

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: P197316

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197316
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 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: 23937 lumens
Efficiency: N/A
Efficacy: 96.1 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

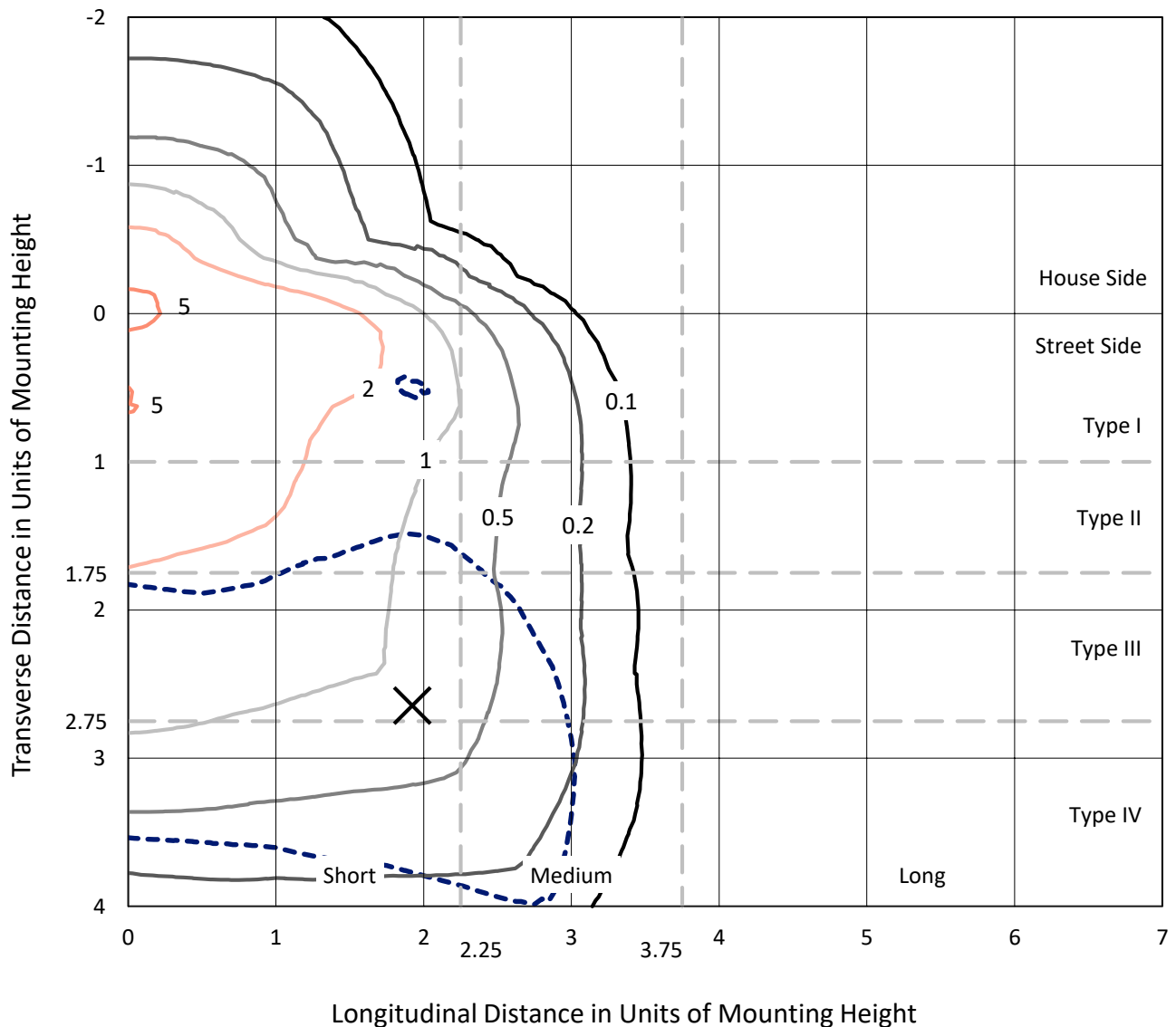
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197316
 CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-8030-800

