

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: P196794

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196794
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-T3-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34849.3 lumens
Efficiency: N/A
Efficacy: 104.7 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

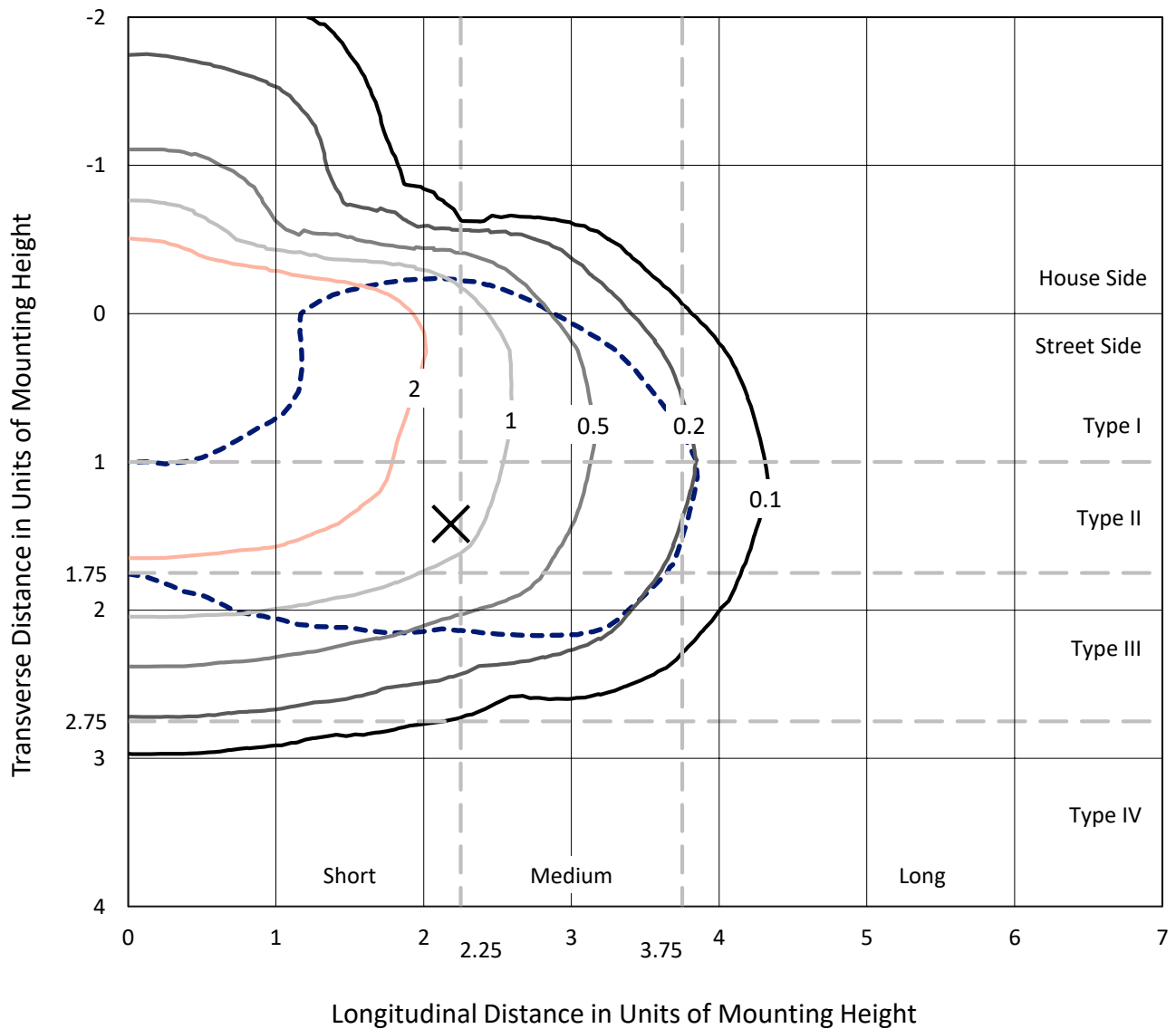


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Iso-Footcandle Lines of Horizontal Illumination

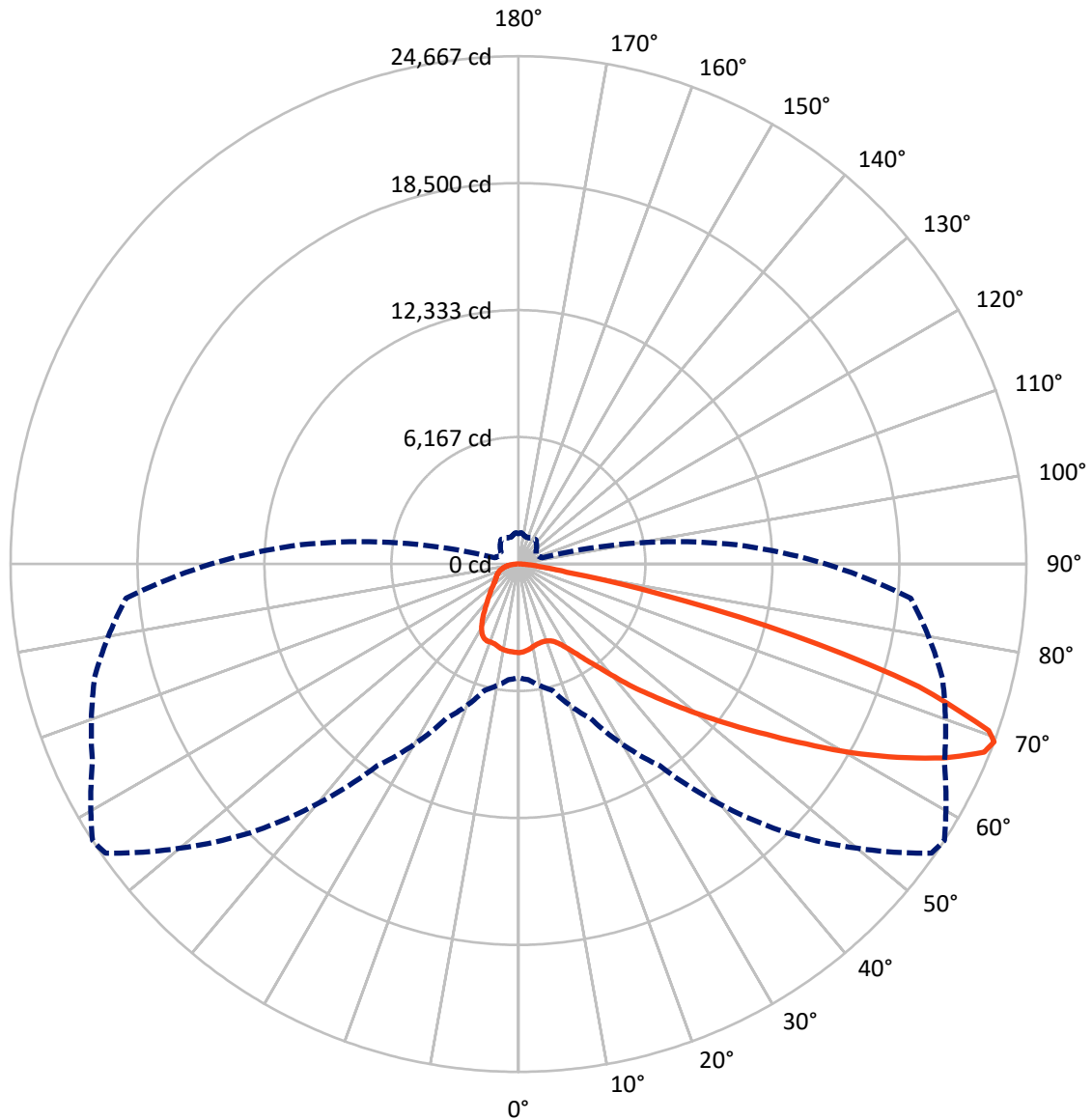
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.9 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	7690.0	0.0	7690.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	27159.3	0.0	27159.3
	% Fixture	77.9	0.0	77.9
Total	Lumens	34849.3	0.0	34849.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.1	1.2
10°-20°	1146.2	3.3
20°-30°	1906.7	5.5
30°-40°	3113.5	8.9
40°-50°	5254.9	15.1
50°-60°	8174.3	23.5
60°-70°	9737.3	27.9
70°-80°	4536.3	13.0
80°-90°	577.0	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°	34849.3	100.0
0°-180°	34849.3	100.0



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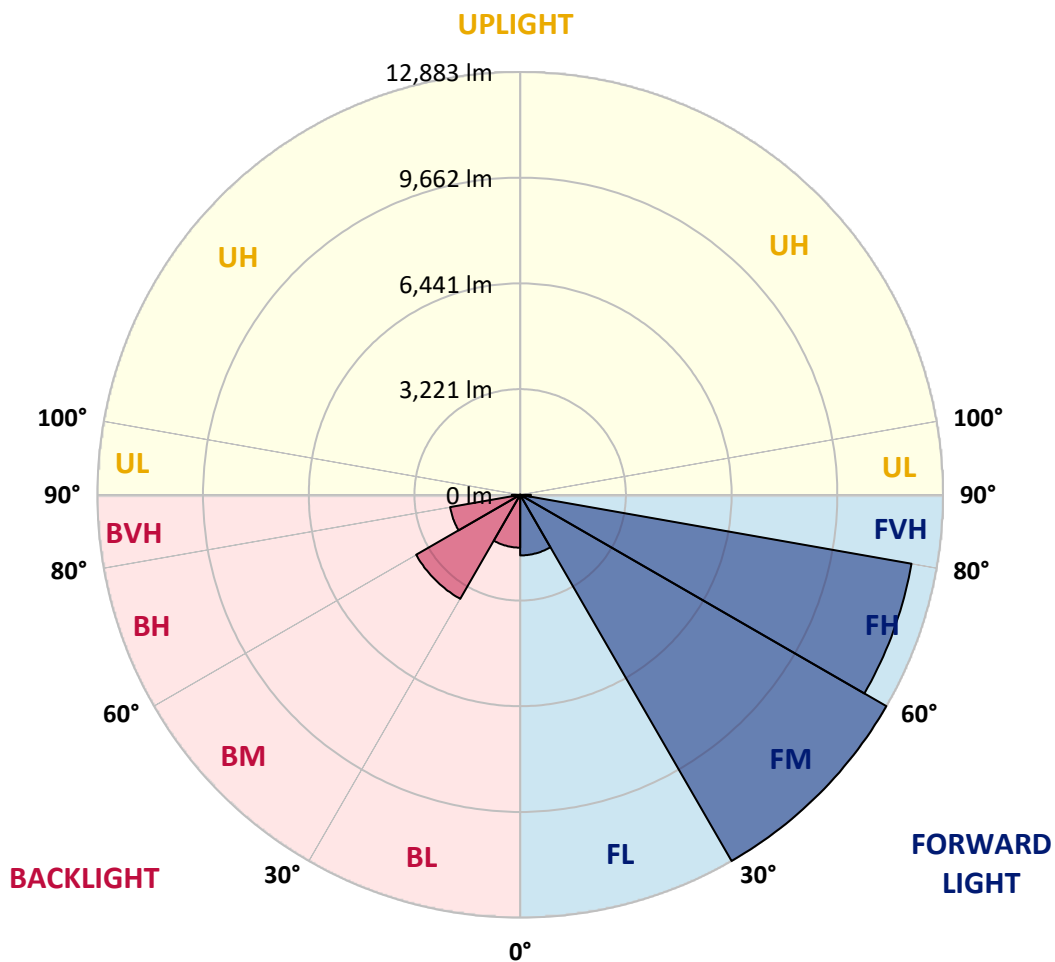
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1845.6	5.3			
FM	(30°-60°)	12882.7	37.0			
FH	(60°-80°)	12106.7	34.7			G5
FVH	(80°-90°)	324.3	0.9			G3/500
BL	(0°-30°)	1610.4	4.6	B3/2500		
BM	(30°-60°)	3660.0	10.5	B3/5000		
BH	(60°-80°)	2166.9	6.2	B3/2500		G3/2500
BVH	(80°-90°)	252.6	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°	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0
