

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: P196830

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196830  
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-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 615mA 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: 23135.7 lumens  
Efficiency: N/A  
Efficacy: 119.9 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

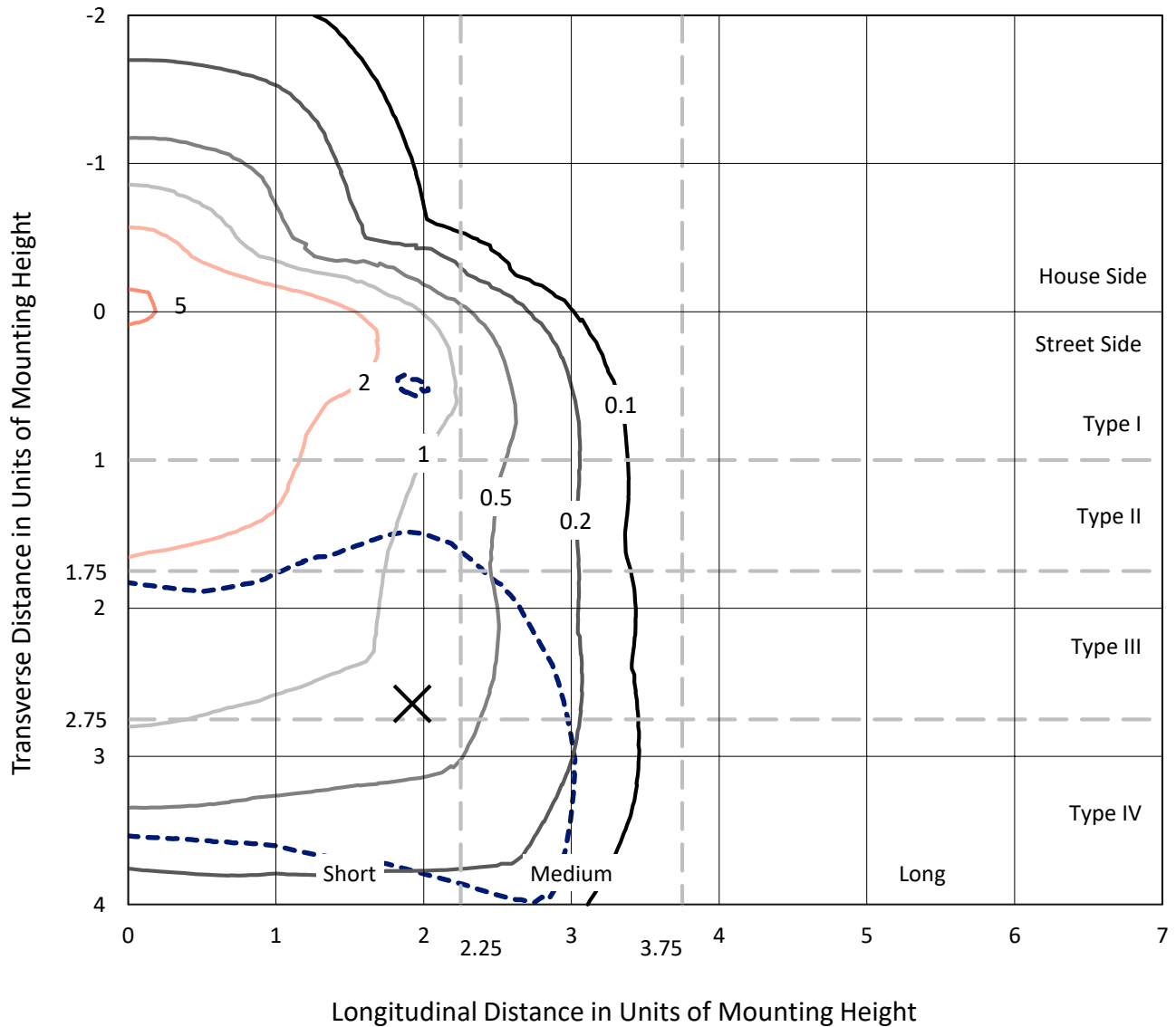
Input Watts (W): 193  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

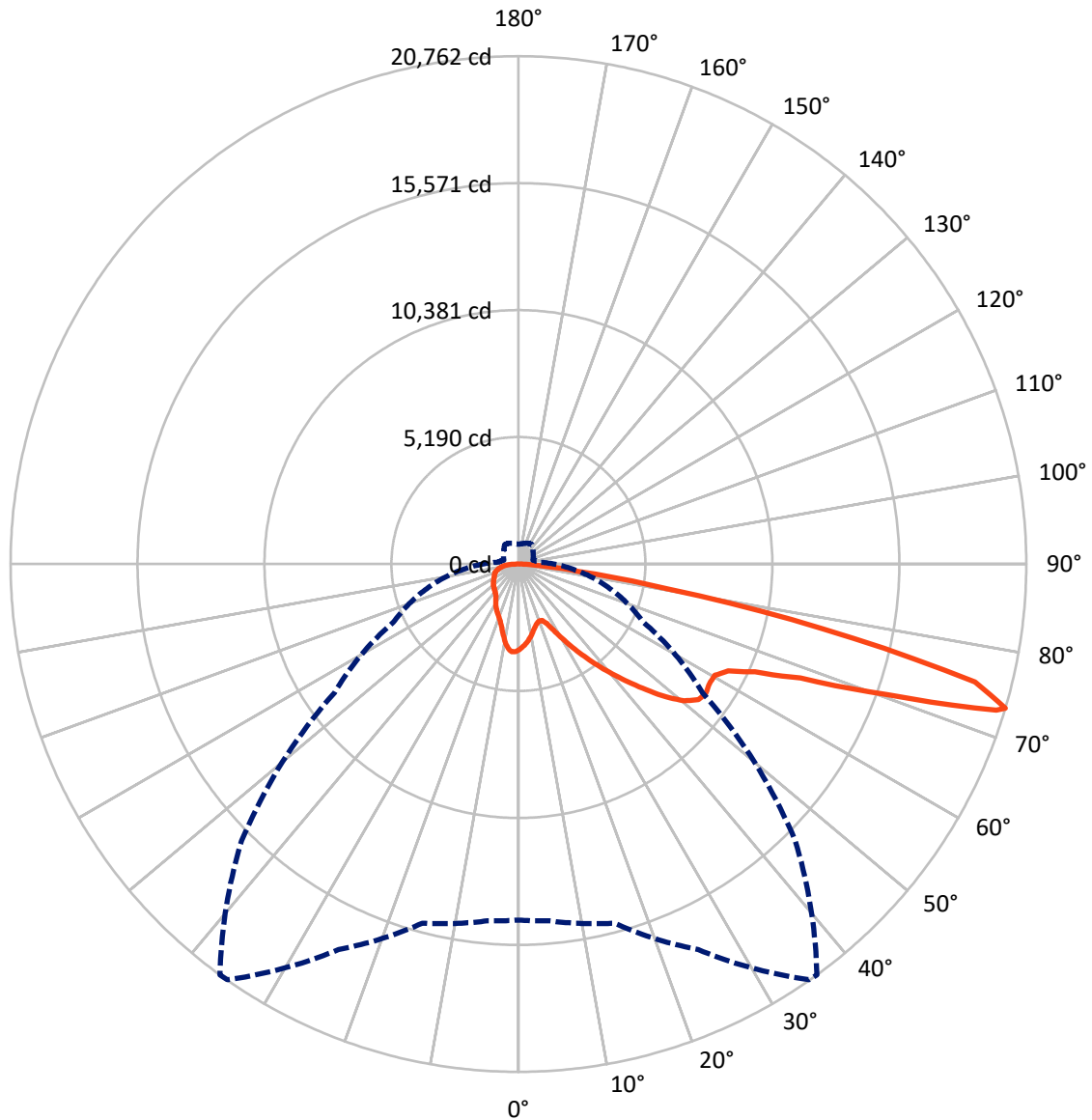
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4461.2	0.0	4461.2
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	18674.4	0.0	18674.4
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	23135.7	0.0	23135.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	318.3	1.4
10°-20°	799.4	3.5
20°-30°	1281.7	5.5
30°-40°	2120.0	9.2
40°-50°	3280.5	14.2
50°-60°	4391.5	19.0
60°-70°	5736.8	24.8
70°-80°	4685.9	20.3
80°-90°	521.6	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°	23135.7	100.0
0°-180°	23135.7	100.0



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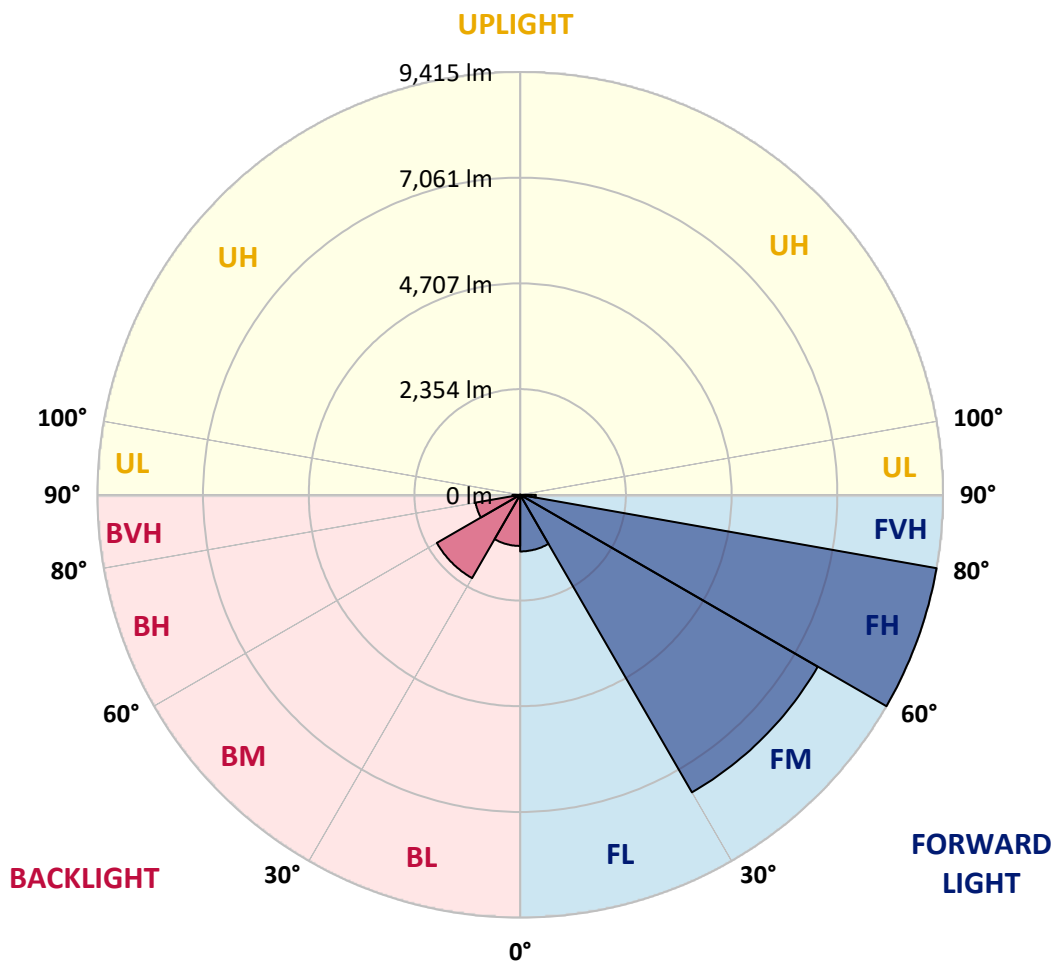
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1260.6	5.4			
FM	(30°-60°)	7649.5	33.1			
FH	(60°-80°)	9414.5	40.7			G4/12000
FVH	(80°-90°)	349.8	1.5			G3/500
BL	(0°-30°)	1138.8	4.9	B3/2500		
BM	(30°-60°)	2142.5	9.3	B2/2500		
BH	(60°-30°)	1008.1	4.4	B3/2500		G3/2500
BVH	(80°-90°)	171.8	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4
