

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: P270711

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270711
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-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 25718.7 lumens
Efficiency: N/A
Efficacy: 103.3 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

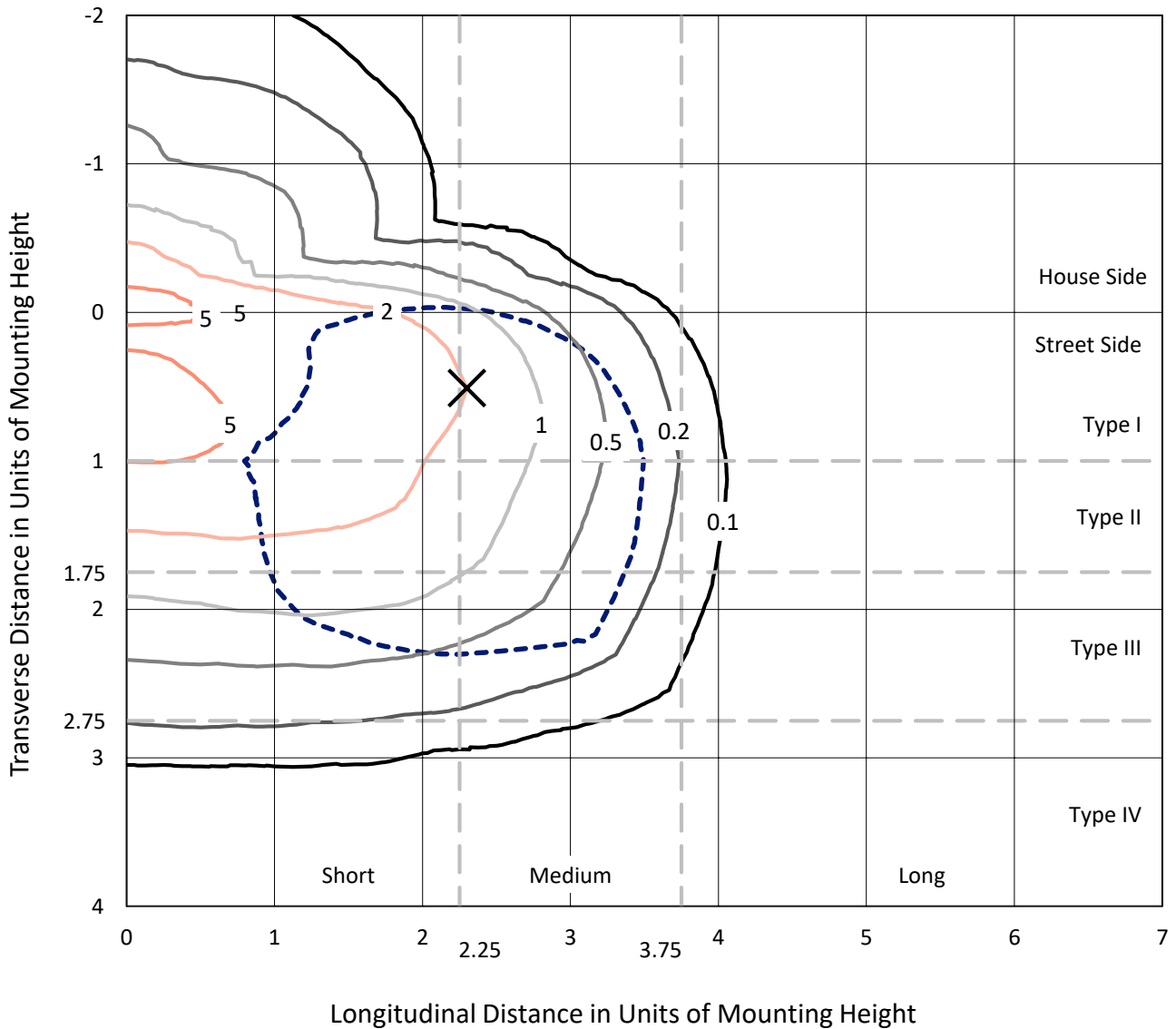


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

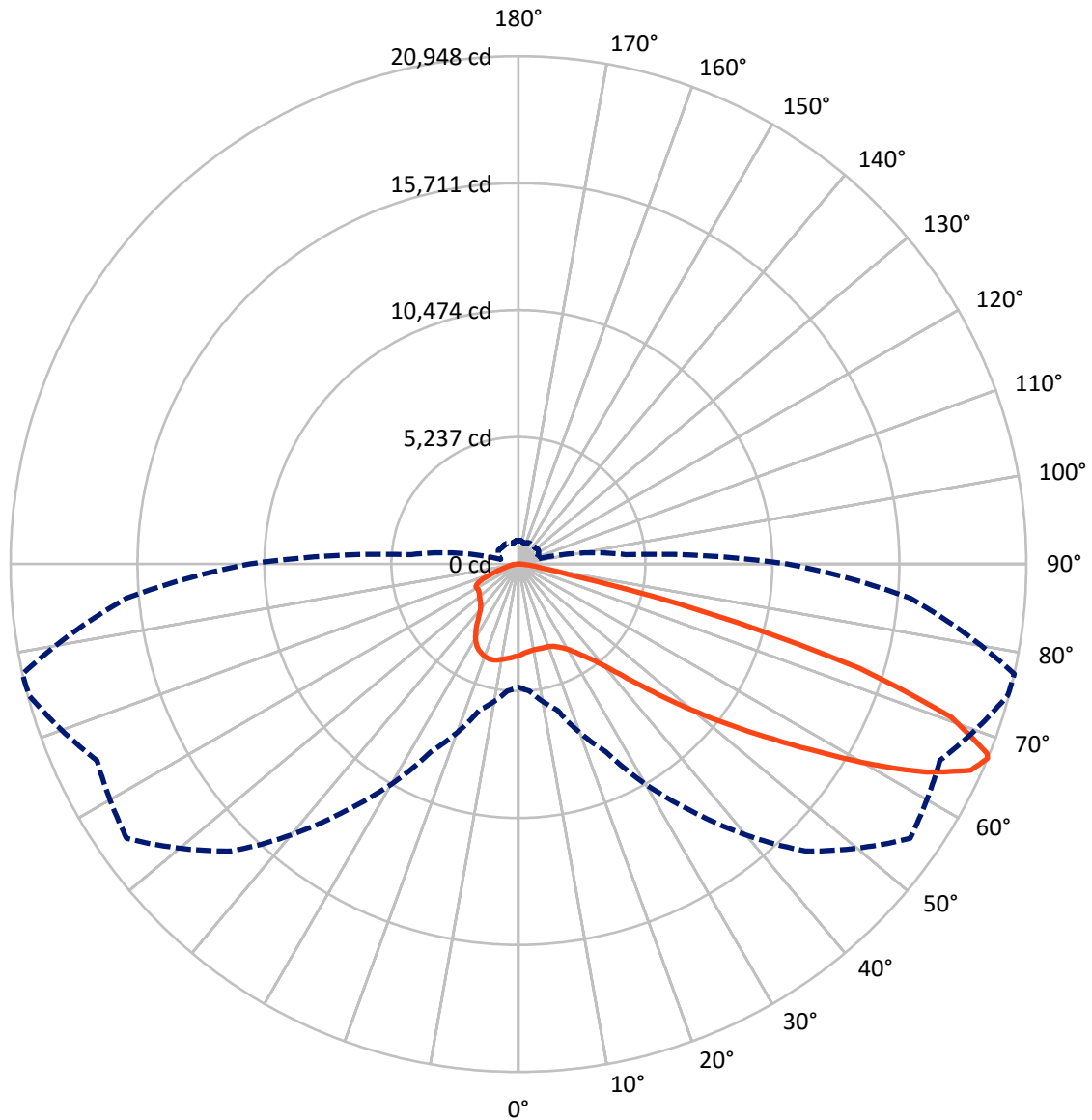


Based on 25 foot mounting height. Maximum calculated value = 7.3 fc
 Type III - Medium - Full Cutoff

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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	4419.7	0.0	4419.7
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	21299.0	0.0	21299.0
	% Fixture	82.8	0.0	82.8
Total	Lumens	25718.7	0.0	25718.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.1	1.3
10°-20°	933.6	3.6
20°-30°	1586.3	6.2
30°-40°	2537.7	9.9
40°-50°	3906.8	15.2
50°-60°	5420.3	21.1
60°-70°	7230.3	28.1
70°-80°	3440.9	13.4
80°-90°	325.8	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°	25718.7	100.0
0°-180°	25718.7	100.0



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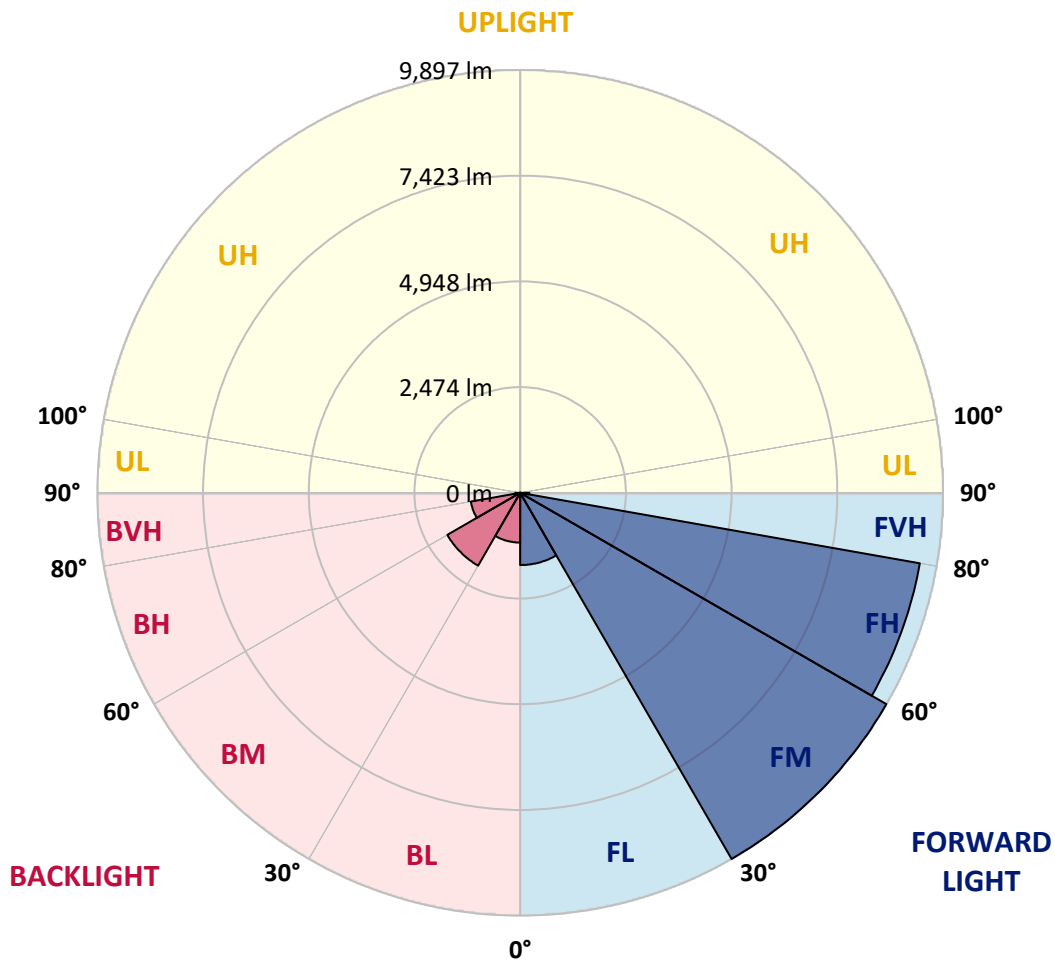
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1691.3	6.6			
FM (30°-60°)	9896.8	38.5			
FH (60°-80°)	9499.3	36.9			G4/12000
FVH (80°-90°)	211.6	0.8			G2/225
BL (0°-30°)	1165.7	4.5	B3/2500		
BM (30°-60°)	1967.9	7.7	B2/2500		
BH (60°-80°)	1171.9	4.6	B3/2500		G3/2500
