

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: P197232

Luminaire Tested: **NAV-AF-06-D-UNV-T2-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197232
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-06-D-UNV-T2-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 31562 lumens
Efficiency: N/A
Efficacy: 82.6 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): 382
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

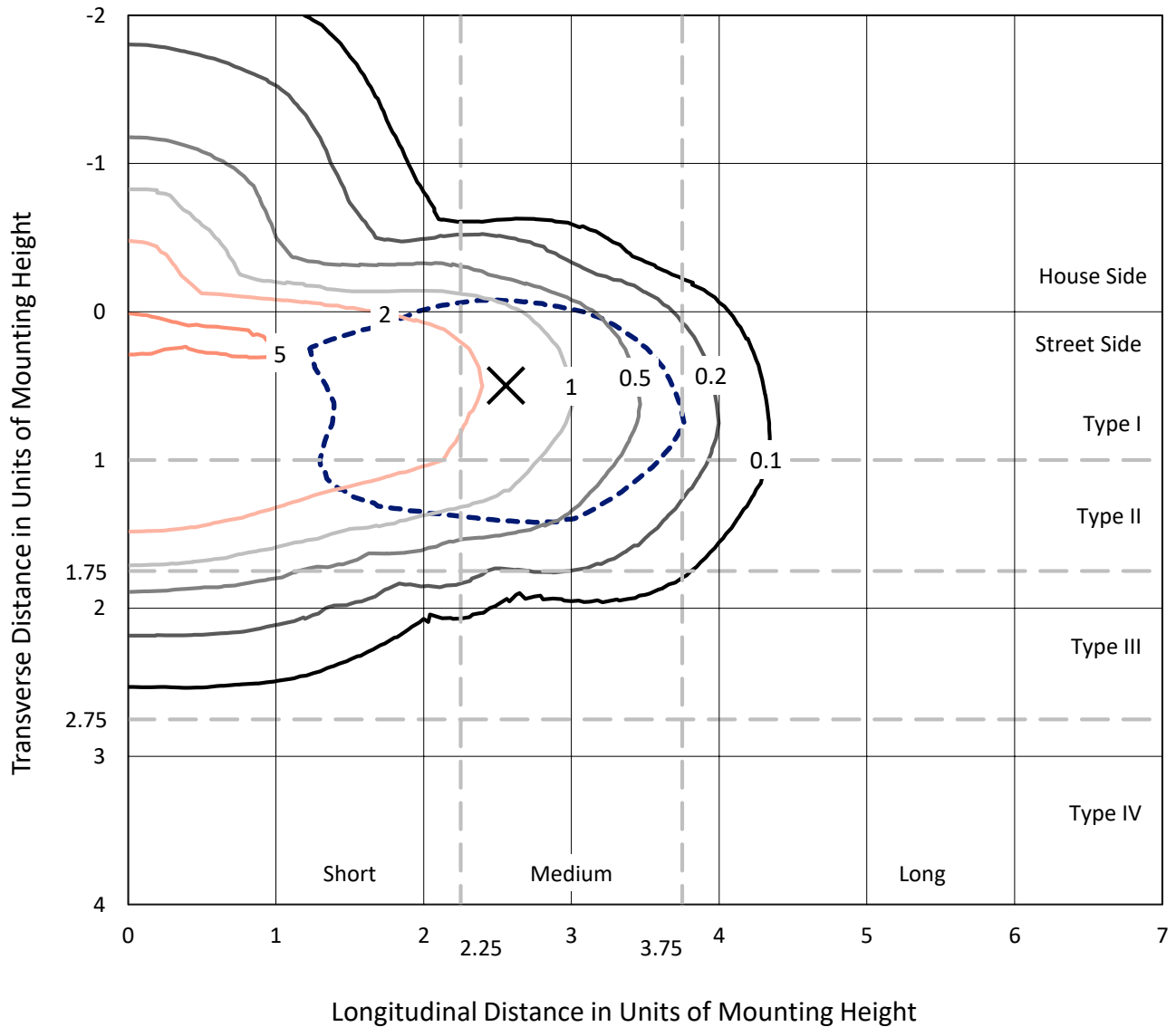


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Iso-Footcandle Lines of Horizontal Illumination

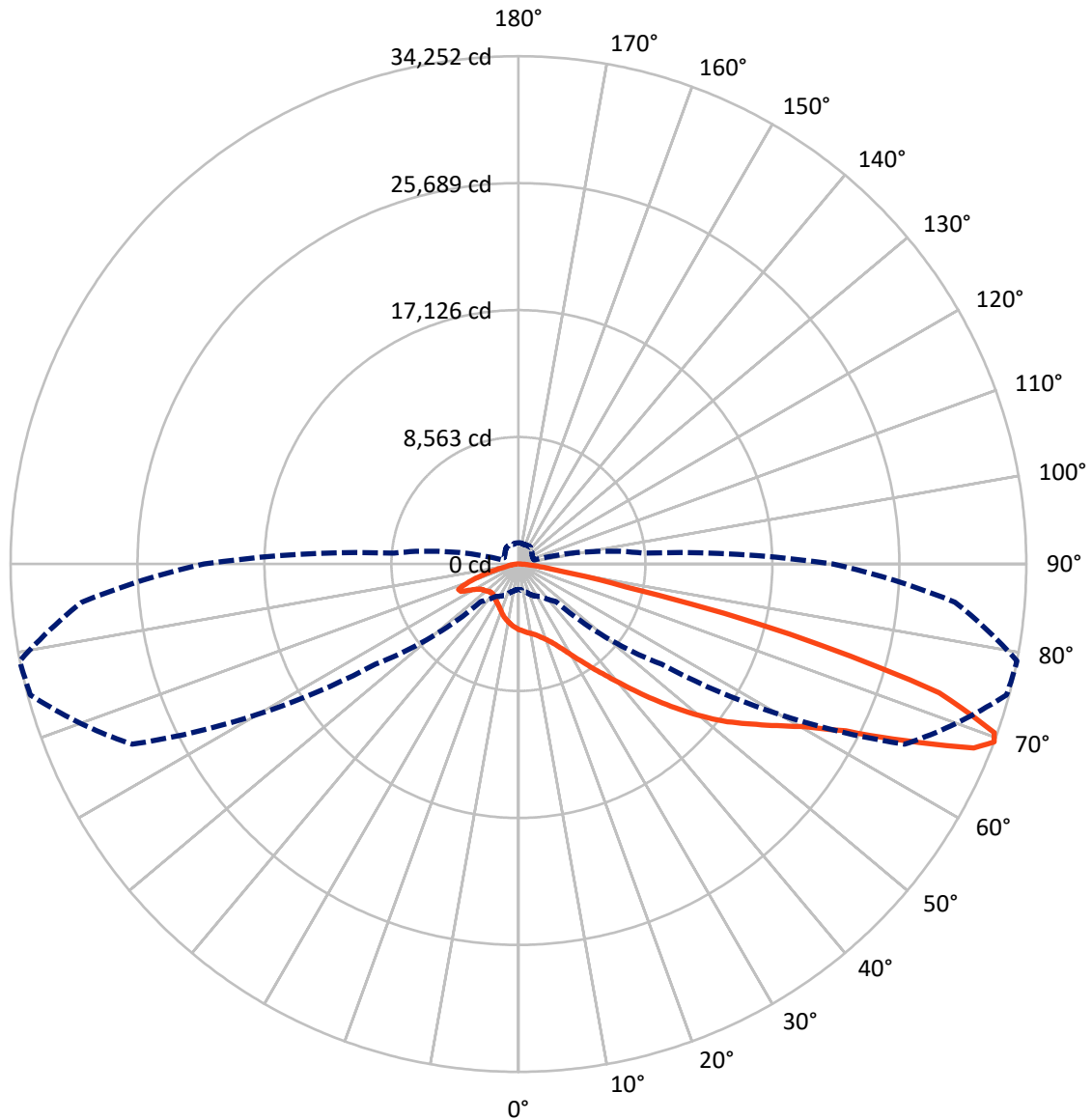
× Max cd
 - - - 1/2 Max cd



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
House Side	Lumens	5937.4	0.0	5937.4
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	25624.6	0.0	25624.6
	% Fixture	81.2	0.0	81.2
Total	Lumens	31562.0	0.0	31562.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.6	1.3
10°-20°	1177.2	3.7
20°-30°	1945.2	6.2
30°-40°	3149.8	10.0
40°-50°	5031.8	15.9
50°-60°	7206.1	22.8
60°-70°	8028.6	25.4
70°-80°	4016.6	12.7
80°-90°	596.1	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°	31562.0	100.0
0°-180°	31562.0	100.0

Coefficient of Utilization



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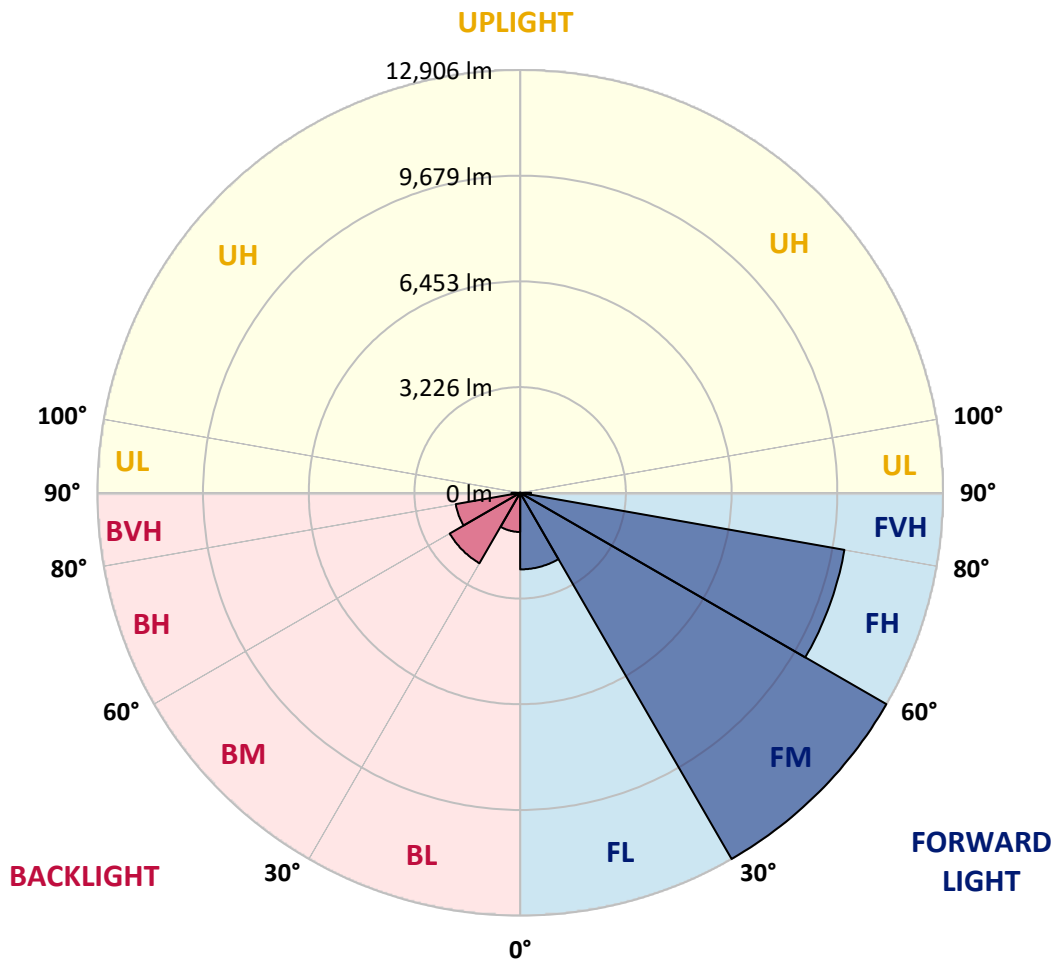
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2336.9	7.4			
FM (30°-60°)	12905.7	40.9			
FH (60°-80°)	10048.9	31.8			G4/12000
FVH (80°-90°)	333.1	1.1			G3/500
BL (0°-30°)	1196.1	3.8	B3/2500		
BM (30°-60°)	2481.9	7.9	B2/2500		
BH (60°-80°)	1996.4	6.3	B3/2500		G3/2500
