

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: P270540

Luminaire Tested: **NAV-AF-04-D-UNV-T2-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270540  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
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-T2-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22760.6 lumens  
Efficiency: N/A  
Efficacy: 88.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

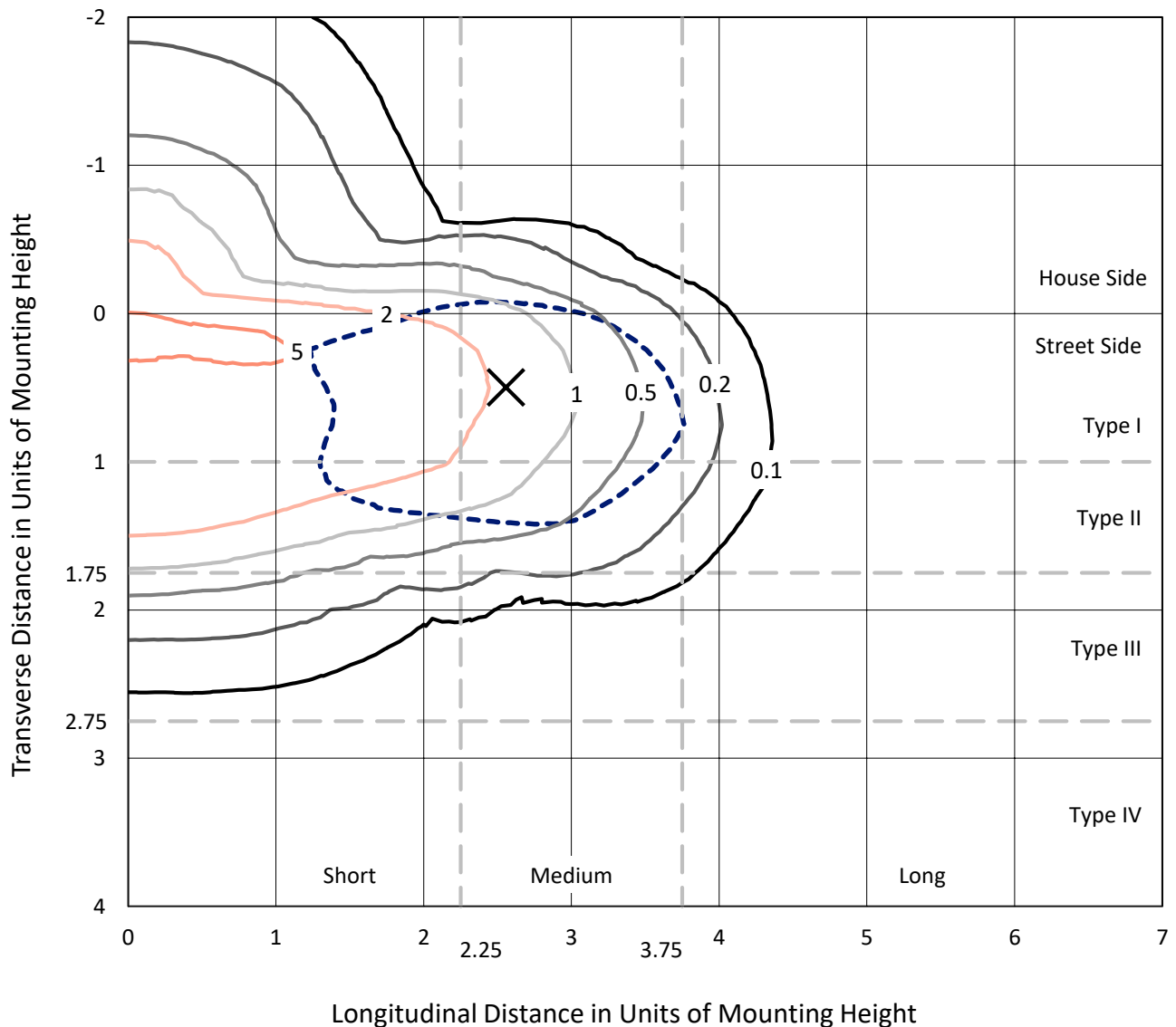
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

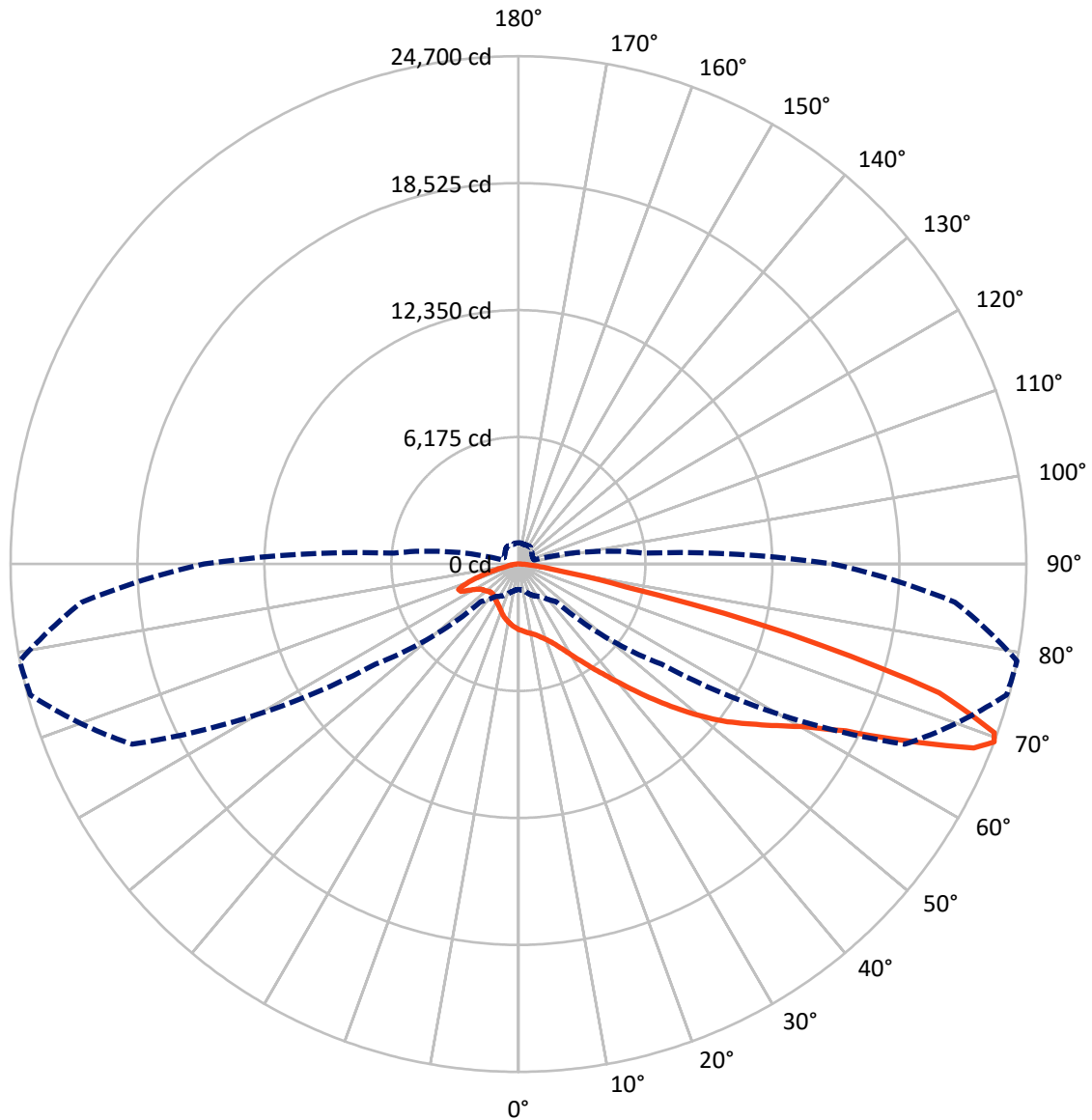
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.2 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4281.7	0.0	4281.7
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	18478.9	0.0	18478.9
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	22760.6	0.0	22760.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.1	1.3
10°-20°	848.9	3.7
20°-30°	1402.8	6.2
30°-40°	2271.4	10.0
40°-50°	3628.6	15.9
50°-60°	5196.6	22.8
60°-70°	5789.8	25.4
70°-80°	2896.5	12.7
80°-90°	429.9	1.9
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°	22760.6	100.0
0°-180°	22760.6	100.0



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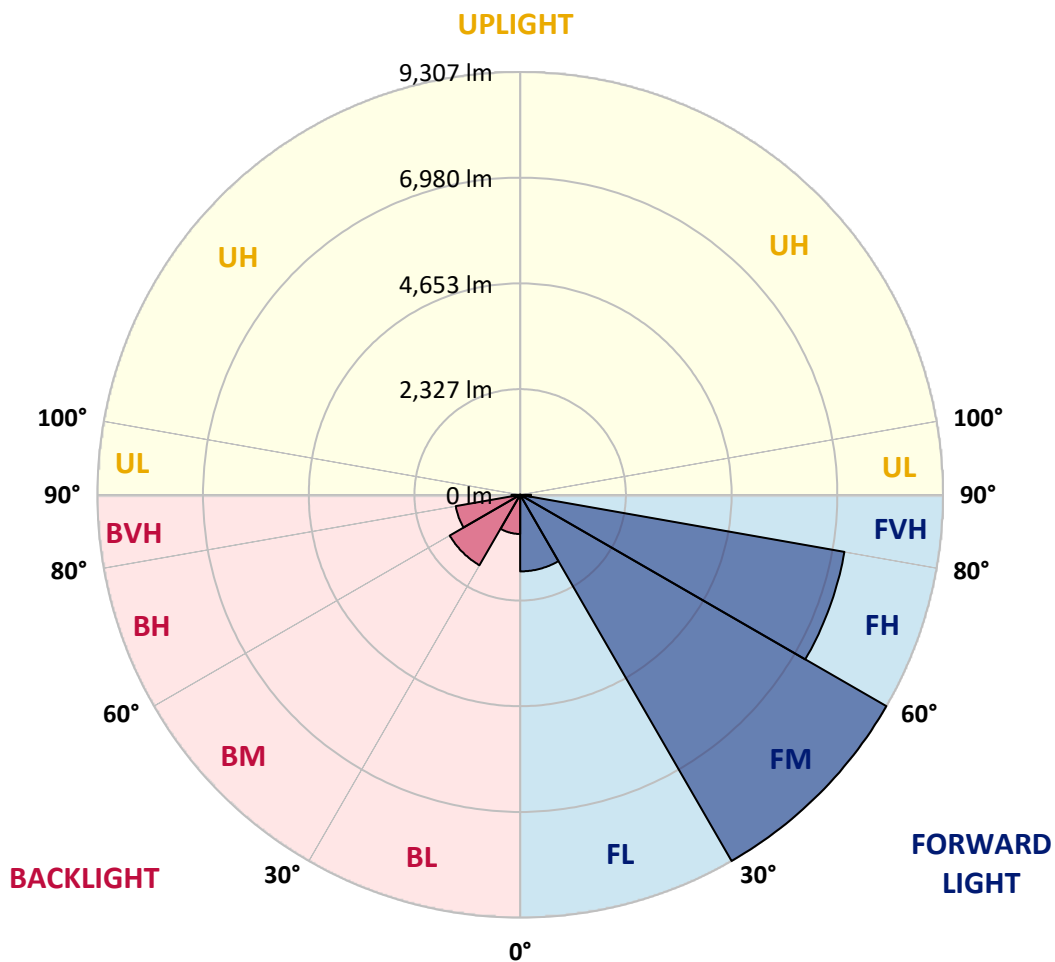
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1685.2	7.4			
FM (30°-60°)	9306.8	40.9			
FH (60°-80°)	7246.6	31.8			G3/7500
FVH (80°-90°)	240.2	1.1			G3/500
BL (0°-30°)	862.6	3.8	B2/1000		
BM (30°-60°)	1789.8	7.9	B2/2500		
BH (60°-80°)	1439.7	6.3	B3/2500		G3/2500
