

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: P195852

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195852
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29602 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 249
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

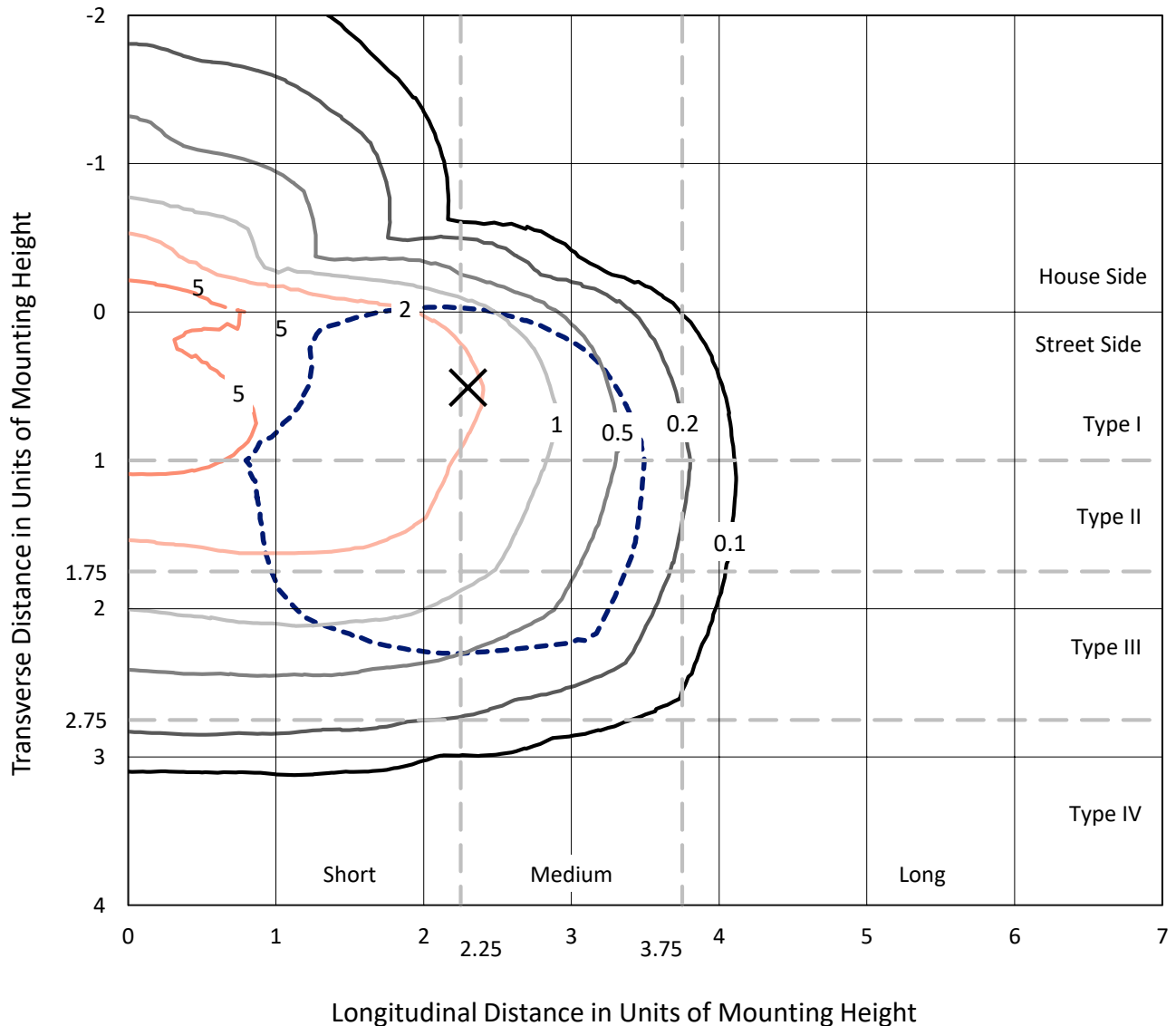


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Iso-Footcandle Lines of Horizontal Illumination

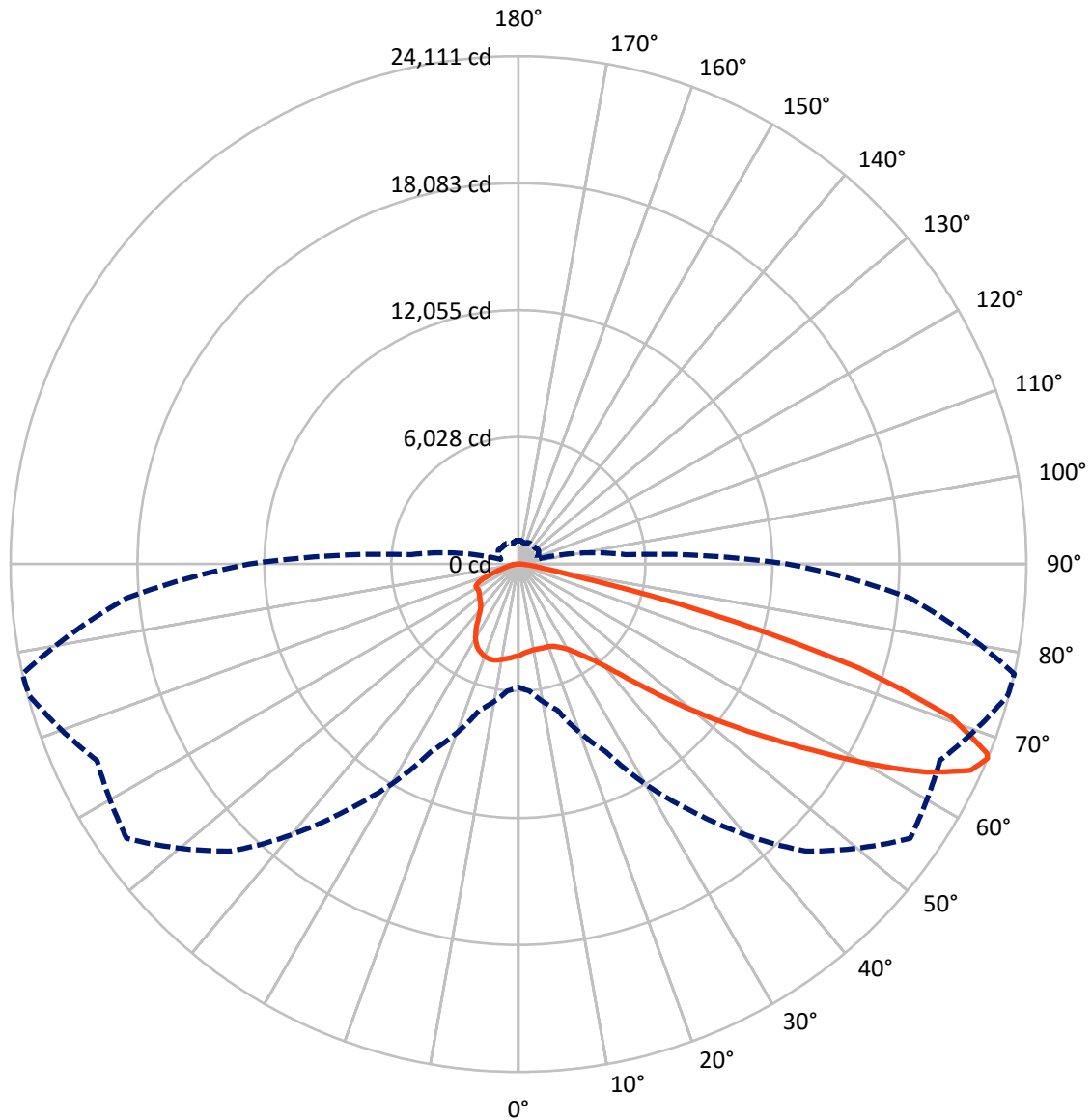
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5087.1	0.0	5087.1
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	24514.9	0.0	24514.9
	% Fixture	82.8	0.0	82.8
Total	Lumens	29602.0	0.0	29602.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	388.0	1.3
10°-20°	1074.6	3.6
20°-30°	1825.8	6.2
30°-40°	2920.9	9.9
40°-50°	4496.7	15.2
50°-60°	6238.7	21.1
60°-70°	8322.0	28.1
70°-80°	3960.4	13.4
80°-90°	375.0	1.3
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°	29602.0	100.0
0°-180°	29602.0	100.0



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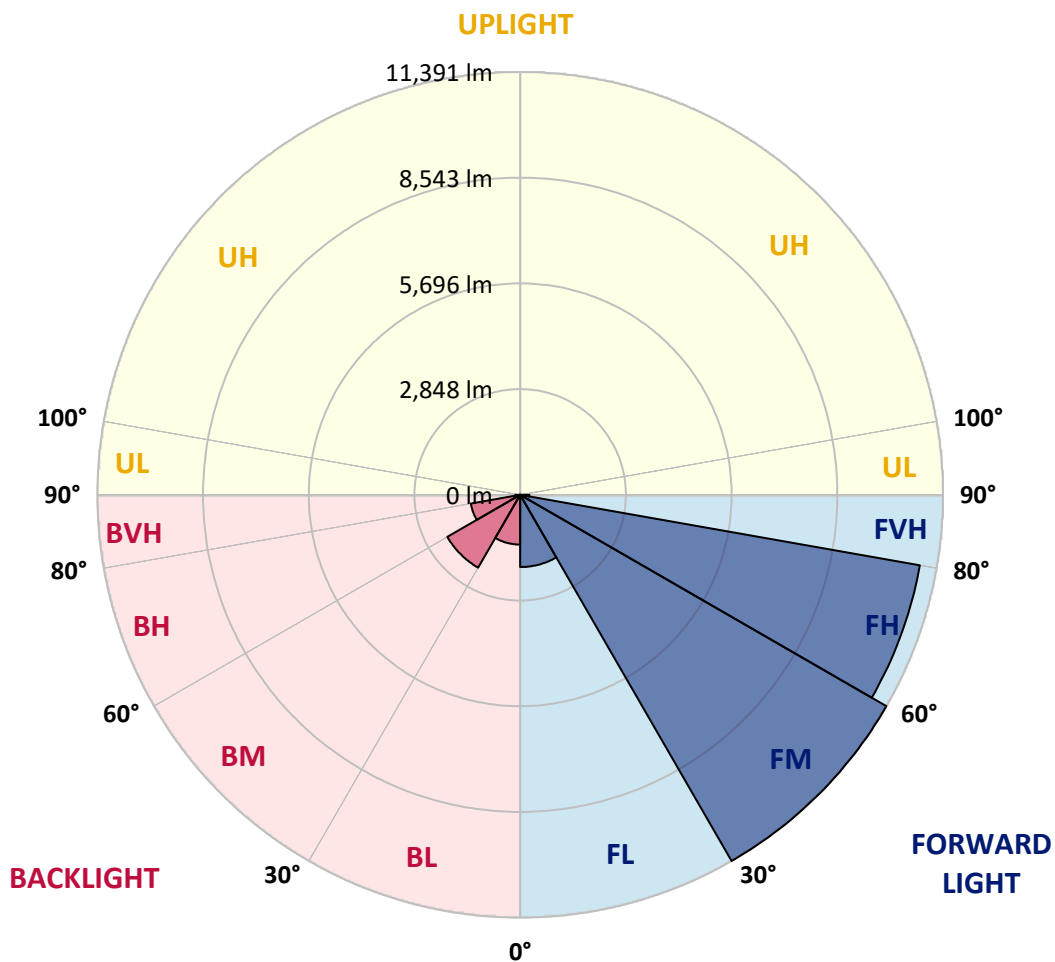
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1946.6	6.6			
FM (30°-60°)	11391.2	38.5			
FH (60°-80°)	10933.6	36.9			G4/12000
FVH (80°-90°)	243.6	0.8			G3/500
BL (0°-30°)	1341.8	4.5	B3/2500		
BM (30°-60°)	2265.1	7.7	B2/2500		
BH (60°-80°)	1348.8	4.6	B3/2500		G3/2500
BVH (80°-90°)	131.4	0.4			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6
2.5°	3906.5	3924.8	3926.6	3979.7	4003.5	4063.9	4129.7	4188.3	4239.5	4257.8	4290.8
