

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: P197303

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197303
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-05-D-UNV-T3R-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27378 lumens
Efficiency: N/A
Efficacy: 85.6 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

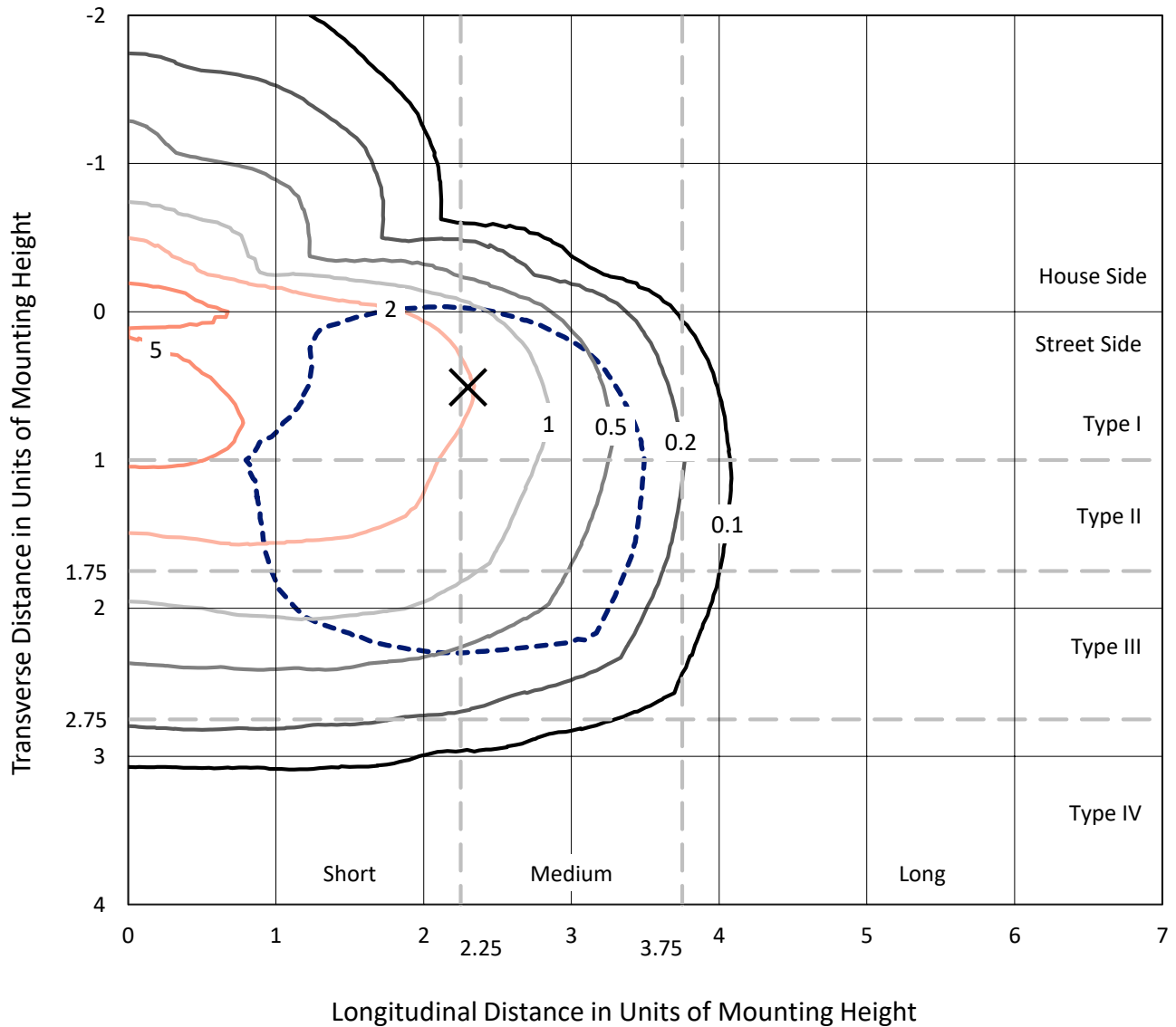
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

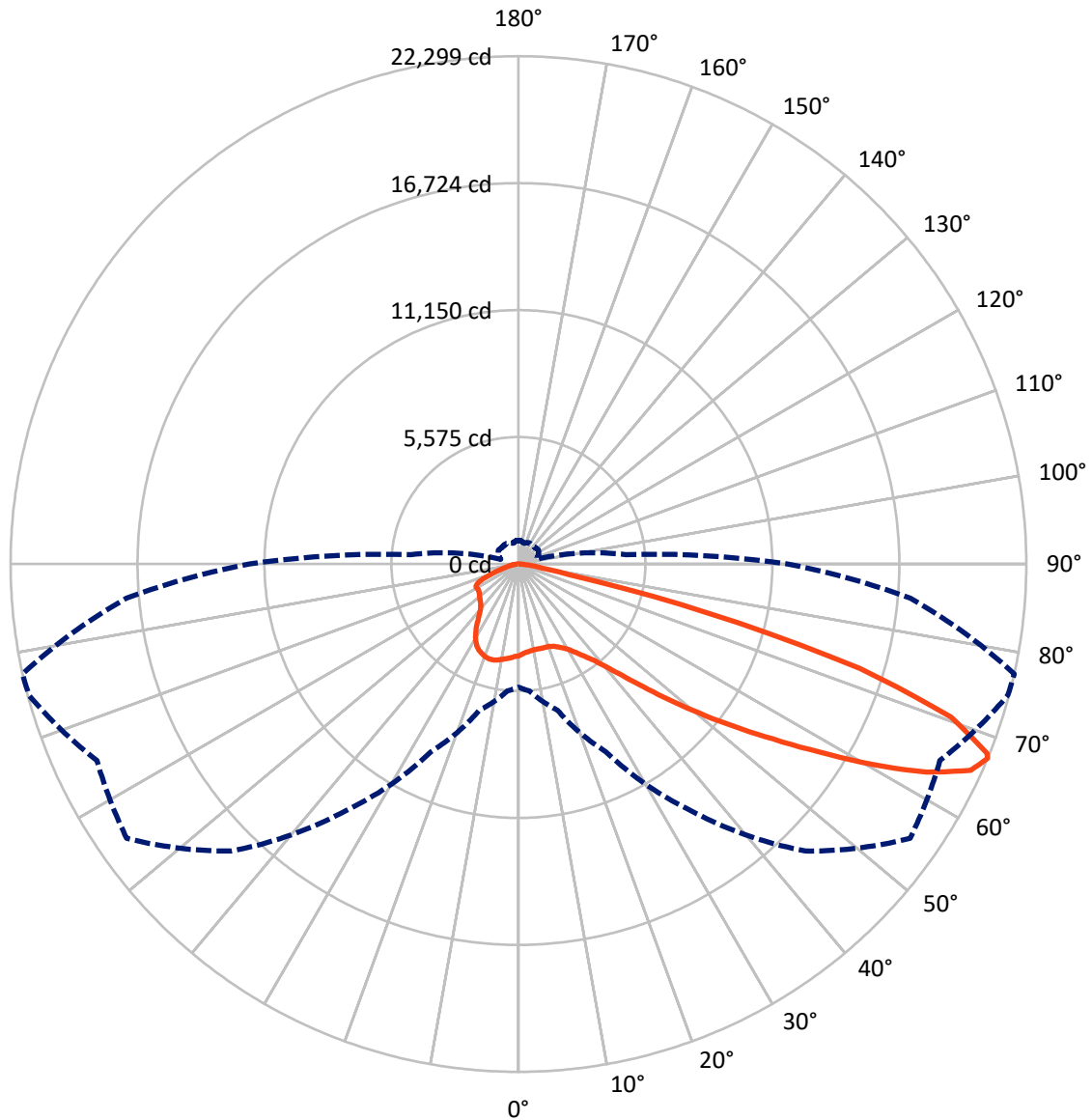
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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	4704.9	0.0	4704.9
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	22673.1	0.0	22673.1
	% Fixture	82.8	0.0	82.8
Total	Lumens	27378.0	0.0	27378.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.9	1.3
10°-20°	993.8	3.6
20°-30°	1688.6	6.2
30°-40°	2701.4	9.9
40°-50°	4158.8	15.2
50°-60°	5770.0	21.1
60°-70°	7696.7	28.1
70°-80°	3662.9	13.4
80°-90°	346.8	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°	27378.0	100.0
0°-180°	27378.0	100.0



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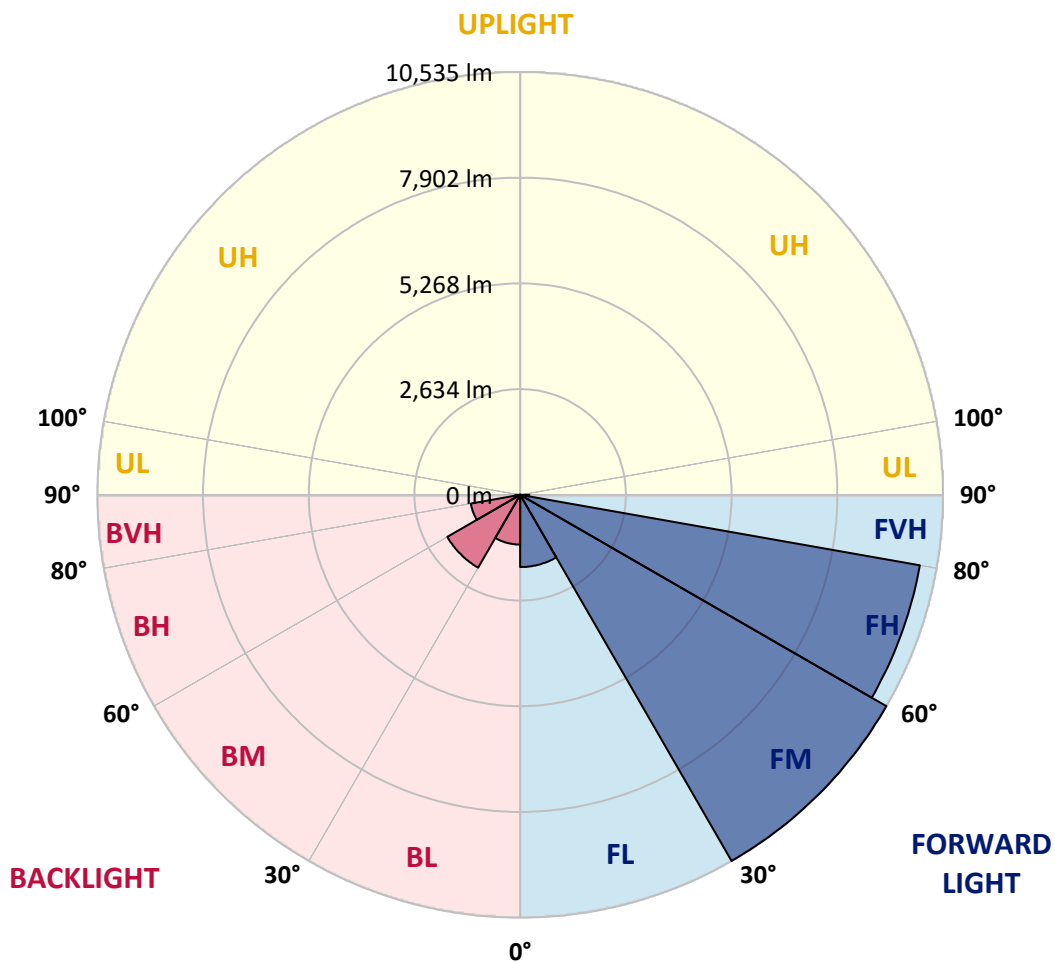
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1800.4	6.6			
FM	(30°-60°)	10535.3	38.5			
FH	(60°-80°)	10112.1	36.9			G4/12000
FVH	(80°-90°)	225.3	0.8			G3/500
BL	(0°-30°)	1241.0	4.5	B3/2500		
BM	(30°-60°)	2094.9	7.7	B2/2500		
BH	(60°-80°)	1247.5	4.6	B3/2500		G3/2500
BVH	(80°-90°)	121.6	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°	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3
