

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: P195910

Luminaire Tested: **NAV-AF-04-D-UNV-T4W-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195910
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-04-D-UNV-T4W-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26448 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

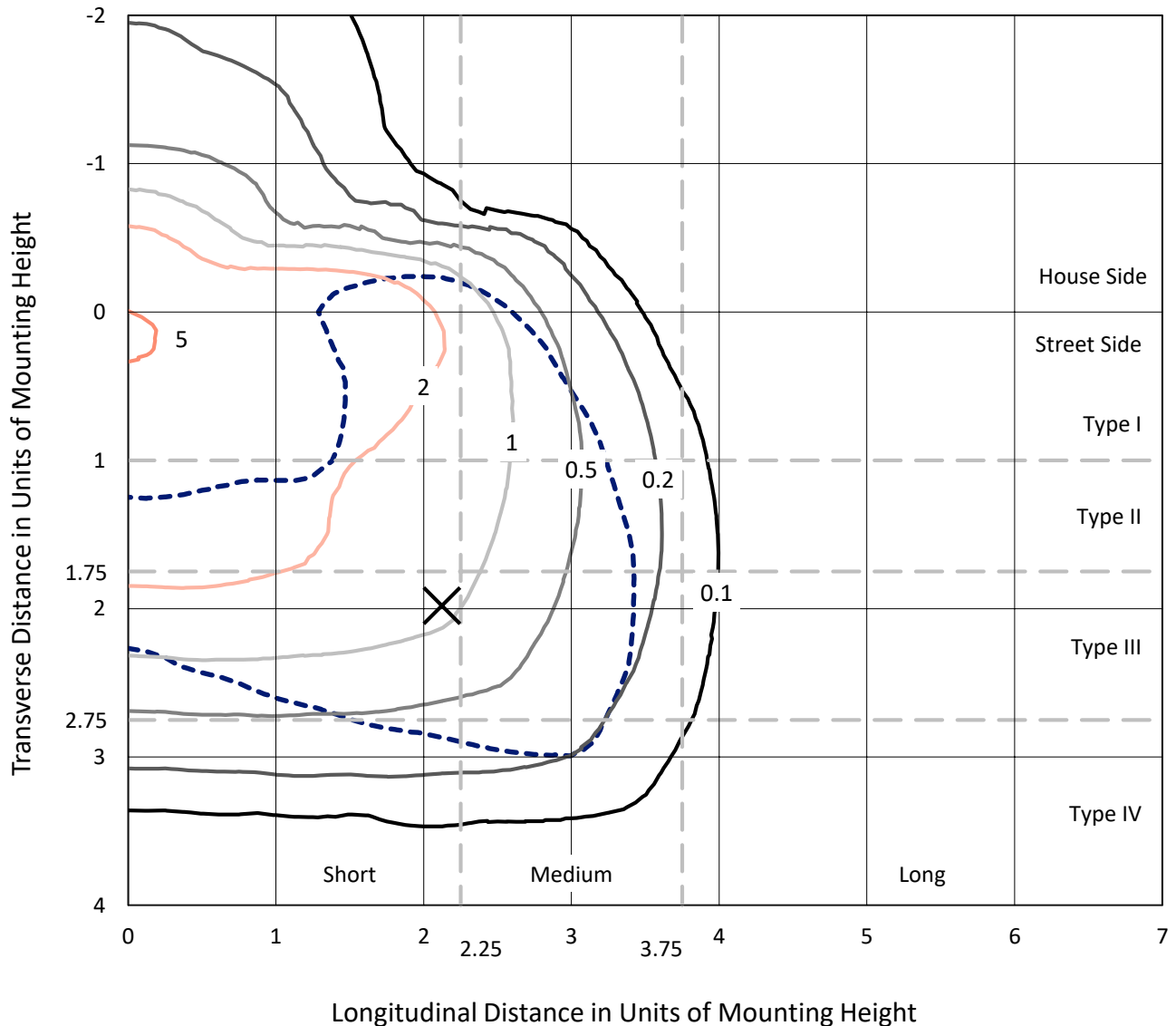
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

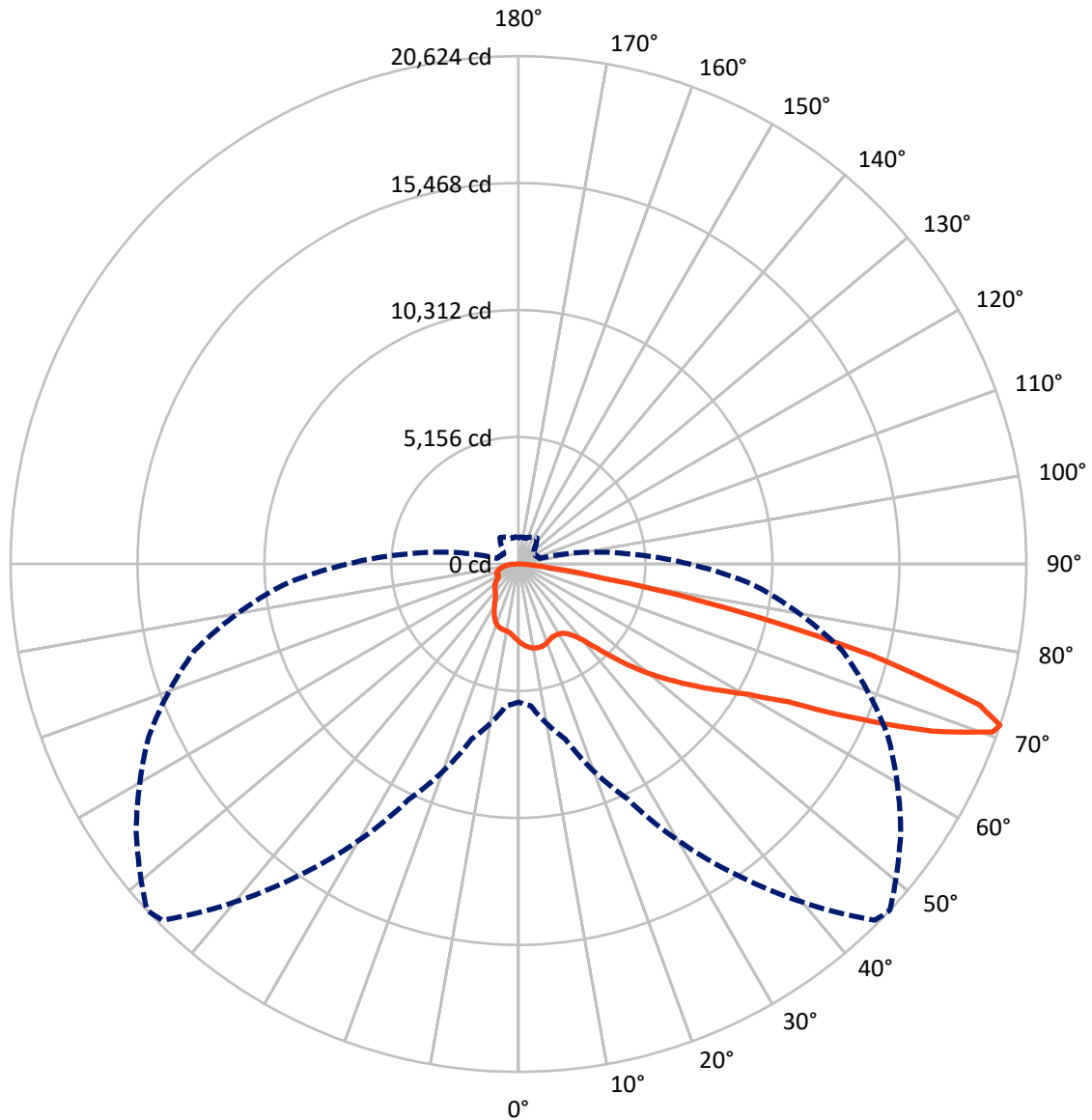
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 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	5668.2	0.0	5668.2
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	20779.8	0.0	20779.8
	% Fixture	78.6	0.0	78.6
Total	Lumens	26448.0	0.0	26448.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.3	1.1
10°-20°	878.5	3.3
20°-30°	1305.5	4.9
30°-40°	1874.4	7.1
40°-50°	3323.5	12.6
50°-60°	5686.9	21.5
60°-70°	8073.5	30.5
70°-80°	4421.7	16.7
80°-90°	583.7	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°	26448.0	100.0
0°-180°	26448.0	100.0



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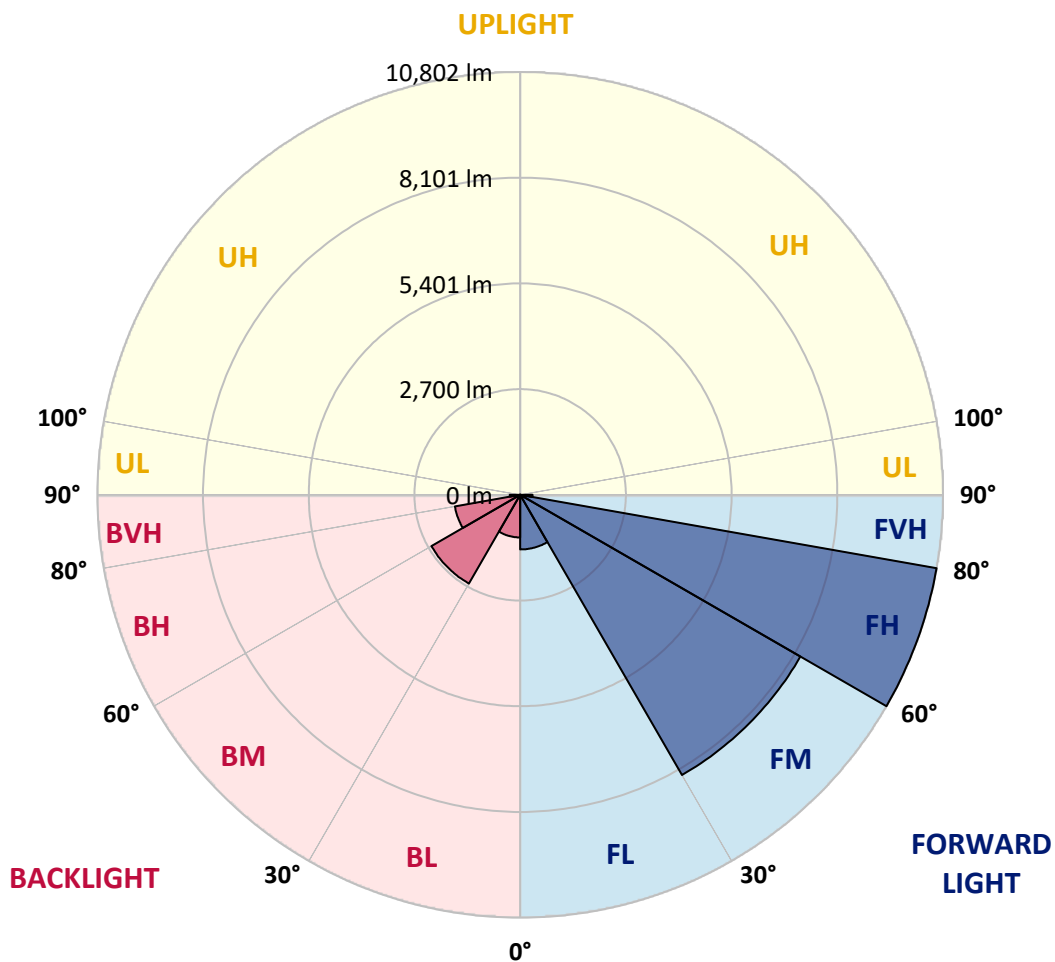
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1395.8	5.3			
FM	(30°-60°)	8265.8	31.3			
FH	(60°-80°)	10801.6	40.8			G4/12000
FVH	(80°-90°)	316.6	1.2			G3/500
BL	(0°-30°)	1088.5	4.1	B3/2500		
BM	(30°-60°)	2619.0	9.9	B3/5000		
BH	(60°-80°)	1693.6	6.4	B3/2500		G3/2500
BVH	(80°-90°)	267.1	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°	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1