BVH (80°-90°)	114.2	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°	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1
2.5°	3394.1	3410.0	3411.6	3457.7	3478.2	3530.8	3588.0	3638.9	3683.4	3699.3	3727.8
5°	3053.9	3053.9	3058.5	3088.8	3147.7	3231.9	3351.1	3481.6	3618.3	3651.6	3735.8
7.5°	2875.8	2879.0	2882.1	2912.3	2958.5	3033.1	3152.4	3330.5	3557.7	3613.4	3761.3
10°	2891.7	2887.0	2871.1	2864.7	2883.7	2931.4	3034.7	3217.5	3507.0	3592.9	3807.3
12.5°	3141.4	3131.8	3079.3	3002.9	2933.1	2915.5	2987.0	3160.3	3483.1	3592.9	3885.3
15°	3569.0	3575.3	3471.9	3312.9	3130.1	3006.2	2996.7	3139.7	3475.2	3602.4	3975.9
17.5°	4125.3	4128.5	3985.4	3754.9	3451.3	3195.4	3061.9	3139.7	3475.2	3611.8	4063.4
20°	4716.7	4694.5	4532.3	4243.0	3848.7	3457.7	3181.0	3158.8	3484.6	3626.2	4145.9
22.5°	5223.9	5203.2	5033.1	4729.4	4278.0	3767.6	3341.5	3222.4	3537.2	3684.9	4262.1
25°	5667.3	5680.1	5514.8	5173.0	4705.6	4117.4	3581.6	3368.6	3646.8	3791.4	4405.1
27.5°	6206.3	6182.5	5991.6	5665.8	5145.9	4479.8	3882.0	3553.1	3777.2	3920.3	4580.0
30°	6829.5	6818.3	6560.9	6225.3	5630.8	4885.3	4179.4	3751.7	3947.3	4096.7	4799.4
32.5°	7586.1	7584.6	7307.9	6896.2	6176.0	5343.1	4530.7	4023.6	4195.3	4346.3	5090.2
35°	8443.0	8441.5	8155.3	7611.6	6804.0	5850.1	4944.0	4354.3	4502.0	4661.0	5436.8
37.5°	9037.6	9028.1	8878.6	8350.9	7498.7	6439.9	5460.6	4799.4	4850.2	5028.4	5855.0
40°	9152.0	9209.2	9338.1	9026.3	8257.0	7095.0	5978.8	5277.9	5325.5	5554.5	6381.1
42.5°	9028.1	9102.7	9530.4	9617.9	9015.3	7888.1	6627.5	5940.9	6001.1	6285.8	6999.6
