

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: P196842

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196842
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-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 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: 35114.8 lumens
Efficiency: N/A
Efficacy: 105.4 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

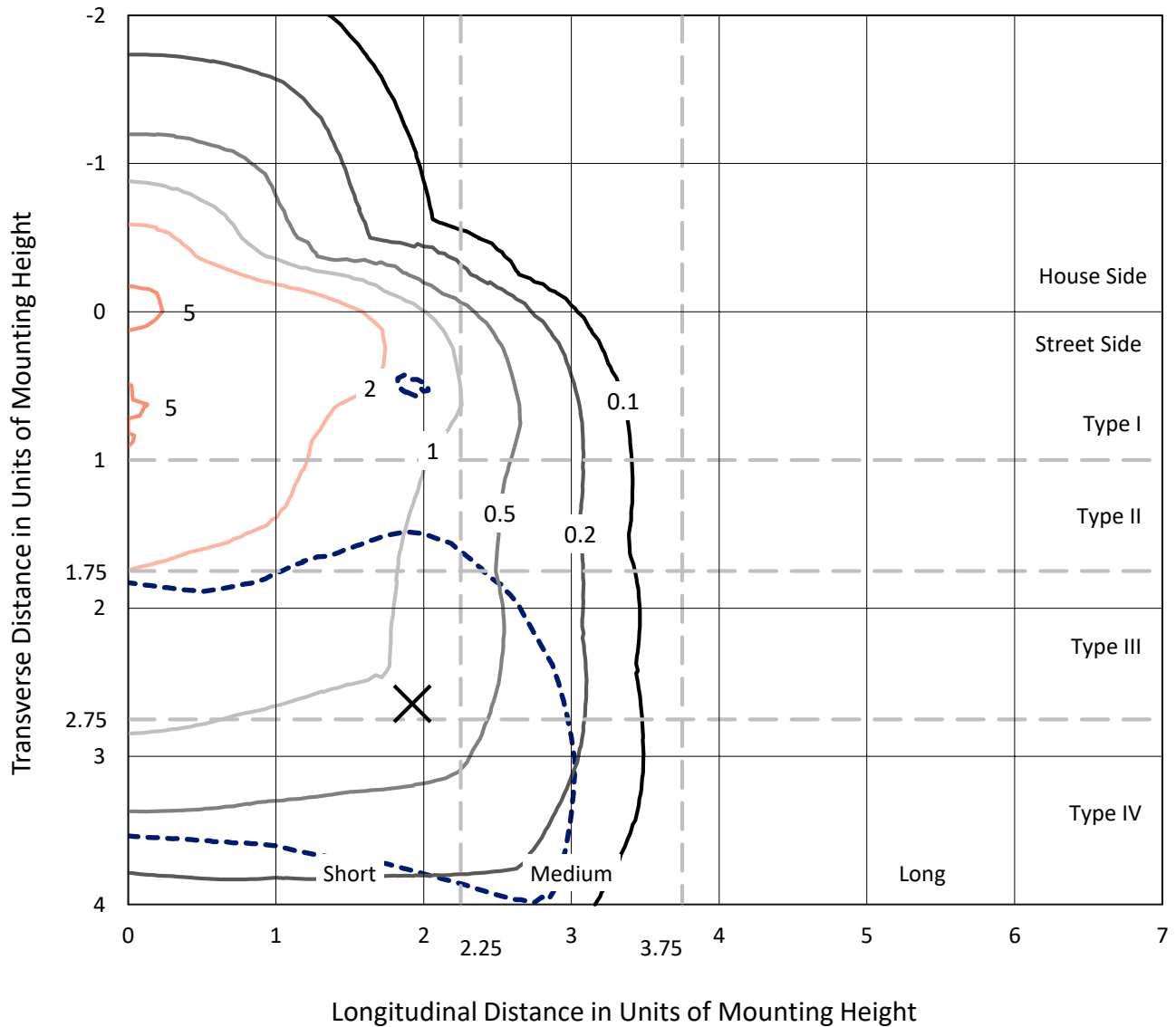
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196842
 CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-7030