BVH (80°-90°)	189.7	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1
2.5°	3506.8	3499.3	3497.8	3475.5	3463.5	3438.3	3378.6	3317.6	3261.0	3231.3	3200.0
5°	3800.1	3785.2	3777.7	3740.5	3707.8	3651.3	3557.4	3460.6	3359.3	3307.2	3244.7
7.5°	3977.2	3978.8	3978.8	3948.9	3916.3	3847.7	3728.5	3596.1	3445.7	3377.2	3279.0
10°	3992.2	3993.7	4016.1	4023.4	4030.9	3995.1	3884.9	3718.2	3524.6	3435.3	3307.2
12.5°	3844.7	3855.2	3892.4	3946.1	4021.9	4060.7	4013.0	3849.1	3625.9	3517.1	3360.7
15°	3646.7	3657.1	3704.8	3786.6	3908.7	4038.3	4105.3	3999.7	3758.4	3630.3	3439.7
17.5°	3549.9	3561.8	3594.6	3660.1	3779.2	3953.4	4154.5	4160.4	3914.8	3767.3	3533.6
20°	3503.7	3512.7	3554.4	3608.0	3698.9	3865.5	4159.0	4330.2	4100.9	3929.6	3648.1
22.5°	3609.5	3612.4	3633.3	3663.1	3724.2	3852.2	4156.0	4505.9	4333.2	4133.6	3795.6
25°	3919.1	3899.8	3884.9	3847.7	3862.6	3953.4	4203.6	4693.6	4630.9	4401.6	3992.2
27.5°	4285.5	4282.5	4243.9	4157.4	4102.4	4160.4	4339.2	4903.5	4995.7	4742.6	4249.8
30°	4693.6	4695.0	4654.7	4549.0	4437.4	4443.3	4555.0	5146.2	5432.1	5153.7	4567.0
32.5°	5120.9	5147.6	5073.2	4967.4	4832.1	4788.9	4864.7	5439.5	5936.9	5639.1	4934.7
35°	5631.7	5636.1	5554.2	5399.4	5263.8	5195.3	5265.2	5805.8	6519.1	6209.4	5383.0
37.5°	6161.7	6164.7	6079.8	5881.7	5710.5	5665.9	5743.4	6251.0	7135.5	6858.6	5910.0
40°	6595.0	6626.3	6559.3	6373.1	6200.5	6173.6	6285.4	6784.1	7923.3	7626.9	6537.0
42.5°	7086.4	7122.1	7041.8	6848.1	6711.1	6702.3	6876.4	7391.7	8706.6	8515.9	7247.3
45°	7640.4	7691.0	7579.3	7361.9	7245.8	7442.3	7452.7	8064.8	9608.9	9510.5	8046.8