2.5°	3613.0	3629.9	3631.6	3680.7	3702.7	3758.6	3819.5	3873.6	3921.0	3937.9	3968.4
5°	3250.9	3250.9	3255.9	3288.1	3350.7	3440.4	3567.3	3706.1	3851.6	3887.2	3976.9
7.5°	3061.3	3064.7	3068.1	3100.3	3149.3	3228.9	3355.8	3545.3	3787.3	3846.6	4003.9
10°	3078.3	3073.2	3056.3	3049.5	3069.8	3120.6	3230.6	3425.2	3733.2	3824.6	4053.0
12.5°	3343.9	3333.8	3277.9	3196.7	3122.3	3103.6	3179.8	3364.3	3707.8	3824.6	4135.9
15°	3799.2	3805.9	3695.9	3526.7	3332.1	3200.1	3190.0	3342.3	3699.3	3834.7	4232.4
17.5°	4391.5	4394.9	4242.5	3997.2	3673.9	3401.5	3259.3	3342.3	3699.3	3844.9	4325.5
20°	5021.0	4997.3	4824.7	4516.7	4097.0	3680.7	3386.3	3362.6	3709.5	3860.1	4413.5
22.5°	5560.8	5538.8	5357.8	5034.5	4553.9	4010.7	3557.2	3430.3	3765.3	3922.7	4537.0
25°	6033.0	6046.5	5870.5	5506.7	5009.2	4383.0	3812.7	3585.9	3882.1	4036.1	4689.3
27.5°	6606.7	6581.3	6378.2	6031.3	5477.9	4768.8	4132.6	3782.2	4020.9	4173.2	4875.5
30°	7270.0	7258.2	6984.0	6627.0	5994.1	5200.4	4449.0	3993.8	4201.9	4361.0	5109.0
32.5°	8075.6	8073.9	7779.4	7341.1	6574.5	5687.8	4823.0	4283.2	4465.9	4626.7	5418.7
35°	8987.7	8986.0	8681.4	8102.6	7243.0	6227.6	5263.0	4635.2	4792.5	4961.8	5787.6
37.5°	9620.6	9610.5	9451.4	8889.6	7982.5	6855.4	5813.0	5109.0	5163.2	5352.7	6232.7
40°	9742.5	9803.4	9940.5	9608.8	8789.7	7552.7	6364.7	5618.4	5669.1	5912.8	6792.8
42.5°	9610.5	9690.0	10145.2	10238.3	9596.9	8397.1	7055.1	6324.1	6388.4	6691.3	7451.1
45°	9495.4	9564.8	10135.1	10586.9	10394.0	9317.7	7916.5	7185.4	7307.3	7683.0	8202.5
