

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: P195834

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195834
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36032 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

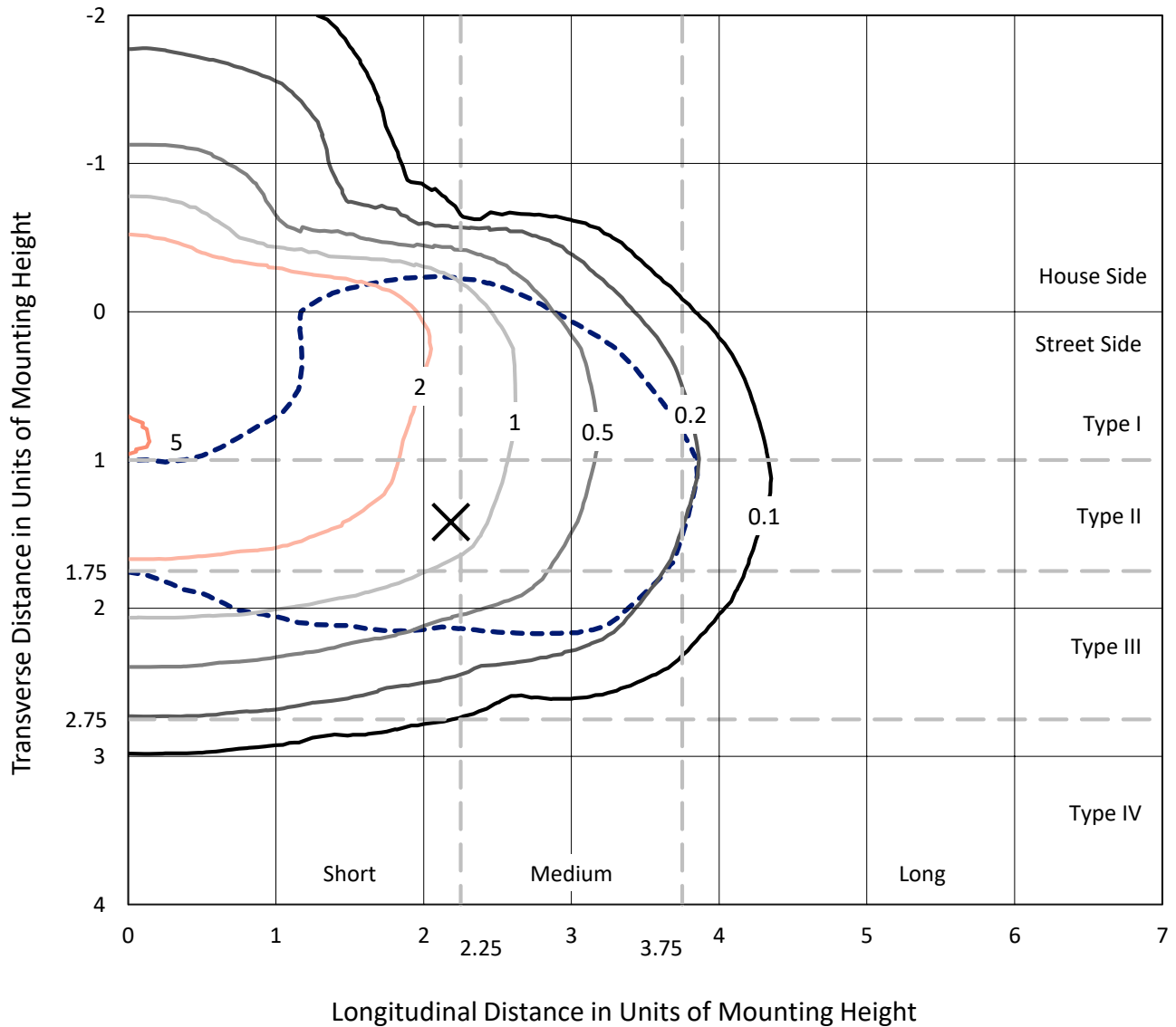
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

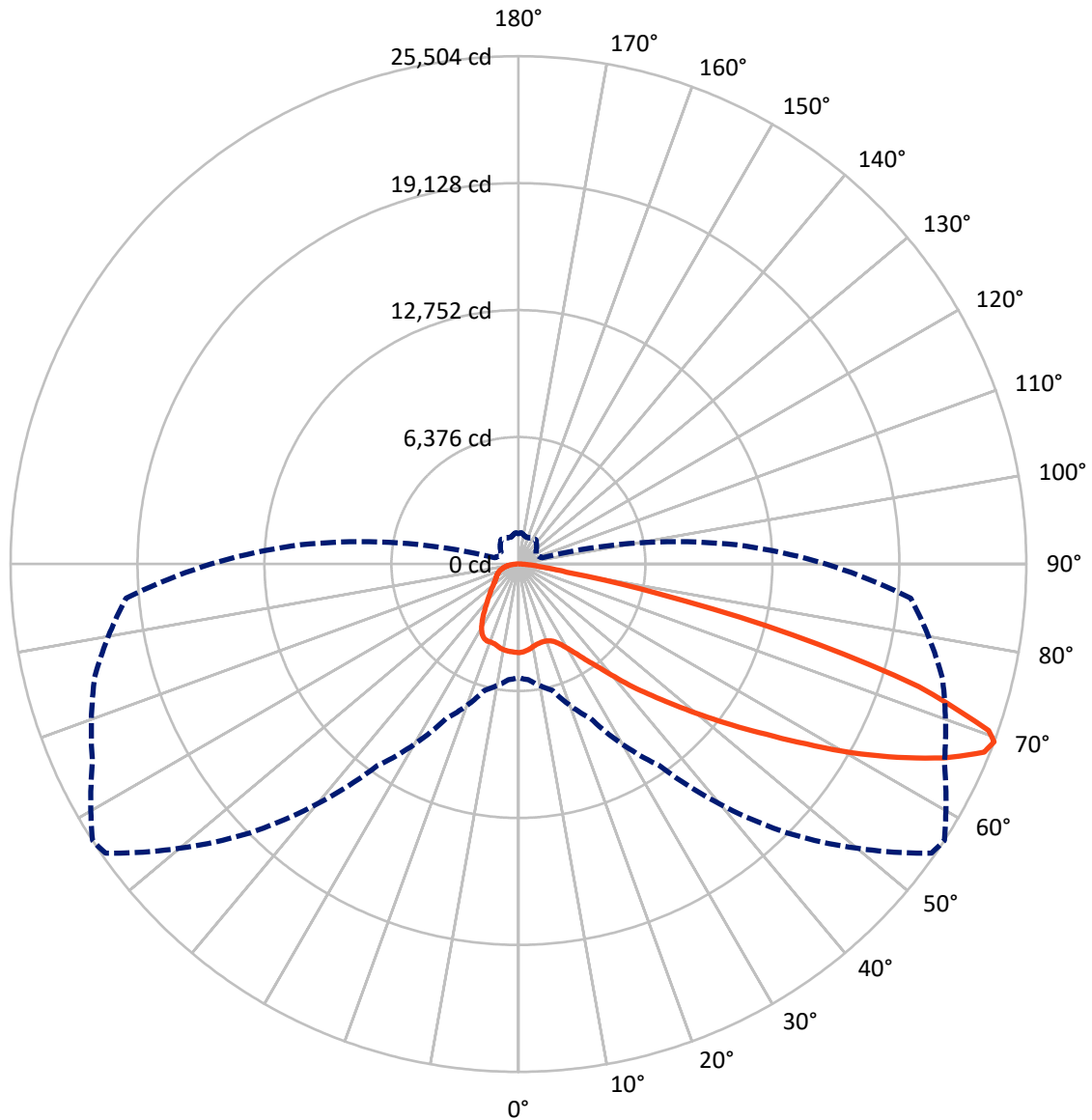
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.1 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7951.0	0.0	7951.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	28081.0	0.0	28081.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	36032.0	0.0	36032.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	416.8	1.2
10°-20°	1185.1	3.3
20°-30°	1971.4	5.5
30°-40°	3219.2	8.9
40°-50°	5433.3	15.1
50°-60°	8451.7	23.5
60°-70°	10067.8	27.9
70°-80°	4690.2	13.0
80°-90°	596.5	1.7
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°	36032.0	100.0
0°-180°	36032.0	100.0



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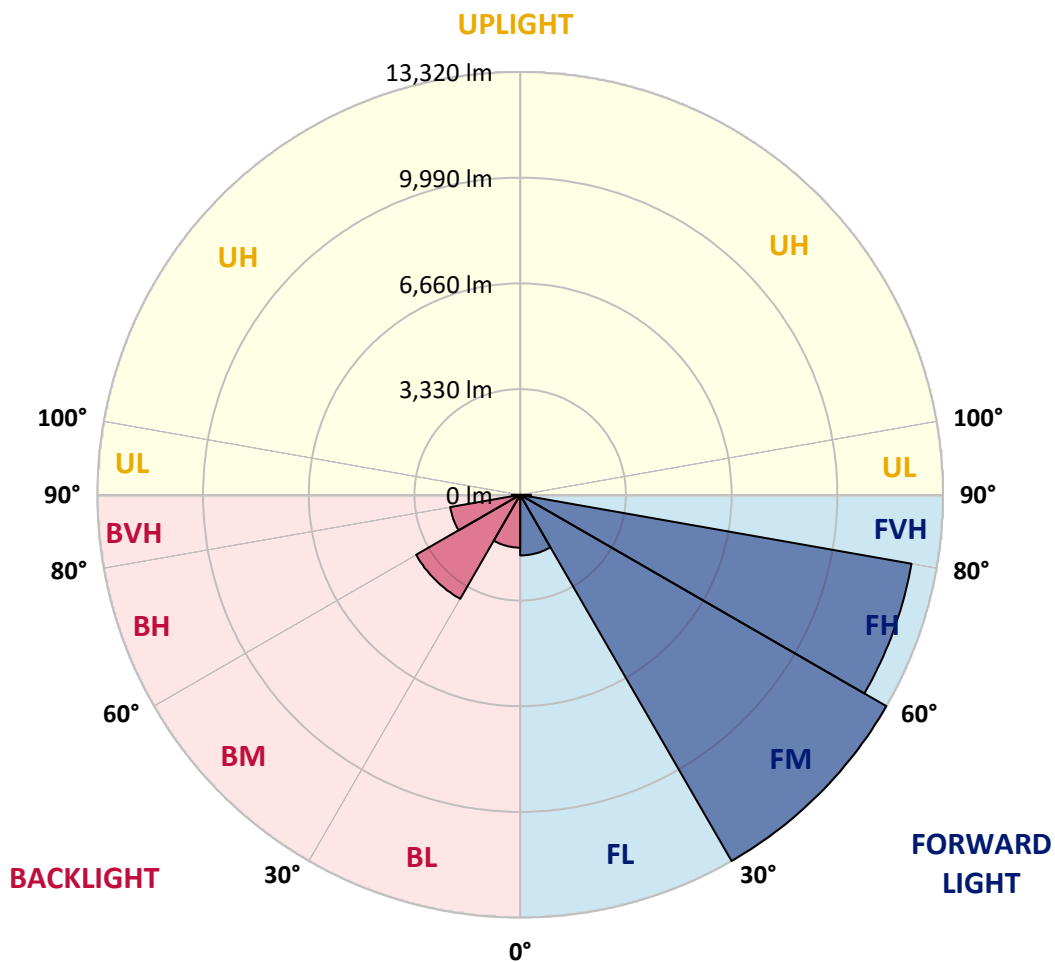
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1908.2	5.3			
FM	(30°-60°)	13319.9	37.0			
FH	(60°-80°)	12517.6	34.7			G5
FVH	(80°-90°)	335.3	0.9			G3/500
BL	(0°-30°)	1665.1	4.6	B3/2500		
BM	(30°-60°)	3784.2	10.5	B3/5000		
BH	(60°-80°)	2240.5	6.2	B3/2500		G3/2500
BVH	(80°-90°)	261.2	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1
2.5°	4426.7	4426.7	4438.3	4438.3	4438.3	4433.7	4419.8	4424.4	4415.2	4408.3	4396.7