2.5°	3370.6	3379.4	3380.9	3391.2	3391.2	3389.8	3394.1	3411.7	3420.6	3441.1	3458.8
5°	3204.5	3214.9	3219.3	3236.8	3258.8	3260.4	3276.5	3310.3	3342.7	3388.2	3426.5
7.5°	3017.8	3029.5	3041.3	3078.1	3110.4	3113.4	3144.3	3198.7	3241.2	3297.1	3366.2
10°	2837.0	2839.9	2851.6	2898.7	2941.4	2945.8	2989.9	3051.6	3109.0	3186.9	3264.7
12.5°	2688.6	2697.4	2694.5	2729.8	2766.5	2769.4	2828.1	2906.1	2989.9	3078.1	3170.7
15°	2637.1	2635.7	2604.7	2603.3	2619.5	2622.4	2679.7	2770.9	2865.0	2973.7	3092.8
17.5°	2672.4	2660.6	2579.7	2529.8	2519.5	2522.5	2565.1	2665.1	2765.1	2889.9	3032.5
20°	2866.4	2820.8	2631.2	2510.7	2476.9	2476.9	2501.8	2582.7	2692.9	2838.4	3017.8
22.5°	3326.5	3255.9	2851.6	2637.1	2518.0	2506.3	2487.2	2548.9	2671.0	2845.8	3078.1
25°	3905.7	3871.8	3255.9	2973.7	2728.2	2690.1	2563.7	2585.6	2716.5	2925.2	3242.7
27.5°	4442.3	4383.4	3786.6	3463.2	3116.3	3057.5	2789.9	2700.4	2825.2	3072.3	3480.9
30°	4755.3	4715.6	4331.9	4023.3	3610.3	3535.2	3151.6	2926.7	3019.3	3314.7	3818.9
32.5°	5096.3	5072.8	4878.8	4598.0	4145.3	4058.6	3619.0	3295.7	3316.2	3636.7	4226.1
35°	5427.1	5457.9	5347.7	5142.0	4721.5	4640.7	4246.7	3777.7	3682.2	3998.3	4661.2
37.5°	5823.9	5831.2	5762.3	5628.5	5327.2	5261.0	4936.2	4292.2	4080.7	4383.4	5081.6
40°	6616.3	6500.2	6229.6	6123.9	5944.5	5903.4	5532.9	4764.1	4451.0	4778.8	5478.5
42.5°	7473.3	7292.5	6869.1	6695.6	6623.7	6585.4	6029.8	5078.7	4797.9	5174.3	5868.1
45°	8164.2	8017.1	7602.6	7388.0	7396.9	7335.1	6463.4	5359.5	5174.3	5571.1	6303.1
