

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: P196751

Luminaire Tested: **NAV-AF-05-D-UNV-T2-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196751  
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-05-D-UNV-T2-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31226.3 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 320  
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

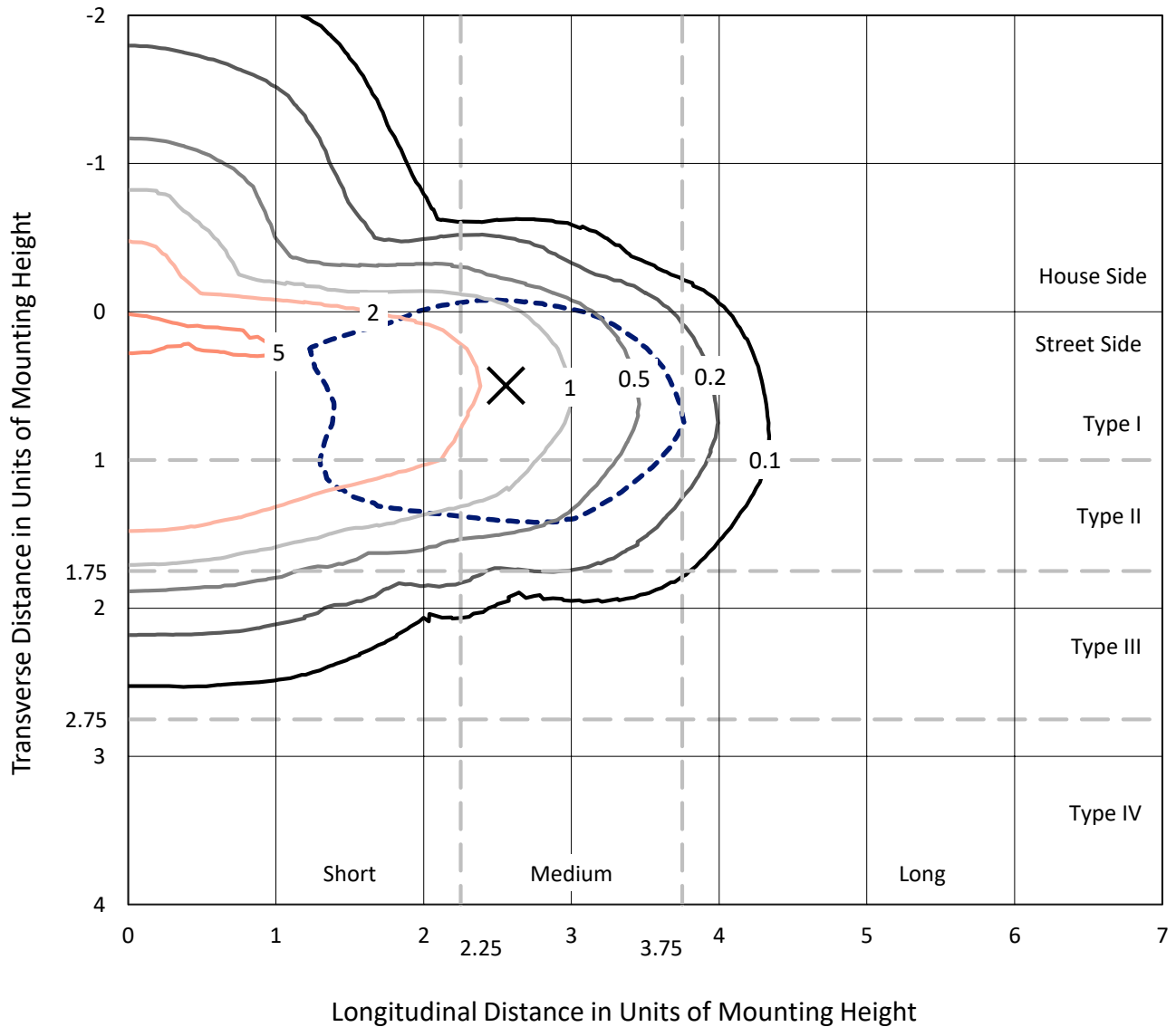


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### Iso-Footcandle Lines of Horizontal Illumination

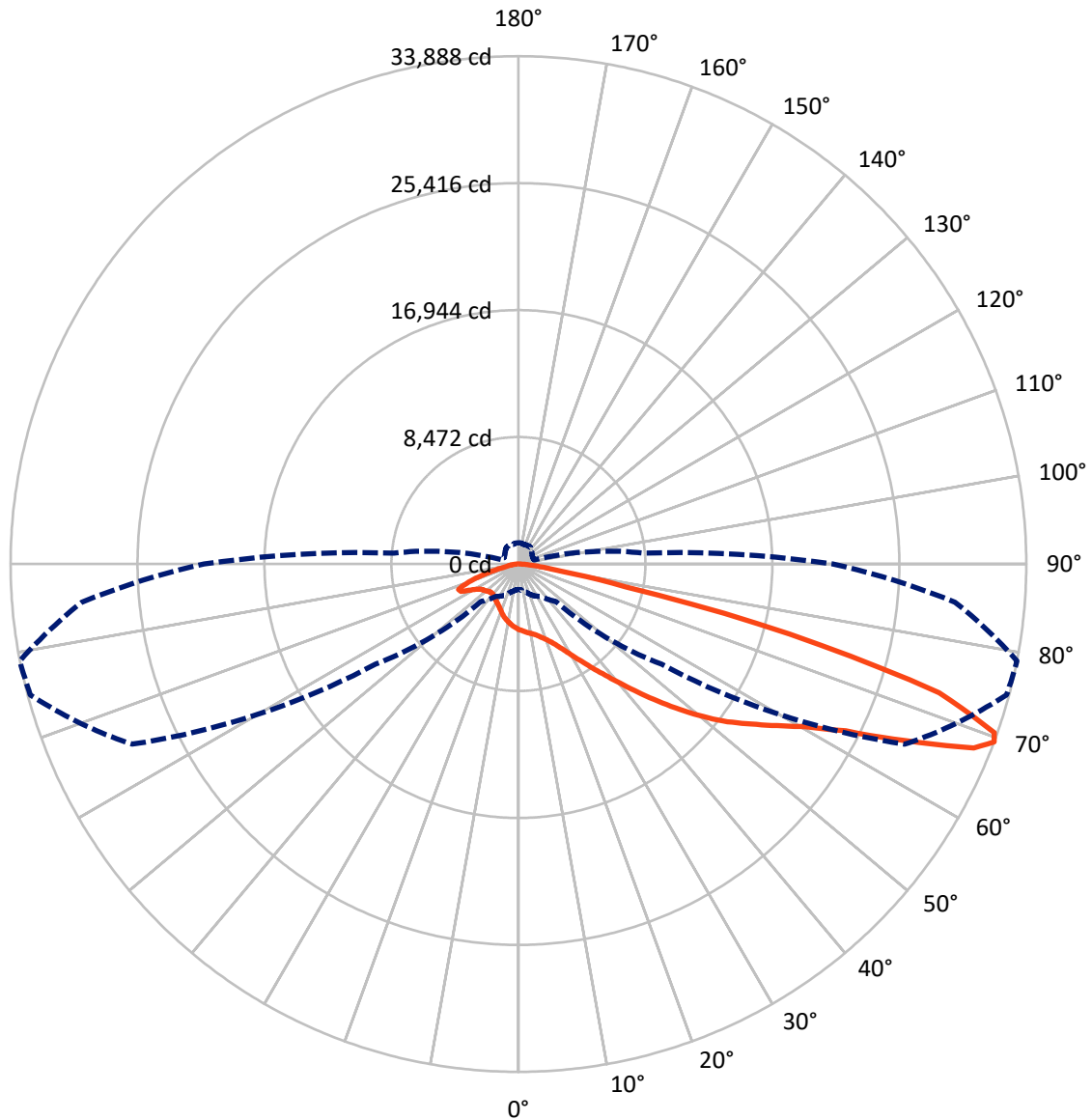
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.9 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	5874.2	0.0	5874.2
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	25352.1	0.0	25352.1
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	31226.3	0.0	31226.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	406.2	1.3
10°-20°	1164.7	3.7
20°-30°	1924.5	6.2
30°-40°	3116.3	10.0
40°-50°	4978.3	15.9
50°-60°	7129.4	22.8
60°-70°	7943.2	25.4
70°-80°	3973.9	12.7
80°-90°	589.7	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°	31226.3	100.0
0°-180°	31226.3	100.0

**Coefficient of Utilization**



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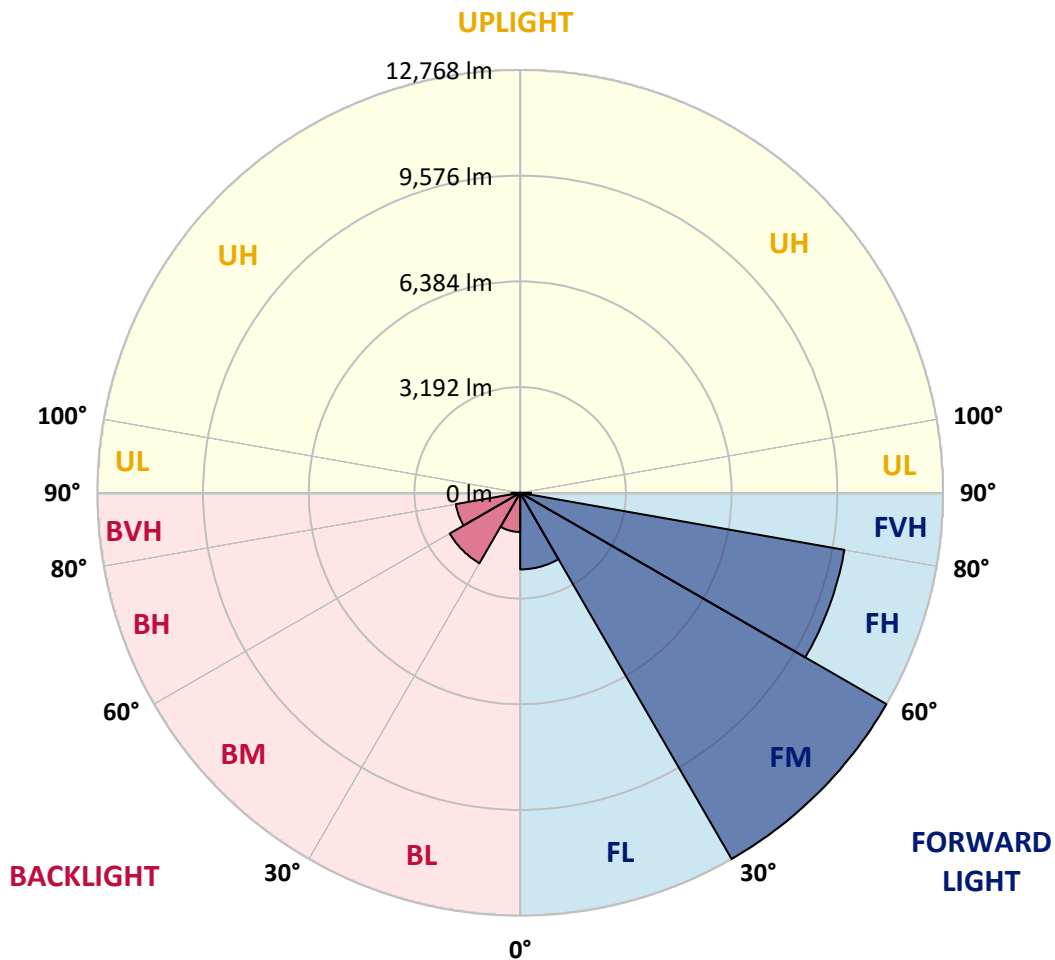
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2312.0	7.4			
FM (30°-60°)	12768.5	40.9			
FH (60°-80°)	9942.0	31.8			G4/12000
FVH (80°-90°)	329.5	1.1			G3/500
BL (0°-30°)	1183.4	3.8	B3/2500		
BM (30°-60°)	2455.5	7.9	B2/2500		