45°	8919.9	8985.0	9520.9	9945.2	9764.0	8752.9	7436.7	6750.0	6864.4	7217.3	7705.4
47.5°	8735.5	8795.9	9333.2	10004.2	10191.7	9586.1	8411.2	7722.9	7919.9	8347.6	8509.7
50°	8726.0	8752.9	9077.4	9806.9	10339.5	10218.7	9490.7	8861.2	9163.2	9655.9	9400.0
52.5°	8484.3	8673.6	8967.6	9492.2	10342.7	10587.6	10554.1	10109.0	10574.8	11120.1	10376.1
55°	7005.9	7223.7	8602.0	9338.1	10323.6	10903.8	11525.4	11436.4	12164.6	12738.4	11469.7
57.5°	6541.6	6634.0	7546.4	9384.1	10482.6	11426.9	12496.9	12862.4	13983.1	14609.6	12781.4
60°	6414.4	6511.5	7335.0	9406.4	10913.4	12379.2	13814.7	14472.9	16121.3	16785.9	14271.0
62.5°	6273.0	6398.6	7350.9	9427.1	11670.2	13787.6	15563.3	16219.8	18316.8	18909.7	15666.7
65°	5859.7	6026.5	7056.7	9296.6	12498.4	15555.4	17874.8	18041.6	20130.6	20507.3	16509.2
67°	5076.0	5258.8	6249.1	8543.2	12422.0	16746.2	19723.6	19181.6	20901.7	20947.8	16235.7
67.5°	4828.0	5017.2	5975.7	8230.0	12204.3	16901.9	20051.2	19338.9	20895.3	20844.5	15981.4
70°	3251.0	3464.0	4231.8	6042.4	9789.5	15730.3	19971.7	18854.0	19524.9	18941.5	13730.5
72.5°	1613.5	1620.0	2111.1	3309.7	5931.2	11282.3	16660.2	16129.2	15827.2	14725.6	10075.7
75°	777.4	791.6	996.8	1462.5	2500.6	5824.7	11361.8	10883.2	9266.5	8023.3	5042.5
77.5°	593.1	607.3	774.2	952.3	1042.8	1899.7	5627.6	4548.2	2685.0	2144.6	1421.2
80°	457.9	484.8	653.3	731.3	690.0	761.5	1769.3	1392.6	1044.5	958.6	704.2
82.5°	357.6	373.5	554.9	554.9	476.9	510.2	823.4	804.4	648.5	585.1	378.4
85°	252.8	284.6	446.6	413.3	313.1	316.4	492.8	472.1	333.8	268.7	147.9
