

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: P270713

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31543.8 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

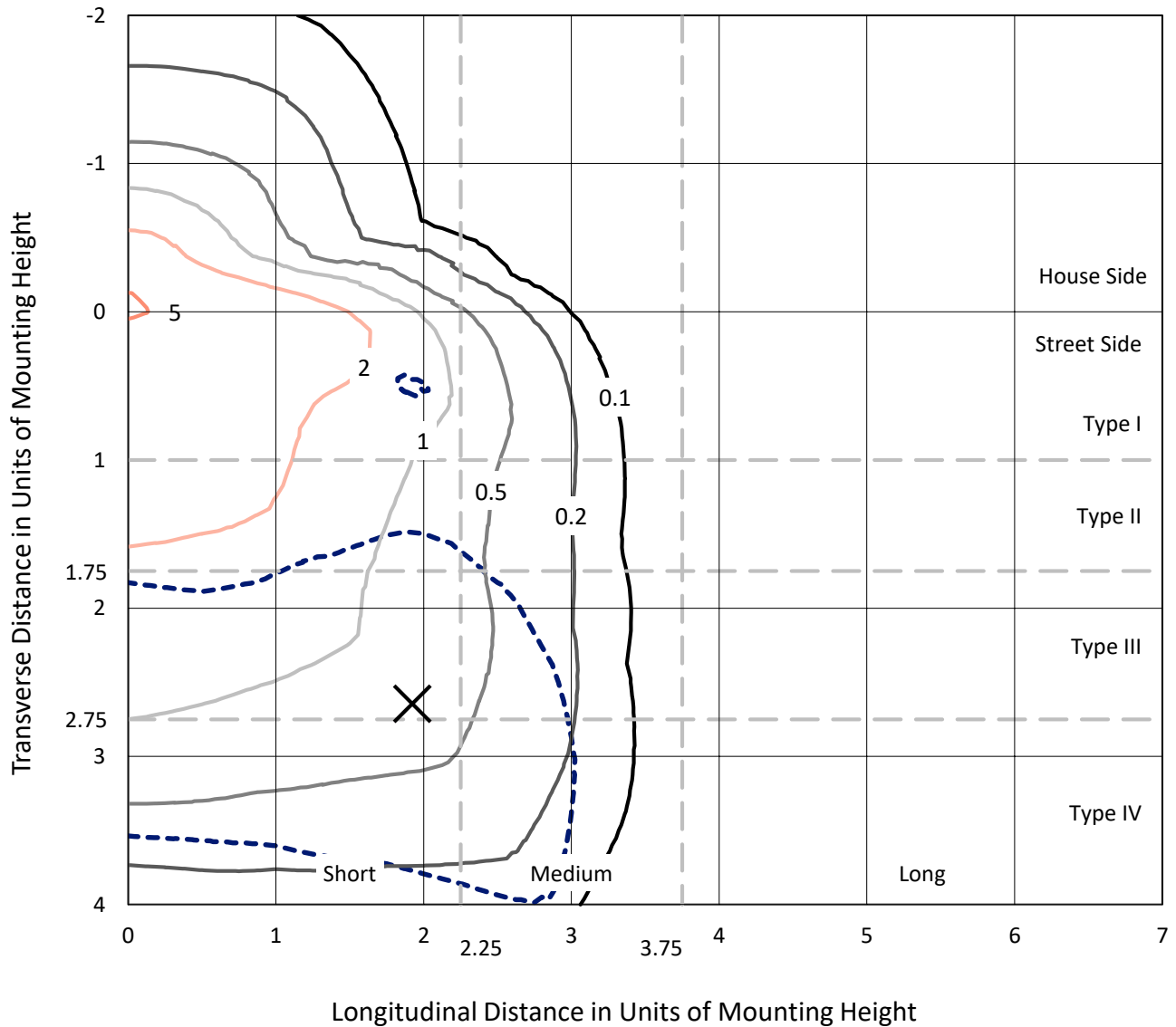
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

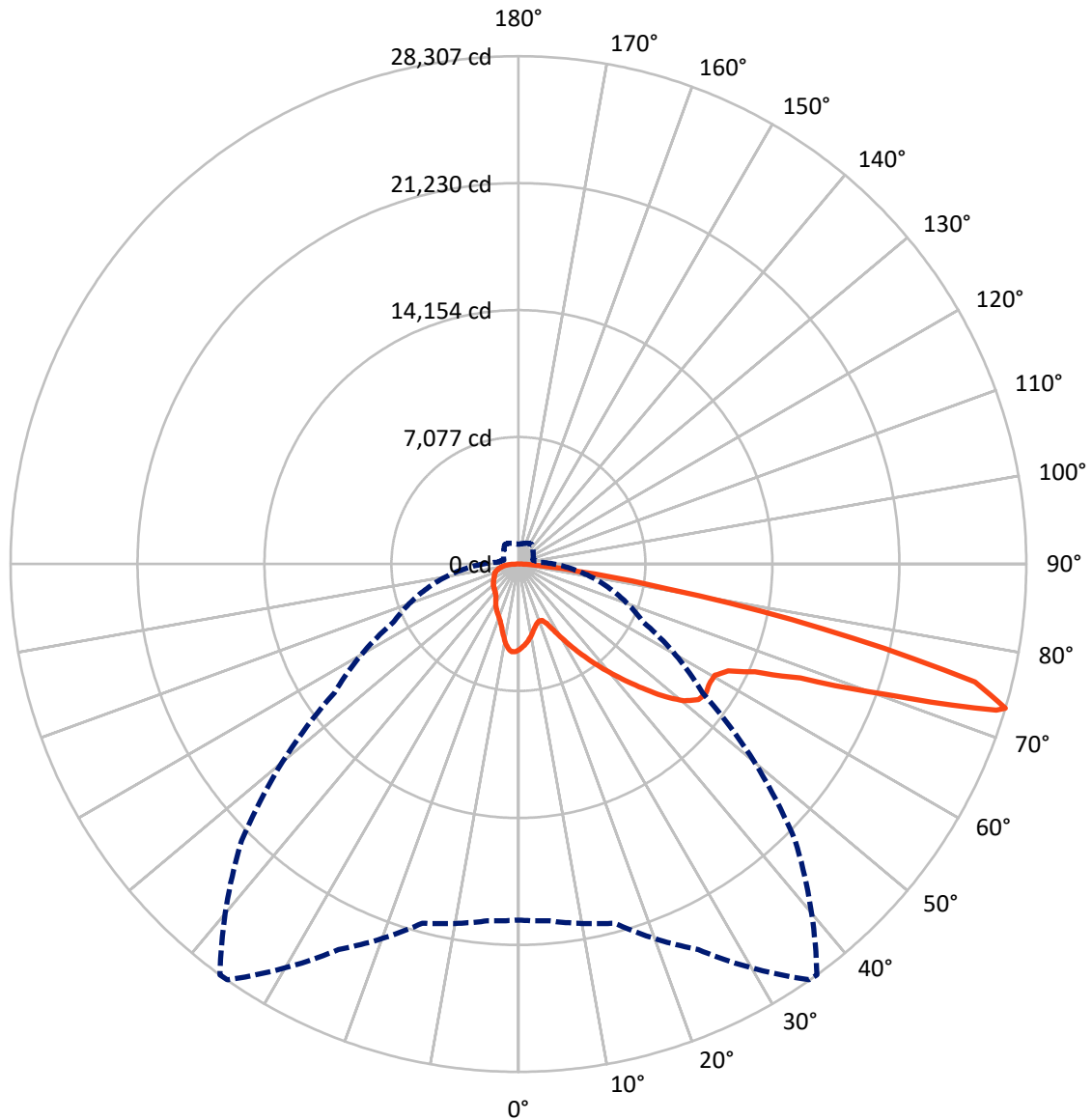
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6082.6	0.0	6082.6
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	25461.2	0.0	25461.2
	% Fixture	80.7	0.0	80.7
Total	Lumens	31543.8	0.0	31543.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	434.0	1.4
10°-20°	1089.9	3.5
20°-30°	1747.5	5.5
30°-40°	2890.5	9.2
40°-50°	4472.7	14.2
50°-60°	5987.6	19.0
60°-70°	7821.7	24.8
70°-80°	6388.9	20.3
80°-90°	711.1	2.3
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°	31543.8	100.0
0°-180°	31543.8	100.0



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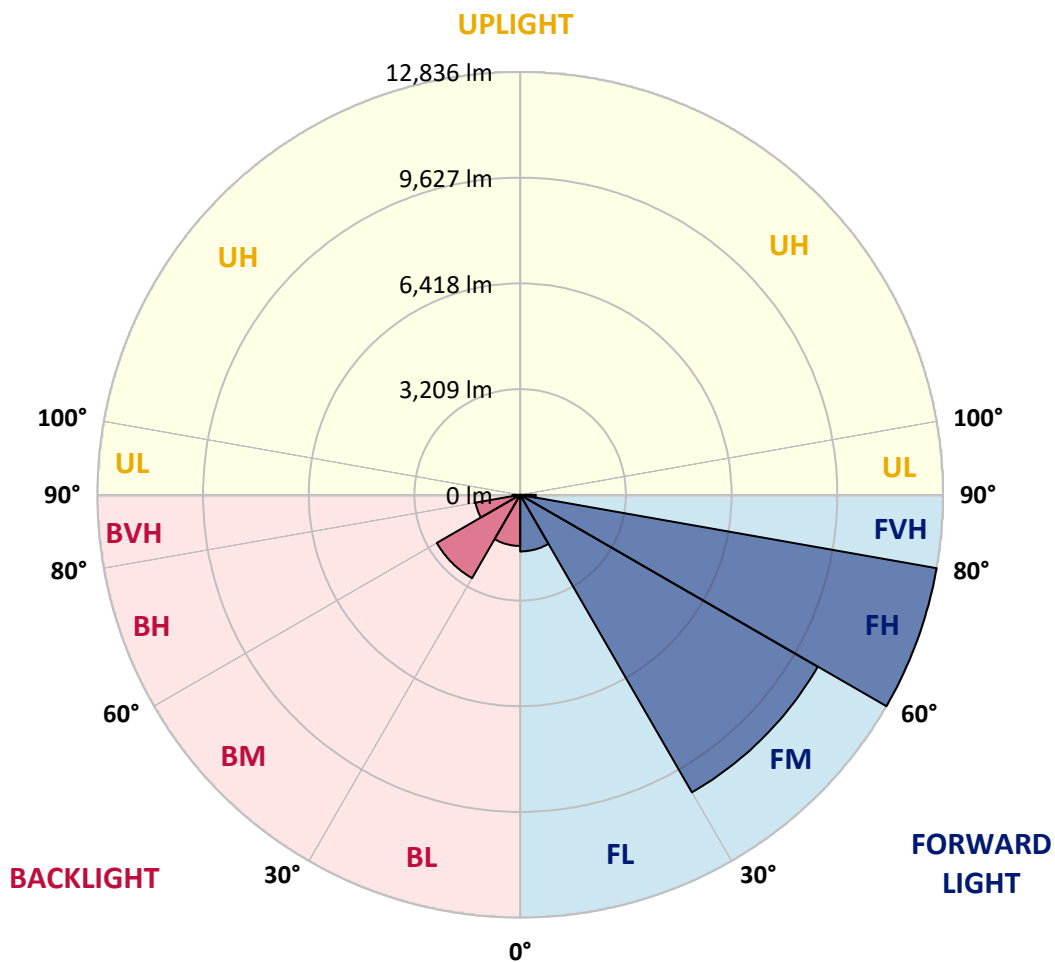
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1718.8	5.4			
FM (30°-60°)	10429.5	33.1			
FH (60°-80°)	12836.0	40.7			G5
FVH (80°-90°)	476.9	1.5			G3/500
BL (0°-30°)	1552.6	4.9	B3/2500		
BM (30°-60°)	2921.2	9.3	B3/5000		
BH (60°-80°)	1374.5	4.4	B3/2500		G3/2500
BVH (80°-90°)	234.2	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9
2.5°	4595.5	4607.6	4609.7	4623.7	4623.7	4621.6	4627.7	4651.8	4663.7	4691.8	4715.8
5°	4369.1	4383.2	4389.2	4413.3	4443.2	4445.4	4467.4	4513.4	4557.6	4619.7	4671.7
7.5°	4114.5	4130.6	4146.7	4196.7	4240.9	4244.9	4286.9	4361.1	4419.2	4495.4	4589.6