5°	3515.0	3515.0	3520.4	3555.2	3622.9	3719.9	3857.1	4007.2	4164.5	4202.9	4299.9
7.5°	3310.0	3313.7	3317.3	3352.1	3405.2	3491.2	3628.4	3833.3	4095.0	4159.0	4329.2
10°	3328.3	3322.8	3304.5	3297.2	3319.2	3374.1	3493.0	3703.4	4036.4	4135.2	4382.3
12.5°	3615.6	3604.6	3544.2	3456.4	3375.9	3355.8	3438.1	3637.5	4009.0	4135.2	4471.9
15°	4107.8	4115.1	3996.2	3813.2	3602.8	3460.1	3449.1	3613.8	3999.8	4146.2	4576.2
17.5°	4748.2	4751.9	4587.2	4321.9	3972.4	3677.8	3524.1	3613.8	3999.8	4157.2	4676.8
20°	5428.9	5403.3	5216.6	4883.6	4429.8	3979.7	3661.3	3635.7	4010.8	4173.7	4772.0
22.5°	6012.6	5988.8	5793.0	5443.5	4923.9	4336.5	3846.1	3708.9	4071.2	4241.4	4905.6
25°	6523.1	6537.7	6347.4	5954.0	5416.1	4739.1	4122.4	3877.2	4197.4	4364.0	5070.2
27.5°	7143.3	7115.9	6896.3	6521.2	5922.9	5156.2	4468.3	4089.5	4347.5	4512.2	5271.5
30°	7860.6	7847.8	7551.4	7165.3	6481.0	5622.8	4810.4	4318.2	4543.3	4715.3	5524.0
32.5°	8731.6	8729.7	8411.4	7937.5	7108.6	6149.8	5214.8	4631.1	4828.7	5002.5	5858.9
35°	9717.8	9716.0	9386.6	8760.8	7831.3	6733.5	5690.5	5011.7	5181.9	5364.8	6257.7
37.5°	10402.1	10391.2	10219.2	9611.7	8630.9	7412.3	6285.2	5524.0	5582.6	5787.5	6739.0
40°	10533.9	10599.7	10748.0	10389.3	9503.7	8166.2	6881.7	6074.8	6129.7	6393.1	7344.6
42.5°	10391.2	10477.2	10969.4	11070.0	10376.5	9079.2	7628.2	6837.8	6907.3	7234.8	8056.4
45°	10266.7	10341.8	10958.4	11446.9	11238.3	10074.6	8559.6	7769.1	7900.9	8307.1	8868.8
47.5°	10054.5	10124.0	10742.5	11514.6	11730.5	11033.4	9681.2	8888.9	9115.8	9608.0	9794.7