BVH (80°-90°)	263.0	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°	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1
2.5°	4862.8	4852.4	4850.4	4819.4	4802.9	4767.8	4685.2	4600.5	4522.1	4480.8	4437.4
5°	5269.5	5248.9	5238.6	5187.0	5141.5	5063.1	4933.0	4798.8	4658.3	4586.1	4499.4
7.5°	5515.3	5517.3	5517.3	5476.0	5430.6	5335.6	5170.4	4986.7	4778.1	4683.1	4546.8
10°	5535.9	5538.0	5569.0	5579.3	5589.6	5540.0	5387.2	5156.0	4887.5	4763.7	4586.1
12.5°	5331.5	5345.9	5397.6	5471.9	5577.2	5630.9	5564.8	5337.7	5028.0	4877.2	4660.4
15°	5056.9	5071.3	5137.4	5251.0	5420.3	5599.9	5692.8	5546.2	5211.7	5034.2	4769.8
17.5°	4922.6	4939.2	4984.6	5075.5	5240.6	5482.2	5761.0	5769.2	5428.5	5224.1	4899.9
20°	4858.6	4871.0	4928.8	5003.2	5129.1	5360.4	5767.2	6004.6	5686.7	5449.2	5058.9
22.5°	5005.2	5009.4	5038.3	5079.6	5164.2	5341.8	5763.1	6248.3	6008.8	5732.1	5263.4
25°	5434.7	5407.9	5387.2	5335.6	5356.3	5482.2	5829.1	6508.5	6421.7	6103.8	5535.9
27.5°	5942.7	5938.6	5884.9	5765.1	5688.7	5769.2	6017.0	6799.6	6927.6	6576.6	5893.1
30°	6508.5	6510.5	6454.8	6308.2	6153.3	6161.6	6316.4	7136.2	7532.6	7146.5	6333.0
32.5°	7101.1	7138.3	7035.0	6888.4	6700.5	6640.6	6745.9	7543.0	8232.6	7819.7	6843.0
35°	7809.3	7815.5	7702.0	7487.2	7299.3	7204.3	7301.4	8050.9	9040.0	8610.5	7464.5
37.5°	8544.4	8548.6	8430.9	8156.2	7918.8	7856.8	7964.2	8668.3	9894.9	9510.8	8195.5
40°	9145.3	9188.7	9095.8	8837.6	8598.1	8561.0	8715.8	9407.5	10987.2	10576.3	9064.8
42.5°	9826.7	9876.3	9764.8	9496.3	9306.4	9294.0	9535.6	10250.0	12073.3	11809.0	10049.7