2.5°	3337.1	3330.2	3333.6	3321.6	3292.5	3261.7	3261.7	3229.1	3194.8	3160.5	3122.8
5°	3544.5	3534.2	3525.6	3487.9	3431.3	3367.9	3357.6	3292.5	3222.2	3152.0	3083.4
7.5°	3717.6	3707.3	3681.6	3613.0	3530.8	3436.5	3424.5	3338.8	3246.2	3148.5	3052.6
10°	3841.0	3834.1	3784.4	3697.0	3601.0	3489.6	3469.0	3381.6	3271.9	3150.3	3028.6
12.5°	3909.5	3899.3	3839.3	3736.4	3623.3	3510.2	3489.6	3405.6	3280.5	3146.8	3004.6
15°	3882.1	3877.0	3820.4	3715.9	3602.7	3505.0	3487.9	3402.2	3275.4	3134.8	2982.3
17.5°	3765.6	3777.6	3733.0	3630.2	3537.6	3469.0	3450.2	3369.6	3249.7	3105.7	2948.0
20°	3604.5	3618.2	3595.9	3491.3	3438.2	3393.6	3383.4	3318.2	3206.8	3062.8	2906.9
22.5°	3433.1	3445.1	3446.8	3349.1	3331.9	3314.8	3306.2	3259.9	3169.1	3037.1	2879.4
25°	3314.8	3328.5	3331.9	3246.2	3256.5	3261.7	3259.9	3227.4	3162.2	3037.1	2882.9
27.5°	3283.9	3290.8	3287.4	3208.5	3227.4	3256.5	3258.2	3251.4	3189.7	3071.4	2930.9
30°	3390.2	3393.6	3350.8	3232.5	3251.4	3289.1	3290.8	3287.4	3247.9	3160.5	3038.8
32.5°	3849.5	3846.1	3698.7	3393.6	3328.5	3342.2	3347.4	3378.2	3381.6	3307.9	3194.8
35°	4548.8	4547.1	4375.7	3854.7	3547.9	3475.9	3482.8	3530.8	3573.6	3523.9	3458.8
37.5°	5318.4	5323.5	5219.0	4512.8	4020.9	3721.0	3714.1	3750.1	3827.3	3844.4	3853.0
40°	6172.0	6197.7	6192.5	5268.7	4684.2	4139.2	4070.6	4029.5	4178.6	4272.9	4394.6
42.5°	7147.2	7140.3	7143.8	6098.3	5441.8	4797.4	4670.5	4478.6	4651.7	4814.5	5081.9
45°	7985.3	8012.7	8033.3	6980.9	6290.2	5549.8	5421.2	5071.6	5227.6	5470.9	5878.9
