

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: P270537

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270537  
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  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20747.5 lumens  
Efficiency: N/A  
Efficacy: 92.2 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

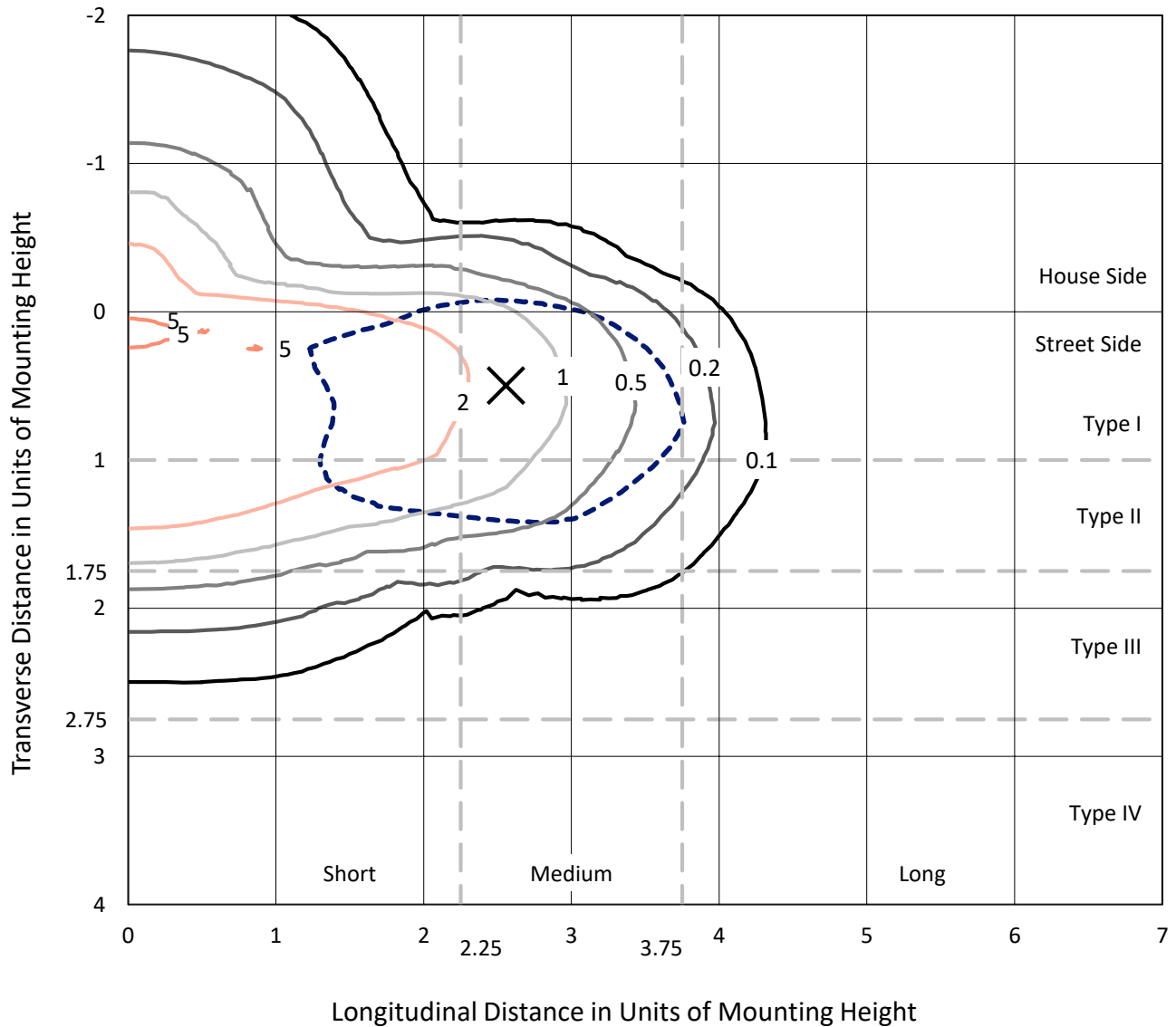
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P270537  
 CATALOG NUMBER: NAV-AF-04-D-UNV-T2-7027

