

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: P270556

Luminaire Tested: **NAV-AF-04-D-UNV-T4FT-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270556  
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-04-D-UNV-T4FT-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 1200mA 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: 23435.8 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-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

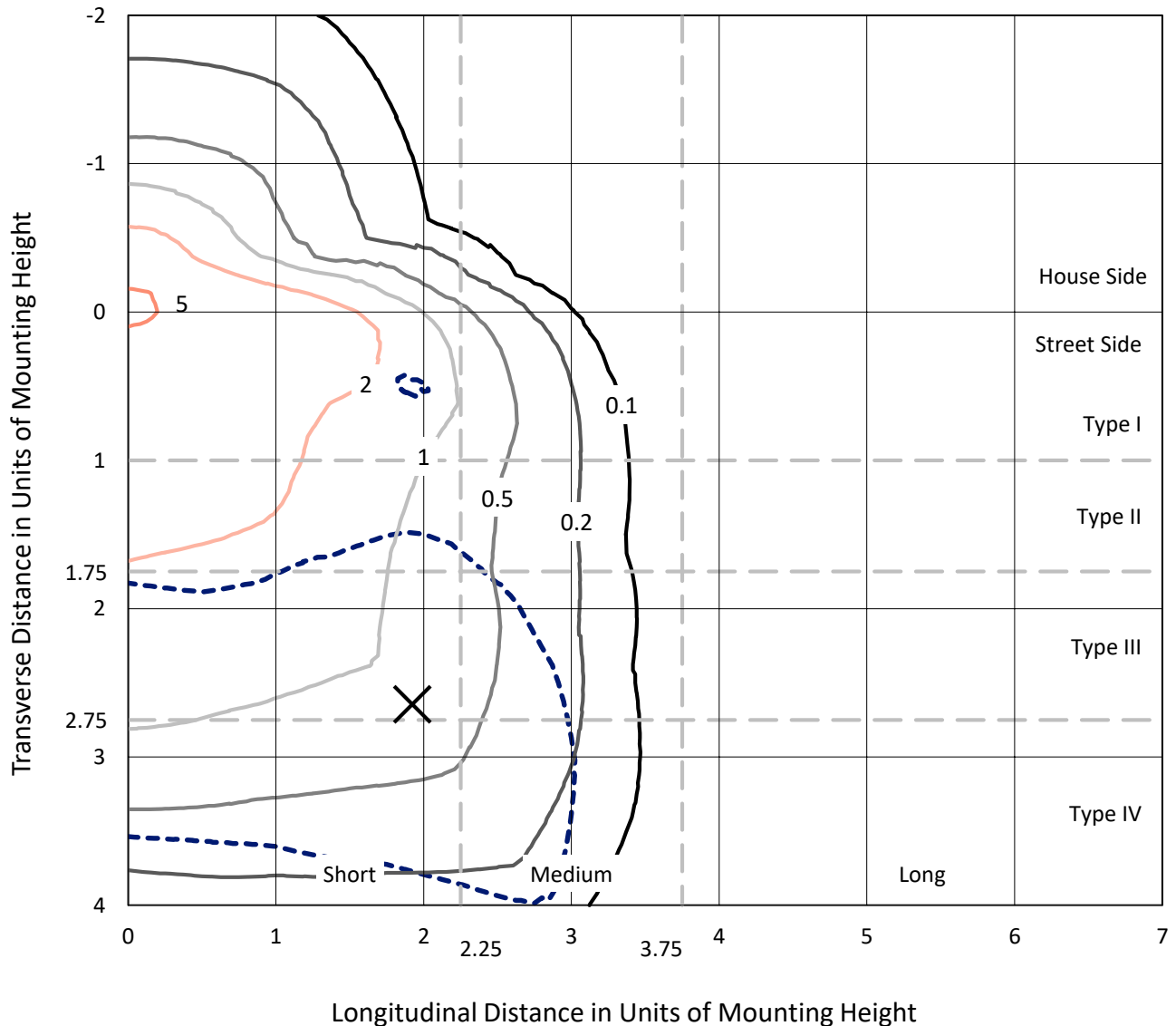


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### Iso-Footcandle Lines of Horizontal Illumination

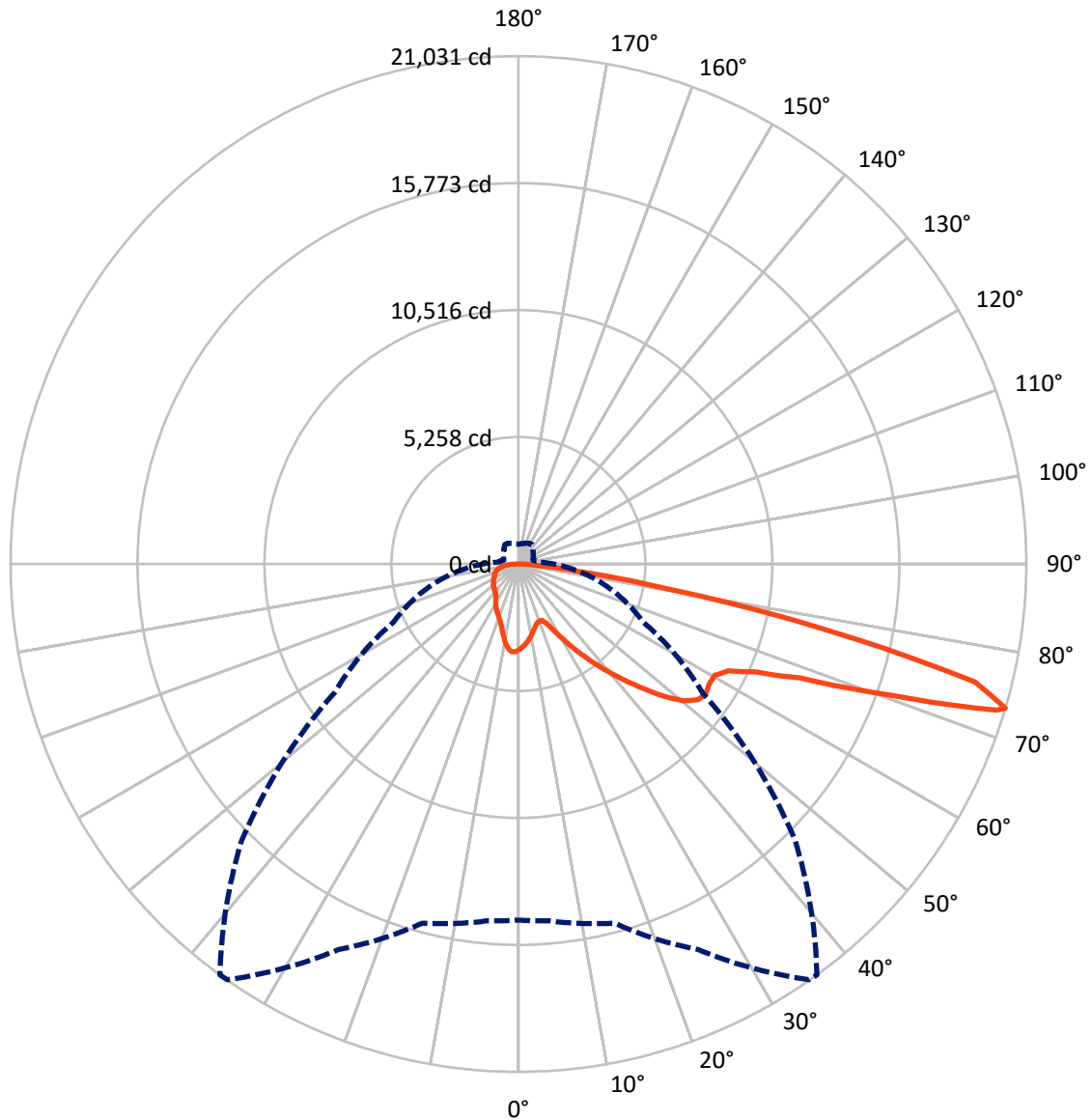
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 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	4519.1	0.0	4519.1
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	18916.7	0.0	18916.7
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	23435.8	0.0	23435.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	322.4	1.4
10°-20°	809.8	3.5
20°-30°	1298.3	5.5
30°-40°	2147.5	9.2
40°-50°	3323.0	14.2
50°-60°	4448.5	19.0
60°-70°	5811.2	24.8
70°-80°	4746.7	20.3
80°-90°	528.4	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°	23435.8	100.0
0°-180°	23435.8	100.0



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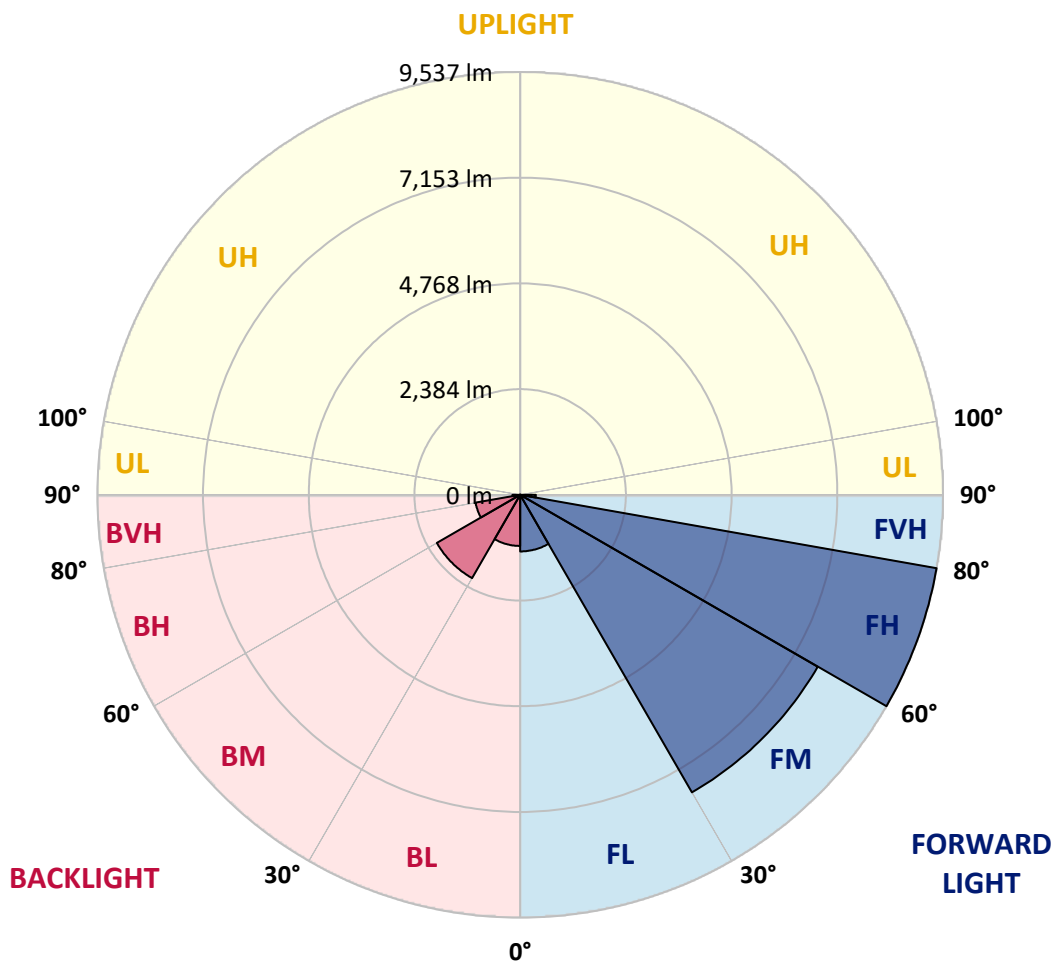
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1277.0	5.4			
FM (30°-60°)	7748.7	33.1			
FH (60°-80°)	9536.7	40.7			G4/12000
FVH (80°-90°)	354.3	1.5			G3/500
BL (0°-30°)	1153.6	4.9	B3/2500		