10°	3868.1	3872.1	3888.1	3952.3	4010.4	4016.4	4076.5	4160.7	4238.8	4345.1	4451.3
12.5°	3665.7	3677.8	3673.7	3721.8	3771.9	3775.8	3856.1	3962.2	4076.5	4196.7	4323.1
15°	3595.5	3593.5	3551.4	3549.5	3571.4	3575.4	3653.6	3777.9	3906.2	4054.5	4216.9
17.5°	3643.6	3627.5	3517.4	3449.2	3435.2	3439.3	3497.3	3633.6	3769.8	3940.2	4134.5
20°	3908.2	3846.1	3587.6	3423.1	3377.1	3377.1	3411.1	3521.4	3671.6	3870.1	4114.5
22.5°	4535.5	4439.2	3888.1	3595.5	3433.1	3417.2	3391.1	3475.3	3641.5	3880.0	4196.7
25°	5325.2	5279.0	4439.2	4054.5	3719.7	3667.7	3495.2	3525.4	3703.7	3988.4	4421.2
27.5°	6056.6	5976.5	5162.7	4721.9	4248.9	4168.8	3804.0	3681.8	3852.0	4188.7	4745.9
30°	6483.5	6429.3	5906.4	5485.4	4922.3	4820.0	4297.0	3990.4	4116.7	4519.5	5206.8
32.5°	6948.5	6916.4	6651.9	6269.1	5651.7	5533.6	4934.3	4493.4	4521.3	4958.4	5762.0
35°	7399.5	7441.5	7291.3	7010.6	6437.4	6327.2	5790.0	5150.7	5020.4	5451.4	6355.2
37.5°	7940.6	7950.5	7856.3	7674.0	7263.2	7173.0	6730.0	5852.2	5563.7	5976.5	6928.4
40°	9020.8	8862.5	8493.7	8349.4	8104.9	8048.9	7543.7	6495.6	6068.7	6515.5	7469.5
42.5°	10189.3	9942.8	9365.5	9129.0	9030.8	8978.7	8221.2	6924.5	6541.6	7054.7	8000.8
45°	11131.3	10930.8	10365.6	10073.1	10085.0	10000.9	8812.5	7307.3	7054.7	7595.9	8593.9
47.5°	12059.1	11724.5	11091.2	11049.1	11189.4	11065.1	9377.5	7690.0	7589.8	8185.0	9187.1
50°	12119.4	11814.7	11558.1	11894.8	12135.4	11981.1	9890.7	8191.0	8145.0	8898.6	9952.9