47.5°	8245.0	8286.5	8195.7	7961.9	7835.5	8119.8	8017.1	8792.9	10584.2	10576.7	8912.1
50°	8711.0	8757.1	8766.1	8663.3	8530.8	8566.5	8636.6	9558.2	11556.5	11672.8	9806.9
52.5°	8626.2	8670.8	8871.8	9141.3	9354.2	9262.0	9346.9	10371.3	12496.1	12741.9	10657.2
55°	7941.1	7964.9	8341.8	8982.1	9888.8	10329.6	10335.4	11255.8	13389.5	13733.6	11464.2
57.5°	6706.7	6709.7	7199.6	8143.7	9577.5	11022.1	11896.1	12366.5	14321.8	14829.5	12464.9
60°	4745.7	4757.6	5327.8	6562.3	8462.4	10938.7	13574.3	14354.5	15401.4	16060.9	13754.4
62.5°	2817.4	2844.2	3274.4	4264.7	6285.4	9866.4	14565.9	17891.1	16991.6	17867.2	15818.3
65°	1833.0	1855.4	2113.0	2610.4	3713.8	7178.7	14239.8	21315.8	20001.0	20708.3	18784.5
67.5°	1411.6	1429.6	1632.0	1932.9	2278.2	3880.5	11385.3	22033.5	23664.1	23884.5	21287.6
69°	1240.4	1255.3	1404.2	1693.0	1917.9	2568.7	8484.6	20730.6	24579.9	24700.4	21318.8
70°	1149.6	1161.5	1301.5	1551.6	1761.5	2050.4	6493.8	19217.8	24244.8	24553.1	20703.9
72.5°	947.1	957.5	1057.2	1249.4	1440.0	1460.7	2876.8	14032.9	20414.9	21400.7	17520.3
75°	790.7	796.6	862.2	1002.1	1165.9	1162.9	1469.6	7948.7	12457.4	13632.3	10818.0
77.5°	659.6	664.0	707.2	793.7	920.3	915.7	1034.8	3430.7	5500.6	5306.9	3724.2
80°	582.2	585.2	607.6	629.9	710.3	705.8	766.9	1575.4	2238.0	2068.3	1408.6
82.5°	442.2	448.3	561.4	571.9	550.9	531.5	534.6	917.3	1146.5	1043.8	756.5
85°	250.2	251.6	360.4	421.5	479.4	360.4	346.9	473.5	565.8	495.9	330.5
87.5°	111.7	116.2	172.7	199.6	259.2	211.5	198.0	201.0	244.2	202.5	131.1