47.5°	8828.6	8780.6	8818.3	7963.0	7234.6	6408.5	6242.2	5770.9	5916.6	6259.4	6879.8
50°	9810.7	9788.4	9617.0	9245.1	8376.1	7279.2	7061.5	6501.0	6713.6	7171.2	8115.6
52.5°	10691.7	10571.7	10438.0	10252.9	9498.7	8160.1	7884.2	7260.3	7651.1	8218.4	9649.6
55°	11013.9	10933.3	11094.4	11334.4	10686.5	9058.3	8749.7	8146.4	8708.6	9416.5	11454.4
57.5°	11356.7	11384.1	11747.5	12232.5	11810.9	10016.4	9682.1	9195.4	9869.0	10756.8	13471.7
60°	11528.1	11637.8	12362.8	13272.9	12880.4	11067.0	10746.5	10400.3	11156.1	12237.6	15483.9
62.5°	11557.2	11704.6	12731.3	13638.0	14352.7	12676.4	12306.2	11930.9	12763.8	13874.5	16940.7
65°	11022.5	11248.7	12698.7	14087.0	15694.7	15365.6	15130.8	14476.1	14916.6	15315.9	17189.3
67.5°	9450.8	9697.6	11442.4	13901.9	16771.1	18155.9	18111.4	17144.7	16579.1	15873.0	15346.8
70°	6936.4	7135.2	8811.5	11884.6	16301.4	20346.4	20425.2	18874.1	17043.6	14690.3	11411.5
71°	5609.8	5781.2	7361.4	10551.1	15386.2	20459.5	20624.0	18951.2	16560.2	13622.5	9553.6
72.5°	3491.3	3587.3	4888.2	7963.0	13248.9	19294.0	19571.7	17964.0	15038.3	11514.4	6753.0
75°	1318.0	1355.7	1813.4	3511.9	7908.2	14494.9	14830.9	13576.2	10564.8	6573.0	2826.3
77.5°	707.9	726.7	899.8	1460.3	3169.1	8309.3	8741.2	7743.7	5068.2	2300.1	1155.2
80°	474.8	486.8	622.2	865.5	1456.9	3164.0	3523.9	3109.1	1897.3	1312.9	822.7
82.5°	306.8	313.7	423.3	569.0	941.0	1112.4	1270.0	1326.6	1184.3	941.0	497.0
85°	202.2	207.4	279.4	363.4	582.7	548.5	562.2	735.3	807.3	620.5	253.7
87.5°	116.5	120.0	168.0	186.8	262.2	205.7	222.8	349.6	479.9	404.5	145.7