2.5°	4281.5	4281.5	4292.6	4292.6	4292.6	4288.1	4274.8	4279.2	4270.3	4263.7	4252.5
5°	4194.5	4198.9	4212.3	4216.8	4223.4	4225.6	4225.6	4223.4	4225.6	4225.6	4218.9
7.5°	4074.0	4078.4	4094.1	4102.9	4123.0	4140.9	4149.7	4149.7	4160.9	4169.9	4172.1
10°	4000.3	4000.3	4009.3	4009.3	4024.9	4033.8	4062.8	4060.5	4091.8	4120.8	4134.2
12.5°	3991.3	3991.3	3987.0	3971.3	3962.4	3960.2	3989.2	3993.7	4040.5	4091.8	4116.4
15°	4020.4	4020.4	4007.0	3975.7	3942.3	3926.7	3955.7	3964.6	4016.0	4076.1	4114.0
17.5°	4114.0	4111.9	4082.9	4020.4	3962.4	3937.8	3946.8	3955.7	4002.5	4071.8	4118.5
20°	4321.6	4321.6	4259.2	4145.3	4044.9	3987.0	3973.5	3980.2	4013.7	4078.4	4138.6
22.5°	4685.2	4691.9	4580.3	4393.0	4221.2	4098.6	4044.9	4051.7	4067.2	4129.7	4196.6
25°	5220.7	5202.8	5044.5	4779.0	4511.2	4301.5	4192.2	4198.9	4198.9	4256.8	4326.0
27.5°	5787.5	5791.9	5564.3	5278.8	4926.2	4613.9	4439.9	4437.6	4435.4	4491.1	4564.8
30°	6427.7	6429.9	6166.7	5836.5	5432.7	5033.3	4772.2	4770.0	4749.9	4819.1	4915.0
32.5°	7128.3	7126.1	6820.4	6447.8	5999.3	5546.4	5207.3	5205.1	5189.5	5283.2	5399.1
35°	7904.7	7904.7	7601.2	7141.6	6657.5	6153.3	5760.5	5758.4	5767.4	5894.5	6003.8
37.5°	8839.5	8859.7	8493.7	7935.9	7407.1	6869.4	6412.1	6398.8	6331.8	6545.9	6726.6
40°	9814.5	9870.3	9491.1	8839.5	8268.4	7712.8	7208.6	7199.6	7141.6	7369.2	7661.5
42.5°	10869.7	10997.0	10575.3	9910.5	9287.9	8687.9	8181.4	8156.9	7933.8	8288.4	8745.7
45°	12253.1	12335.6	11724.3	11121.9	10535.1	9850.2	9247.8	9116.1	8893.0	9348.2	9941.7