5°	4336.8	4341.4	4355.2	4359.8	4366.8	4369.1	4369.1	4366.8	4369.1	4369.1	4362.1
7.5°	4212.2	4216.8	4233.0	4242.2	4262.9	4281.4	4290.6	4290.6	4302.2	4311.4	4313.7
10°	4136.1	4136.1	4145.3	4145.3	4161.4	4170.7	4200.7	4198.4	4230.7	4260.6	4274.5
12.5°	4126.8	4126.8	4122.2	4106.1	4096.9	4094.6	4124.5	4129.2	4177.6	4230.7	4256.0
15°	4156.8	4156.8	4143.0	4110.7	4076.1	4060.0	4089.9	4099.2	4152.2	4214.5	4253.7
17.5°	4253.7	4251.4	4221.4	4156.8	4096.9	4071.5	4080.7	4089.9	4138.4	4209.9	4258.3
20°	4468.3	4468.3	4403.7	4286.0	4182.2	4122.2	4108.4	4115.3	4149.9	4216.8	4279.1
22.5°	4844.3	4851.2	4735.8	4542.1	4364.4	4237.6	4182.2	4189.1	4205.3	4269.9	4339.1
25°	5397.9	5379.4	5215.7	4941.1	4664.3	4447.5	4334.5	4341.4	4341.4	4401.4	4472.9
27.5°	5983.8	5988.4	5753.1	5457.9	5093.4	4770.4	4590.5	4588.2	4585.9	4643.6	4719.7
30°	6645.9	6648.2	6376.0	6034.6	5617.0	5204.1	4934.2	4931.9	4911.2	4982.7	5081.9
32.5°	7370.2	7367.9	7051.9	6666.6	6203.0	5734.7	5384.0	5381.7	5365.6	5462.5	5582.4
35°	8173.0	8173.0	7859.2	7384.0	6883.5	6362.1	5956.1	5953.8	5963.1	6094.5	6207.6
37.5°	9139.5	9160.3	8782.0	8205.3	7658.5	7102.6	6629.7	6615.9	6546.7	6768.1	6955.0
40°	10147.6	10205.2	9813.1	9139.5	8549.0	7974.6	7453.2	7444.0	7384.0	7619.3	7921.5
42.5°	11238.7	11370.2	10934.2	10246.8	9603.2	8982.6	8459.0	8433.6	8202.9	8569.7	9042.6
45°	12668.9	12754.2	12122.2	11499.3	10892.7	10184.5	9561.6	9425.5	9194.9	9665.5	10279.1
47.5°	13642.4	13600.8	13206.4	12788.8	12399.0	11720.8	10763.5	10590.5	10309.0	10931.9	11607.8