47.5°	9299.1	9363.4	9935.4	10649.5	10849.2	10204.5	8953.9	8221.1	8430.9	8886.2	9058.8
50°	9288.9	9317.7	9662.9	10439.7	11006.6	10878.0	10102.9	9432.8	9754.3	10278.9	10006.5
52.5°	9031.7	9233.1	9546.2	10104.6	11010.0	11270.6	11235.1	10761.2	11257.1	11837.5	11045.5
55°	7457.9	7689.7	9156.9	9940.5	10989.7	11607.4	12269.0	12174.3	12949.3	13560.3	12209.8
57.5°	6963.7	7061.9	8033.3	9989.5	11158.9	12164.1	13303.0	13692.2	14885.3	15552.1	13605.9
60°	6828.4	6931.6	7808.2	10013.2	11617.5	13177.8	14705.9	15406.5	17161.4	17868.8	15191.6
62.5°	6677.7	6811.4	7825.1	10035.2	12423.0	14677.2	16567.4	17266.3	19498.5	20129.7	16677.4
65°	6237.7	6415.4	7512.0	9896.5	13304.7	16559.0	19028.0	19205.7	21429.4	21830.4	17574.3
67°	5403.5	5598.1	6652.4	9094.3	13223.5	17826.5	20996.1	20419.1	22250.1	22299.2	17283.3
67.5°	5139.5	5340.8	6361.3	8760.9	12991.6	17992.3	21344.7	20586.6	22243.3	22189.2	17012.5
70°	3460.7	3687.5	4504.9	6432.4	10421.1	16745.1	21260.1	20070.5	20784.6	20163.5	14616.2
72.5°	1717.7	1724.4	2247.3	3523.3	6313.9	12010.1	17735.1	17169.9	16848.4	15675.6	10725.7
75°	827.5	842.8	1061.1	1556.9	2662.0	6200.5	12094.7	11585.4	9864.3	8540.9	5367.9
77.5°	631.2	646.5	824.1	1013.7	1110.1	2022.3	5990.7	4841.6	2858.3	2282.9	1512.9
80°	487.4	516.1	695.5	778.4	734.5	810.6	1883.5	1482.4	1111.8	1020.4	749.7
82.5°	380.8	397.7	590.6	590.6	507.7	543.2	876.6	856.3	690.5	622.8	402.8
85°	269.1	302.9	475.5	440.0	333.4	336.8	524.6	502.6	355.4	286.0	157.4
87.5°	120.2	154.0	338.5	287.7	177.7	137.1	214.9	184.5	140.5	108.3	72.8