45°	10594.8	10665.1	10510.2	10208.7	10047.7	10320.2	10334.7	11183.3	13324.6	13188.3	11158.6
47.5°	11433.2	11491.0	11365.0	11040.9	10865.3	11259.7	11117.3	12193.1	14677.1	14666.8	12358.2
50°	12079.5	12143.5	12155.9	12013.4	11829.6	11879.2	11976.2	13254.4	16025.5	16186.5	13599.2
52.5°	11961.8	12023.7	12302.5	12676.2	12971.5	12843.5	12961.2	14381.8	17328.4	17669.1	14778.3
55°	11012.0	11045.0	11567.4	12455.3	13712.8	14324.0	14332.3	15608.4	18567.3	19044.3	15897.4
57.5°	9300.2	9304.3	9983.6	11292.8	13281.2	15284.2	16496.2	17148.7	19859.9	20564.0	17285.0
60°	6580.7	6597.3	7388.1	9099.9	11734.7	15168.5	18823.4	19905.3	21356.9	22271.7	19073.2
62.5°	3906.7	3943.9	4540.6	5913.8	8715.8	13681.8	20198.6	24809.4	23562.2	24776.4	21935.1
65°	2541.9	2572.8	2930.1	3619.7	5149.8	9954.7	19746.4	29558.6	27735.3	28716.1	26048.3
67.5°	1957.5	1982.3	2263.1	2680.2	3159.3	5381.1	15788.0	30553.9	32814.9	33120.5	29519.4
69°	1720.0	1740.7	1947.2	2347.8	2659.6	3561.9	11765.6	28747.1	34084.8	34252.1	29562.7
70°	1594.1	1610.6	1804.7	2151.6	2442.7	2843.3	9004.9	26649.2	33620.2	34047.6	28710.0
72.5°	1313.3	1327.7	1466.1	1732.4	1996.7	2025.6	3989.3	19459.3	28309.4	29676.3	24295.3
75°	1096.4	1104.7	1195.6	1389.7	1616.8	1612.7	2038.0	11022.3	17274.7	18903.9	15001.3
77.5°	914.7	920.9	980.8	1100.6	1276.1	1269.9	1435.1	4757.5	7627.6	7359.2	5164.2
80°	807.4	811.5	842.5	873.4	984.9	978.7	1063.4	2184.6	3103.5	2868.1	1953.4
82.5°	613.3	621.5	778.5	792.9	764.0	737.2	741.3	1272.0	1589.9	1447.5	1049.0
85°	346.9	349.0	499.7	584.4	664.9	499.7	481.1	656.6	784.7	687.6	458.4