50°	14246.7	14276.7	14055.3	14034.5	14013.8	13540.9	12119.9	11912.3	11587.0	12325.2	13114.1
52.5°	14645.8	14509.7	14548.9	15019.5	15589.3	15363.2	13653.9	13423.2	13088.7	13826.9	14717.3
55°	14479.7	14299.8	14662.0	15589.3	16929.5	16980.3	15337.8	15100.2	14814.2	15423.2	16645.8
57.5°	13792.3	13882.3	14454.3	15743.8	17845.3	18428.9	17273.2	17031.0	16468.2	17086.4	18477.4
60°	12825.8	13008.0	13882.3	15499.3	18486.6	19557.0	19397.8	19236.3	18267.5	18705.8	20401.3
62.5°	11787.7	11967.6	13042.6	15081.8	18198.3	20555.8	21483.1	21383.9	20253.6	20265.2	21621.5
65°	10253.7	10327.5	11425.5	13942.2	17397.8	21457.8	23570.8	23483.1	22152.1	21596.2	21962.9
67.5°	7743.9	7836.2	8738.1	11005.7	14961.8	20968.7	25238.6	25224.8	23294.0	22089.8	21151.0
69°	5718.5	5831.6	6567.4	8544.4	12371.3	19104.8	25317.0	25503.9	23603.1	22039.1	19778.4
70°	4184.5	4313.7	4994.2	6782.0	10304.4	17047.2	24645.7	25047.1	23485.4	21718.4	18708.1
72.5°	1778.5	1822.4	2156.8	3061.1	5227.2	10279.1	20186.7	21031.0	21210.9	19460.1	14615.8
75°	1114.2	1128.0	1259.5	1570.9	2325.2	4251.4	13072.6	14223.7	15836.1	15097.9	9785.4
77.5°	839.7	851.2	927.3	1081.9	1444.1	1587.1	6064.6	7231.8	9070.3	8881.1	4869.6
80°	643.6	650.5	701.3	786.6	1017.3	994.2	1967.7	2472.9	3785.4	3340.2	1723.2
82.5°	505.2	507.5	551.3	567.5	710.5	669.0	987.3	1100.3	1529.4	1271.0	842.0
85°	447.5	454.4	498.3	415.2	454.4	403.7	542.1	588.2	812.0	765.9	318.3
87.5°	228.4	239.9	417.5	355.2	228.4	191.5	237.6	256.1	329.9	357.6	154.6
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°	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1	4452.1