Iso-Footcandle Lines of Horizontal Illumination

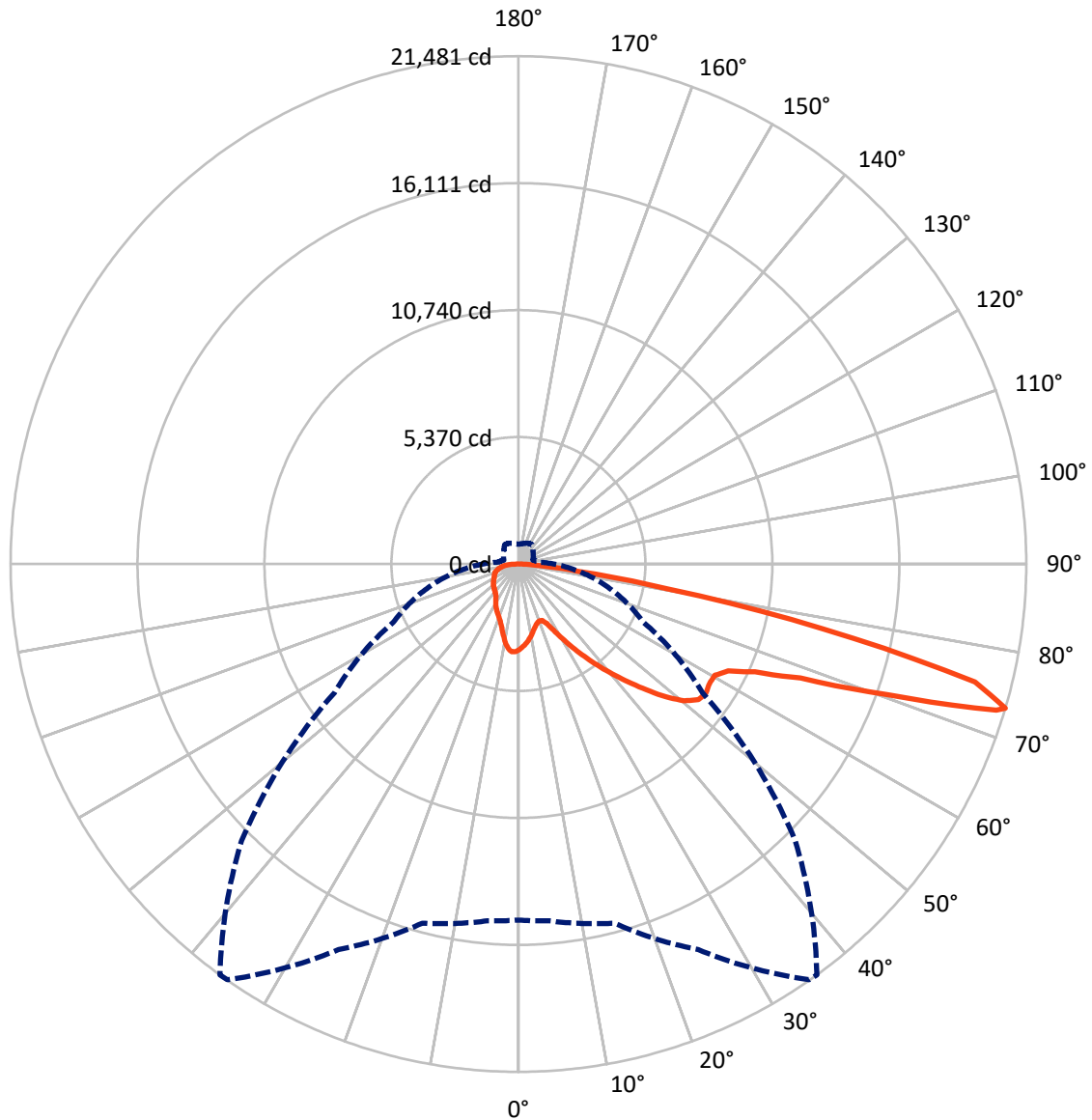
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197316
CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-8030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197316

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4615.8	0.0	4615.8
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	19321.2	0.0	19321.2
	% Fixture	80.7	0.0	80.7
Total	Lumens	23937.0	0.0	23937.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.3	1.4
10°-20°	827.1	3.5
20°-30°	1326.1	5.5
30°-40°	2193.4	9.2
40°-50°	3394.1	14.2
50°-60°	4543.7	19.0
60°-70°	5935.5	24.8
70°-80°	4848.2	20.3
80°-90°	539.7	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°	23937.0	100.0
0°-180°	23937.0	100.0