47.5°	8844.7	8599.2	8134.8	8103.9	8206.8	8115.7	6878.0	5640.2	5566.8	6003.4	6738.2
50°	8888.8	8665.4	8477.2	8724.3	8900.6	8787.4	7254.3	6007.7	5973.9	6526.6	7299.8
52.5°	8352.4	8320.0	8606.6	9022.6	9315.1	9213.8	7561.5	6385.5	6389.9	7180.7	7983.3
55°	8156.7	8115.7	8459.6	8971.2	9366.6	9306.2	7790.7	6811.8	6851.4	7974.5	8716.8
57.5°	8486.0	8383.1	8450.7	8874.1	9246.1	9210.8	8028.9	7285.1	7357.1	8888.8	9394.5
60°	9507.6	9297.5	8938.8	9018.1	9250.4	9229.9	8370.0	7812.8	7933.4	9841.3	9823.7
62.5°	11037.9	10799.7	10069.3	9716.4	9665.0	9625.3	8932.9	8461.0	8521.3	10529.4	9573.9
65°	12716.5	12460.8	11592.1	11014.4	10711.6	10626.3	9841.3	9243.2	8865.3	10527.7	8600.7
67.5°	14601.1	14330.7	13464.8	12913.6	12585.8	12440.3	11315.8	9875.2	8753.7	9637.0	6882.4
70°	16531.2	16273.9	15877.0	16069.6	16213.6	15991.6	13638.3	10085.4	7951.1	7555.6	4621.5
72.5°	15506.6	15486.0	15787.3	17613.0	20389.8	20433.8	15957.9	9491.5	6143.0	4490.7	2463.7
73°	14555.5	14642.3	15200.8	17385.3	20747.0	20761.7	16003.4	9184.4	5640.2	3869.0	2163.8
75°	7540.8	8128.9	10201.5	14096.8	19210.8	19280.0	14107.2	6952.9	3361.8	2149.1	1458.2
77.5°	2019.7	1993.2	3286.8	6867.6	12807.7	12716.5	8913.8	3366.2	1611.0	1347.9	1023.1
80°	692.3	701.1	1118.6	2512.2	5978.3	6191.5	3869.0	1468.5	1059.9	939.3	724.7
82.5°	352.8	364.6	585.1	1068.7	2500.4	2447.5	1245.0	864.4	709.9	570.4	405.7
85°	188.2	194.1	321.9	554.2	917.2	927.5	438.0	461.6	451.2	323.4	200.0
87.5°	92.7	95.5	154.4	243.9	339.6	327.8	152.9	200.0	222.1	182.3	110.3