50°	10043.5	10074.6	10447.9	11287.7	11900.7	11761.6	10923.6	10199.0	10546.7	11113.9	10819.3
52.5°	9765.4	9983.1	10321.6	10925.4	11904.4	12186.1	12147.7	11635.4	12171.5	12799.1	11942.8
55°	8063.7	8314.4	9900.8	10748.0	11882.4	12550.3	13265.7	13163.2	14001.3	14661.8	13201.7
57.5°	7529.4	7635.6	8685.8	10801.0	12065.4	13152.2	14383.7	14804.5	16094.5	16815.4	14711.2
60°	7383.0	7494.7	8442.5	10826.6	12561.2	14248.3	15900.5	16658.1	18555.5	19320.3	16425.7
62.5°	7220.2	7364.7	8460.8	10850.4	13432.2	15869.4	17913.3	18668.9	21082.4	21764.9	18032.2
65°	6744.5	6936.6	8122.3	10700.4	14385.5	17904.1	20573.7	20765.8	23170.1	23603.8	19002.0
67°	5842.4	6052.8	7192.8	9833.1	14297.7	19274.6	22701.7	22077.8	24057.6	24110.6	18687.2
67.5°	5557.0	5774.7	6878.0	9472.6	14047.0	19453.9	23078.6	22258.9	24050.2	23991.7	18394.5
70°	3741.8	3987.0	4870.8	6954.9	11267.6	18105.4	22987.2	21700.8	22473.0	21801.5	15803.6
72.5°	1857.2	1864.5	2429.9	3809.5	6826.8	12985.7	19175.8	18564.7	18217.0	16949.0	11597.0
75°	894.7	911.2	1147.3	1683.4	2878.2	6704.2	13077.2	12526.5	10665.6	9234.8	5804.0
77.5°	682.5	699.0	891.1	1096.0	1200.3	2186.6	6477.3	5234.9	3090.4	2468.3	1635.8
80°	527.0	558.1	752.0	841.7	794.1	876.5	2036.5	1602.9	1202.1	1103.3	810.6
82.5°	411.7	430.0	638.6	638.6	548.9	587.4	947.8	925.9	746.5	673.3	435.5
85°	290.9	327.5	514.2	475.7	360.5	364.1	567.2	543.4	384.2	309.2	170.2
87.5°	129.9	166.5	366.0	311.1	192.1	148.2	232.4	199.4	151.9	117.1	78.7
