

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: P195900

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195900
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 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: 28759 lumens
Efficiency: N/A
Efficacy: 115.5 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

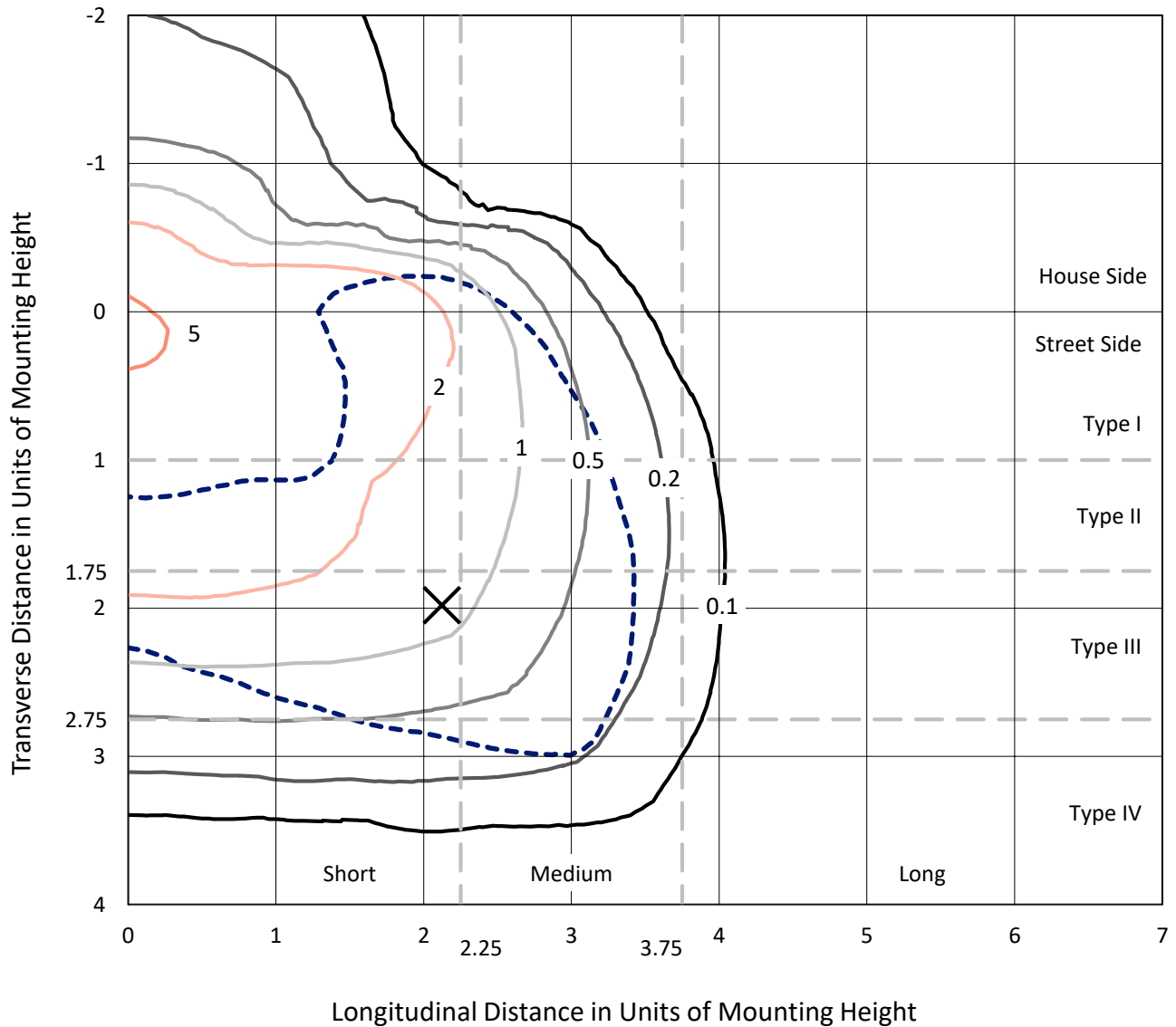
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

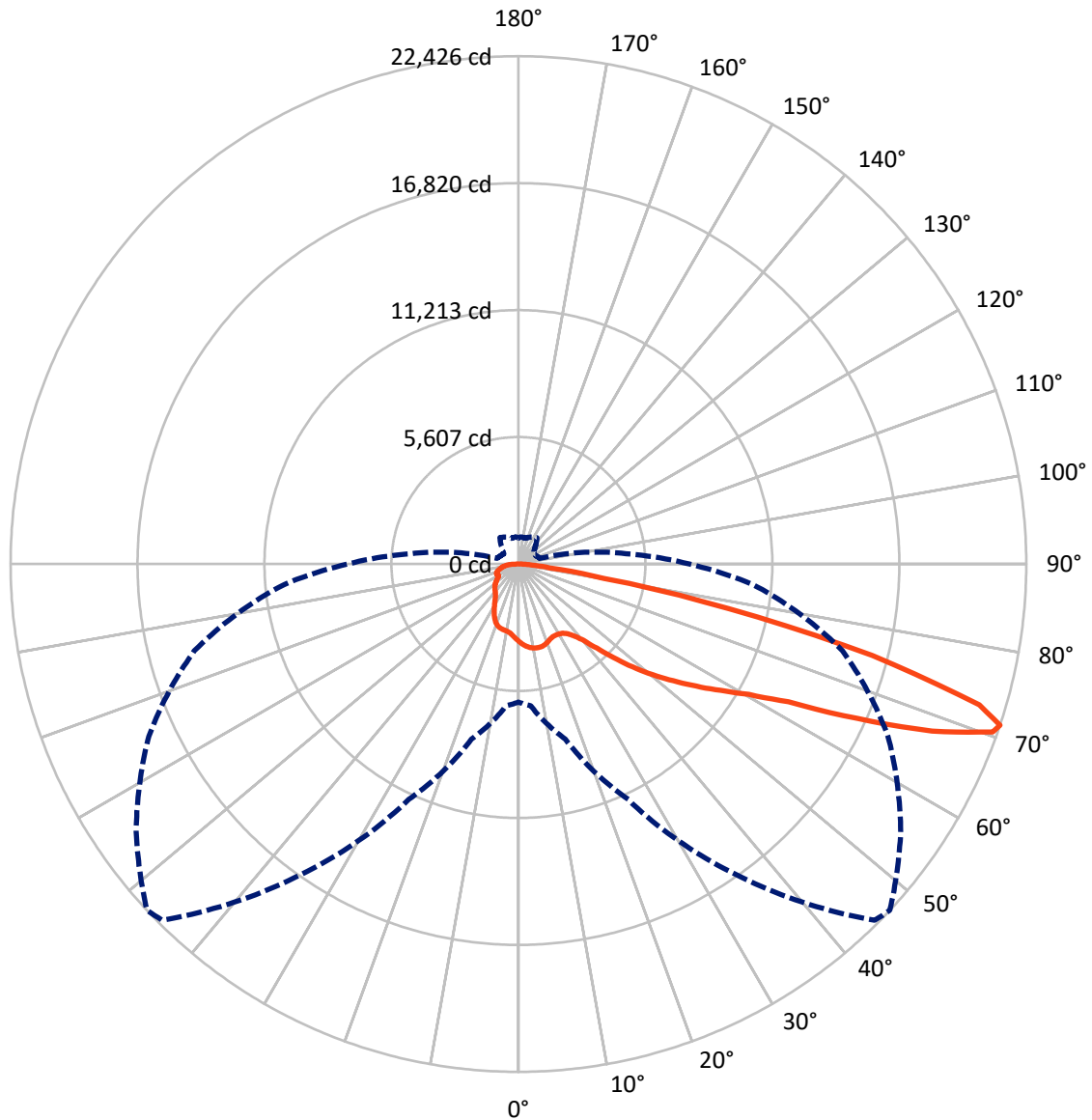
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 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	6163.4	0.0	6163.4
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	22595.5	0.0	22595.5
	% Fixture	78.6	0.0	78.6
Total	Lumens	28759.0	0.0	28759.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.5	1.1
10°-20°	955.3	3.3
20°-30°	1419.5	4.9
30°-40°	2038.2	7.1
40°-50°	3613.9	12.6
50°-60°	6183.8	21.5
60°-70°	8778.9	30.5
70°-80°	4808.1	16.7
80°-90°	634.7	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°	28759.0	100.0
0°-180°	28759.0	100.0



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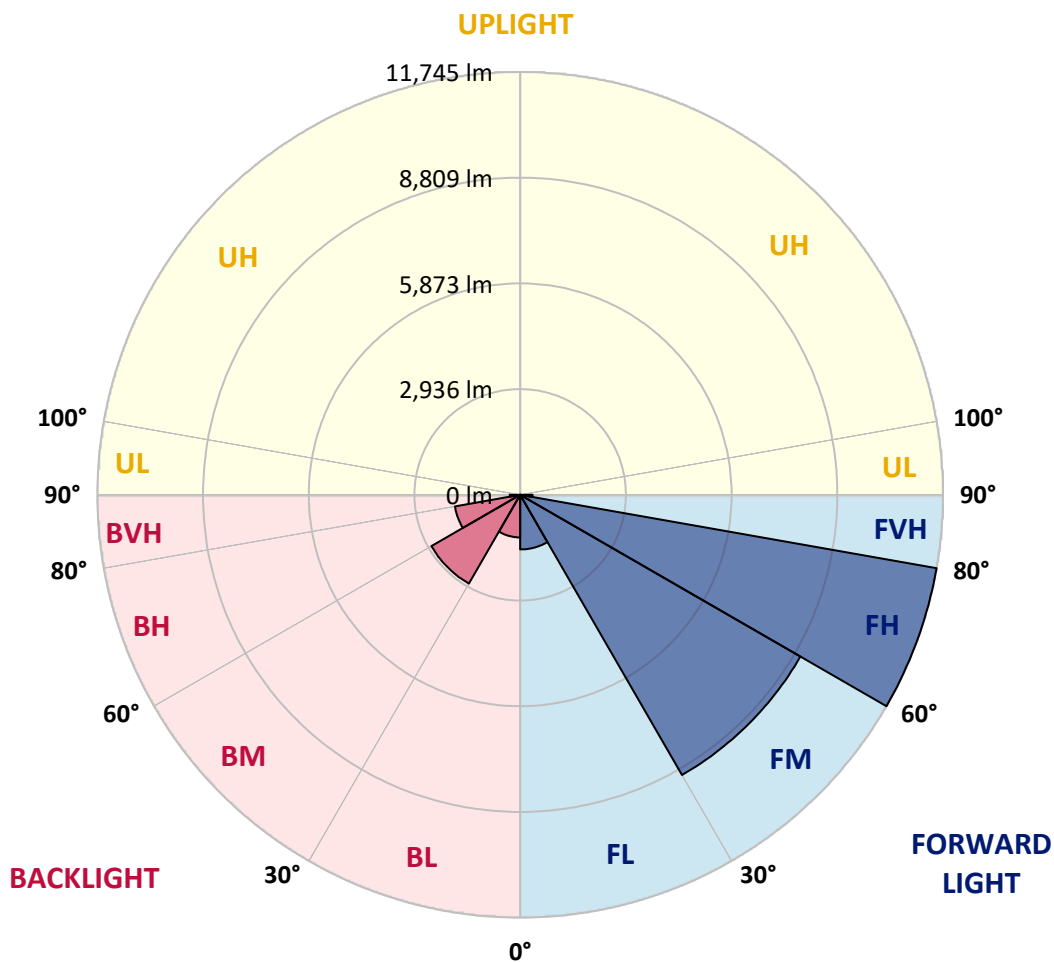
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1517.8	5.3			
FM	(30°-60°)	8988.1	31.3			
FH	(60°-80°)	11745.5	40.8			G4/12000
FVH	(80°-90°)	344.3	1.2			G3/500
BL	(0°-30°)	1183.6	4.1	B3/2500		
BM	(30°-60°)	2847.9	9.9	B3/5000		
BH	(60°-80°)	1841.6	6.4	B3/2500		G3/2500
BVH	(80°-90°)	290.4	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9