REPORT NUMBER: P197316

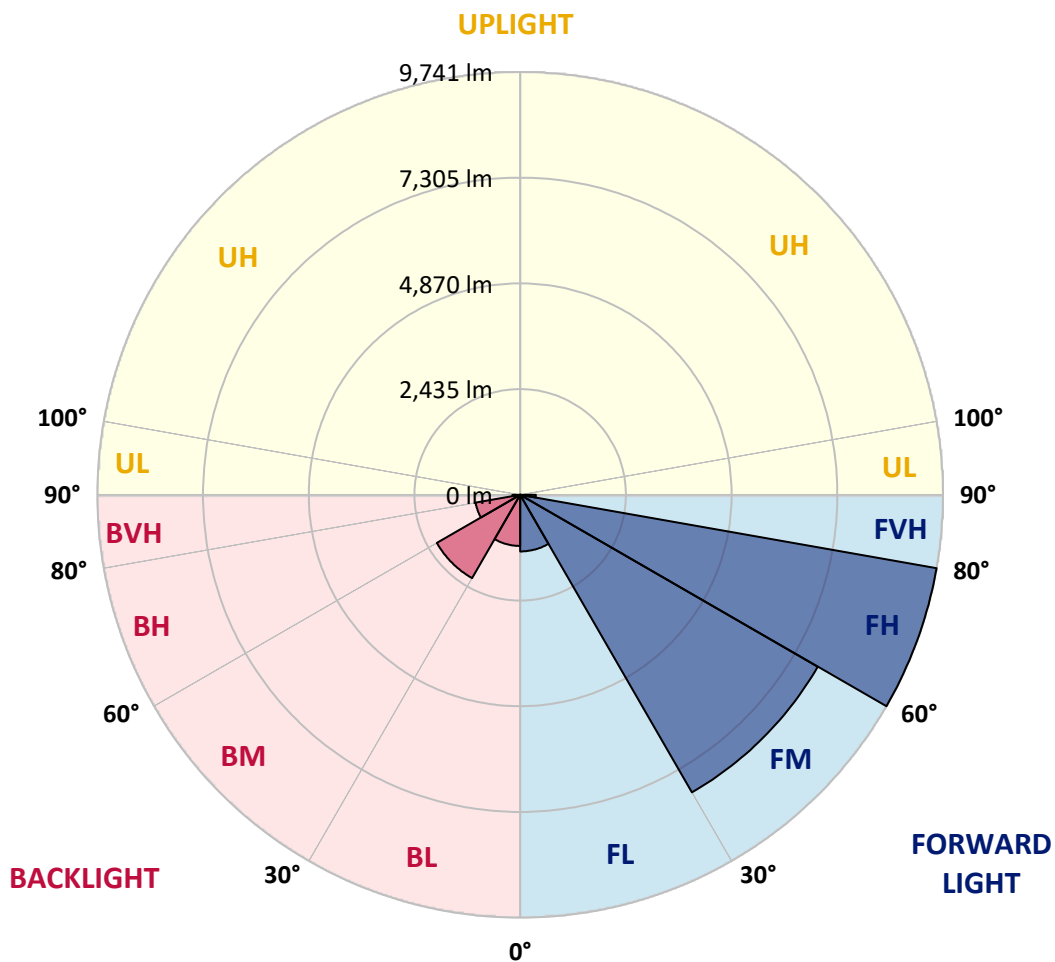
CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-8030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1304.3	5.4			
FM	(30°-60°)	7914.4	33.1			
FH	(60°-80°)	9740.6	40.7			G4/12000
FVH	(80°-90°)	361.9	1.5			G3/500
BL	(0°-30°)	1178.2	4.9	B3/2500		
BM	(30°-60°)	2216.8	9.3	B2/2500		
BH	(60°-80°)	1043.1	4.4	B3/2500		G3/2500
BVH	(80°-90°)	177.7	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