87.5°	112.8	144.6	317.9	270.3	166.9	128.7	201.8	173.3	132.0	101.8	68.4
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°	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1	3785.1
2.5°	3759.6	3785.1	3824.9	3848.7	3880.5	3893.3	3905.9	3928.2	3945.6	3941.0	3933.0
5°	3794.7	3837.6	3886.8	3902.7	3902.7	3886.8	3877.4	3878.9	3874.1	3870.9	3861.5
7.5°	3845.6	3904.4	3939.3	3923.4	3874.1	3812.1	3753.3	3718.4	3684.9	3664.2	3670.7
10°	3917.1	3982.2	3983.9	3913.8	3796.2	3661.1	3545.2	3470.3	3398.7	3367.0	3376.5
12.5°	4020.5	4085.6	4029.9	3878.9	3672.2	3460.8	3247.8	3093.7	2955.2	2921.8	2912.3
15°	4131.7	4182.6	4058.5	3804.2	3494.1	3146.0	2788.3	2557.8	2403.7	2376.6	2367.2
17.5°	4228.6	4257.2	4044.3	3670.7	3212.8	2664.4	2247.9	2092.1	2060.4	2076.2	2076.2
20°	4314.5	4304.9	3982.2	3464.0	2769.2	2130.2	1888.5	1887.0	1929.9	1969.7	1972.9
22.5°	4422.5	4347.8	3883.7	3157.3	2240.0	1777.2	1736.0	1777.2	1824.9	1869.6	1874.3
25°	4551.4	4395.5	3751.7	2720.0	1801.1	1613.5	1631.1	1666.0	1696.2	1731.3	1732.8
27.5°	4680.1	4432.1	3565.7	2206.5	1562.7	1508.7	1527.7	1542.0	1549.9	1572.3	1572.3
30°	4829.6	4460.8	3297.0	1767.8	1453.0	1416.4	1405.3	1398.9	1405.3	1435.5	1437.1
32.5°	5017.2	4511.6	2929.8	1516.6	1402.2	1351.3	1294.0	1262.3	1284.4	1338.6	1348.0
35°	5230.2	4572.1	2489.6	1416.4	1384.6	1319.5	1214.6	1165.3	1173.1	1222.6	1230.5
37.5°	5497.3	4649.9	2055.5	1392.6	1402.2	1316.2	1177.9	1108.0	1073.0	1074.6	1073.0
40°	5839.1	4727.8	1712.1	1398.9	1440.3	1324.2	1160.5	1050.7	977.6	980.9	987.1
42.5°	6196.7	4778.8	1494.3	1418.1	1486.3	1335.4	1154.1	995.1	931.6	985.6	1034.8