BM (30°-60°)	2170.3	9.3	B2/2500		
BH (60°-80°)	1021.2	4.4	B3/2500		G3/2500
BVH (80°-90°)	174.0	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°	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8
2.5°	3414.4	3423.4	3424.8	3435.2	3435.2	3433.7	3438.2	3456.0	3464.9	3485.9	3503.7
5°	3246.0	3256.4	3260.9	3278.9	3301.2	3302.7	3319.1	3353.4	3386.0	3432.2	3471.0
7.5°	3057.0	3068.9	3080.7	3118.0	3150.7	3153.8	3185.0	3240.1	3283.3	3339.9	3409.8
10°	2873.8	2876.8	2888.7	2936.4	2979.6	2984.0	3028.6	3091.2	3149.3	3228.1	3307.1
12.5°	2723.4	2732.4	2729.4	2765.2	2802.4	2805.3	2864.9	2943.8	3028.6	3118.0	3211.8
15°	2671.3	2669.9	2638.5	2637.1	2653.5	2656.4	2714.5	2806.8	2902.2	3012.2	3132.8
17.5°	2707.0	2695.2	2613.3	2562.7	2552.2	2555.1	2598.3	2699.5	2800.8	2927.4	3071.8
20°	2903.6	2857.5	2665.5	2543.2	2509.1	2509.1	2534.3	2616.3	2728.0	2875.4	3057.0
22.5°	3369.7	3298.1	2888.7	2671.3	2550.6	2538.8	2519.4	2582.0	2705.5	2882.8	3118.0
25°	3956.3	3922.1	3298.1	3012.2	2763.6	2724.9	2596.9	2619.2	2751.7	2963.1	3284.8
27.5°	4499.8	4440.3	3835.8	3508.2	3156.7	3097.1	2826.2	2735.3	2861.9	3112.1	3525.9
30°	4817.0	4776.7	4388.2	4075.5	3657.1	3581.2	3192.4	2964.6	3058.5	3357.8	3868.6
32.5°	5162.5	5138.7	4942.0	4657.7	4199.0	4111.3	3666.1	3338.5	3359.2	3683.9	4281.0
35°	5497.4	5528.8	5417.0	5208.6	4782.8	4700.9	4301.9	3826.8	3730.0	4050.2	4721.8
37.5°	5899.4	5907.0	5836.9	5701.5	5396.3	5329.3	5000.1	4347.9	4133.6	4440.3	5147.6
40°	6702.2	6584.4	6310.6	6203.2	6021.6	5979.9	5604.7	4826.0	4508.9	4840.8	5549.5