BH (60°-80°)	1975.1	6.3	B3/2500		G3/2500
BVH (80°-90°)	260.2	0.8			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1
2.5°	4811.0	4800.9	4798.7	4768.2	4751.8	4717.0	4635.4	4551.6	4473.9	4433.0	4390.2
5°	5213.6	5193.1	5182.8	5131.8	5086.9	5009.2	4880.5	4747.8	4608.8	4537.3	4451.4
7.5°	5456.6	5458.7	5458.7	5417.8	5372.9	5278.9	5115.4	4933.6	4727.3	4633.3	4498.5
10°	5477.0	5479.1	5509.7	5519.9	5530.1	5481.1	5330.0	5101.1	4835.6	4713.0	4537.3
12.5°	5274.8	5289.1	5340.1	5413.7	5517.9	5571.0	5505.7	5280.9	4974.5	4825.3	4610.8
15°	5003.1	5017.4	5082.7	5195.1	5362.7	5540.3	5632.4	5487.2	5156.3	4980.6	4719.1
17.5°	4870.3	4886.6	4931.5	5021.4	5184.9	5423.9	5699.7	5707.9	5370.8	5168.5	4847.9
20°	4807.0	4819.2	4876.5	4950.0	5074.5	5303.3	5705.8	5940.8	5626.2	5391.2	5005.1
22.5°	4951.9	4956.1	4984.7	5025.6	5109.3	5285.0	5701.8	6181.9	5944.9	5671.1	5207.4
25°	5376.9	5350.4	5330.0	5278.9	5299.3	5423.9	5767.1	6439.2	6353.4	6038.9	5477.0
27.5°	5879.5	5875.4	5822.3	5703.8	5628.2	5707.9	5953.0	6727.3	6854.0	6506.6	5830.5
30°	6439.2	6441.3	6386.1	6241.1	6087.8	6096.0	6249.3	7060.4	7452.6	7070.5	6265.6
32.5°	7025.6	7062.3	6960.2	6815.1	6629.2	6570.0	6674.2	7462.7	8145.1	7736.5	6770.1
35°	7726.3	7732.4	7620.1	7407.6	7221.7	7127.7	7223.6	7965.3	8943.9	8519.0	7385.2
37.5°	8453.5	8457.6	8341.2	8069.5	7834.6	7773.2	7879.4	8576.1	9789.6	9409.6	8108.3
40°	9048.1	9090.9	8999.0	8743.7	8506.7	8469.9	8623.1	9307.5	10870.3	10463.8	8968.3
42.5°	9722.2	9771.3	9660.9	9395.3	9207.4	9195.1	9434.1	10141.0	11944.9	11683.4	9942.8