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°	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1	3194.1
2.5°	3170.2	3144.8	3085.3	3024.2	2963.1	2924.5	2884.3	2847.1	2832.1	2830.6	2802.4
5°	3183.7	3124.0	2988.5	2839.6	2698.1	2587.9	2495.6	2436.2	2378.1	2367.7	2342.3
7.5°	3188.1	3091.2	2871.0	2632.7	2416.7	2264.8	2172.6	2132.3	2104.0	2096.6	2087.7
10°	3186.6	3049.6	2739.9	2413.7	2168.1	2053.4	2019.2	2028.2	2040.1	2046.0	2046.0
12.5°	3210.5	3030.3	2608.8	2208.3	2007.3	1952.1	1979.0	2025.0	2060.8	2075.8	2078.7
15°	3253.7	3018.3	2464.4	2029.6	1894.0	1907.6	1972.9	2040.1	2090.6	2113.0	2118.9
17.5°	3307.2	3002.0	2297.7	1882.2	1828.6	1874.8	1959.7	2044.5	2105.5	2133.8	2138.2
20°	3366.8	2978.2	2124.9	1771.9	1770.5	1828.6	1913.4	2008.7	2074.2	2105.5	2104.0
22.5°	3447.2	2955.8	1964.1	1691.6	1706.5	1760.0	1830.0	1916.4	1977.4	2005.7	1999.7
25°	3554.4	2934.9	1819.6	1620.2	1633.5	1669.2	1718.4	1783.9	1827.1	1842.0	1831.6
27.5°	3698.9	2918.6	1706.5	1554.5	1553.1	1569.5	1599.3	1634.9	1655.8	1651.4	1634.9
30°	3875.9	2902.2	1623.1	1496.4	1475.6	1474.2	1487.6	1508.4	1521.8	1495.0	1481.7
32.5°	4074.1	2873.9	1548.6	1445.9	1408.6	1395.2	1401.1	1429.6	1484.5	1457.8	1447.3
35°	4307.8	2841.1	1474.2	1390.8	1362.5	1337.1	1341.7	1402.8	1569.5	1550.1	1539.7
37.5°	4589.4	2811.3	1405.7	1331.2	1329.8	1298.5	1295.4	1368.5	1591.7	1550.1	1541.2
40°	4927.4	2805.3	1344.7	1265.7	1289.5	1277.6	1267.1	1311.9	1468.2	1383.3	1367.0
42.5°	5335.4	2832.1	1299.9	1203.2	1243.3	1271.6	1252.2	1262.7	1326.7	1250.8	1237.4