### Iso-Footcandle Lines of Horizontal Illumination

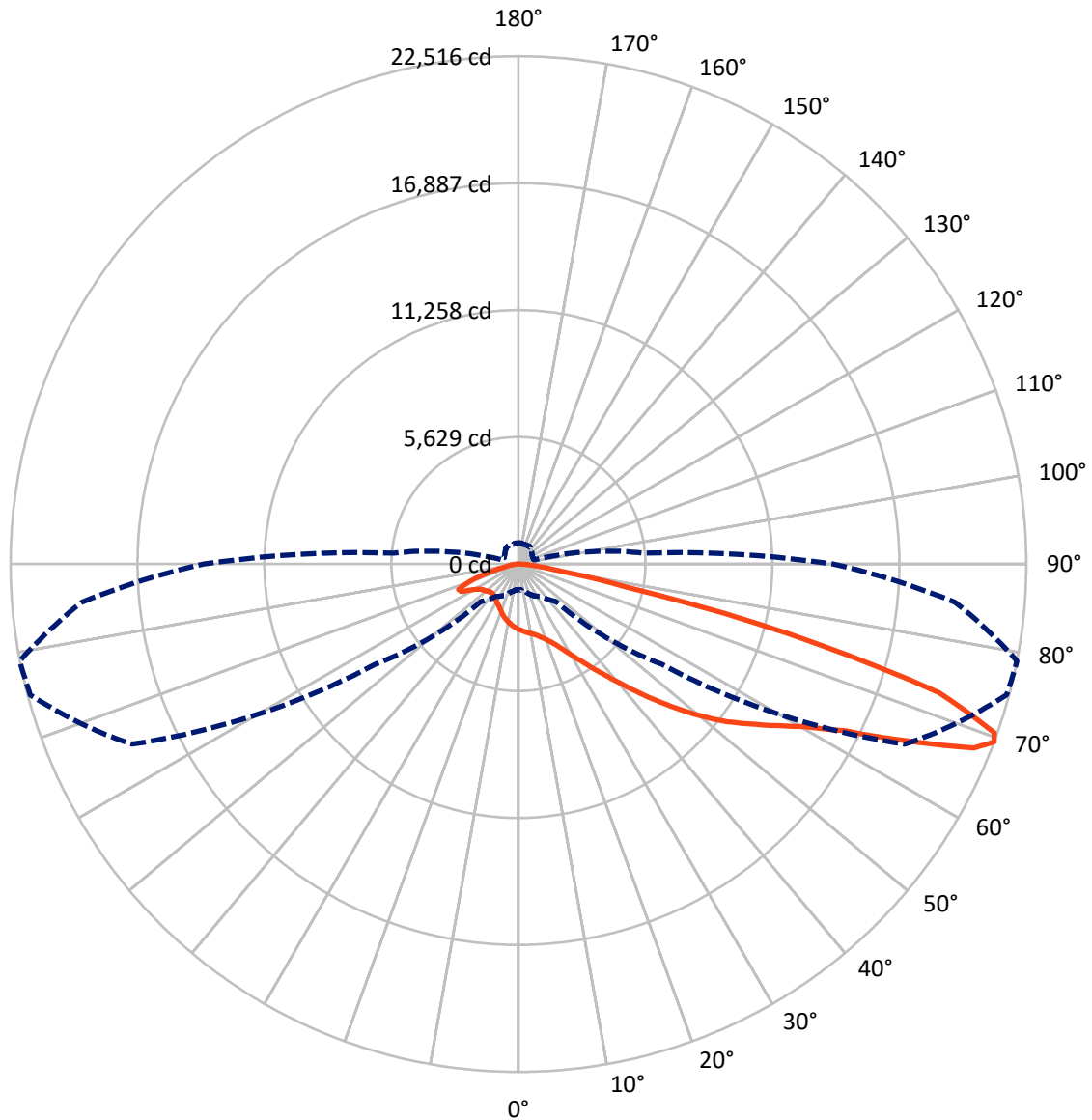
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P270537  
CATALOG NUMBER: NAV-AF-04-D-UNV-T2-7027

