

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: P270631

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270631  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
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-T3R-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21468.9 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B2 - 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

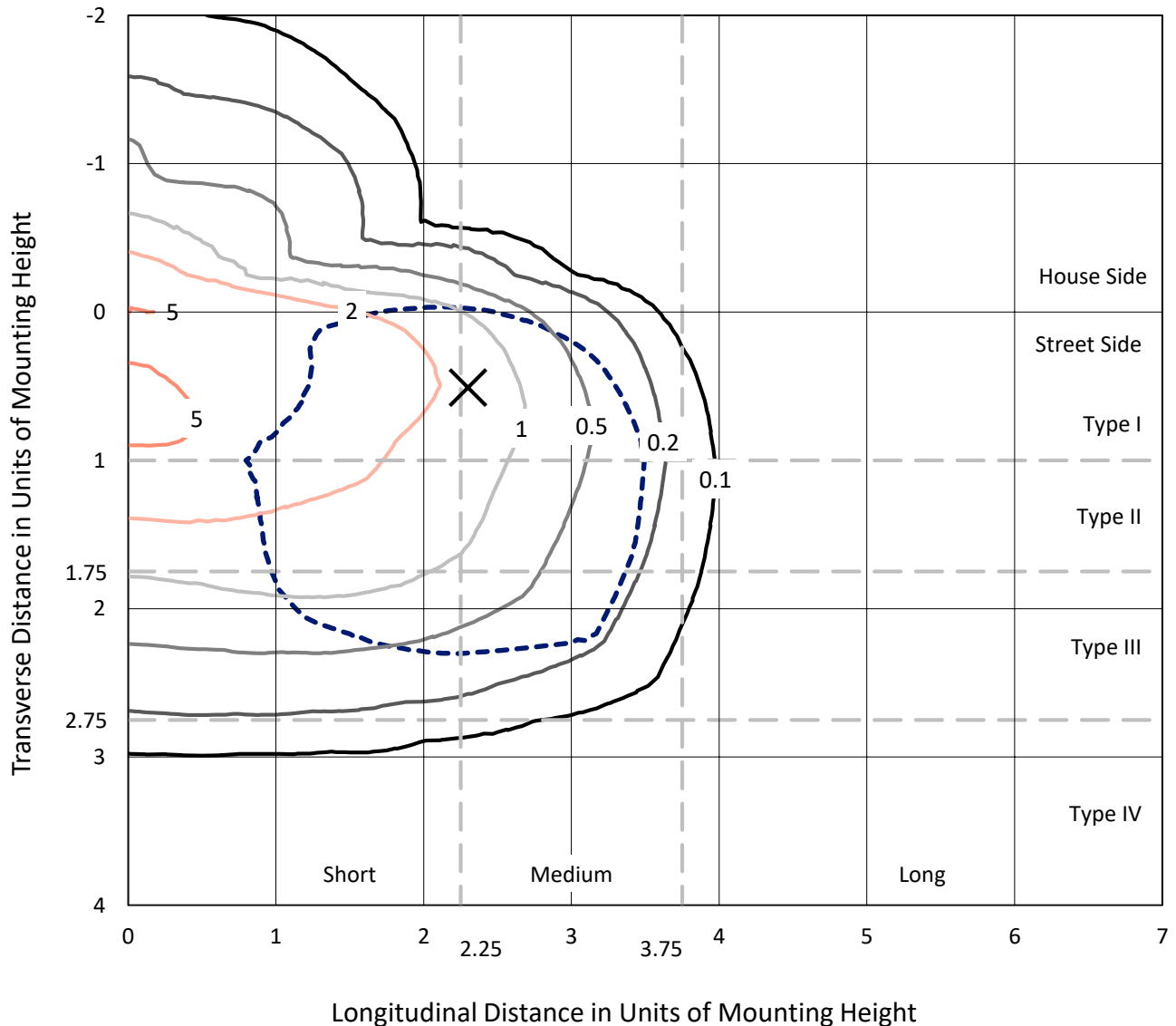


REPORT NUMBER: P270631

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7027-800

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

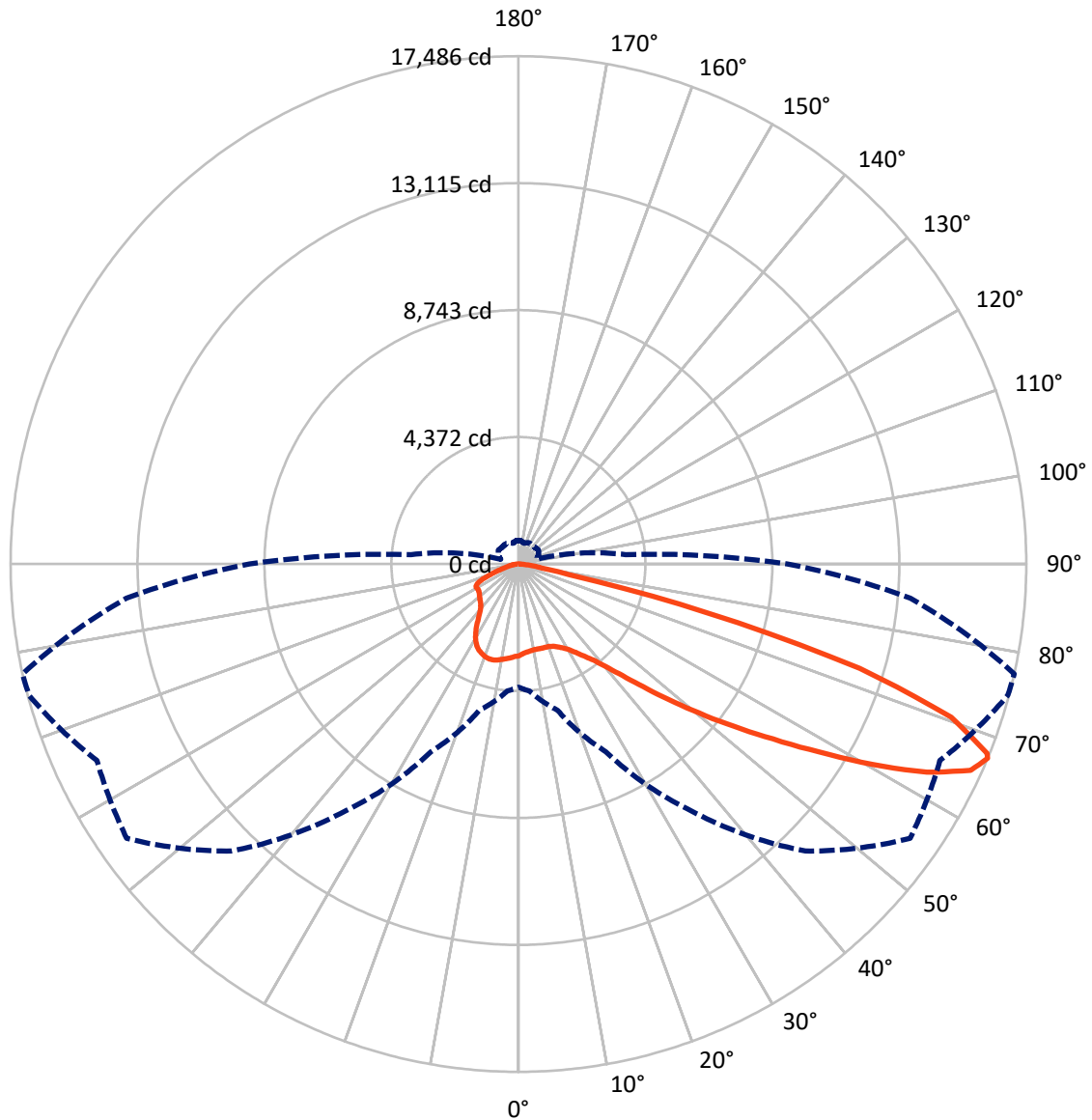


Based on 25 foot mounting height. Maximum calculated value = 6.1 fc  
 Type III - Medium - Full Cutoff

REPORT NUMBER: P270631

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7027-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P270631

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7027-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3689.4	0.0	3689.4
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	17779.5	0.0	17779.5
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	21468.9	0.0	21468.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.4	1.3
10°-20°	779.3	3.6
20°-30°	1324.2	6.2
30°-40°	2118.4	9.9
40°-50°	3261.2	15.2
50°-60°	4524.6	21.1
60°-70°	6035.6	28.1
70°-80°	2872.3	13.4
80°-90°	271.9	1.3
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°	21468.9	100.0
0°-180°	21468.9	100.0