2.5°	4399.0	4401.4	4408.3	4419.8	4438.3	4461.3	4489.0	4516.7	4532.8	4544.4	4539.8
5°	4362.1	4364.4	4378.3	4399.0	4422.1	4456.7	4502.9	4537.5	4562.8	4579.0	4576.7
7.5°	4316.0	4322.9	4350.6	4373.7	4406.0	4433.7	4470.6	4502.9	4528.2	4544.4	4542.1
10°	4281.4	4288.3	4322.9	4352.9	4380.6	4385.2	4378.3	4369.1	4366.8	4378.3	4373.7
12.5°	4265.3	4279.1	4311.4	4332.2	4320.6	4276.8	4226.0	4205.3	4198.4	4221.4	4223.7
15°	4269.9	4281.4	4309.1	4295.2	4233.0	4159.1	4131.5	4147.6	4161.4	4175.3	4177.6
17.5°	4281.4	4288.3	4295.2	4244.5	4156.8	4108.4	4099.2	4083.0	4041.5	4018.4	4016.1
20°	4302.2	4311.4	4299.9	4219.1	4140.7	4076.1	3965.4	3866.2	3771.6	3720.9	3700.1
22.5°	4373.7	4380.6	4346.0	4267.6	4147.6	3937.7	3713.9	3543.2	3397.9	3319.5	3289.5
25°	4514.4	4525.9	4477.5	4378.3	4064.6	3697.8	3381.8	3151.1	2968.8	2874.3	2848.9
27.5°	4761.2	4772.7	4719.7	4461.3	3870.8	3377.1	2994.2	2765.8	2609.0	2528.2	2516.7
30°	5130.3	5146.4	5098.0	4459.0	3575.5	2968.8	2615.9	2482.1	2392.1	2336.8	2334.5
32.5°	5642.4	5702.4	5504.0	4380.6	3211.1	2555.9	2329.9	2283.7	2239.9	2203.0	2203.0
35°	6292.9	6433.6	5905.4	4216.8	2809.7	2274.5	2170.7	2126.9	2071.5	2032.3	2027.7
37.5°	7070.3	7289.5	6191.4	3926.2	2463.7	2138.4	2073.8	2002.3	1914.6	1838.5	1820.1
40°	8138.4	8189.1	6332.1	3453.3	2205.3	2064.6	1983.8	1893.9	1783.1	1697.8	1688.6
42.5°	9211.0	9044.9	6304.5	2945.8	2057.7	1997.7	1891.6	1792.4	1693.2	1621.7	1621.7
45°	10431.3	9792.3	6094.5	2436.0	1923.9	1921.6	1806.2	1711.6	1635.5	1582.5	1570.9