45°	5811.8	2905.2	1267.1	1148.0	1194.2	1267.1	1244.8	1235.9	1246.4	1204.6	1195.7
47.5°	6367.1	3034.7	1244.8	1102.0	1148.0	1255.3	1241.8	1224.0	1219.4	1195.7	1189.7
50°	6961.3	3208.9	1230.0	1060.2	1106.4	1234.5	1240.4	1215.0	1207.6	1197.3	1194.2
52.5°	7551.1	3398.0	1212.2	1024.4	1072.0	1209.1	1241.8	1206.2	1195.7	1189.7	1186.8
55°	8137.7	3594.6	1179.4	993.2	1046.9	1179.4	1240.4	1194.2	1182.3	1182.3	1182.3
57.5°	8898.6	3894.0	1136.1	967.8	1014.0	1140.6	1221.1	1180.8	1164.5	1165.9	1167.3
60°	9997.5	4395.6	1088.4	939.5	970.9	1095.9	1191.2	1156.9	1137.7	1143.6	1145.1
62.5°	11833.6	5272.7	1023.0	899.5	926.2	1048.3	1152.5	1124.1	1106.4	1116.9	1118.3
65°	14281.6	6334.5	936.7	848.8	880.0	994.8	1103.4	1085.5	1066.2	1091.5	1090.1
67.5°	15775.0	6645.7	845.8	795.2	835.3	938.1	1042.4	1034.8	1021.6	1066.2	1063.1
69°	15285.2	6082.9	793.7	761.0	804.2	899.5	1003.6	1000.6	990.2	1033.4	1030.4
70°	14524.2	5557.2	761.0	738.5	787.8	875.6	978.3	978.3	967.8	1005.2	997.7
72.5°	11666.7	4121.8	685.0	682.1	731.1	810.0	909.9	917.3	911.3	924.7	917.3
75°	6849.7	2483.8	610.5	619.4	662.6	740.1	833.8	839.8	833.8	832.4	833.8
77.5°	2375.1	1113.8	539.1	552.5	589.6	668.6	750.4	762.4	753.5	743.1	746.0
80°	929.1	647.8	461.5	481.0	512.3	588.2	667.1	674.5	661.2	659.6	647.8
82.5°	558.3	394.5	358.9	390.1	428.9	510.7	576.3	573.3	562.9	624.0	546.4
85°	242.7	218.8	262.0	293.3	312.7	382.7	486.9	473.5	448.3	394.5	385.6
87.5°	98.3	113.1	144.4	174.2	187.7	247.2	333.5	321.7	326.2	268.1	266.5
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)