2.5°	3628.7	3621.2	3624.9	3611.9	3580.2	3546.7	3546.7	3511.2	3474.0	3436.7	3395.7
5°	3854.2	3843.0	3833.7	3792.7	3731.2	3662.2	3651.0	3580.2	3503.8	3427.4	3352.8
7.5°	4042.4	4031.2	4003.3	3928.7	3839.3	3736.8	3723.7	3630.5	3529.9	3423.7	3319.3
10°	4176.6	4169.1	4115.1	4020.0	3915.7	3794.5	3772.2	3677.1	3557.8	3425.5	3293.2
12.5°	4251.1	4240.0	4174.7	4062.9	3939.9	3816.9	3794.5	3703.2	3567.2	3421.8	3267.1
15°	4221.3	4215.7	4154.2	4040.5	3917.5	3811.3	3792.7	3699.5	3561.6	3408.7	3242.9
17.5°	4094.6	4107.6	4059.2	3947.4	3846.7	3772.2	3751.7	3664.1	3533.6	3377.1	3205.6
20°	3919.4	3934.3	3910.1	3796.4	3738.6	3690.2	3679.0	3608.2	3487.0	3330.5	3160.9
22.5°	3733.0	3746.1	3747.9	3641.7	3623.1	3604.4	3595.1	3544.8	3446.0	3302.5	3131.1
25°	3604.4	3619.3	3623.1	3529.9	3541.1	3546.7	3544.8	3509.4	3438.6	3302.5	3134.8
27.5°	3570.9	3578.3	3574.6	3488.9	3509.4	3541.1	3542.9	3535.5	3468.4	3339.8	3187.0
30°	3686.4	3690.2	3643.6	3515.0	3535.5	3576.5	3578.3	3574.6	3531.8	3436.7	3304.4
32.5°	4185.9	4182.2	4021.9	3690.2	3619.3	3634.3	3639.8	3673.4	3677.1	3597.0	3474.0
35°	4946.3	4944.5	4758.1	4191.5	3857.9	3779.6	3787.1	3839.3	3885.9	3831.8	3761.0
37.5°	5783.1	5788.7	5675.0	4907.2	4372.3	4046.1	4038.7	4077.8	4161.7	4180.3	4189.6
40°	6711.3	6739.2	6733.6	5729.1	5093.5	4500.9	4426.3	4381.6	4543.8	4646.3	4778.6
42.5°	7771.7	7764.3	7768.0	6631.1	5917.3	5216.6	5078.6	4869.9	5058.1	5235.2	5525.9
45°	8683.1	8712.9	8735.3	7590.9	6839.9	6034.7	5894.9	5514.7	5684.3	5949.0	6392.6
47.5°	9600.0	9547.8	9588.8	8658.8	7866.8	6968.5	6787.7	6275.1	6433.6	6806.3	7481.0
