

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: P197340

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197340
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 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: 23467 lumens
Efficiency: N/A
Efficacy: 94.2 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): 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

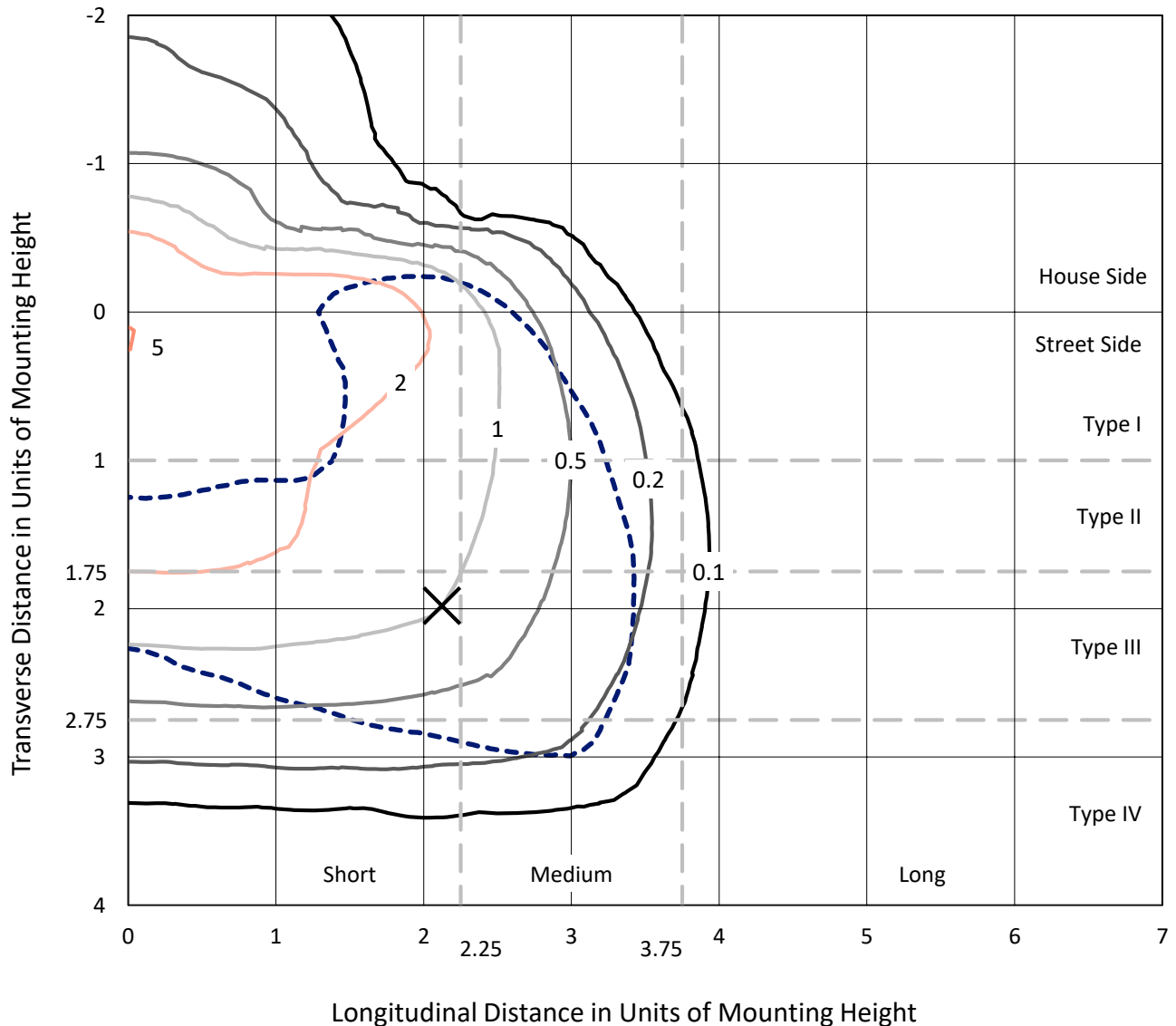


REPORT NUMBER: P197340

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-8030-800

Iso-Footcandle Lines of Horizontal Illumination

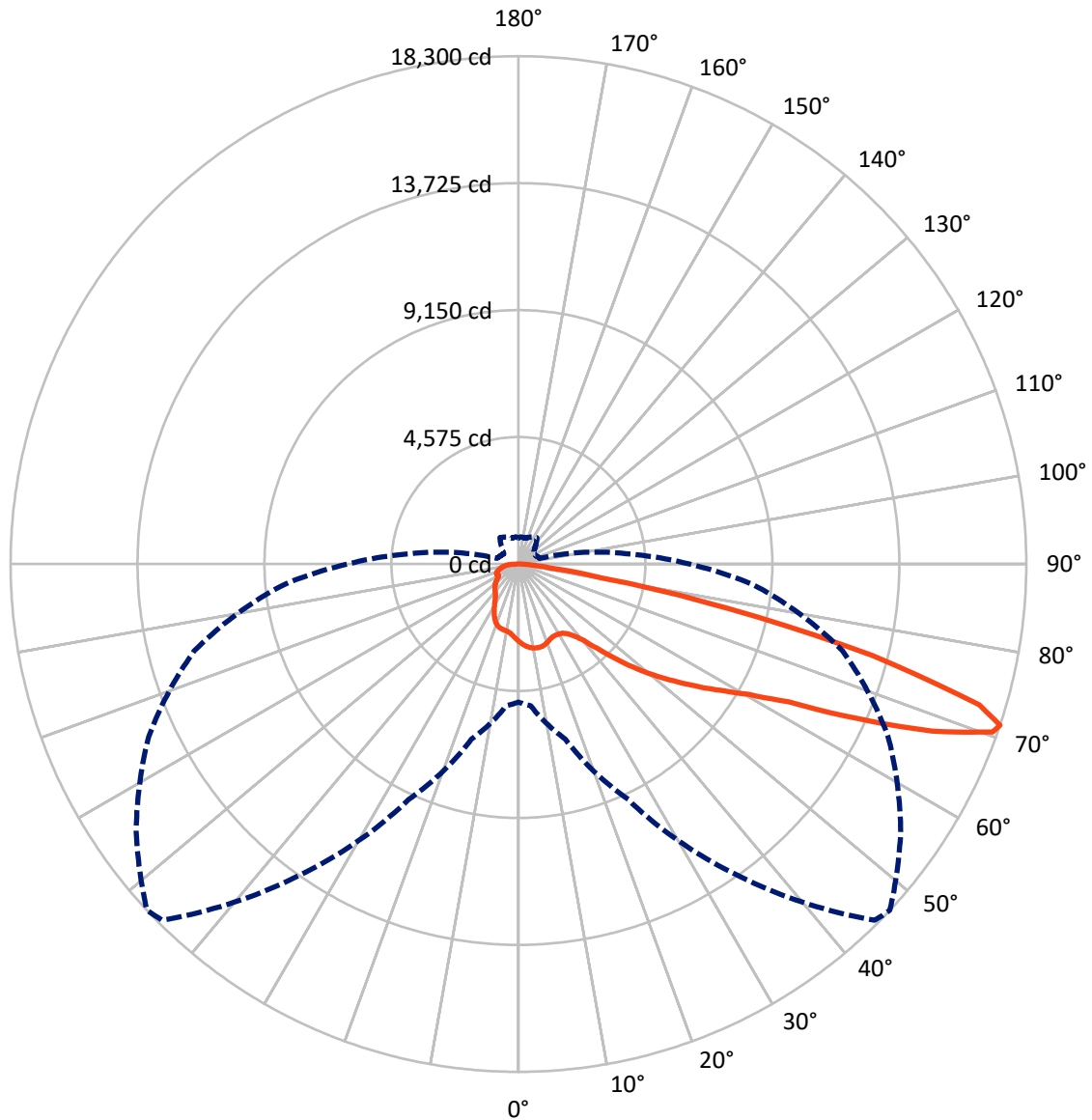
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P197340
CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-8030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197340

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5029.3	0.0	5029.3
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	18437.7	0.0	18437.7
	% Fixture	78.6	0.0	78.6
Total	Lumens	23467.0	0.0	23467.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.4	1.1
10°-20°	779.5	3.3
20°-30°	1158.3	4.9
30°-40°	1663.2	7.1
40°-50°	2948.9	12.6
50°-60°	5045.9	21.5
60°-70°	7163.5	30.5
70°-80°	3923.4	16.7
80°-90°	517.9	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°	23467.0	100.0
0°-180°	23467.0	100.0