REPORT NUMBER: P197316

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8
2.5°	3487.4	3496.5	3498.0	3508.7	3508.7	3507.1	3511.7	3529.9	3539.1	3560.4	3578.6
5°	3315.5	3326.1	3330.7	3349.0	3371.8	3373.3	3390.0	3425.0	3458.5	3505.6	3545.2
7.5°	3122.4	3134.5	3146.7	3184.7	3218.2	3221.2	3253.1	3309.4	3353.5	3411.3	3482.8
10°	2935.3	2938.3	2950.5	2999.2	3043.3	3047.8	3093.5	3157.3	3216.6	3297.3	3377.9
12.5°	2781.7	2790.8	2787.8	2824.3	2862.3	2865.3	2926.2	3006.8	3093.5	3184.7	3280.5
15°	2728.4	2726.9	2695.0	2693.5	2710.2	2713.2	2772.6	2866.8	2964.2	3076.7	3199.9
17.5°	2764.9	2752.8	2669.1	2617.4	2606.8	2609.8	2653.9	2757.3	2860.8	2990.0	3137.6
20°	2965.7	2918.6	2722.4	2597.6	2562.7	2562.7	2588.5	2672.2	2786.2	2936.8	3122.4
22.5°	3441.7	3368.7	2950.5	2728.4	2605.3	2593.1	2573.3	2637.2	2763.4	2944.4	3184.7
25°	4041.0	4006.0	3368.7	3076.7	2822.7	2783.2	2652.4	2675.2	2810.6	3026.5	3355.0
27.5°	4596.1	4535.2	3917.8	3583.2	3224.2	3163.4	2886.6	2793.8	2923.1	3178.6	3601.4
30°	4920.0	4879.0	4482.0	4162.6	3735.3	3657.7	3260.8	3028.1	3123.9	3429.6	3951.2
32.5°	5272.9	5248.5	5047.8	4757.3	4288.9	4199.1	3744.4	3409.8	3431.1	3762.6	4372.5
35°	5615.1	5647.0	5532.9	5320.0	4885.0	4801.4	4393.8	3908.6	3809.8	4136.8	4822.7
37.5°	6025.7	6033.3	5961.8	5823.4	5511.6	5443.2	5107.1	4440.9	4221.9	4535.2	5257.7
40°	6845.4	6725.3	6445.5	6336.0	6150.4	6107.8	5724.6	4929.1	4605.2	4944.4	5668.3
42.5°	7732.1	7545.0	7107.0	6927.6	6853.1	6813.5	6238.6	5254.6	4964.1	5353.5	6071.3
45°	8446.9	8294.8	7866.0	7643.9	7653.0	7589.2	6687.3	5545.1	5353.5	5764.1	6521.5
47.5°	9151.1	8897.1	8416.5	8384.6	8491.0	8396.7	7116.2	5835.6	5759.5	6211.2	6971.7
50°	9196.7	8965.5	8770.9	9026.4	9208.9	9091.8	7505.5	6215.8	6180.8	6752.7	7552.7
52.5°	8641.6	8608.1	8904.7	9335.1	9637.8	9532.8	7823.4	6606.7	6611.2	7429.5	8259.9
55°	8439.3	8396.7	8752.6	9281.9	9691.0	9628.6	8060.6	7047.7	7088.8	8250.7	9018.8
57.5°	8780.0	8673.5	8743.5	9181.5	9566.3	9529.8	8307.0	7537.4	7612.0	9196.7	9719.9
60°	9837.0	9619.5	9248.4	9330.6	9570.8	9549.6	8659.8	8083.4	8208.1	10182.2	10164.0
62.5°	11420.2	11173.8	10418.0	10053.0	9999.7	9958.7	9242.3	8754.1	8816.5	10894.0	9905.4
65°	13157.1	12892.4	11993.6	11395.9	11082.6	10994.4	10182.2	9563.2	9172.4	10892.5	8898.6
67.5°	15106.8	14827.0	13931.2	13360.9	13021.7	12871.1	11707.7	10217.2	9056.8	9970.8	7120.7
70°	17103.7	16837.6	16426.9	16626.2	16775.2	16545.6	14110.7	10434.7	8226.4	7817.3	4781.6
72.5°	16043.7	16022.4	16334.2	18223.1	21096.0	21141.6	16510.6	9820.3	6355.7	4646.3	2549.0
73°	15059.7	15149.4	15727.3	17987.4	21465.6	21480.8	16557.7	9502.4	5835.6	4002.9	2238.7
75°	7802.1	8410.4	10554.9	14585.2	19876.3	19947.8	14595.8	7193.7	3478.2	2223.5	1508.7
77.5°	2089.7	2062.3	3400.7	7105.5	13251.4	13157.1	9222.6	3482.8	1666.9	1394.6	1058.5
80°	716.3	725.5	1157.4	2599.2	6185.4	6405.9	4002.9	1519.4	1096.5	971.8	749.8
82.5°	365.0	377.2	605.3	1105.7	2587.0	2532.3	1288.2	894.3	734.6	590.1	419.8
85°	194.7	200.8	333.1	573.4	949.0	959.7	453.2	477.6	466.9	334.6	206.8
87.5°	95.8	98.9	159.7	252.5	351.3	339.2	158.2	206.8	229.7	188.6	114.1
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: P197316

