

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: P195309

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7060-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195309  
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-03-D-UNV-T2-7060-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19450 lumens  
Efficiency: N/A  
Efficacy: 101.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 191  
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

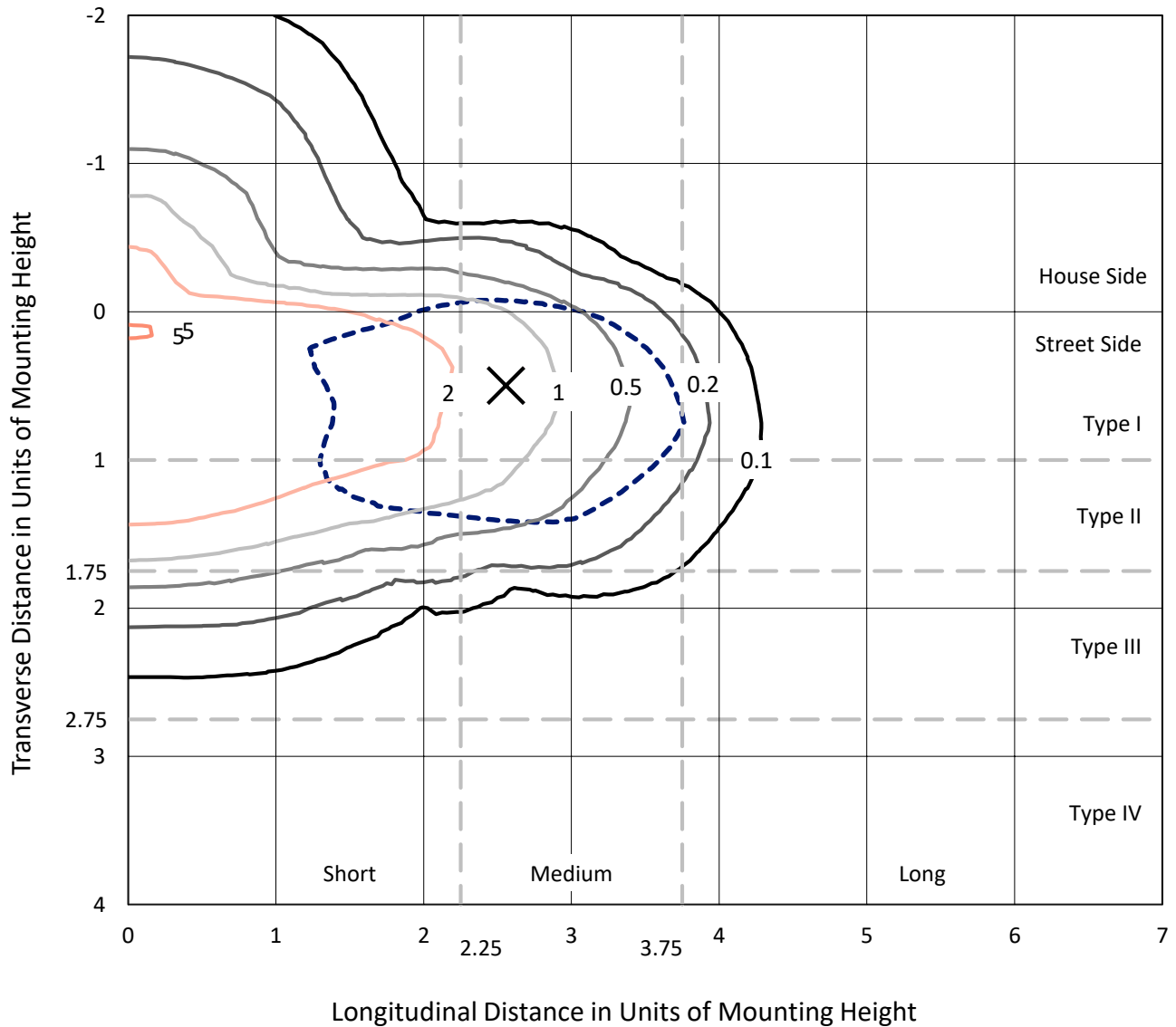


REPORT NUMBER: P195309

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-7060-1200

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

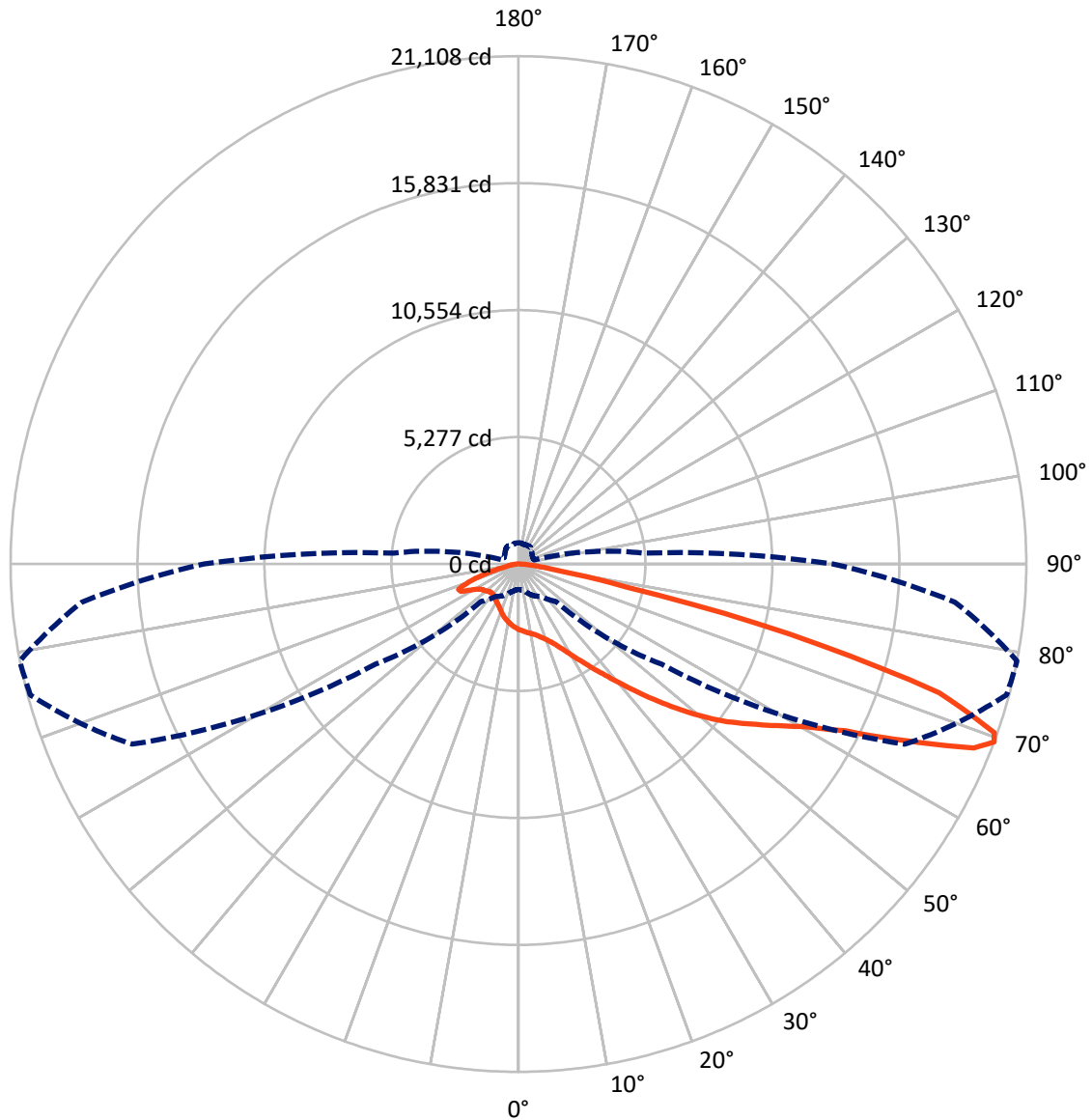


Based on 25 foot mounting height. Maximum calculated value = 5.3 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P195309

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-7060-1200

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P195309

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-7060-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3658.9	0.0	3658.9
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	15791.1	0.0	15791.1
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	19450.0	0.0	19450.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	253.0	1.3
10°-20°	725.4	3.7
20°-30°	1198.7	6.2
30°-40°	1941.1	10.0
40°-50°	3100.8	15.9
50°-60°	4440.7	22.8
60°-70°	4947.6	25.4
70°-80°	2475.2	12.7
80°-90°	367.3	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°	19450.0	100.0
0°-180°	19450.0	100.0