47.5°	13194.5	13154.4	12773.0	12369.1	11992.1	11336.0	10410.2	10242.8	9970.7	10573.0	11226.7
50°	13779.1	13808.0	13593.9	13573.9	13553.8	13096.4	11722.1	11521.3	11206.7	11920.6	12683.7
52.5°	14165.1	14033.5	14071.4	14526.6	15077.6	14858.9	13205.7	12982.6	12659.1	13373.2	14234.3
55°	14004.5	13830.5	14180.8	15077.6	16373.8	16423.0	14834.4	14604.5	14327.9	14916.9	16099.5
57.5°	13339.6	13426.7	13979.9	15227.1	17259.5	17824.0	16706.3	16472.0	15927.6	16525.6	17870.9
60°	12404.7	12580.9	13426.7	14990.6	17879.8	18915.1	18761.1	18604.8	17667.9	18091.8	19731.6
62.5°	11400.7	11574.8	12614.5	14586.7	17600.9	19881.2	20778.1	20682.0	19588.9	19600.0	20911.9
65°	9917.1	9988.5	11050.5	13484.7	16826.8	20753.5	22797.2	22712.4	21424.9	20887.3	21242.0
67.5°	7489.7	7579.0	8451.3	10644.5	14470.8	20280.4	24410.1	24396.8	22529.4	21364.8	20456.7
69°	5530.8	5640.2	6351.9	8264.0	11965.3	18477.8	24486.1	24666.8	22828.4	21315.7	19129.2
70°	4047.2	4172.1	4830.3	6559.4	9966.2	16487.7	23836.8	24225.0	22714.6	21005.5	18094.0
72.5°	1720.2	1762.6	2086.1	2960.6	5055.7	9941.7	19524.2	20340.7	20514.7	18821.3	14136.1
75°	1077.7	1091.0	1218.1	1519.4	2248.9	4111.9	12643.5	13756.9	15316.3	14602.4	9464.2
77.5°	812.2	823.3	896.9	1046.3	1396.7	1535.0	5865.5	6994.4	8772.5	8589.6	4709.8
80°	622.4	629.2	678.3	760.8	983.9	961.6	1903.1	2391.6	3661.2	3230.6	1666.6
82.5°	488.6	490.8	533.1	548.8	687.1	647.1	954.9	1064.1	1479.2	1229.2	814.3
85°	432.7	439.6	482.0	401.6	439.6	390.5	524.3	568.9	785.3	740.7	307.9
87.5°	220.9	232.0	403.8	343.6	220.9	185.2	229.8	247.7	319.0	345.8	149.4