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°	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4	3504.4
2.5°	3480.9	3480.9	3500.0	3532.4	3555.9	3577.9	3592.6	3616.1	3629.4	3627.9	3626.5
5°	3457.3	3472.0	3510.3	3550.0	3576.4	3594.1	3594.1	3604.4	3604.4	3599.9	3594.1
7.5°	3403.0	3427.9	3483.8	3519.1	3526.5	3507.3	3469.1	3439.7	3403.0	3383.9	3376.4
10°	3316.2	3348.6	3419.2	3435.3	3397.1	3329.4	3236.8	3157.5	3086.9	3054.6	3044.3
12.5°	3231.1	3273.6	3339.7	3314.7	3223.5	3091.3	2948.7	2839.9	2760.6	2729.8	2719.5
15°	3160.5	3211.9	3263.3	3185.4	3026.6	2842.9	2685.6	2584.2	2523.9	2500.4	2494.5
17.5°	3113.4	3173.7	3191.3	3045.7	2825.2	2619.5	2479.8	2413.6	2387.2	2376.9	2373.9
20°	3116.3	3184.0	3141.3	2910.5	2631.2	2423.9	2331.4	2312.3	2312.3	2312.3	2310.8
22.5°	3197.2	3255.9	3120.8	2784.2	2444.5	2259.4	2219.6	2235.8	2247.6	2247.6	2246.1
25°	3364.7	3397.1	3135.4	2662.1	2269.7	2116.8	2118.2	2149.1	2159.4	2159.4	2156.4
27.5°	3620.6	3594.1	3161.9	2526.8	2097.7	1987.4	2007.9	2035.9	2043.2	2038.8	2037.3
30°	3941.0	3835.1	3184.0	2368.0	1936.0	1866.8	1884.5	1900.7	1894.8	1884.5	1883.0
32.5°	4299.6	4080.7	3170.7	2190.2	1793.4	1741.9	1752.2	1761.0	1752.2	1727.2	1727.2
35°	4655.3	4302.5	3098.7	1996.1	1680.2	1621.4	1619.9	1647.8	1646.3	1616.9	1618.4
37.5°	4967.0	4477.5	2959.1	1818.3	1583.1	1533.1	1539.0	1556.7	1565.4	1525.8	1521.4
40°	5239.0	4598.0	2762.1	1667.0	1505.3	1508.3	1492.1	1464.1	1453.8	1436.1	1433.2
42.5°	5494.6	4681.8	2553.3	1540.5	1465.5	1499.4	1445.0	1378.9	1350.9	1367.1	1377.3