42.5°	7570.2	7387.0	6958.2	6782.6	6709.6	6670.9	6107.9	5144.7	4860.2	5241.4	5944.3
45°	8270.1	8121.1	7701.3	7483.9	7492.9	7430.2	6547.2	5428.9	5241.4	5643.4	6385.0
47.5°	8959.4	8710.9	8240.3	8209.0	8313.3	8220.8	6967.2	5713.4	5638.9	6081.2	6825.7
50°	9004.2	8777.8	8587.3	8837.3	9016.1	8901.5	7348.3	6085.7	6051.4	6611.3	7394.5
52.5°	8460.6	8427.9	8718.3	9139.6	9435.9	9333.2	7659.6	6468.3	6472.7	7273.8	8086.9
55°	8262.6	8220.8	8569.3	9087.6	9488.1	9427.1	7891.9	6900.2	6940.3	8078.0	8829.9
57.5°	8596.2	8491.9	8560.4	8989.2	9366.0	9330.2	8133.1	7379.7	7452.6	9004.2	9516.4
60°	9631.1	9418.1	9054.7	9135.3	9370.5	9349.6	8478.6	7914.2	8036.2	9969.0	9951.2
62.5°	11181.2	10939.9	10199.9	9842.5	9790.4	9750.2	9048.8	8570.9	8632.0	10665.9	9698.0
65°	12881.5	12622.5	11742.5	11157.3	10850.5	10764.2	9969.0	9363.0	8980.4	10664.4	8712.3
67.5°	14790.6	14516.5	13639.5	13081.1	12749.0	12601.7	11462.6	10003.3	8867.2	9762.2	6971.7
70°	16745.7	16485.1	16083.1	16278.0	16424.0	16199.1	13815.3	10216.2	8054.2	7653.6	4681.4
72.5°	15707.8	15686.9	15992.2	17841.5	20654.3	20698.9	16164.9	9614.6	6222.6	4548.9	2495.6
73°	14744.4	14832.3	15398.0	17610.7	21016.1	21031.1	16211.1	9303.4	5713.4	3919.1	2191.9
75°	7638.6	8234.4	10333.8	14279.7	19460.2	19530.1	14290.1	7043.2	3405.5	2177.0	1477.2
77.5°	2045.9	2019.1	3329.5	6956.7	12974.0	12881.5	9029.5	3409.8	1632.0	1365.5	1036.4
80°	701.3	710.3	1133.1	2544.8	6055.8	6271.7	3919.1	1487.6	1073.6	951.5	734.0
82.5°	357.3	369.3	592.6	1082.5	2532.9	2479.2	1261.2	875.6	719.3	577.7	411.0
85°	190.6	196.5	326.2	561.4	929.1	939.5	443.8	467.6	457.1	327.6	202.5