REPORT NUMBER: P195309

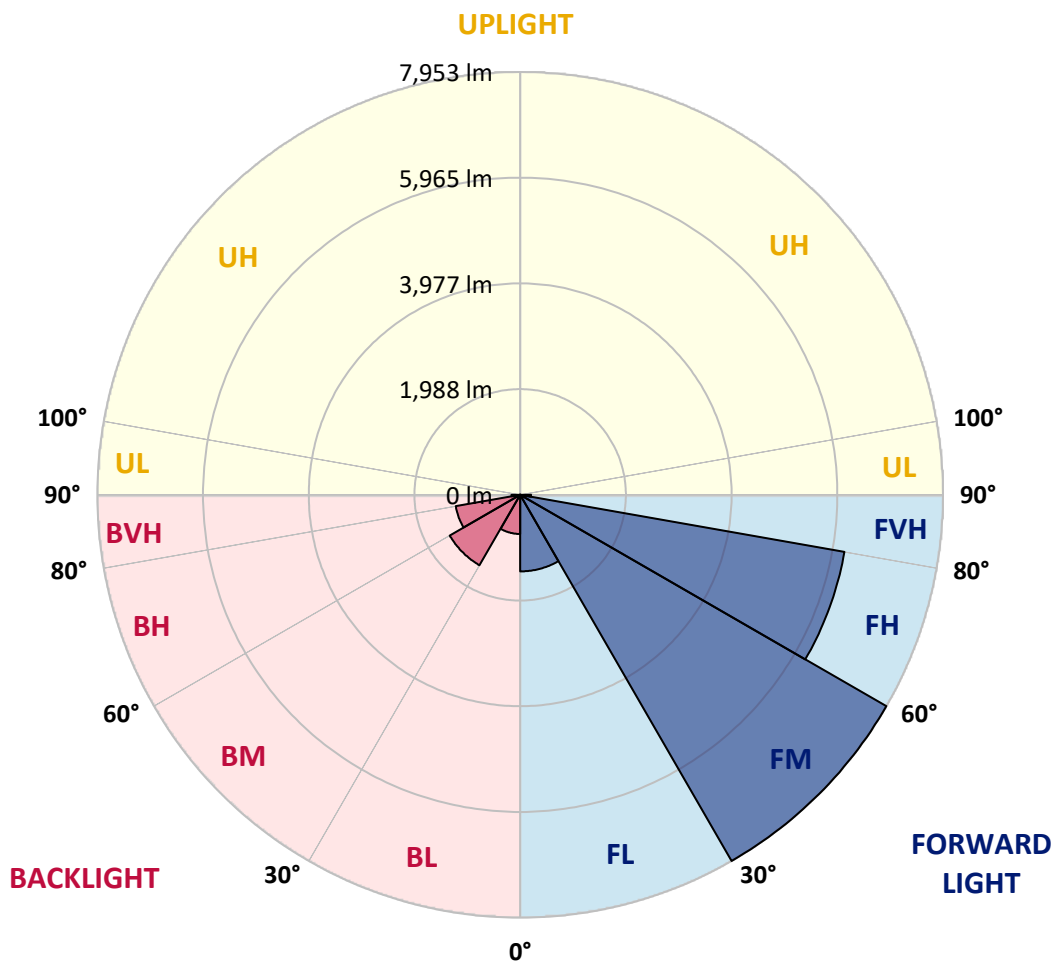
CATALOG NUMBER: NAV-AF-03-D-UNV-T2-7060-1200

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1440.1	7.4			
FM (30°-60°)	7953.1	40.9			
FH (60°-80°)	6192.6	31.8			G3/7500
FVH (80°-90°)	205.3	1.1			G2/225
BL (0°-30°)	737.1	3.8	B2/1000		
BM (30°-60°)	1529.5	7.9	B2/2500		
BH (60°-80°)	1230.2	6.3	B3/2500		G3/2500
BVH (80°-90°)	162.1	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