REPORT NUMBER: P270631

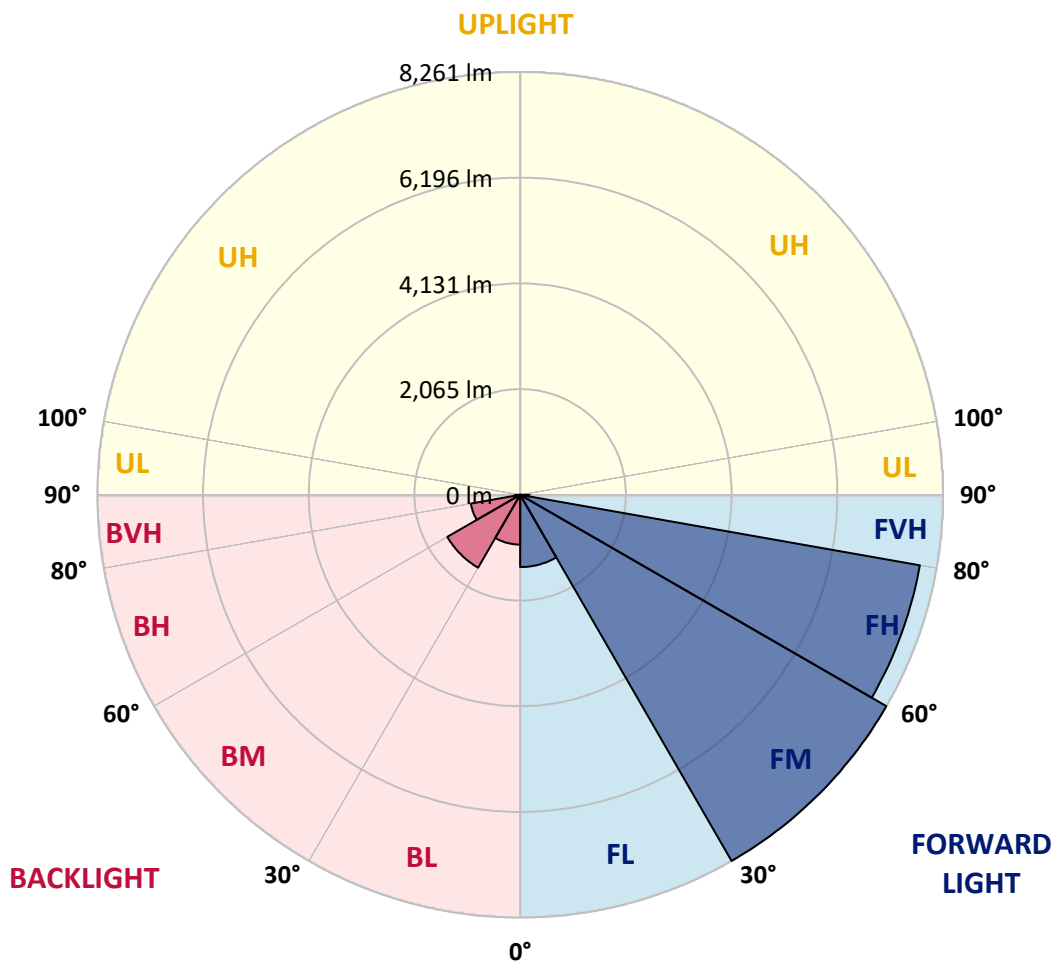
CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7027-800

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1411.8	6.6			
FM	(30°-60°)	8261.5	38.5			
FH	(60°-80°)	7929.6	36.9			G4/12000
FVH	(80°-90°)	176.6	0.8			G2/225
BL	(0°-30°)	973.1	4.5	B2/1000		
BM	(30°-60°)	1642.7	7.7	B2/2500		
BH	(60°-80°)	978.2	4.6	B2/1000		G2/1000
BVH	(80°-90°)	95.3	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type III Medium