52.5°	11387.8	11343.6	11734.5	12301.7	12700.4	12562.2	10309.5	8706.2	8712.2	9790.4	10884.8
55°	11121.1	11065.1	11534.1	12231.5	12770.7	12688.5	10622.2	9287.3	9341.6	10872.6	11884.8
57.5°	11570.2	11429.9	11522.0	12099.2	12606.4	12558.2	10946.8	9932.6	10031.0	12119.4	12808.8
60°	12963.0	12676.4	12187.5	12295.7	12612.4	12584.3	11411.8	10652.2	10816.6	13418.1	13394.0
62.5°	15049.5	14724.7	13728.6	13247.7	13177.4	13123.3	12179.4	11536.0	11618.3	14356.0	13053.2
65°	17338.1	16989.5	15805.0	15017.3	14604.5	14488.3	13418.1	12602.3	12087.2	14353.9	11726.5
67.5°	19907.6	19538.8	18358.3	17606.8	17159.9	16961.3	15428.2	13464.1	11934.9	13139.4	9383.5
70°	22539.1	22188.3	21647.1	21909.8	22106.1	21803.5	18594.8	13750.6	10840.7	10301.6	6301.2
72.5°	21142.1	21114.1	21524.9	24014.1	27800.0	27860.2	21757.4	12941.1	8375.4	6122.8	3359.0
73°	19845.4	19963.7	20725.2	23703.4	28287.1	28307.1	21819.6	12522.2	7690.0	5274.9	2950.2
75°	10281.6	11083.2	13909.0	19220.1	26192.7	26286.8	19234.1	9479.9	4583.5	2930.1	1988.2
77.5°	2753.8	2717.6	4481.4	9363.6	17462.4	17338.1	12153.3	4589.6	2196.5	1837.8	1394.9
80°	943.9	955.9	1525.2	3425.1	8151.0	8441.6	5274.9	2002.2	1445.1	1280.7	988.0
82.5°	481.0	497.0	797.7	1457.1	3409.1	3336.9	1697.5	1178.4	968.1	777.7	553.1
85°	256.6	264.6	438.9	755.6	1250.6	1264.6	597.3	629.4	615.2	440.9	272.5
87.5°	126.2	130.3	210.5	332.7	462.9	446.9	208.4	272.5	302.5	248.6	150.2
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°	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9	4777.9