REPORT NUMBER: P195309

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-7060-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4
2.5°	2996.7	2990.3	2989.0	2969.9	2959.8	2938.1	2887.2	2835.1	2786.7	2761.3	2734.5
5°	3247.3	3234.6	3228.3	3196.4	3168.5	3120.1	3039.9	2957.2	2870.7	2826.2	2772.7
7.5°	3398.8	3400.0	3400.0	3374.6	3346.6	3288.1	3186.3	3073.0	2944.5	2886.0	2802.0
10°	3411.5	3412.8	3431.9	3438.2	3444.6	3414.0	3319.9	3177.4	3011.9	2935.6	2826.2
12.5°	3285.5	3294.4	3326.2	3372.0	3436.9	3470.0	3429.3	3289.3	3098.5	3005.6	2872.0
15°	3116.3	3125.2	3165.9	3235.9	3340.2	3450.9	3508.2	3417.9	3211.7	3102.3	2939.4
17.5°	3033.6	3043.7	3071.7	3127.7	3229.5	3378.4	3550.2	3555.3	3345.3	3219.4	3019.6
20°	2994.1	3001.8	3037.4	3083.2	3160.8	3303.3	3554.0	3700.3	3504.4	3358.1	3117.6
22.5°	3084.5	3087.0	3104.8	3130.3	3182.4	3291.9	3551.5	3850.5	3702.9	3532.4	3243.5
25°	3349.1	3332.6	3319.9	3288.1	3300.8	3378.4	3592.2	4010.8	3957.4	3761.4	3411.5
27.5°	3662.2	3659.6	3626.5	3552.7	3505.7	3555.3	3708.0	4190.2	4269.1	4052.8	3631.6
30°	4010.8	4012.1	3977.7	3887.4	3792.0	3797.1	3892.5	4397.7	4642.0	4404.0	3902.7
32.5°	4376.0	4398.9	4335.3	4245.0	4129.2	4092.3	4157.2	4648.3	5073.3	4818.8	4217.0
35°	4812.5	4816.3	4746.3	4614.0	4498.2	4439.7	4499.5	4961.4	5570.9	5306.2	4600.0
37.5°	5265.5	5268.0	5195.5	5026.3	4879.9	4841.8	4907.9	5341.8	6097.7	5861.0	5050.4
40°	5635.8	5662.5	5605.2	5446.2	5298.6	5275.7	5371.1	5797.4	6770.8	6517.6	5586.1
42.5°	6055.7	6086.2	6017.5	5852.1	5735.0	5727.4	5876.3	6316.5	7440.1	7277.3	6193.1
45°	6529.0	6572.3	6476.9	6291.1	6191.8	6359.8	6368.7	6891.7	8211.3	8127.3	6876.4
47.5°	7045.7	7081.3	7003.7	6803.9	6695.7	6938.8	6851.0	7513.9	9044.7	9038.4	7615.7
50°	7444.0	7483.4	7491.0	7403.2	7290.0	7320.5	7380.3	8168.0	9875.6	9974.9	8380.5
52.5°	7371.4	7409.6	7581.4	7811.7	7993.7	7914.8	7987.3	8862.8	10678.6	10888.5	9107.1
55°	6786.1	6806.4	7128.4	7675.5	8450.5	8827.1	8832.2	9618.6	11442.1	11736.0	9796.8
57.5°	5731.2	5733.8	6152.4	6959.1	8184.5	9418.8	10165.8	10567.9	12238.6	12672.5	10651.9
60°	4055.4	4065.5	4552.9	5607.8	7231.5	9347.6	11599.8	12266.6	13161.2	13724.9	11753.8
62.5°	2407.5	2430.4	2798.2	3644.4	5371.1	8431.4	12447.3	15288.7	14520.2	15268.4	13517.5
65°	1566.4	1585.5	1805.6	2230.6	3173.5	6134.6	12168.6	18215.4	17091.8	17696.3	16052.2
67.5°	1206.3	1221.6	1394.6	1651.7	1946.9	3316.1	9729.3	18828.7	20222.1	20410.4	18191.2
69°	1060.0	1072.7	1199.9	1446.8	1638.9	2195.0	7250.5	17715.3	21004.7	21107.7	18218.0
70°	982.3	992.5	1112.1	1325.9	1505.3	1752.2	5549.2	16422.5	20718.4	20981.8	17692.4
72.5°	809.3	818.2	903.5	1067.6	1230.5	1248.3	2458.4	11991.8	17445.6	18287.9	14971.9
75°	675.7	680.8	736.8	856.4	996.3	993.8	1255.9	6792.4	10645.5	11649.5	9244.5
77.5°	563.7	567.5	604.4	678.2	786.4	782.6	884.4	2931.8	4700.5	4535.1	3182.4
80°	497.5	500.1	519.2	538.3	607.0	603.2	655.3	1346.3	1912.5	1767.5	1203.8
82.5°	377.9	383.0	479.7	488.6	470.8	454.3	456.8	783.8	979.8	892.0	646.4
85°	213.8	215.0	307.9	360.1	409.7	307.9	296.5	404.6	483.5	423.7	282.5
87.5°	95.4	99.3	147.6	170.5	221.4	180.7	169.2	171.8	208.7	173.1	112.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195309