50°	10667.9	10643.7	10457.3	10052.9	9108.0	7915.2	7678.5	7069.1	7300.2	7797.8	8824.7
52.5°	11625.9	11495.4	11350.1	11148.8	10328.7	8873.2	8573.1	7894.7	8319.6	8936.5	10492.7
55°	11976.3	11888.7	12063.9	12324.8	11620.3	9849.8	9514.3	8858.3	9469.6	10239.3	12455.2
57.5°	12349.0	12378.8	12773.9	13301.4	12842.9	10891.6	10528.2	9998.9	10731.3	11696.7	14648.8
60°	12535.4	12654.7	13443.0	14432.7	14005.9	12034.0	11685.5	11309.1	12131.0	13307.0	16836.8
62.5°	12567.1	12727.3	13843.7	14829.6	15606.8	13784.1	13381.5	12973.4	13879.1	15086.8	18421.0
65°	11985.6	12231.6	13808.3	15317.9	17066.1	16708.3	16452.9	15741.0	16220.0	16654.2	18691.3
67.5°	10276.6	10544.9	12442.2	15116.6	18236.5	19742.4	19693.9	18642.8	18027.8	17259.9	16687.8
70°	7542.5	7758.7	9581.4	12923.0	17725.8	22124.2	22210.0	20523.3	18532.8	15973.9	12408.7
71°	6100.0	6286.3	8004.7	11473.1	16730.6	22247.2	22426.1	20607.2	18007.3	14812.8	10388.4
72.5°	3796.4	3900.8	5315.3	8658.8	14406.6	20979.9	21281.8	19533.7	16352.3	12520.5	7343.1
75°	1433.2	1474.2	1971.8	3818.8	8599.2	15761.5	16126.8	14762.5	11488.0	7147.4	3073.3
77.5°	769.7	790.2	978.5	1587.9	3446.0	9035.3	9505.0	8420.3	5511.0	2501.1	1256.1
80°	516.3	529.3	676.5	941.2	1584.2	3440.4	3831.8	3380.8	2063.1	1427.6	894.6
82.5°	333.6	341.1	460.3	618.8	1023.2	1209.6	1381.0	1442.5	1287.8	1023.2	540.5
85°	219.9	225.5	303.8	395.1	633.7	596.4	611.3	799.5	877.8	674.7	275.8
87.5°	126.7	130.5	182.6	203.1	285.1	223.6	242.3	380.2	521.8	439.8	158.4