87.5°	93.9	96.7	156.3	247.2	344.1	332.1	154.9	202.5	224.8	184.6	111.7
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°	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8	3549.8
2.5°	3525.9	3525.9	3545.4	3578.0	3601.9	3624.3	3639.2	3663.0	3676.5	3675.0	3673.3
5°	3502.2	3517.0	3555.9	3596.1	3622.9	3640.7	3640.7	3651.2	3651.2	3646.6	3640.7
7.5°	3447.1	3472.4	3529.0	3564.7	3572.2	3552.8	3514.1	3484.3	3447.1	3427.8	3420.2
10°	3359.2	3392.0	3463.4	3479.9	3441.1	3372.6	3278.9	3198.4	3127.0	3094.2	3083.8
12.5°	3272.9	3316.1	3383.0	3357.8	3265.5	3131.4	2987.0	2876.8	2796.5	2765.2	2754.7
15°	3201.4	3253.5	3305.7	3226.7	3065.9	2879.7	2720.4	2617.8	2556.7	2532.9	2526.9
17.5°	3153.8	3214.9	3232.7	3085.3	2861.9	2653.5	2512.0	2444.9	2418.1	2407.7	2404.9
20°	3156.7	3225.3	3182.1	2948.2	2665.5	2455.3	2361.6	2342.2	2342.2	2342.2	2340.8
22.5°	3238.6	3298.1	3161.2	2820.1	2476.3	2288.6	2248.5	2264.7	2276.8	2276.8	2275.2
25°	3408.3	3441.1	3176.0	2696.6	2299.0	2144.3	2145.7	2177.0	2187.5	2187.5	2184.4
27.5°	3667.5	3640.7	3202.8	2559.6	2124.9	2013.2	2034.0	2062.2	2069.8	2065.4	2063.8
30°	3992.1	3884.9	3225.3	2398.8	1961.1	1891.0	1909.0	1925.2	1919.4	1909.0	1907.5
32.5°	4355.4	4133.6	3211.8	2218.6	1816.6	1764.5	1775.0	1783.9	1775.0	1749.5	1749.5
35°	4715.7	4358.3	3138.9	2022.2	1702.0	1642.5	1640.9	1669.2	1667.8	1637.9	1639.4
37.5°	5031.4	4535.6	2997.5	1842.0	1603.7	1553.1	1559.0	1576.9	1585.8	1545.7	1541.1
40°	5306.8	4657.7	2798.0	1688.5	1524.8	1527.7	1511.4	1483.1	1472.6	1454.7	1451.8