87.5°	154.9	161.1	239.5	276.7	359.3	293.2	274.6	278.8	338.6	280.8	181.7
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°	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1	4429.1
2.5°	4396.1	4361.0	4278.4	4193.8	4109.1	4055.4	3999.7	3948.0	3927.4	3925.3	3886.1
5°	4414.7	4332.1	4144.2	3937.7	3741.5	3588.7	3460.7	3378.1	3297.6	3283.1	3248.0
7.5°	4420.9	4286.7	3981.1	3650.7	3351.3	3140.7	3012.6	2956.9	2917.7	2907.3	2894.9
10°	4418.8	4228.9	3799.4	3347.2	3006.5	2847.5	2800.0	2812.4	2828.9	2837.1	2837.1
12.5°	4451.9	4202.0	3617.7	3062.2	2783.4	2707.0	2744.2	2808.2	2857.8	2878.4	2882.6
15°	4511.7	4185.5	3417.4	2814.4	2626.5	2645.1	2736.0	2828.9	2899.1	2930.1	2938.3
17.5°	4586.1	4162.8	3186.1	2610.0	2535.7	2599.7	2717.4	2835.1	2919.7	2959.0	2965.2
20°	4668.7	4129.7	2946.6	2457.2	2455.1	2535.7	2653.4	2785.5	2876.4	2919.7	2917.7
22.5°	4780.2	4098.8	2723.6	2345.7	2366.3	2440.7	2537.7	2657.5	2742.1	2781.4	2773.1
25°	4928.8	4069.9	2523.3	2246.6	2265.2	2314.7	2382.9	2473.7	2533.6	2554.2	2539.8
27.5°	5129.1	4047.1	2366.3	2155.7	2153.7	2176.4	2217.7	2267.2	2296.1	2289.9	2267.2
30°	5374.9	4024.4	2250.7	2075.2	2046.3	2044.2	2062.8	2091.7	2110.3	2073.1	2054.5
32.5°	5649.5	3985.2	2147.5	2005.0	1953.4	1934.8	1943.0	1982.3	2058.7	2021.5	2007.1
35°	5973.7	3939.8	2044.2	1928.6	1889.4	1854.3	1860.4	1945.1	2176.4	2149.5	2135.1
37.5°	6363.9	3898.5	1949.2	1846.0	1843.9	1800.6	1796.4	1897.6	2207.3	2149.5	2137.1
40°	6832.7	3890.2	1864.6	1755.1	1788.2	1771.7	1757.2	1819.2	2036.0	1918.3	1895.6
42.5°	7398.4	3927.4	1802.6	1668.4	1724.2	1763.4	1736.6	1751.0	1839.8	1734.5	1715.9