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°	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3	4029.3
2.5°	4002.2	4029.3	4071.6	4097.0	4130.9	4144.4	4157.9	4181.6	4200.2	4195.2	4186.7
5°	4039.5	4085.2	4137.6	4154.6	4154.6	4137.6	4127.5	4129.2	4124.1	4120.7	4110.6
7.5°	4093.6	4156.2	4193.5	4176.6	4124.1	4058.1	3995.5	3958.2	3922.7	3900.7	3907.5
10°	4169.8	4239.2	4240.9	4166.4	4041.2	3897.3	3773.8	3694.3	3618.1	3584.3	3594.4
12.5°	4279.8	4349.2	4289.9	4129.2	3909.2	3684.1	3457.3	3293.2	3146.0	3110.4	3100.3
15°	4398.2	4452.4	4320.4	4049.6	3719.6	3349.0	2968.3	2722.9	2558.7	2530.0	2519.8
17.5°	4501.5	4531.9	4305.2	3907.5	3420.1	2836.3	2392.9	2227.0	2193.2	2210.1	2210.1
20°	4592.9	4582.7	4239.2	3687.5	2948.0	2267.7	2010.4	2008.7	2054.4	2096.7	2100.1
22.5°	4707.9	4628.4	4134.2	3360.9	2384.4	1892.0	1848.0	1892.0	1942.7	1990.1	1995.2
25°	4845.0	4679.2	3993.8	2895.5	1917.4	1717.7	1736.3	1773.5	1805.7	1842.9	1844.6
27.5°	4982.1	4718.1	3795.8	2348.9	1663.5	1606.0	1626.3	1641.5	1650.0	1673.7	1673.7
30°	5141.2	4748.5	3509.8	1881.8	1546.7	1507.8	1496.0	1489.2	1496.0	1528.1	1529.8
32.5°	5340.8	4802.7	3118.9	1614.4	1492.6	1438.4	1377.5	1343.7	1367.4	1424.9	1435.1
35°	5567.6	4867.0	2650.1	1507.8	1474.0	1404.6	1292.9	1240.4	1248.9	1301.4	1309.8
37.5°	5851.9	4949.9	2188.1	1482.4	1492.6	1401.2	1254.0	1179.5	1142.3	1144.0	1142.3
40°	6215.7	5032.8	1822.6	1489.2	1533.2	1409.7	1235.4	1118.6	1040.8	1044.1	1050.9
42.5°	6596.5	5087.0	1590.7	1509.5	1582.3	1421.5	1228.6	1059.4	991.7	1049.2	1101.7