42.5°	5566.0	4742.5	2586.4	1560.4	1484.5	1518.9	1463.7	1396.8	1368.4	1384.7	1395.2
45°	5820.6	4837.8	2382.5	1454.7	1434.0	1492.1	1416.1	1341.6	1308.9	1316.2	1326.7
47.5°	6131.8	4970.4	2136.8	1341.6	1356.5	1442.9	1386.3	1305.9	1256.8	1226.9	1218.0
50°	6541.3	5162.5	1818.1	1219.4	1274.7	1389.3	1361.0	1253.8	1200.1	1140.6	1125.7
52.5°	7053.5	5344.1	1496.4	1121.3	1207.6	1343.1	1319.3	1209.1	1143.6	1072.0	1060.2
55°	7564.3	5369.3	1219.4	1036.4	1131.7	1280.5	1268.6	1173.4	1081.0	1023.0	1011.0
57.5°	7921.7	5129.7	1033.4	964.9	1058.7	1203.1	1222.6	1130.2	1028.9	984.3	976.7
60°	7927.6	4556.5	920.3	917.2	1003.5	1136.1	1174.9	1079.6	996.2	966.3	960.4
62.5°	7297.7	3671.9	847.2	881.4	963.4	1081.0	1139.1	1051.2	988.8	976.7	970.9
65°	6116.9	2713.1	789.3	848.8	926.2	1034.8	1109.3	1042.4	985.7	981.3	976.7
67.5°	4516.1	1859.9	740.1	807.0	884.6	987.2	1081.0	1028.9	967.8	985.7	979.8
70°	2841.1	1241.8	693.9	759.3	829.3	932.1	1043.8	1005.2	945.6	935.1	915.7
72.5°	1603.7	897.9	638.8	698.3	757.9	859.1	993.2	964.9	894.9	853.2	833.8
73°	1448.8	850.2	625.4	683.5	741.6	844.2	981.3	953.0	880.0	833.8	816.0
75°	1060.2	695.4	564.3	622.4	673.0	775.7	924.6	893.5	814.6	759.3	747.5
77.5°	768.3	536.1	485.4	537.5	582.2	680.5	839.8	804.1	726.6	696.8	685.0
80°	554.0	406.6	402.0	452.7	491.5	591.2	748.9	711.7	637.3	725.1	705.8
82.5°	330.5	260.6	294.9	351.3	391.7	495.9	650.7	607.6	536.1	541.9	461.5
85°	157.8	147.4	183.2	230.9	259.2	339.5	541.9	507.7	428.9	351.3	344.1
87.5°	70.0	67.1	87.9	102.8	138.5	203.9	370.8	329.0	311.3	186.0	146.0
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)