2.5°	4745.9	4745.9	4771.9	4816.1	4848.2	4878.2	4898.2	4930.3	4948.4	4946.3	4944.4
5°	4713.9	4733.9	4786.0	4840.1	4876.2	4900.3	4900.3	4914.3	4914.3	4908.2	4900.3
7.5°	4639.7	4673.7	4749.9	4797.9	4808.1	4781.9	4729.8	4689.8	4639.7	4613.6	4603.6
10°	4521.3	4565.5	4661.8	4683.8	4631.8	4539.4	4413.3	4304.9	4208.7	4164.7	4150.7
12.5°	4405.2	4463.3	4553.5	4519.5	4395.1	4214.8	4020.4	3872.1	3763.9	3721.8	3707.8
15°	4309.0	4379.1	4449.2	4343.0	4126.6	3876.0	3661.6	3523.3	3441.1	3409.1	3401.2
17.5°	4244.9	4327.0	4351.1	4152.7	3852.0	3571.4	3381.1	3290.9	3254.7	3240.7	3236.8
20°	4248.9	4341.1	4282.9	3968.4	3587.6	3305.0	3178.7	3152.6	3152.6	3152.6	3150.5
22.5°	4359.0	4439.2	4254.9	3795.9	3332.9	3080.5	3026.3	3048.4	3064.4	3064.4	3062.4
25°	4587.6	4631.8	4274.9	3629.6	3094.4	2886.1	2888.1	2930.1	2944.1	2944.1	2940.2
27.5°	4936.2	4900.3	4311.0	3445.2	2859.9	2709.6	2737.8	2775.9	2785.9	2779.8	2777.7
30°	5373.2	5228.9	4341.1	3228.8	2639.5	2545.3	2569.3	2591.4	2583.3	2569.3	2567.4
32.5°	5862.2	5563.7	4323.1	2986.2	2445.0	2374.9	2389.0	2401.0	2389.0	2354.8	2354.8
35°	6347.2	5866.2	4224.8	2721.7	2290.8	2210.5	2208.7	2246.8	2244.7	2204.6	2206.5
37.5°	6772.1	6104.7	4034.4	2479.2	2158.4	2090.4	2098.4	2122.4	2134.5	2080.4	2074.4
40°	7143.0	6269.1	3765.9	2272.7	2052.3	2056.3	2034.2	1996.2	1982.1	1958.0	1954.1
42.5°	7491.7	6383.4	3481.3	2100.3	1998.2	2044.3	1970.2	1880.0	1841.9	1864.0	1877.9
45°	7834.4	6511.6	3206.7	1958.0	1930.0	2008.3	1905.9	1805.8	1761.7	1771.6	1785.7