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°	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0
2.5°	4254.7	4256.8	4263.7	4274.8	4292.6	4314.8	4341.6	4368.4	4384.0	4395.2	4390.8
5°	4218.9	4221.2	4234.6	4254.7	4277.0	4310.4	4355.1	4388.5	4413.1	4428.8	4426.4
7.5°	4174.4	4181.1	4207.8	4230.1	4261.3	4288.1	4323.8	4355.1	4379.5	4395.2	4393.0
10°	4140.9	4147.6	4181.1	4210.1	4236.8	4241.2	4234.6	4225.6	4223.4	4234.6	4230.1
12.5°	4125.3	4138.6	4169.9	4190.0	4178.8	4136.4	4087.3	4067.2	4060.5	4082.9	4085.1
15°	4129.7	4140.9	4167.7	4154.2	4094.1	4022.6	3995.8	4011.5	4024.9	4038.2	4040.5
17.5°	4140.9	4147.6	4154.2	4105.2	4020.4	3973.5	3964.6	3948.9	3908.9	3886.6	3884.2
20°	4160.9	4169.9	4158.7	4080.7	4004.8	3942.3	3835.2	3739.3	3647.8	3598.7	3578.7
22.5°	4230.1	4236.8	4203.3	4127.5	4011.5	3808.4	3592.0	3426.9	3286.4	3210.5	3181.5
25°	4366.2	4377.4	4330.5	4234.6	3931.1	3576.4	3270.7	3047.7	2871.5	2779.9	2755.4
27.5°	4604.9	4616.1	4564.8	4314.8	3743.8	3266.3	2895.9	2675.1	2523.4	2445.2	2434.1
30°	4961.9	4977.6	4930.7	4312.7	3458.2	2871.5	2530.0	2400.7	2313.7	2260.0	2257.9
32.5°	5457.2	5515.2	5323.3	4236.8	3105.7	2472.0	2253.4	2208.7	2166.4	2130.7	2130.7
35°	6086.4	6222.5	5711.5	4078.4	2717.5	2199.8	2099.4	2057.1	2003.5	1965.6	1961.1
37.5°	6838.2	7050.2	5988.2	3797.3	2382.8	2068.2	2005.8	1936.6	1851.8	1778.2	1760.2
40°	7871.2	7920.3	6124.3	3339.9	2133.0	1996.8	1918.7	1831.7	1724.6	1642.0	1633.1
42.5°	8908.7	8748.1	6097.5	2849.1	1990.1	1932.1	1829.4	1733.5	1637.6	1568.4	1568.4