45°	10482.2	10551.6	10398.4	10100.2	9940.7	10210.5	10224.7	11064.3	13182.9	13048.1	11039.9
47.5°	11311.6	11368.8	11244.2	10923.4	10749.8	11140.0	10999.0	12063.4	14521.0	14510.7	12226.7
50°	11951.0	12014.3	12026.6	11885.7	11703.9	11752.8	11848.8	13113.4	15855.0	16014.3	13454.6
52.5°	11834.5	11895.8	12171.6	12541.5	12833.6	12706.9	12823.3	14228.9	17144.1	17481.2	14621.1
55°	10894.8	10927.6	11444.4	12322.8	13566.9	14171.7	14179.7	15442.3	18369.9	18841.8	15728.3
57.5°	9201.3	9205.3	9877.5	11172.7	13139.9	15121.6	16320.8	16966.4	19648.6	20345.2	17101.1
60°	6510.8	6527.0	7309.6	9003.1	11609.9	15007.2	18623.1	19693.7	21129.7	22034.8	18870.3
62.5°	3865.1	3901.9	4492.3	5850.9	8623.1	13536.3	19983.7	24545.5	23311.7	24512.9	21701.8
65°	2514.8	2545.4	2898.8	3581.2	5095.0	9848.8	19536.3	29244.3	27440.4	28410.6	25771.3
67.5°	1936.7	1961.2	2239.0	2651.7	3125.7	5323.7	15620.0	30228.9	32465.9	32768.3	29205.4
69°	1701.7	1722.2	1926.5	2322.8	2631.3	3524.0	11640.5	28441.4	33722.4	33887.8	29248.2
70°	1577.1	1593.4	1785.6	2128.7	2416.7	2813.1	8909.1	26365.8	33262.7	33685.5	28404.5
72.5°	1299.3	1313.7	1450.4	1714.0	1975.5	2004.2	3946.9	19252.3	28008.3	29360.7	24036.8
75°	1084.8	1092.9	1182.8	1374.9	1599.5	1595.5	2016.4	10905.0	17091.0	18702.8	14841.7
77.5°	905.0	911.1	970.3	1088.9	1262.5	1256.4	1419.9	4706.9	7546.5	7280.9	5109.3
80°	798.8	802.8	833.5	864.1	974.5	968.4	1052.0	2161.3	3070.5	2837.6	1932.6
82.5°	606.7	614.9	770.2	784.5	755.8	729.3	733.4	1258.4	1573.0	1432.1	1037.8
85°	343.2	345.3	494.4	578.1	657.8	494.4	476.1	649.6	776.3	680.2	453.5
87.5°	153.2	159.3	237.0	273.8	355.4	290.1	271.7	275.8	335.0	277.8	179.7