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-8030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8	3625.8
2.5°	3601.4	3601.4	3621.2	3654.7	3679.0	3701.8	3717.0	3741.3	3755.0	3753.5	3752.0
5°	3577.1	3592.3	3631.8	3672.9	3700.3	3718.5	3718.5	3729.2	3729.2	3724.6	3718.5
7.5°	3520.8	3546.7	3604.5	3641.0	3648.6	3628.8	3589.3	3558.8	3520.8	3501.0	3493.4
10°	3431.1	3464.5	3537.5	3554.3	3514.7	3444.8	3349.0	3266.8	3193.8	3160.4	3149.7
12.5°	3342.9	3387.0	3455.4	3429.6	3335.3	3198.4	3050.9	2938.3	2856.2	2824.3	2813.6
15°	3269.9	3323.1	3376.3	3295.7	3131.5	2941.4	2778.6	2673.7	2611.3	2587.0	2580.9
17.5°	3221.2	3283.6	3301.8	3151.2	2923.1	2710.2	2565.7	2497.3	2469.9	2459.3	2456.2
20°	3224.2	3294.2	3250.1	3011.3	2722.4	2507.9	2412.1	2392.3	2392.3	2392.3	2390.8
22.5°	3307.9	3368.7	3228.8	2880.5	2529.2	2337.6	2296.5	2313.2	2325.4	2325.4	2323.9
25°	3481.3	3514.7	3244.0	2754.3	2348.2	2190.1	2191.6	2223.5	2234.2	2234.2	2231.1
27.5°	3745.9	3718.5	3271.4	2614.4	2170.3	2056.2	2077.5	2106.4	2114.0	2109.4	2107.9
30°	4077.5	3968.0	3294.2	2450.1	2003.0	1931.5	1949.8	1966.5	1960.4	1949.8	1948.2
32.5°	4448.6	4221.9	3280.5	2266.1	1855.5	1802.2	1812.9	1822.0	1812.9	1787.0	1787.0
35°	4816.6	4451.6	3206.0	2065.3	1738.4	1677.5	1676.0	1704.9	1703.4	1673.0	1674.5
37.5°	5139.0	4632.6	3061.5	1881.3	1638.0	1586.3	1592.4	1610.6	1619.7	1578.7	1574.1
40°	5420.4	4757.3	2857.7	1724.7	1557.4	1560.4	1543.7	1514.8	1504.1	1485.9	1482.9
42.5°	5685.0	4844.0	2641.8	1593.9	1516.3	1551.3	1495.0	1426.6	1397.7	1414.4	1425.1
45°	5945.1	4941.3	2433.4	1485.9	1464.6	1523.9	1446.3	1370.3	1336.8	1344.5	1355.1
47.5°	6263.0	5076.7	2182.5	1370.3	1385.5	1473.7	1415.9	1333.8	1283.6	1253.2	1244.1
50°	6681.2	5272.9	1857.0	1245.6	1301.9	1419.0	1390.1	1280.6	1225.8	1165.0	1149.8
52.5°	7204.4	5458.4	1528.5	1145.2	1233.4	1371.8	1347.5	1234.9	1168.0	1095.0	1082.9
55°	7726.0	5484.3	1245.6	1058.5	1155.9	1308.0	1295.8	1198.4	1104.2	1044.8	1032.7
57.5°	8091.0	5239.4	1055.5	985.5	1081.3	1228.9	1248.6	1154.3	1050.9	1005.3	997.7
60°	8097.1	4653.9	939.9	936.9	1025.1	1160.4	1200.0	1102.6	1017.5	987.0	981.0
62.5°	7453.8	3750.5	865.4	900.4	984.0	1104.2	1163.5	1073.7	1009.9	997.7	991.6
65°	6247.7	2771.0	806.1	866.9	946.0	1057.0	1133.0	1064.6	1006.8	1002.3	997.7
67.5°	4612.8	1899.6	755.9	824.3	903.4	1008.3	1104.2	1050.9	988.6	1006.8	1000.7
70°	2901.8	1268.4	708.7	775.6	847.1	952.1	1066.1	1026.6	965.8	955.1	935.3
72.5°	1638.0	917.1	652.5	713.3	774.1	877.5	1014.4	985.5	914.0	871.5	851.7
73°	1479.8	868.4	638.8	698.1	757.4	862.3	1002.3	973.4	898.8	851.7	833.4
75°	1082.9	710.2	576.4	635.7	687.4	792.4	944.5	912.5	831.9	775.6	763.5
77.5°	784.8	547.5	495.8	549.0	594.7	695.0	857.8	821.3	742.2	711.8	699.6
80°	565.8	415.2	410.6	462.3	501.9	603.8	765.0	727.0	650.9	740.7	720.9
82.5°	337.6	266.2	301.1	358.9	400.0	506.5	664.6	620.5	547.5	553.6	471.5
85°	161.2	150.6	187.1	235.7	264.6	346.8	553.6	518.6	438.0	358.9	351.3
87.5°	71.5	68.4	89.7	104.9	141.4	208.4	378.7	336.1	317.9	190.1	149.0
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)