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°	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9	3419.9
2.5°	3377.1	3362.2	3328.6	3308.1	3298.8	3295.1	3291.3	3298.8	3298.8	3295.1	3287.6
5°	3315.6	3287.6	3231.7	3192.6	3172.1	3166.5	3173.9	3183.2	3188.8	3188.8	3183.2
7.5°	3270.8	3229.8	3155.3	3101.2	3069.5	3060.2	3080.7	3114.3	3136.6	3147.8	3149.7
10°	3233.6	3177.6	3095.6	3039.7	3013.6	3009.9	3036.0	3078.9	3125.5	3146.0	3149.7
12.5°	3200.0	3136.6	3047.2	2995.0	2976.4	2985.7	3021.1	3060.2	3114.3	3144.1	3146.0
15°	3168.3	3103.1	3008.0	2954.0	2950.3	2965.2	2998.7	3030.4	3071.4	3108.7	3108.7
17.5°	3131.1	3060.2	2961.5	2911.1	2911.1	2924.2	2946.5	2963.3	2989.4	3024.8	3023.0
20°	3086.3	3013.6	2913.0	2860.8	2849.6	2842.2	2842.2	2845.9	2868.3	2899.9	2905.5
22.5°	3052.8	2978.2	2872.0	2808.6	2758.3	2709.8	2689.3	2681.9	2702.4	2732.2	2739.7
25°	3052.8	2978.2	2858.9	2752.7	2629.7	2536.5	2497.4	2486.2	2506.7	2534.7	2545.8
27.5°	3103.1	3028.5	2888.8	2702.4	2476.9	2327.8	2281.2	2271.9	2290.5	2312.9	2324.1
30°	3220.5	3147.8	2974.5	2644.6	2307.3	2111.6	2059.4	2050.1	2059.4	2068.7	2081.8
32.5°	3416.2	3354.7	3114.3	2592.4	2135.8	1915.9	1852.5	1837.6	1841.4	1843.2	1854.4
35°	3734.9	3706.9	3300.6	2530.9	1973.7	1755.6	1690.4	1660.6	1658.7	1668.0	1681.1
37.5°	4223.2	4240.0	3541.1	2441.5	1839.5	1641.9	1576.7	1546.9	1532.0	1550.6	1565.5
40°	4912.8	4951.9	3818.8	2320.3	1729.5	1574.8	1505.9	1477.9	1457.4	1451.8	1459.3
42.5°	5809.2	5798.0	4102.0	2165.6	1610.3	1530.1	1457.4	1427.6	1394.1	1351.2	1341.9
45°	6871.5	6711.3	4338.7	1975.5	1474.2	1487.2	1412.7	1371.7	1319.5	1256.1	1248.7