REPORT NUMBER: P197340

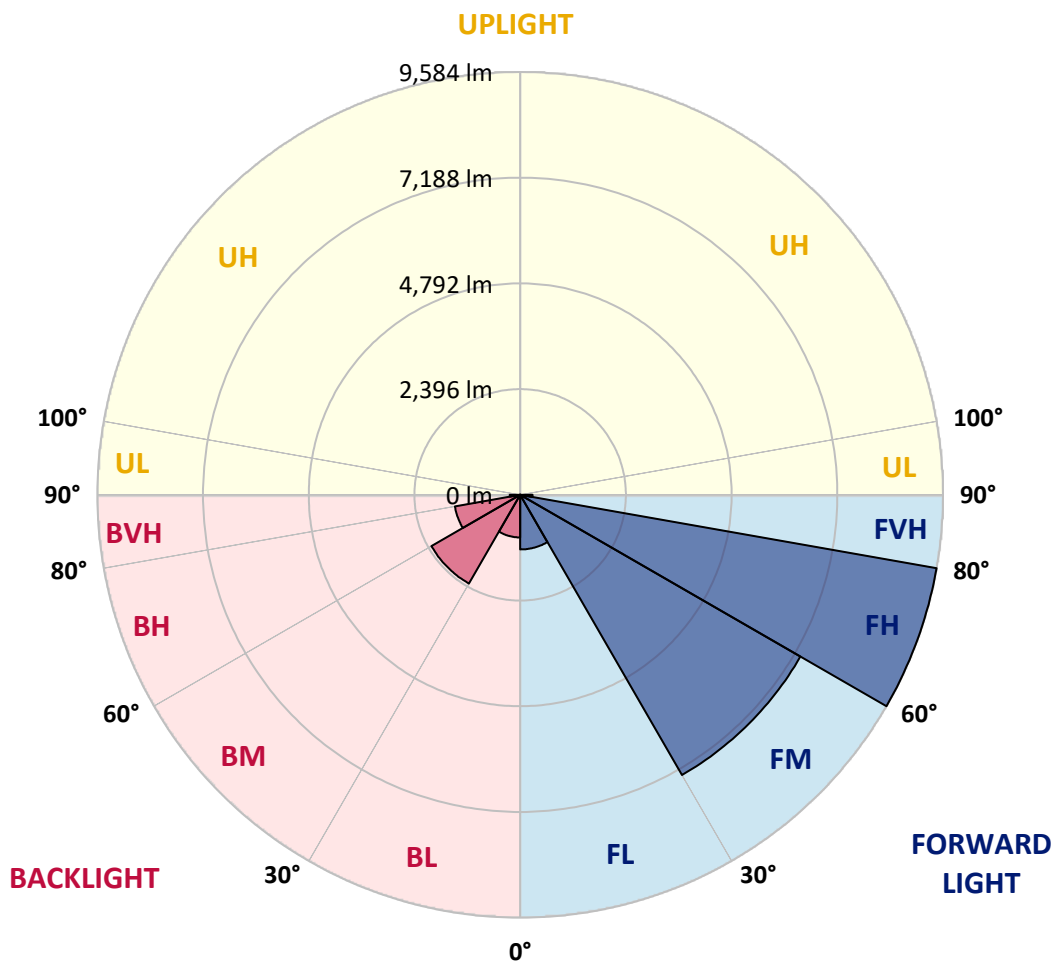
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1238.5	5.3			
FM	(30°-60°)	7334.1	31.3			
FH	(60°-80°)	9584.2	40.8			G4/12000
FVH	(80°-90°)	280.9	1.2			G3/500
BL	(0°-30°)	965.8	4.1	B2/1000		
BM	(30°-60°)	2323.8	9.9	B2/2500		
BH	(60°-80°)	1502.7	6.4	B3/2500		G3/2500
BVH	(80°-90°)	237.0	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: P197340