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°	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1	4382.1
2.5°	4349.4	4314.6	4232.9	4149.1	4065.4	4012.2	3957.2	3906.0	3885.6	3883.6	3844.8
5°	4367.7	4286.0	4100.1	3895.8	3701.7	3550.6	3423.9	3342.2	3262.5	3248.2	3213.6
7.5°	4373.8	4241.1	3938.7	3611.9	3315.7	3107.3	2980.6	2925.4	2886.6	2876.4	2864.1
10°	4371.8	4183.9	3758.9	3311.5	2974.5	2817.1	2770.2	2782.4	2798.7	2807.0	2807.0
12.5°	4404.5	4157.4	3579.3	3029.6	2753.9	2678.3	2715.0	2778.4	2827.4	2847.9	2851.8
15°	4463.8	4140.9	3381.0	2784.5	2598.6	2617.0	2706.9	2798.7	2868.3	2898.8	2907.1
17.5°	4537.3	4118.5	3152.2	2582.3	2508.7	2572.1	2688.5	2804.9	2888.7	2927.5	2933.6
20°	4619.1	4085.9	2915.2	2431.0	2429.1	2508.7	2625.2	2755.8	2845.7	2888.7	2886.6
22.5°	4729.3	4055.1	2694.6	2320.7	2341.2	2414.7	2510.8	2629.3	2713.0	2751.8	2743.6
25°	4876.5	4026.5	2496.5	2222.7	2241.0	2290.1	2357.5	2447.4	2506.6	2527.0	2512.8
27.5°	5074.5	4004.2	2341.2	2132.7	2130.8	2153.2	2194.0	2243.1	2271.7	2265.6	2243.1
30°	5317.6	3981.6	2226.8	2053.1	2024.6	2022.5	2040.9	2069.5	2087.8	2051.2	2032.7
32.5°	5589.3	3942.8	2124.6	1983.7	1932.6	1914.2	1922.4	1961.2	2036.8	2000.0	1985.7
35°	5910.2	3897.9	2022.5	1908.1	1869.2	1834.6	1840.7	1924.4	2153.2	2126.6	2112.4
37.5°	6296.3	3857.0	1928.5	1826.4	1824.3	1781.4	1777.3	1877.4	2183.9	2126.6	2114.3
40°	6760.0	3848.8	1844.8	1736.4	1769.1	1752.8	1738.6	1799.8	2014.3	1897.9	1875.4
42.5°	7319.8	3885.6	1783.4	1650.7	1705.9	1744.7	1718.1	1732.5	1820.3	1716.0	1697.7