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270537

CATALOG NUMBER: NAV-AF-04-D-UNV-T2-7027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3903.0	0.0	3903.0
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	16844.5	0.0	16844.5
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	20747.5	0.0	20747.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	269.9	1.3
10°-20°	773.8	3.7
20°-30°	1278.7	6.2
30°-40°	2070.5	10.0
40°-50°	3307.7	15.9
50°-60°	4737.0	22.8
60°-70°	5277.7	25.4
70°-80°	2640.4	12.7
80°-90°	391.8	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°	20747.5	100.0
0°-180°	20747.5	100.0

**Coefficient of Utilization**



REPORT NUMBER: P270537

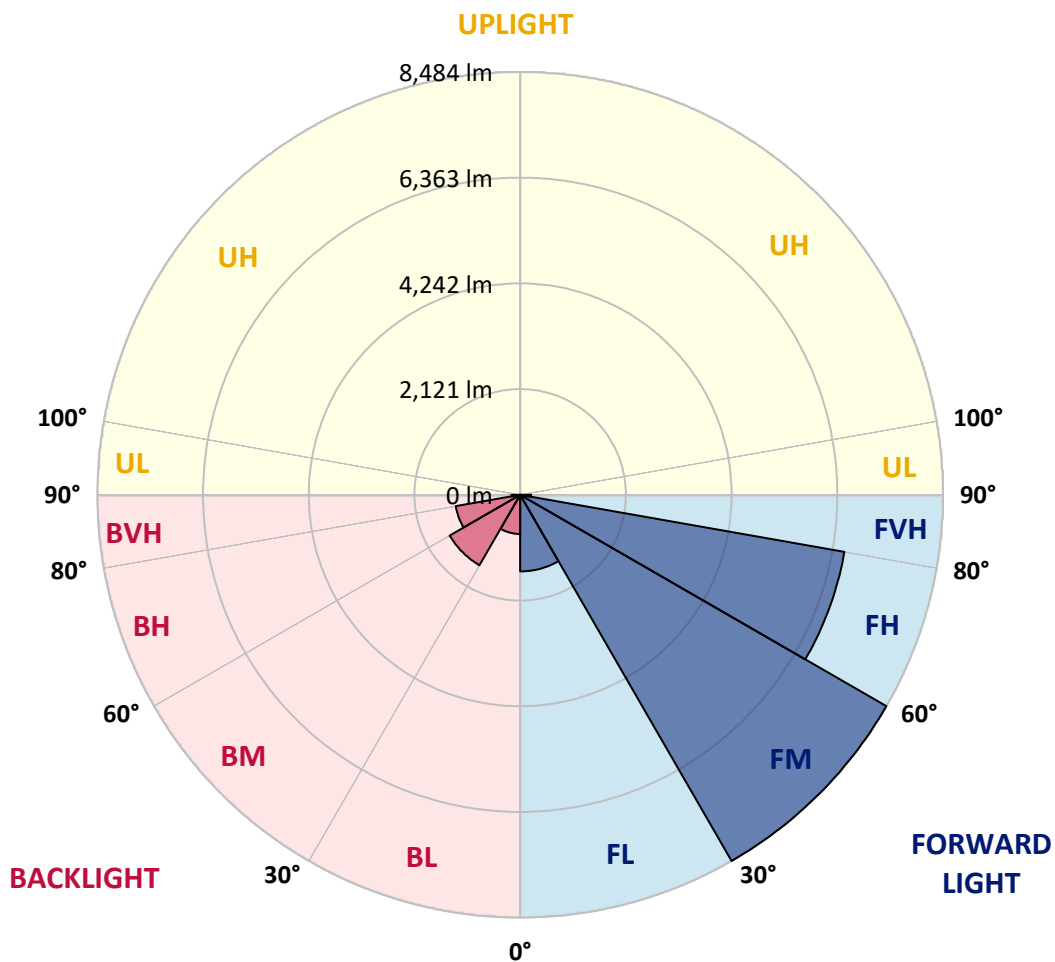
CATALOG NUMBER: NAV-AF-04-D-UNV-T2-7027

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1536.2	7.4			
FM (30°-60°)	8483.7	40.9			
FH (60°-80°)	6605.7	31.8			G3/7500
FVH (80°-90°)	218.9	1.1			G2/225
BL (0°-30°)	786.3	3.8	B2/1000		
BM (30°-60°)	1631.5	7.9	B2/2500		
BH (60°-80°)	1312.3	6.3	B3/2500		G3/2500
BVH (80°-90°)	172.9	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: P270537

CATALOG NUMBER: NAV-AF-04-D-UNV-T2-7027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5
2.5°	3196.6	3189.8	3188.4	3168.1	3157.3	3134.1	3079.8	3024.2	2972.6	2945.5	2916.9
5°	3464.0	3450.4	3443.7	3409.6	3379.9	3328.2	3242.7	3154.5	3062.2	3014.7	2957.7