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6
2.5°	2960.9	2954.9	2957.9	2947.3	2921.4	2894.0	2894.0	2865.1	2834.7	2804.3	2770.8
5°	3145.0	3135.8	3128.2	3094.8	3044.6	2988.3	2979.2	2921.4	2859.1	2796.7	2735.9
7.5°	3298.6	3289.4	3266.6	3205.8	3132.8	3049.2	3038.5	2962.5	2880.3	2793.7	2708.5
10°	3408.1	3402.0	3357.9	3280.3	3195.1	3096.3	3078.0	3000.5	2903.2	2795.2	2687.2
12.5°	3468.9	3459.8	3406.5	3315.3	3214.9	3114.5	3096.3	3021.8	2910.8	2792.1	2665.9
15°	3444.6	3440.0	3389.8	3297.0	3196.7	3110.0	3094.8	3018.7	2906.2	2781.5	2646.1
17.5°	3341.1	3351.8	3312.2	3221.0	3138.9	3078.0	3061.3	2989.8	2883.4	2755.6	2615.7
20°	3198.2	3210.4	3190.6	3097.8	3050.7	3011.1	3002.0	2944.2	2845.4	2717.6	2579.2
22.5°	3046.1	3056.8	3058.3	2971.6	2956.4	2941.2	2933.6	2892.5	2811.9	2694.8	2554.9
25°	2941.2	2953.3	2956.4	2880.3	2889.5	2894.0	2892.5	2863.6	2805.8	2694.8	2557.9
27.5°	2913.8	2919.9	2916.8	2846.9	2863.6	2889.5	2891.0	2884.9	2830.2	2725.2	2600.5
30°	3008.1	3011.1	2973.1	2868.2	2884.9	2918.4	2919.9	2916.8	2881.9	2804.3	2696.3
32.5°	3415.7	3412.6	3281.8	3011.1	2953.3	2965.5	2970.1	2997.4	3000.5	2935.1	2834.7
35°	4036.1	4034.6	3882.5	3420.2	3148.0	3084.1	3090.2	3132.8	3170.8	3126.7	3068.9
37.5°	4719.0	4723.5	4630.8	4004.2	3567.7	3301.6	3295.5	3327.5	3395.9	3411.1	3418.7
40°	5476.3	5499.1	5494.6	4674.9	4156.3	3672.7	3611.8	3575.3	3707.6	3791.3	3899.3
42.5°	6341.6	6335.5	6338.6	5410.9	4828.5	4256.6	4144.1	3973.8	4127.4	4271.9	4509.1
45°	7085.3	7109.6	7127.9	6194.1	5581.2	4924.3	4810.2	4500.0	4638.4	4854.3	5216.3
47.5°	7833.5	7790.9	7824.4	7065.5	6419.2	5686.2	5538.7	5120.4	5249.7	5553.9	6104.4
50°	8704.9	8685.1	8533.1	8203.1	7432.0	6458.7	6265.6	5768.3	5956.9	6362.9	7200.9
52.5°	9486.6	9380.1	9261.5	9097.3	8428.1	7240.4	6995.6	6442.0	6788.7	7292.1	8562.0
55°	9772.5	9701.0	9844.0	10056.9	9482.0	8037.3	7763.5	7228.2	7727.1	8355.1	10163.3
57.5°	10076.6	10101.0	10423.4	10853.8	10479.7	8887.4	8590.8	8158.9	8756.6	9544.4	11953.3
60°	10228.7	10326.1	10969.3	11776.9	11428.6	9819.6	9535.2	9228.1	9898.7	10858.3	13738.7
62.5°	10254.6	10385.4	11296.3	12100.8	12735.0	11247.6	10919.2	10586.1	11325.2	12310.7	15031.3
65°	9780.1	9980.8	11267.4	12499.2	13925.7	13633.7	13425.4	12844.5	13235.3	13589.6	15251.8
67.5°	8385.5	8604.5	10152.7	12335.0	14880.8	16109.6	16070.0	15212.3	14710.4	14083.9	13617.0
70°	6154.6	6331.0	7818.3	10545.0	14464.1	18053.1	18123.1	16746.8	15122.6	13034.5	10125.3
71°	4977.5	5129.6	6531.7	9361.9	13652.0	18153.5	18299.5	16815.2	14693.7	12087.1	8476.8
72.5°	3097.8	3183.0	4337.2	7065.5	11755.6	17119.3	17365.7	15939.2	13343.3	10216.6	5991.8
75°	1169.5	1202.9	1609.0	3116.1	7016.8	12861.2	13159.3	12046.0	9374.0	5832.2	2507.8
77.5°	628.1	644.8	798.4	1295.7	2811.9	7372.7	7755.9	6870.9	4496.9	2040.9	1025.0
80°	421.3	431.9	552.0	768.0	1292.7	2807.3	3126.7	2758.7	1683.5	1164.9	730.0
82.5°	272.2	278.3	375.6	504.9	834.9	987.0	1126.9	1177.1	1050.9	834.9	441.0
85°	179.5	184.0	247.9	322.4	517.1	486.6	498.8	652.4	716.3	550.5	225.1
87.5°	103.4	106.5	149.0	165.8	232.7	182.5	197.7	310.2	425.8	358.9	129.3
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: P197340