45°	5746.1	4775.9	2352.0	1436.1	1415.6	1473.0	1398.0	1324.4	1292.1	1299.4	1309.7
47.5°	6053.3	4906.8	2109.4	1324.4	1339.1	1424.4	1368.6	1289.1	1240.6	1211.2	1202.4
50°	6457.6	5096.3	1794.8	1203.9	1258.2	1371.4	1343.6	1237.7	1184.8	1126.0	1111.2
52.5°	6963.2	5275.7	1477.3	1106.9	1192.1	1325.9	1302.4	1193.6	1128.9	1058.4	1046.6
55°	7467.5	5300.7	1203.9	1023.1	1117.1	1264.1	1252.4	1158.3	1067.1	1009.9	998.1
57.5°	7820.1	5063.9	1020.2	952.5	1045.2	1187.7	1206.9	1115.6	1015.8	971.7	964.3
60°	7826.0	4498.1	908.4	905.5	990.8	1121.5	1159.8	1065.8	983.5	954.1	948.2
62.5°	7204.2	3624.9	836.4	870.2	951.1	1067.1	1124.5	1037.8	976.0	964.3	958.4
65°	6038.5	2678.3	779.1	837.9	914.3	1021.6	1095.1	1029.0	973.1	968.7	964.3
67.5°	4458.5	1836.0	730.6	796.7	873.2	974.6	1067.1	1015.8	955.5	973.1	967.3
70°	2804.6	1226.0	684.9	749.6	818.8	920.2	1030.5	992.2	933.4	923.1	904.0
72.5°	1583.1	886.4	630.7	689.4	748.2	848.2	980.5	952.5	883.5	842.3	823.2
73°	1430.3	839.3	617.5	674.6	732.0	833.4	968.7	940.7	868.7	823.2	805.6
75°	1046.6	686.4	557.1	614.5	664.4	765.8	912.9	881.9	804.0	749.6	737.9
77.5°	758.5	529.2	479.2	530.7	574.7	671.7	829.1	793.8	717.3	687.9	676.2
80°	546.9	401.3	396.9	446.9	485.1	583.6	739.3	702.6	629.2	715.8	696.7
82.5°	326.3	257.2	291.0	346.9	386.6	489.5	642.3	599.8	529.2	535.1	455.7
85°	155.8	145.6	180.9	227.8	255.7	335.1	535.1	501.3	423.4	346.9	339.6
87.5°	69.1	66.1	86.8	101.4	136.7	201.4	366.0	324.8	307.2	183.8	144.0
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)