°	2635.6	2573.5	2487.6	2443.0	2433.5	2427.1	2427.1	2430.3	2449.4	2476.5	2481.2
22.5°	2607.0	2543.3	2452.5	2398.4	2355.4	2314.1	2296.6	2290.2	2307.8	2333.2	2339.6
25°	2607.0	2543.3	2441.4	2350.7	2245.7	2166.1	2132.6	2123.1	2140.6	2164.5	2174.1
27.5°	2650.0	2586.2	2466.8	2307.8	2115.2	1987.8	1948.0	1940.1	1956.0	1975.1	1984.6
30°	2750.2	2688.1	2540.1	2258.4	1970.3	1803.3	1758.7	1750.7	1758.7	1766.6	1777.8
32.5°	2917.3	2864.8	2659.5	2213.9	1823.9	1636.1	1582.0	1569.3	1572.5	1574.0	1583.6
35°	3189.5	3165.6	2818.6	2161.3	1685.4	1499.2	1443.5	1418.0	1416.5	1424.5	1435.6
37.5°	3606.4	3620.7	3023.9	2084.9	1570.8	1402.2	1346.4	1320.9	1308.3	1324.2	1336.9
40°	4195.3	4228.7	3261.1	1981.5	1476.9	1344.9	1286.0	1262.1	1244.6	1239.8	1246.2
42.5°	4960.8	4951.3	3503.0	1849.4	1375.1	1306.6	1244.6	1219.2	1190.5	1153.9	1145.9
45°	5868.1	5731.2	3705.1	1687.1	1258.9	1270.1	1206.4	1171.4	1126.8	1072.7	1066.3
47.5°	6939.1	6561.9	3829.2	1513.6	1150.7	1222.3	1163.4	1109.3	1044.0	1009.0	1004.2
50°	8229.8	7534.3	3916.8	1336.9	1053.6	1161.9	1102.9	1031.3	967.6	958.1	956.6
52.5°	9757.7	8681.9	4025.0	1177.7	977.2	1083.8	1042.5	969.2	918.3	923.1	923.1
55°	11382.7	9869.1	4028.2	1052.0	910.3	993.1	997.9	939.0	899.2	915.1	919.9
57.5°	12864.4	10906.8	3711.5	962.9	846.7	921.5	983.6	950.1	919.9	975.6	980.4
60°	14156.7	11705.8	3030.3	889.7	794.2	894.5	1015.4	1018.6	1012.2	1163.4	1174.6
62.5°	14629.4	11713.7	2151.8	827.6	765.6	910.3	1082.3	1087.0	1087.0	1227.0	1247.8
65°	13967.4	10738.1	1432.3	790.9	746.4	945.4	1136.4	1115.6	1066.3	1163.4	1141.1
67.5°	11634.1	8358.7	1047.2	767.1	719.3	946.9	1184.1	1131.6	1047.2	1130.0	1091.8
70°	7995.9	5318.9	877.0	744.8	687.5	905.6	1209.5	1126.8	1018.6	1053.6	1002.7
71°	6436.2	4244.6	832.4	736.9	674.8	881.7	1212.7	1120.4	1004.2	1026.5	980.4
72.5°	4239.8	2614.9	778.3	719.3	655.7	840.4	1204.8	1106.1	985.2	986.7	956.6
75°	1672.7	1083.8	700.3	679.5	601.6	773.5	1169.7	1075.8	948.6	916.8	904.0
77.5°	845.1	708.2	615.9	623.9	538.0	705.0	1120.4	1026.5	897.6	854.7	845.1
80°	617.6	538.0	526.8	541.1	466.4	638.2	1058.3	959.7	832.4	877.0	857.8
82.5°	375.6	327.9	412.2	447.2	389.9	569.8	985.2	881.7	749.6	690.7	668.4
85°	178.3	192.6	297.6	329.5	288.1	455.2	900.8	795.8	654.1	565.0	574.6
87.5°	87.6	106.6	170.3	197.3	189.3	334.2	679.5	617.6	515.7	424.9	415.4
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)