REPORT NUMBER: P270631

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7027-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7
2.5°	2833.3	2846.5	2847.7	2886.3	2903.5	2947.2	2995.0	3037.6	3074.7	3088.1	3111.9
5°	2549.2	2549.2	2553.3	2578.4	2627.5	2697.9	2797.4	2906.1	3020.3	3048.2	3118.6
7.5°	2400.6	2403.2	2405.9	2431.2	2469.6	2532.0	2631.6	2780.2	2969.8	3016.4	3139.8
10°	2413.8	2410.0	2396.6	2391.3	2407.3	2447.1	2533.3	2685.9	2927.4	2999.1	3178.3
12.5°	2622.2	2614.2	2570.5	2506.8	2448.4	2433.8	2493.4	2638.1	2907.5	2999.1	3243.3
15°	2979.1	2984.4	2898.2	2765.5	2612.9	2509.4	2501.5	2620.8	2900.8	3007.0	3318.9
17.5°	3443.7	3446.3	3326.9	3134.5	2881.0	2667.3	2555.9	2620.8	2900.8	3015.0	3391.9
20°	3937.4	3918.8	3783.4	3541.8	3212.8	2886.3	2655.4	2636.9	2908.8	3027.0	3460.9
22.5°	4360.6	4343.3	4201.5	3948.0	3571.0	3145.1	2789.4	2689.9	2952.6	3076.1	3557.7
25°	4730.8	4741.4	4603.5	4318.2	3928.0	3437.1	2989.7	2812.0	3044.1	3165.0	3677.2
27.5°	5180.7	5160.9	5001.7	4729.5	4295.5	3739.6	3240.6	2965.9	3153.1	3272.4	3823.1
30°	5701.0	5691.7	5476.6	5196.6	4700.3	4077.9	3488.7	3131.9	3295.1	3419.8	4006.4
32.5°	6332.6	6331.3	6100.4	5756.7	5155.6	4460.2	3782.0	3358.8	3502.0	3628.2	4249.2
35°	7047.8	7046.6	6807.6	6353.8	5679.8	4883.5	4127.1	3634.7	3758.1	3890.9	4538.4
37.5°	7544.1	7536.2	7411.5	6970.8	6259.6	5375.7	4558.4	4006.4	4048.8	4197.4	4887.5
40°	7639.7	7687.4	7795.0	7535.0	6892.6	5922.5	4991.0	4405.7	4445.5	4636.6	5326.7
42.5°	7536.2	7598.7	7955.6	8028.5	7525.6	6584.8	5532.4	4959.2	5009.6	5247.1	5842.9
45°	7446.1	7500.4	7947.6	8301.9	8150.6	7306.6	6207.8	5634.6	5730.1	6024.8	6432.1
47.5°	7292.0	7342.4	7791.0	8351.1	8507.6	8002.0	7021.3	6446.7	6611.3	6968.2	7103.5
50°	7284.0	7306.6	7577.4	8186.4	8631.0	8530.1	7922.4	7396.9	7649.0	8060.4	7846.8
52.5°	7082.3	7240.2	7485.8	7923.7	8633.7	8838.1	8810.1	8438.6	8827.5	9282.5	8661.5
55°	5848.2	6030.1	7180.5	7795.0	8617.7	9102.0	9620.9	9546.6	10154.4	10633.4	9574.6
57.5°	5460.7	5537.7	6299.5	7833.5	8750.4	9538.7	10431.7	10737.0	11672.5	12195.4	10669.3
60°	5354.5	5435.6	6122.8	7852.1	9110.2	10333.7	11531.9	12081.2	13457.4	14012.1	11912.8
62.5°	5236.5	5341.3	6136.2	7869.3	9741.7	11509.4	12991.6	13539.8	15290.1	15785.0	13077.9
65°	4891.5	5030.8	5890.6	7760.5	10433.2	12985.0	14921.1	15060.4	16804.2	17118.7	13781.2
67°	4237.2	4389.7	5216.5	7131.5	10369.5	13979.0	16464.5	16012.0	17447.8	17486.2	13553.0
67.5°	4030.2	4188.1	4988.3	6870.1	10187.6	14109.0	16737.8	16143.4	17442.5	17400.0	13340.6
70°	2713.8	2891.6	3532.6	5044.1	8171.8	13131.0	16671.6	15738.6	16298.6	15811.5	11461.6
72.5°	1347.0	1352.3	1762.2	2762.8	4951.2	9417.9	13907.3	13464.1	13211.9	12292.2	8410.7
75°	648.9	660.9	832.0	1220.8	2087.4	4862.3	9484.2	9084.9	7735.2	6697.6	4209.4
77.5°	495.0	507.0	646.3	794.9	870.5	1585.8	4697.6	3796.6	2241.4	1790.1	1186.4
80°	382.1	404.7	545.5	610.5	576.0	635.6	1477.1	1162.4	871.9	800.2	587.9
82.5°	298.5	311.8	463.2	463.2	398.0	425.9	687.5	671.5	541.4	488.4	315.8
85°	211.0	237.5	372.8	344.9	261.4	264.1	411.3	394.1	278.7	224.2	123.3
87.5°	94.2	120.7	265.4	225.7	139.3	107.4	168.5	144.6	110.1	84.9	57.0