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°	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6	4356.6
2.5°	4327.4	4356.6	4402.4	4429.8	4466.4	4481.1	4495.7	4521.3	4541.4	4536.0	4526.8
5°	4367.6	4417.0	4473.7	4492.0	4492.0	4473.7	4462.8	4464.6	4459.1	4455.4	4444.5
7.5°	4426.2	4493.9	4534.1	4515.8	4459.1	4387.7	4320.0	4279.8	4241.4	4217.6	4224.9
10°	4508.5	4583.5	4585.4	4504.8	4369.4	4213.9	4080.3	3994.3	3912.0	3875.4	3886.4
12.5°	4627.4	4702.5	4638.4	4464.6	4226.7	3983.4	3738.2	3560.7	3401.5	3363.1	3352.1
15°	4755.5	4814.1	4671.4	4378.6	4021.8	3621.1	3209.4	2944.1	2766.6	2735.5	2724.5
17.5°	4867.1	4900.1	4654.9	4224.9	3697.9	3066.7	2587.3	2408.0	2371.4	2389.7	2389.7
20°	4965.9	4955.0	4583.5	3987.0	3187.4	2451.9	2173.7	2171.9	2221.3	2267.1	2270.7
22.5°	5090.4	5004.4	4470.1	3633.9	2578.1	2045.7	1998.1	2045.7	2100.6	2151.8	2157.3
25°	5238.6	5059.3	4318.2	3130.7	2073.1	1857.2	1877.3	1917.6	1952.3	1992.6	1994.4
27.5°	5386.8	5101.3	4104.1	2539.7	1798.6	1736.4	1758.4	1774.9	1784.0	1809.6	1809.6
30°	5558.8	5134.3	3794.9	2034.7	1672.4	1630.3	1617.5	1610.2	1617.5	1652.3	1654.1
32.5°	5774.7	5192.8	3372.2	1745.6	1613.8	1555.3	1489.4	1452.8	1478.4	1540.7	1551.6
35°	6019.9	5262.4	2865.4	1630.3	1593.7	1518.7	1397.9	1341.2	1350.4	1407.1	1416.2
37.5°	6327.3	5352.0	2365.9	1602.9	1613.8	1515.0	1355.8	1275.3	1235.1	1236.9	1235.1
40°	6720.7	5441.7	1970.6	1610.2	1657.8	1524.2	1335.7	1209.5	1125.3	1129.0	1136.3
42.5°	7132.4	5500.2	1720.0	1632.1	1710.8	1537.0	1328.4	1145.4	1072.2	1134.4	1191.2