45°	8059.2	4028.6	1757.2	1592.0	1656.0	1757.2	1726.2	1713.8	1728.3	1670.5	1658.1
47.5°	8829.4	4208.2	1726.2	1528.0	1592.0	1740.7	1722.1	1697.3	1691.1	1658.1	1649.8
50°	9653.3	4449.8	1705.6	1470.2	1534.2	1711.8	1720.0	1684.9	1674.6	1660.2	1656.0
52.5°	10471.0	4712.0	1680.8	1420.6	1486.7	1676.7	1722.1	1672.5	1658.1	1649.8	1645.7
55°	11284.5	4984.6	1635.4	1377.3	1451.6	1635.4	1720.0	1656.0	1639.5	1639.5	1639.5
57.5°	12339.7	5399.6	1575.5	1342.2	1406.2	1581.7	1693.2	1637.4	1614.7	1616.8	1618.9
60°	13863.5	6095.5	1509.4	1302.9	1346.3	1519.7	1651.9	1604.4	1577.6	1585.8	1587.9
62.5°	16409.5	7311.7	1418.6	1247.2	1284.3	1453.7	1598.2	1559.0	1534.2	1548.7	1550.7
65°	19804.2	8784.0	1298.8	1177.0	1220.3	1379.3	1530.1	1505.3	1478.4	1513.5	1511.5
67.5°	21875.2	9215.5	1172.8	1102.6	1158.4	1300.9	1445.4	1435.1	1416.5	1478.4	1474.3
69°	21195.9	8435.0	1100.6	1055.1	1115.0	1247.2	1391.7	1387.6	1373.1	1433.0	1428.9
70°	20140.7	7706.1	1055.1	1024.2	1092.3	1214.1	1356.6	1356.6	1342.2	1393.8	1383.5
72.5°	16178.3	5715.6	949.8	945.7	1013.9	1123.3	1261.6	1272.0	1263.7	1282.3	1272.0
75°	9498.4	3444.2	846.6	859.0	918.9	1026.2	1156.3	1164.6	1156.3	1154.3	1156.3
77.5°	3293.5	1544.5	747.5	766.1	817.7	927.1	1040.7	1057.2	1044.8	1030.4	1034.5
80°	1288.5	898.2	640.1	667.0	710.3	815.6	925.1	935.4	916.8	914.7	898.2
82.5°	774.3	547.2	497.6	541.0	594.7	708.3	799.1	795.0	780.5	865.2	757.8
85°	336.6	303.5	363.4	406.8	433.6	530.7	675.2	656.6	621.5	547.2	534.8
87.5°	136.3	156.9	200.3	241.6	260.2	342.8	462.5	446.0	452.2	371.7	369.6
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)