45°	7041.6	5071.8	1470.6	1528.1	1619.5	1426.6	1203.2	1052.6	996.8	1169.4	1267.5
47.5°	7552.7	5005.8	1402.9	1536.6	1629.7	1424.9	1184.6	1074.6	1039.1	1338.6	1450.3
50°	8107.7	4902.5	1348.7	1523.1	1624.6	1418.1	1204.9	1101.7	1056.0	1375.8	1462.1
52.5°	8715.2	4807.8	1292.9	1492.6	1599.2	1397.8	1230.3	1089.8	1008.6	1267.5	1333.5
55°	9434.5	4785.8	1230.3	1440.1	1556.9	1375.8	1216.8	1052.6	956.1	1123.7	1164.3
57.5°	10256.9	4922.8	1149.1	1375.8	1499.4	1331.8	1184.6	1032.3	937.5	1022.1	1044.1
60°	11301.1	5225.8	1062.8	1308.1	1428.3	1265.8	1155.8	1037.4	942.6	1006.9	1012.0
62.5°	12116.7	5498.2	984.9	1225.2	1333.5	1186.3	1125.4	1042.4	957.8	1027.2	1018.8
65°	12412.9	5364.5	888.4	1101.7	1199.8	1098.3	1083.1	1045.8	957.8	1039.1	1020.4
67°	11805.4	4726.5	797.1	978.1	1072.9	1020.4	1042.4	1032.3	940.9	1037.4	1005.2
67.5°	11516.0	4501.5	773.4	957.8	1039.1	996.8	1032.3	1025.5	935.8	1034.0	996.8
70°	9497.1	3228.9	653.2	803.8	869.8	878.3	969.7	981.5	895.2	971.4	903.7
72.5°	6757.3	2020.6	563.5	622.8	702.3	751.4	885.1	922.3	841.1	844.4	788.6
75°	3343.9	1084.8	502.6	480.6	546.6	626.1	771.7	841.1	761.5	704.0	685.4
77.5°	1128.8	614.3	424.8	387.5	424.8	502.6	639.7	734.5	671.8	595.7	583.8
80°	583.8	446.8	331.7	311.4	335.1	389.2	500.9	610.9	573.7	577.1	475.5
82.5°	363.8	272.5	238.6	236.9	253.8	297.8	368.9	495.8	492.5	421.4	306.3
85°	169.2	157.4	152.3	157.4	162.5	169.2	240.3	353.7	374.0	226.8	201.4
87.5°	71.1	69.4	60.9	66.0	72.8	71.1	96.5	150.6	209.8	142.2	130.3
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)