47.5°	11598.5	10463.6	5732.4	2060.0	1785.5	1845.4	1750.9	1674.7	1605.5	1554.8	1545.5
50°	13014.9	11241.0	5347.1	1797.0	1651.7	1778.5	1727.8	1688.6	1621.7	1534.0	1524.8
52.5°	14422.1	12149.9	5049.6	1598.6	1534.0	1725.5	1741.6	1746.2	1684.0	1513.3	1501.7
55°	15933.0	13121.0	4735.8	1444.1	1437.1	1700.1	1773.9	1769.3	1739.3	1517.9	1499.4
57.5°	17370.1	14096.8	4267.6	1335.6	1361.0	1674.7	1780.8	1707.0	1654.0	1540.9	1510.9
60°	18560.4	14904.2	3580.1	1259.5	1296.4	1624.0	1734.7	1624.0	1534.0	1536.3	1508.6
62.5°	19139.4	15130.2	2738.2	1171.8	1243.4	1540.9	1667.8	1561.7	1478.7	1545.5	1529.4
65°	18698.8	14486.6	1951.5	1091.1	1178.8	1444.1	1628.6	1508.6	1451.0	1591.7	1573.2
67.5°	17116.4	12733.5	1416.4	1019.6	1116.5	1344.9	1554.8	1460.2	1423.3	1626.3	1584.8
69°	15434.7	10994.2	1227.2	978.1	1072.7	1291.8	1506.3	1434.8	1402.5	1577.8	1517.9
70°	14036.8	9653.9	1132.6	952.7	1035.7	1261.8	1469.4	1418.7	1381.8	1520.2	1448.7
72.5°	10064.5	6239.9	952.7	876.6	938.9	1194.9	1388.7	1358.7	1303.3	1372.5	1326.4
75°	6080.7	3257.2	809.7	798.1	837.4	1102.6	1294.1	1257.2	1201.8	1208.8	1185.7
77.5°	2793.5	1504.0	678.2	705.9	731.3	987.3	1178.8	1137.2	1086.5	1068.0	1070.4
80°	1224.9	878.9	567.5	602.1	615.9	888.1	1054.2	1008.1	952.7	1051.9	975.8
82.5°	662.0	509.8	442.9	466.0	505.2	772.8	915.8	855.8	802.8	934.3	754.3
85°	267.6	260.7	299.9	323.0	350.6	555.9	765.9	703.6	639.0	572.1	558.2
87.5°	115.3	124.6	147.6	156.9	186.9	346.0	514.4	449.8	452.1	387.5	380.6
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)