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-8030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6	2790.6
2.5°	2755.6	2743.5	2716.1	2699.4	2691.8	2688.7	2685.7	2691.8	2691.8	2688.7	2682.6
5°	2705.5	2682.6	2637.0	2605.1	2588.4	2583.8	2589.9	2597.5	2602.0	2602.0	2597.5
7.5°	2669.0	2635.5	2574.7	2530.6	2504.7	2497.1	2513.8	2541.2	2559.5	2568.6	2570.1
10°	2638.5	2592.9	2526.0	2480.4	2459.1	2456.0	2477.3	2512.3	2550.3	2567.1	2570.1
12.5°	2611.2	2559.5	2486.5	2443.9	2428.7	2436.3	2465.2	2497.1	2541.2	2565.5	2567.1
15°	2585.3	2532.1	2454.5	2410.4	2407.4	2419.6	2446.9	2472.8	2506.2	2536.7	2536.7
17.5°	2554.9	2497.1	2416.5	2375.4	2375.4	2386.1	2404.3	2418.0	2439.3	2468.2	2466.7
20°	2518.4	2459.1	2377.0	2334.4	2325.3	2319.2	2319.2	2322.2	2340.5	2366.3	2370.9
22.5°	2491.0	2430.2	2343.5	2291.8	2250.7	2211.2	2194.5	2188.4	2205.1	2229.5	2235.5
25°	2491.0	2430.2	2332.9	2246.2	2145.8	2069.8	2037.8	2028.7	2045.4	2068.3	2077.4
27.5°	2532.1	2471.3	2357.2	2205.1	2021.1	1899.4	1861.4	1853.8	1869.0	1887.3	1896.4
30°	2627.9	2568.6	2427.2	2158.0	1882.7	1723.0	1680.5	1672.9	1680.5	1688.1	1698.7
32.5°	2787.6	2737.4	2541.2	2115.4	1742.8	1563.4	1511.6	1499.5	1502.5	1504.0	1513.2
35°	3047.6	3024.8	2693.3	2065.2	1610.5	1432.6	1379.3	1355.0	1353.5	1361.1	1371.7
37.5°	3446.1	3459.8	2889.5	1992.2	1501.0	1339.8	1286.6	1262.2	1250.1	1265.3	1277.4
40°	4008.8	4040.7	3116.1	1893.4	1411.3	1285.1	1228.8	1206.0	1189.2	1184.7	1190.8
42.5°	4740.3	4731.1	3347.2	1767.1	1313.9	1248.6	1189.2	1164.9	1137.5	1102.6	1095.0
45°	5607.1	5476.3	3540.4	1612.0	1202.9	1213.6	1152.7	1119.3	1076.7	1025.0	1018.9
47.5°	6630.6	6270.1	3659.0	1446.3	1099.5	1168.0	1111.7	1060.0	997.6	964.2	959.6
50°	7863.9	7199.3	3742.6	1277.4	1006.8	1110.2	1053.9	985.5	924.6	915.5	914.0
52.5°	9323.9	8295.8	3846.0	1125.4	933.8	1035.6	996.1	926.2	877.5	882.0	882.0
55°	10876.6	9430.3	3849.1	1005.2	869.9	949.0	953.5	897.3	859.2	874.4	879.0
57.5°	12292.4	10421.9	3546.4	920.1	809.1	880.5	939.8	907.9	879.0	932.2	936.8
60°	13527.3	11185.3	2895.6	850.1	758.9	854.7	970.3	973.3	967.2	1111.7	1122.3
62.5°	13979.0	11192.9	2056.1	790.8	731.5	869.9	1034.1	1038.7	1038.7	1172.5	1192.3
65°	13346.3	10260.7	1368.7	755.8	713.2	903.3	1085.8	1066.1	1018.9	1111.7	1090.4
67.5°	11116.9	7987.1	1000.7	733.0	687.4	904.9	1131.5	1081.3	1000.7	1079.7	1043.3
70°	7640.4	5082.4	837.9	711.7	657.0	865.3	1155.8	1076.7	973.3	1006.8	958.1
71°	6150.0	4055.9	795.4	704.1	644.8	842.5	1158.8	1070.6	959.6	980.9	936.8
72.5°	4051.3	2498.6	743.7	687.4	626.6	803.0	1151.2	1056.9	941.4	942.9	914.0
75°	1598.3	1035.6	669.1	649.4	574.9	739.1	1117.8	1028.0	906.4	876.0	863.8
77.5°	807.5	676.7	588.5	596.1	514.0	673.7	1070.6	980.9	857.7	816.7	807.5
80°	590.1	514.0	503.4	517.1	445.6	609.8	1011.3	917.0	795.4	837.9	819.7
82.5°	358.9	313.3	393.9	427.3	372.6	544.4	941.4	842.5	716.3	660.0	638.7
85°	170.3	184.0	284.4	314.8	275.3	434.9	860.8	760.4	625.0	539.9	549.0
87.5°	83.6	101.9	162.7	188.6	181.0	319.4	649.4	590.1	492.7	406.0	396.9
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)