45°	7973.4	3985.7	1738.6	1575.1	1638.5	1738.6	1707.8	1695.6	1709.9	1652.8	1640.4
47.5°	8735.5	4163.5	1707.8	1511.7	1575.1	1722.2	1703.8	1679.4	1673.1	1640.4	1632.4
50°	9550.6	4402.5	1687.4	1454.6	1517.8	1693.5	1701.7	1667.0	1656.8	1642.5	1638.5
52.5°	10359.6	4661.9	1662.9	1405.5	1470.8	1658.9	1703.8	1654.7	1640.4	1632.4	1628.2
55°	11164.4	4931.5	1618.0	1362.6	1436.2	1618.0	1701.7	1638.5	1622.1	1622.1	1622.1
57.5°	12208.4	5342.2	1558.7	1327.9	1391.2	1564.9	1675.2	1620.0	1597.6	1599.5	1601.6
60°	13716.1	6030.7	1493.3	1289.0	1332.0	1503.6	1634.3	1587.3	1560.8	1569.0	1571.0
62.5°	16235.0	7233.9	1403.4	1233.9	1270.6	1438.2	1581.2	1542.4	1517.8	1532.2	1534.2
65°	19593.6	8690.5	1285.0	1164.4	1207.4	1364.6	1513.8	1489.3	1462.8	1497.4	1495.4
67.5°	21642.5	9117.4	1160.4	1091.0	1146.0	1287.1	1429.9	1419.9	1401.5	1462.8	1458.6
69°	20970.4	8345.2	1088.9	1044.0	1103.2	1233.9	1376.8	1372.9	1358.5	1417.7	1413.7
70°	19926.4	7624.1	1044.0	1013.3	1080.7	1201.2	1342.1	1342.1	1327.9	1379.0	1368.8
72.5°	16006.2	5654.7	939.7	935.7	1003.1	1111.3	1248.2	1258.4	1250.3	1268.6	1258.4
75°	9397.4	3407.6	837.6	849.8	909.1	1015.3	1144.1	1152.2	1144.1	1142.0	1144.1
77.5°	3258.4	1528.1	739.5	757.9	808.9	917.2	1029.7	1045.9	1033.7	1019.4	1023.5
80°	1274.7	888.8	633.2	659.8	702.7	807.0	915.3	925.4	907.1	905.0	888.8
82.5°	766.1	541.4	492.3	535.3	588.4	700.7	790.6	786.5	772.3	855.9	749.7
85°	333.0	300.4	359.6	402.4	429.1	525.0	668.0	649.6	614.9	541.4	529.2
87.5°	134.8	155.2	198.2	239.1	257.5	339.1	457.6	441.3	447.4	367.7	365.7
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)