7.5°	3625.5	3626.8	3626.8	3599.7	3569.9	3507.4	3398.8	3278.1	3141.0	3078.5	2988.9
10°	3639.0	3640.4	3660.9	3667.6	3674.3	3641.8	3541.4	3389.3	3212.9	3131.4	3014.7
12.5°	3504.6	3514.2	3548.1	3597.1	3666.3	3701.6	3658.1	3508.8	3305.1	3206.1	3063.6
15°	3324.2	3333.7	3377.1	3451.7	3563.0	3681.2	3742.2	3646.0	3426.0	3309.3	3135.5
17.5°	3236.0	3246.8	3276.7	3336.3	3445.0	3603.8	3787.1	3792.5	3568.4	3434.1	3221.1
20°	3193.8	3202.0	3239.9	3288.9	3371.7	3523.7	3791.0	3947.2	3738.1	3582.1	3325.5
22.5°	3290.2	3292.9	3312.0	3339.1	3394.8	3511.5	3788.4	4107.4	3949.8	3768.0	3459.9
25°	3572.6	3555.0	3541.4	3507.4	3520.9	3603.8	3831.8	4278.4	4221.3	4012.4	3639.0
27.5°	3906.5	3903.8	3868.6	3789.8	3739.6	3792.5	3955.3	4469.7	4554.0	4323.3	3873.9
30°	4278.4	4279.7	4243.1	4146.8	4044.9	4050.4	4152.1	4690.9	4951.6	4697.9	4163.0
32.5°	4668.0	4692.3	4624.6	4528.1	4404.6	4365.3	4434.6	4958.5	5411.7	5140.3	4498.4
35°	5133.5	5137.5	5062.9	4921.8	4798.2	4735.9	4799.6	5292.4	5942.5	5660.2	4906.8
37.5°	5616.7	5619.4	5542.2	5361.5	5205.5	5164.7	5235.3	5698.2	6504.4	6252.1	5387.3
40°	6011.7	6040.3	5979.2	5809.5	5652.0	5627.6	5729.4	6184.1	7222.6	6952.4	5958.7
42.5°	6459.7	6492.2	6419.0	6242.5	6117.5	6109.5	6268.4	6737.9	7936.4	7762.8	6606.2
45°	6964.6	7010.7	6909.0	6710.8	6604.9	6784.1	6793.6	7351.5	8759.1	8669.5	7335.2
47.5°	7515.7	7553.7	7470.9	7257.8	7142.5	7401.7	7308.0	8015.1	9648.1	9641.2	8123.8
50°	7940.6	7982.6	7990.8	7897.1	7776.3	7808.8	7872.7	8712.9	10534.5	10640.3	8939.6