47.5°	8125.8	7684.1	4484.1	1772.4	1347.5	1431.3	1362.4	1299.0	1222.6	1181.6	1176.0
50°	9637.3	8822.9	4586.6	1565.5	1233.8	1360.5	1291.6	1207.7	1133.1	1122.0	1120.1
52.5°	11426.5	10166.6	4713.3	1379.2	1144.3	1269.2	1220.7	1135.0	1075.4	1081.0	1081.0
55°	13329.3	11556.9	4717.1	1231.9	1066.0	1163.0	1168.6	1099.6	1053.0	1071.6	1077.2
57.5°	15064.5	12772.1	4346.2	1127.6	991.5	1079.1	1151.8	1112.6	1077.2	1142.5	1148.1
60°	16577.8	13707.7	3548.5	1041.8	930.0	1047.4	1189.1	1192.8	1185.3	1362.4	1375.4
62.5°	17131.3	13717.0	2519.7	969.1	896.4	1066.0	1267.3	1272.9	1272.9	1436.9	1461.2
65°	16356.0	12574.5	1677.3	926.3	874.1	1107.0	1330.7	1306.5	1248.7	1362.4	1336.3
67.5°	13623.8	9788.3	1226.3	898.3	842.4	1108.9	1386.6	1325.1	1226.3	1323.2	1278.5
70°	9363.3	6228.6	1026.9	872.2	805.1	1060.5	1416.4	1319.5	1192.8	1233.8	1174.1
71°	7536.9	4970.5	974.7	862.9	790.2	1032.5	1420.2	1312.1	1176.0	1202.1	1148.1
72.5°	4965.0	3062.1	911.4	842.4	767.9	984.0	1410.8	1295.3	1153.6	1155.5	1120.1
75°	1958.8	1269.2	820.0	795.8	704.5	905.8	1369.8	1259.9	1110.8	1073.5	1058.6
77.5°	989.6	829.4	721.3	730.6	629.9	825.6	1312.1	1202.1	1051.1	1000.8	989.6
80°	723.1	629.9	616.9	633.7	546.1	747.4	1239.4	1123.8	974.7	1026.9	1004.5
82.5°	439.8	383.9	482.7	523.7	456.6	667.2	1153.6	1032.5	877.8	808.9	782.8
85°	208.7	225.5	348.5	385.8	337.3	533.0	1054.9	931.9	766.0	661.6	672.8
87.5°	102.5	124.9	199.4	231.1	221.8	391.4	795.8	723.1	603.8	497.6	486.4
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)