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°	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1	3145.1
2.5°	3105.7	3092.0	3061.1	3042.3	3033.7	3030.3	3026.8	3033.7	3033.7	3030.3	3023.4
5°	3049.1	3023.4	2972.0	2936.0	2917.2	2912.0	2918.9	2927.4	2932.6	2932.6	2927.4
7.5°	3008.0	2970.3	2901.7	2852.0	2822.9	2814.3	2833.2	2864.0	2884.6	2894.9	2896.6
10°	2973.7	2922.3	2846.9	2795.5	2771.5	2768.0	2792.0	2831.5	2874.3	2893.2	2896.6
12.5°	2942.9	2884.6	2802.3	2754.3	2737.2	2745.8	2778.3	2814.3	2864.0	2891.4	2893.2
15°	2913.7	2853.7	2766.3	2716.6	2713.2	2726.9	2757.8	2786.9	2824.6	2858.9	2858.9
17.5°	2879.4	2814.3	2723.5	2677.2	2677.2	2689.2	2709.8	2725.2	2749.2	2781.8	2780.0
20°	2838.3	2771.5	2678.9	2630.9	2620.6	2613.8	2613.8	2617.2	2637.8	2666.9	2672.1
22.5°	2807.5	2738.9	2641.2	2582.9	2536.7	2492.1	2473.2	2466.4	2485.2	2512.7	2519.5
25°	2807.5	2738.9	2629.2	2531.5	2418.4	2332.7	2296.7	2286.4	2305.3	2331.0	2341.3
27.5°	2853.7	2785.2	2656.6	2485.2	2277.8	2140.7	2097.9	2089.3	2106.5	2127.0	2137.3
30°	2961.7	2894.9	2735.5	2432.1	2121.9	1941.9	1893.9	1885.4	1893.9	1902.5	1914.5
32.5°	3141.7	3085.1	2864.0	2384.1	1964.2	1761.9	1703.7	1690.0	1693.4	1695.1	1705.4
35°	3434.8	3409.1	3035.4	2327.6	1815.1	1614.5	1554.6	1527.1	1525.4	1534.0	1546.0
37.5°	3883.8	3899.3	3256.5	2245.3	1691.7	1510.0	1450.0	1422.6	1408.9	1426.0	1439.7
40°	4518.0	4554.0	3511.9	2133.9	1590.6	1448.3	1384.9	1359.2	1340.3	1335.2	1342.0
42.5°	5342.4	5332.1	3772.4	1991.6	1480.9	1407.2	1340.3	1312.9	1282.0	1242.6	1234.0