52.5°	7863.1	7903.8	8087.1	8332.9	8526.9	8442.8	8520.2	9454.0	11391.0	11614.9	9714.6
55°	7238.8	7260.6	7604.0	8187.6	9014.2	9416.0	9421.5	10260.4	12205.5	12518.9	10450.3
57.5°	6113.5	6116.3	6562.8	7423.5	8730.5	10047.2	10843.9	11272.9	13055.1	13518.0	11362.4
60°	4325.9	4336.7	4856.6	5981.9	7713.8	9971.1	12373.8	13084.9	14039.3	14640.4	12538.0
62.5°	2568.2	2592.6	2984.9	3887.4	5729.4	8993.9	13277.7	16308.6	15488.8	16287.0	14419.2
65°	1670.8	1691.2	1926.1	2379.4	3385.3	6543.9	12980.4	19430.6	18232.0	18876.9	17123.1
67.5°	1286.8	1303.1	1487.7	1761.8	2076.7	3537.3	10378.4	20084.8	21571.2	21772.0	19404.7
69°	1130.6	1144.3	1279.9	1543.3	1748.3	2341.4	7734.2	18897.1	22406.0	22515.8	19433.4
70°	1048.0	1058.7	1186.3	1414.4	1605.8	1869.1	5919.4	17518.0	22100.6	22381.5	18872.8
72.5°	863.4	872.8	963.7	1138.8	1312.6	1331.6	2622.4	12791.8	18609.4	19508.0	15970.6
75°	720.8	726.2	785.8	913.4	1062.9	1060.1	1339.7	7245.5	11355.7	12426.7	9861.2
77.5°	601.3	605.4	644.8	723.5	838.8	834.7	943.4	3127.4	5014.1	4837.6	3394.8
80°	530.7	533.5	553.9	574.1	647.5	643.4	699.1	1436.1	2040.1	1885.4	1284.0
82.5°	403.1	408.5	511.8	521.2	502.2	484.5	487.3	836.1	1045.2	951.6	689.4
85°	228.0	229.3	328.5	384.1	437.0	328.5	316.3	431.6	515.7	451.9	301.3
87.5°	101.8	105.9	157.5	181.8	236.2	192.7	180.5	183.3	222.6	184.6	119.5
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: P270537