47.5°	8253.2	6689.9	2876.1	1805.8	1825.8	1942.0	1865.9	1757.7	1691.5	1651.4	1639.4
50°	8804.4	6948.5	2447.2	1641.5	1715.7	1869.9	1831.9	1687.6	1615.4	1535.3	1515.3
52.5°	9493.7	7193.0	2014.2	1509.2	1625.5	1807.7	1775.7	1627.4	1539.2	1442.9	1427.0
55°	10181.3	7227.0	1641.5	1394.9	1523.2	1723.6	1707.6	1579.3	1455.1	1376.9	1360.8
57.5°	10662.3	6904.5	1390.8	1298.7	1425.0	1619.4	1645.4	1521.2	1384.8	1324.8	1314.8
60°	10670.2	6132.8	1238.7	1234.6	1350.8	1529.2	1581.2	1453.0	1340.8	1300.7	1292.8
62.5°	9822.4	4942.4	1140.4	1186.5	1296.8	1455.1	1533.1	1415.0	1330.7	1314.8	1306.8
65°	8233.1	3651.6	1062.2	1142.4	1246.6	1392.9	1493.2	1403.0	1326.7	1320.8	1314.8
67.5°	6078.7	2503.2	996.1	1086.3	1190.4	1328.8	1455.1	1384.8	1302.7	1326.7	1318.7
70°	3823.9	1671.4	934.0	1022.1	1116.4	1254.7	1404.9	1352.8	1272.7	1258.6	1232.6
72.5°	2158.4	1208.5	859.8	939.9	1020.1	1156.4	1336.8	1298.7	1204.4	1148.5	1122.3
73°	1950.1	1144.4	841.7	920.0	998.0	1136.4	1320.8	1282.7	1184.4	1122.3	1098.3
75°	1427.0	935.9	759.5	837.8	905.9	1044.2	1244.6	1202.6	1096.3	1022.1	1006.1
77.5°	1034.2	721.5	653.3	723.6	783.6	915.9	1130.3	1082.3	978.1	938.0	921.9
80°	745.6	547.2	541.0	609.3	661.4	795.7	1008.1	958.0	857.8	976.1	950.0
82.5°	444.9	350.7	396.8	473.0	527.0	667.4	875.8	817.6	721.5	729.6	621.3
85°	212.4	198.4	246.6	310.6	348.7	457.0	729.6	683.4	577.3	473.0	462.9
87.5°	94.2	90.2	118.2	138.2	186.4	274.6	499.1	443.0	418.9	250.4	196.4
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)