45°	7613.6	5483.8	1590.1	1652.3	1751.1	1542.5	1301.0	1138.1	1077.7	1264.4	1370.5
47.5°	8166.2	5412.4	1516.9	1661.4	1762.1	1540.7	1280.8	1161.9	1123.5	1447.3	1568.1
50°	8766.3	5300.8	1458.3	1646.8	1756.6	1533.3	1302.8	1191.2	1141.8	1487.6	1580.9
52.5°	9423.2	5198.3	1397.9	1613.8	1729.1	1511.4	1330.2	1178.4	1090.5	1370.5	1441.8
55°	10200.9	5174.5	1330.2	1557.1	1683.4	1487.6	1315.6	1138.1	1033.8	1215.0	1258.9
57.5°	11090.1	5322.7	1242.4	1487.6	1621.2	1440.0	1280.8	1116.1	1013.7	1105.2	1129.0
60°	12219.1	5650.3	1149.1	1414.4	1544.3	1368.7	1249.7	1121.6	1019.2	1088.7	1094.2
62.5°	13101.0	5944.9	1064.9	1324.7	1441.8	1282.7	1216.8	1127.1	1035.6	1110.7	1101.5
65°	13421.2	5800.3	960.6	1191.2	1297.3	1187.5	1171.0	1130.8	1035.6	1123.5	1103.3
67°	12764.3	5110.5	861.8	1057.6	1160.1	1103.3	1127.1	1116.1	1017.3	1121.6	1086.9
67.5°	12451.5	4867.1	836.2	1035.6	1123.5	1077.7	1116.1	1108.8	1011.9	1118.0	1077.7
70°	10268.6	3491.2	706.3	869.1	940.5	949.6	1048.4	1061.3	967.9	1050.3	977.1
72.5°	7306.2	2184.7	609.3	673.3	759.3	812.4	957.0	997.2	909.4	913.0	852.7
75°	3615.6	1172.9	543.4	519.6	591.0	677.0	834.4	909.4	823.4	761.2	741.0
77.5°	1220.4	664.2	459.3	419.0	459.3	543.4	691.6	794.1	726.4	644.1	631.3
80°	631.3	483.1	358.6	336.7	362.3	420.8	541.6	660.5	620.3	623.9	514.2
82.5°	393.4	294.6	258.0	256.2	274.5	322.0	398.9	536.1	532.5	455.6	331.2
85°	183.0	170.2	164.7	170.2	175.7	183.0	259.8	382.4	404.4	245.2	217.7
87.5°	76.8	75.0	65.9	71.4	78.7	76.8	104.3	162.8	226.9	153.7	140.9
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)