CATALOG NUMBER: NAV-AF-04-D-UNV-T2-7027

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5	2911.5
2.5°	2889.8	2866.8	2812.5	2756.8	2701.2	2665.9	2629.2	2595.3	2581.6	2580.3	2554.5
5°	2902.1	2847.7	2724.2	2588.5	2459.5	2359.0	2275.0	2220.6	2167.7	2158.2	2135.1
7.5°	2906.0	2817.9	2617.0	2399.8	2203.1	2064.6	1980.5	1943.8	1917.9	1911.1	1903.0
10°	2904.8	2779.8	2497.6	2200.3	1976.4	1871.8	1840.5	1848.7	1859.6	1865.1	1865.1
12.5°	2926.5	2762.2	2378.2	2012.9	1829.7	1779.5	1803.9	1845.9	1878.5	1892.2	1894.9
15°	2965.8	2751.4	2246.4	1850.1	1726.5	1738.8	1798.4	1859.6	1905.8	1926.1	1931.5
17.5°	3014.7	2736.4	2094.4	1715.8	1666.8	1708.9	1786.3	1863.7	1919.3	1945.1	1949.1
20°	3069.0	2714.7	1936.9	1615.2	1614.0	1666.8	1744.1	1831.0	1890.8	1919.3	1917.9
22.5°	3142.4	2694.3	1790.3	1542.0	1555.5	1604.5	1668.2	1746.9	1802.5	1828.4	1822.9
25°	3239.9	2675.3	1658.7	1476.9	1489.0	1521.5	1566.4	1626.1	1665.5	1679.0	1669.6
27.5°	3371.7	2660.4	1555.5	1417.0	1415.6	1430.6	1457.8	1490.4	1509.4	1505.3	1490.4
30°	3533.3	2645.5	1479.5	1364.2	1345.1	1343.8	1356.0	1374.9	1387.3	1362.8	1350.6
32.5°	3713.8	2619.6	1411.6	1318.1	1284.0	1271.8	1277.3	1303.1	1353.2	1328.9	1319.3
35°	3926.9	2589.9	1343.8	1267.8	1241.9	1218.9	1223.0	1278.6	1430.6	1413.0	1403.5
37.5°	4183.3	2562.7	1281.3	1213.5	1212.2	1183.5	1180.9	1247.3	1451.0	1413.0	1404.9
40°	4491.4	2557.3	1225.6	1153.8	1175.5	1164.7	1155.1	1195.9	1338.4	1261.0	1246.0
42.5°	4863.5	2581.6	1185.0	1096.7	1133.4	1159.3	1141.6	1151.1	1209.4	1140.2	1127.9
45°	5297.8	2648.3	1155.1	1046.5	1088.6	1155.1	1134.7	1126.7	1136.0	1098.1	1090.0
47.5°	5804.0	2766.3	1134.7	1004.5	1046.5	1144.3	1132.0	1115.8	1111.7	1090.0	1084.6
50°	6345.6	2925.2	1121.2	966.4	1008.4	1125.2	1130.6	1107.6	1100.9	1091.4	1088.6
52.5°	6883.2	3097.4	1104.8	933.9	977.3	1102.2	1132.0	1099.4	1090.0	1084.6	1081.7
55°	7417.9	3276.7	1075.0	905.3	954.2	1075.0	1130.6	1088.6	1077.7	1077.7	1077.7
57.5°	8111.5	3549.6	1035.7	882.2	924.4	1039.8	1113.0	1076.3	1061.4	1062.9	1064.1
60°	9113.3	4006.9	992.3	856.5	885.0	999.0	1086.0	1054.7	1037.1	1042.5	1043.8
62.5°	10786.9	4806.4	932.5	819.9	844.2	955.5	1050.6	1024.7	1008.4	1018.0	1019.3
65°	13018.4	5774.2	853.7	773.7	802.1	906.7	1005.8	989.6	971.8	995.0	993.5
67.5°	14379.9	6057.9	770.9	724.8	761.5	855.1	950.1	943.4	931.2	971.8	969.1
69°	13933.3	5544.8	723.5	693.6	732.9	819.9	914.8	912.1	902.6	942.1	939.3
70°	13239.7	5065.6	693.6	673.3	718.0	798.1	891.7	891.7	882.2	916.2	909.4
72.5°	10634.9	3757.3	624.4	621.6	666.5	738.3	829.3	836.1	830.8	842.9	836.1
75°	6243.8	2264.1	556.5	564.7	604.0	674.5	760.1	765.5	760.1	758.8	760.1
77.5°	2164.9	1015.4	491.4	503.6	537.5	609.5	684.1	695.0	686.8	677.3	680.0
80°	847.0	590.5	420.8	438.5	466.8	536.2	608.2	614.9	602.7	601.3	590.5
82.5°	509.0	359.7	327.2	355.5	390.9	465.6	525.2	522.5	513.1	568.7	498.1
85°	221.3	199.6	238.9	267.3	285.0	348.8	443.9	431.6	408.5	359.7	351.5
87.5°	89.7	103.1	131.6	158.8	171.0	225.4	304.0	293.1	297.2	244.2	243.0
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)