CATALOG NUMBER: NAV-AF-03-D-UNV-T2-7060-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4	2729.4
2.5°	2709.1	2687.5	2636.6	2584.4	2532.2	2499.1	2464.8	2433.0	2420.2	2419.0	2394.8
5°	2720.5	2669.6	2553.8	2426.6	2305.7	2211.6	2132.7	2081.8	2032.1	2023.2	2001.6
7.5°	2724.4	2641.6	2453.3	2249.7	2065.2	1935.4	1856.5	1822.2	1798.0	1791.6	1784.0
10°	2723.1	2606.0	2341.3	2062.7	1852.7	1754.7	1725.5	1733.1	1743.3	1748.4	1748.4
12.5°	2743.4	2589.5	2229.4	1887.1	1715.3	1668.2	1691.1	1730.6	1761.1	1773.8	1776.4
15°	2780.3	2579.3	2105.9	1734.4	1618.6	1630.0	1686.0	1743.3	1786.5	1805.6	1810.7
17.5°	2826.2	2565.3	1963.4	1608.4	1562.6	1602.0	1674.6	1747.1	1799.3	1823.5	1827.3
20°	2877.1	2544.9	1815.8	1514.2	1513.0	1562.6	1635.1	1716.6	1772.6	1799.3	1798.0
22.5°	2945.8	2525.9	1678.4	1445.5	1458.3	1504.1	1563.9	1637.7	1689.8	1714.0	1708.9
25°	3037.4	2508.0	1555.0	1384.4	1395.9	1426.4	1468.4	1524.4	1561.3	1574.0	1565.1
27.5°	3160.8	2494.0	1458.3	1328.5	1327.2	1341.2	1366.6	1397.2	1415.0	1411.2	1397.2
30°	3312.2	2480.0	1387.0	1278.8	1261.0	1259.7	1271.2	1289.0	1300.5	1277.6	1266.1
32.5°	3481.5	2455.9	1323.4	1235.6	1203.8	1192.3	1197.4	1221.6	1268.7	1245.7	1236.8
35°	3681.3	2427.9	1259.7	1188.5	1164.3	1142.7	1146.5	1198.7	1341.2	1324.6	1315.7
37.5°	3921.8	2402.4	1201.2	1137.6	1136.3	1109.6	1107.0	1169.4	1360.3	1324.6	1317.0
40°	4210.6	2397.3	1149.0	1081.6	1102.0	1091.8	1082.9	1121.0	1254.7	1182.1	1168.1
42.5°	4559.3	2420.2	1110.9	1028.2	1062.5	1086.7	1070.1	1079.1	1133.8	1068.9	1057.4
45°	4966.5	2482.6	1082.9	981.1	1020.5	1082.9	1063.8	1056.2	1065.1	1029.4	1021.8
47.5°	5441.1	2593.3	1063.8	941.6	981.1	1072.7	1061.2	1046.0	1042.2	1021.8	1016.7
50°	5948.8	2742.2	1051.1	906.0	945.4	1054.9	1060.0	1038.3	1032.0	1023.1	1020.5
52.5°	6452.7	2903.8	1035.8	875.5	916.2	1033.2	1061.2	1030.7	1021.8	1016.7	1014.2
55°	6954.1	3071.7	1007.8	848.7	894.5	1007.8	1060.0	1020.5	1010.3	1010.3	1010.3
57.5°	7604.3	3327.5	970.9	827.1	866.6	974.7	1043.4	1009.1	995.1	996.3	997.6
60°	8543.4	3756.3	930.2	802.9	829.7	936.5	1018.0	988.7	972.2	977.3	978.5
62.5°	10112.3	4505.8	874.2	768.6	791.5	895.8	984.9	960.7	945.4	954.4	955.6
65°	12204.3	5413.1	800.4	725.3	752.0	850.0	942.9	927.6	911.1	932.7	931.4
67.5°	13480.6	5679.0	722.8	679.5	713.9	801.7	890.7	884.4	872.9	911.1	908.5
69°	<b>13061.9</b>	<b>5198.0</b>	<b>678.2</b>	<b>650.2</b>	<b>687.1</b>	<b>768.6</b>	<b>857.6</b>	<b>855.1</b>	<b>846.2</b>	<b>883.1</b>	<b>880.5</b>
70°	12411.7	4748.9	650.2	631.1	673.1	748.2	836.0	836.0	827.1	858.9	852.6
72.5°	9969.8	3522.2	585.3	582.8	624.8	692.2	777.5	783.8	778.8	790.2	783.8
75°	5853.4	2122.5	521.7	529.3	566.2	632.4	712.6	717.7	712.6	711.3	712.6
77.5°	2029.6	951.8	460.6	472.1	503.9	571.3	641.3	651.5	643.9	635.0	637.5
80°	794.0	553.5	394.5	411.0	437.7	502.6	570.1	576.4	565.0	563.7	553.5
82.5°	477.2	337.2	306.7	333.4	366.5	436.5	492.4	489.9	481.0	533.2	467.0
85°	207.4	187.1	224.0	250.7	267.2	327.0	416.1	404.6	383.0	337.2	329.6
87.5°	84.0	96.7	123.4	148.9	160.3	211.2	285.0	274.9	278.7	229.0	227.8
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)