45°	6614.8	4764.4	1381.5	1435.5	1521.4	1340.1	1130.2	988.9	936.4	1098.4	1190.8
47.5°	7095.0	4702.4	1317.9	1443.4	1530.9	1338.6	1112.8	1009.4	976.1	1257.4	1362.4
50°	7616.4	4605.4	1267.0	1430.7	1526.1	1332.1	1131.9	1034.8	992.0	1292.4	1373.5
52.5°	8187.1	4516.4	1214.6	1402.2	1502.2	1313.1	1155.7	1023.8	947.4	1190.8	1252.6
55°	8862.7	4495.7	1155.7	1352.8	1462.5	1292.4	1143.1	988.9	898.1	1055.6	1093.7
57.5°	9635.3	4624.5	1079.5	1292.4	1408.5	1251.1	1112.8	969.7	880.7	960.2	980.9
60°	10616.2	4909.1	998.3	1228.8	1341.7	1189.0	1085.8	974.5	885.5	945.8	950.6
62.5°	11382.5	5165.1	925.3	1151.0	1252.6	1114.3	1057.1	979.2	899.8	965.0	957.1
65°	11660.5	5039.4	834.6	1034.8	1127.2	1031.8	1017.4	982.4	899.8	976.1	958.6
67°	11089.8	4440.1	748.7	918.8	1007.9	958.6	979.2	969.7	883.9	974.5	944.3
67.5°	10818.1	4228.6	726.5	899.8	976.1	936.4	969.7	963.3	879.1	971.2	936.4
70°	8921.4	3033.1	613.6	755.1	817.1	825.1	910.9	922.0	841.0	912.5	848.9
72.5°	6347.8	1898.1	529.5	585.1	659.7	705.9	831.4	866.3	790.1	793.3	740.8
75°	3141.4	1018.9	472.1	451.5	513.6	588.2	724.9	790.1	715.4	661.3	643.8
77.5°	1060.3	577.2	398.9	364.1	398.9	472.1	601.0	690.0	631.1	559.6	548.4
80°	548.4	419.7	311.6	292.5	314.8	365.6	470.5	573.8	539.0	542.0	446.6
82.5°	341.7	255.9	224.1	222.6	238.5	279.8	346.6	465.9	462.5	395.9	287.7
85°	159.0	147.9	143.1	147.9	152.6	159.0	225.7	332.3	351.3	213.0	189.2
87.5°	66.7	65.1	57.2	62.1	68.4	66.7	90.5	141.6	197.1	133.6	122.3
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)