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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CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7027-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7	3159.7
2.5°	3138.4	3159.7	3192.8	3212.8	3239.3	3249.9	3260.5	3279.2	3293.6	3289.8	3283.0
5°	3167.7	3203.4	3244.6	3257.9	3257.9	3244.6	3236.7	3238.0	3234.0	3231.4	3223.4
7.5°	3210.2	3259.2	3288.3	3275.1	3234.0	3182.2	3133.1	3104.0	3076.1	3058.8	3064.1
10°	3269.8	3324.2	3325.5	3267.1	3169.0	3056.2	2959.2	2896.9	2837.1	2810.6	2818.6
12.5°	3356.1	3410.4	3364.1	3238.0	3065.5	2888.9	2711.2	2582.4	2466.9	2439.1	2431.2
15°	3449.0	3491.4	3387.9	3175.6	2916.7	2626.1	2327.6	2135.2	2006.5	1983.8	1975.9
17.5°	3529.9	3553.8	3376.0	3064.1	2681.9	2224.2	1876.4	1746.3	1719.8	1733.1	1733.1
20°	3601.6	3593.6	3324.2	2891.6	2311.7	1778.3	1576.5	1575.2	1611.0	1644.2	1646.9
22.5°	3691.9	3629.4	3242.0	2635.4	1869.8	1483.6	1449.1	1483.6	1523.4	1560.5	1564.6
25°	3799.3	3669.2	3131.9	2270.6	1503.6	1347.0	1361.6	1390.8	1416.0	1445.2	1446.5
27.5°	3906.8	3699.8	2976.5	1842.0	1304.5	1259.3	1275.2	1287.2	1293.9	1312.5	1312.5
30°	4031.6	3723.7	2752.2	1475.6	1212.9	1182.3	1173.0	1167.7	1173.0	1198.2	1199.6
32.5°	4188.1	3766.1	2445.7	1266.0	1170.4	1128.0	1080.2	1053.6	1072.2	1117.3	1125.3
35°	4365.9	3816.5	2078.0	1182.3	1155.8	1101.4	1013.8	972.8	979.3	1020.5	1027.1
37.5°	4588.9	3881.5	1715.9	1162.4	1170.4	1098.7	983.4	925.0	895.7	897.0	895.7
40°	4874.3	3946.7	1429.3	1167.7	1202.3	1105.5	968.7	877.1	816.1	818.7	824.0
42.5°	5172.8	3989.1	1247.3	1183.6	1240.7	1114.6	963.4	830.8	777.7	822.8	863.9
45°	5521.8	3977.2	1153.2	1198.2	1269.9	1118.7	943.5	825.5	781.6	917.0	994.0
47.5°	5922.5	3925.4	1100.2	1204.9	1277.8	1117.3	928.8	842.7	814.9	1049.7	1137.3
50°	6357.8	3844.3	1057.7	1194.3	1273.9	1112.0	944.8	863.9	828.1	1078.9	1146.5
52.5°	6834.2	3770.0	1013.8	1170.4	1254.0	1096.1	964.8	854.6	790.9	994.0	1045.6
55°	7398.3	3752.8	964.8	1129.3	1220.8	1078.9	954.1	825.5	749.7	881.1	912.9
57.5°	8043.2	3860.3	901.1	1078.9	1175.7	1044.4	928.8	809.6	735.2	801.6	818.7
60°	8861.9	4097.9	833.4	1025.8	1119.9	992.5	906.4	813.4	739.1	789.6	793.6
62.5°	9501.6	4311.5	772.4	960.7	1045.6	930.3	882.5	817.5	751.2	805.5	798.9
65°	9733.8	4206.8	696.6	863.9	940.9	861.2	849.3	820.2	751.2	814.9	800.2
67°	9257.4	3706.3	625.0	767.1	841.4	800.2	817.5	809.6	737.9	813.4	788.3
67.5°	9030.4	3529.9	606.4	751.2	814.9	781.6	809.6	804.3	733.8	810.8	781.6
70°	7447.3	2532.0	512.3	630.3	682.2	688.7	760.3	769.7	701.9	761.8	708.7
72.5°	5298.8	1584.5	441.8	488.4	550.8	589.2	694.0	723.2	659.5	662.2	618.5
75°	2622.2	850.7	394.1	376.8	428.6	491.1	605.1	659.5	597.2	552.1	537.5
77.5°	885.1	481.8	333.1	303.8	333.1	394.1	501.7	576.0	526.9	467.1	457.9
80°	457.9	350.2	260.1	244.2	262.8	305.2	392.7	479.1	450.0	452.6	372.8
82.5°	285.3	213.6	187.0	185.8	199.1	233.6	289.3	388.8	386.2	330.4	240.1
85°	132.7	123.3	119.5	123.3	127.4	132.7	188.5	277.3	293.2	177.9	157.9
87.5°	55.8	54.3	47.8	51.7	57.0	55.8	75.6	118.0	164.6	111.5	102.1
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)