45°	6319.4	6172.0	3990.1	1816.8	1355.7	1367.7	1299.2	1261.5	1213.5	1155.2	1148.4
47.5°	7472.9	7066.6	4123.8	1630.0	1239.2	1316.3	1252.9	1194.6	1124.4	1086.6	1081.5
50°	8862.9	8113.9	4218.0	1439.7	1134.6	1251.2	1187.8	1110.6	1042.1	1031.8	1030.1
52.5°	10508.3	9349.6	4334.6	1268.3	1052.4	1167.2	1122.6	1043.8	989.0	994.1	994.1
55°	12258.2	10628.2	4338.0	1132.9	980.4	1069.5	1074.7	1011.2	968.4	985.5	990.7
57.5°	13853.9	11745.7	3996.9	1036.9	911.8	992.4	1059.2	1023.2	990.7	1050.7	1055.8
60°	15245.6	12606.2	3263.4	958.1	855.3	963.2	1093.5	1096.9	1090.1	1252.9	1264.9
62.5°	15754.7	12614.7	2317.3	891.3	824.4	980.4	1165.5	1170.6	1170.6	1321.5	1343.7
65°	15041.7	11564.1	1542.6	851.8	803.8	1018.1	1223.8	1201.5	1148.4	1252.9	1228.9
67.5°	12529.0	9001.7	1127.8	826.1	774.7	1019.8	1275.2	1218.6	1127.8	1216.9	1175.8
70°	8610.9	5728.0	944.4	802.1	740.4	975.2	1302.6	1213.5	1096.9	1134.6	1079.8
71°	6931.2	4571.1	896.4	793.6	726.7	949.5	1306.0	1206.6	1081.5	1105.5	1055.8
72.5°	4566.0	2816.0	838.1	774.7	706.2	905.0	1297.5	1191.2	1060.9	1062.7	1030.1
75°	1801.4	1167.2	754.1	731.9	647.9	833.0	1259.8	1158.6	1021.5	987.2	973.5
77.5°	910.1	762.7	663.3	671.9	579.3	759.3	1206.6	1105.5	966.7	920.4	910.1
80°	665.0	579.3	567.3	582.7	502.2	687.3	1139.8	1033.5	896.4	944.4	923.8
82.5°	404.5	353.1	443.9	481.6	419.9	613.6	1060.9	949.5	807.3	743.9	719.9
85°	192.0	207.4	320.5	354.8	310.2	490.2	970.1	857.0	704.4	608.5	618.7
87.5°	94.3	114.8	183.4	212.5	204.0	359.9	731.9	665.0	555.3	457.6	447.3
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)