45°	10088.9	9470.9	5894.5	2356.0	1860.6	1858.5	1746.9	1655.5	1581.8	1530.5	1519.4
47.5°	11217.8	10120.1	5544.3	1992.4	1726.9	1784.9	1693.4	1619.8	1552.8	1503.7	1494.7
50°	12587.8	10872.1	5171.7	1738.0	1597.5	1720.2	1671.1	1633.1	1568.4	1483.6	1474.8
52.5°	13948.7	11751.1	4883.8	1546.1	1483.6	1668.8	1684.4	1688.9	1628.7	1463.6	1452.4
55°	15410.0	12690.4	4580.3	1396.7	1390.0	1644.4	1715.7	1711.2	1682.3	1468.0	1450.2
57.5°	16800.0	13634.1	4127.5	1291.8	1316.3	1619.8	1722.4	1651.0	1599.7	1490.4	1461.4
60°	17951.2	14415.0	3462.7	1218.1	1253.9	1570.7	1677.7	1570.7	1483.6	1485.9	1459.1
62.5°	18511.2	14633.6	2648.3	1133.3	1202.5	1490.4	1613.1	1510.4	1430.1	1494.7	1479.2
65°	18085.1	14011.2	1887.5	1055.3	1140.1	1396.7	1575.2	1459.1	1403.3	1539.5	1521.6
67.5°	16554.5	12315.4	1369.9	986.2	1079.8	1300.7	1503.7	1412.2	1376.5	1572.9	1532.8
69°	14928.1	10633.3	1186.9	945.9	1037.4	1249.4	1456.9	1387.7	1356.5	1526.1	1468.0
70°	13576.1	9337.1	1095.5	921.4	1001.8	1220.4	1421.3	1372.1	1336.5	1470.3	1401.1
72.5°	9734.2	6035.1	921.4	847.9	908.1	1155.8	1343.2	1314.1	1260.6	1327.5	1282.9
75°	5881.1	3150.3	783.1	771.9	809.8	1066.5	1251.7	1215.9	1162.4	1169.1	1146.7
77.5°	2701.9	1454.7	655.9	682.8	707.2	954.9	1140.1	1099.9	1050.8	1032.9	1035.2
80°	1184.7	850.0	548.8	582.4	595.7	859.0	1019.6	975.0	921.4	1017.4	943.8
82.5°	640.4	493.1	428.4	450.7	488.6	747.5	885.8	827.7	776.4	903.6	729.6
85°	258.8	252.1	290.1	312.4	339.1	537.7	740.7	680.4	618.0	553.3	540.0
87.5°	111.6	120.5	142.8	151.8	180.8	334.7	497.5	435.1	437.2	374.9	368.1
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)