Iso-Footcandle Lines of Horizontal Illumination

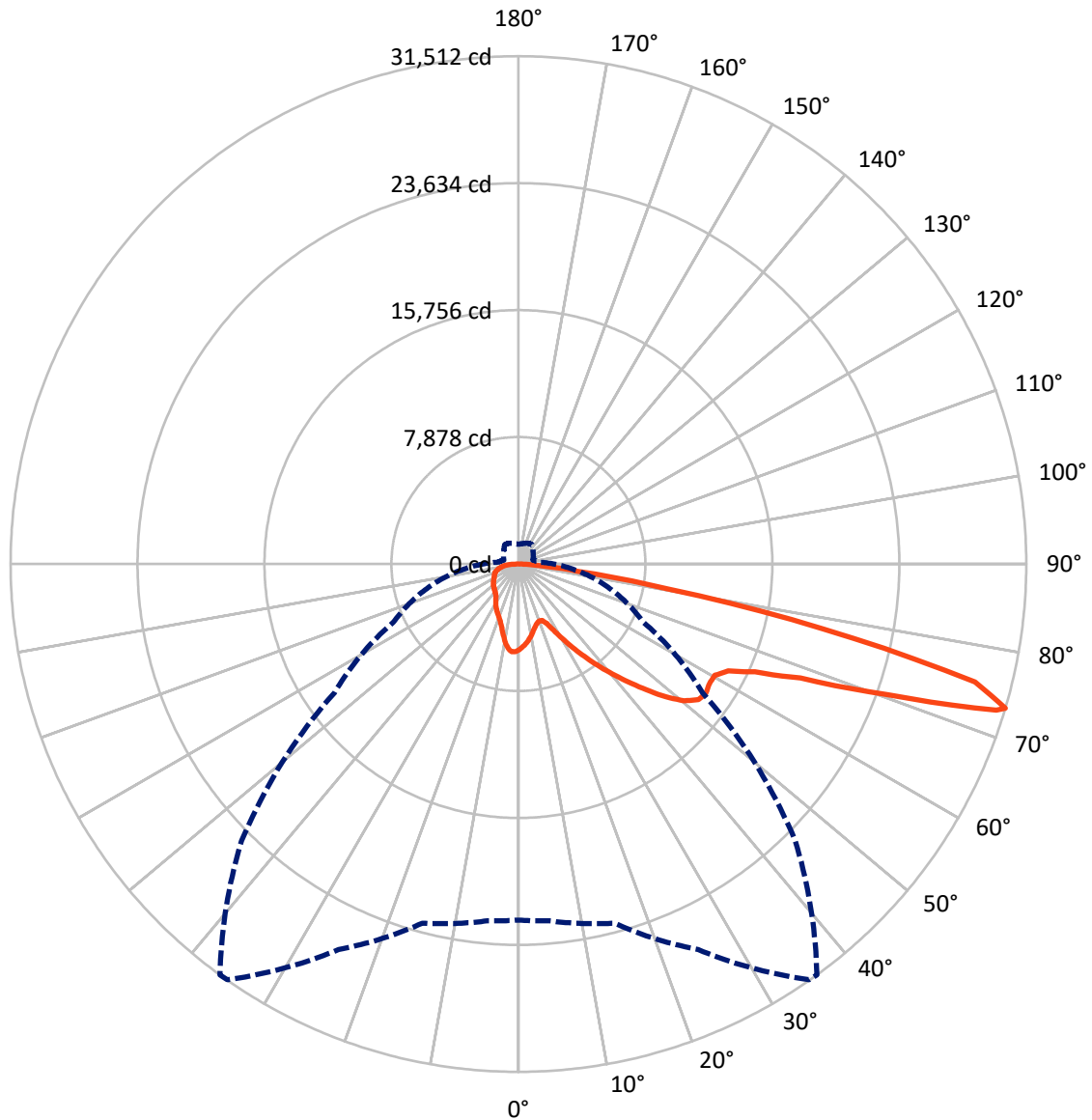
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196842
CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196842

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6771.2	0.0	6771.2
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	28343.6	0.0	28343.6
	% Fixture	80.7	0.0	80.7
Total	Lumens	35114.8	0.0	35114.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	483.1	1.4
10°-20°	1213.3	3.5
20°-30°	1945.3	5.5
30°-40°	3217.7	9.2
40°-50°	4979.0	14.2
50°-60°	6665.4	19.0
60°-70°	8707.1	24.8
70°-80°	7112.2	20.3
80°-90°	791.6	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°	35114.8	100.0
0°-180°	35114.8	100.0



REPORT NUMBER: P196842

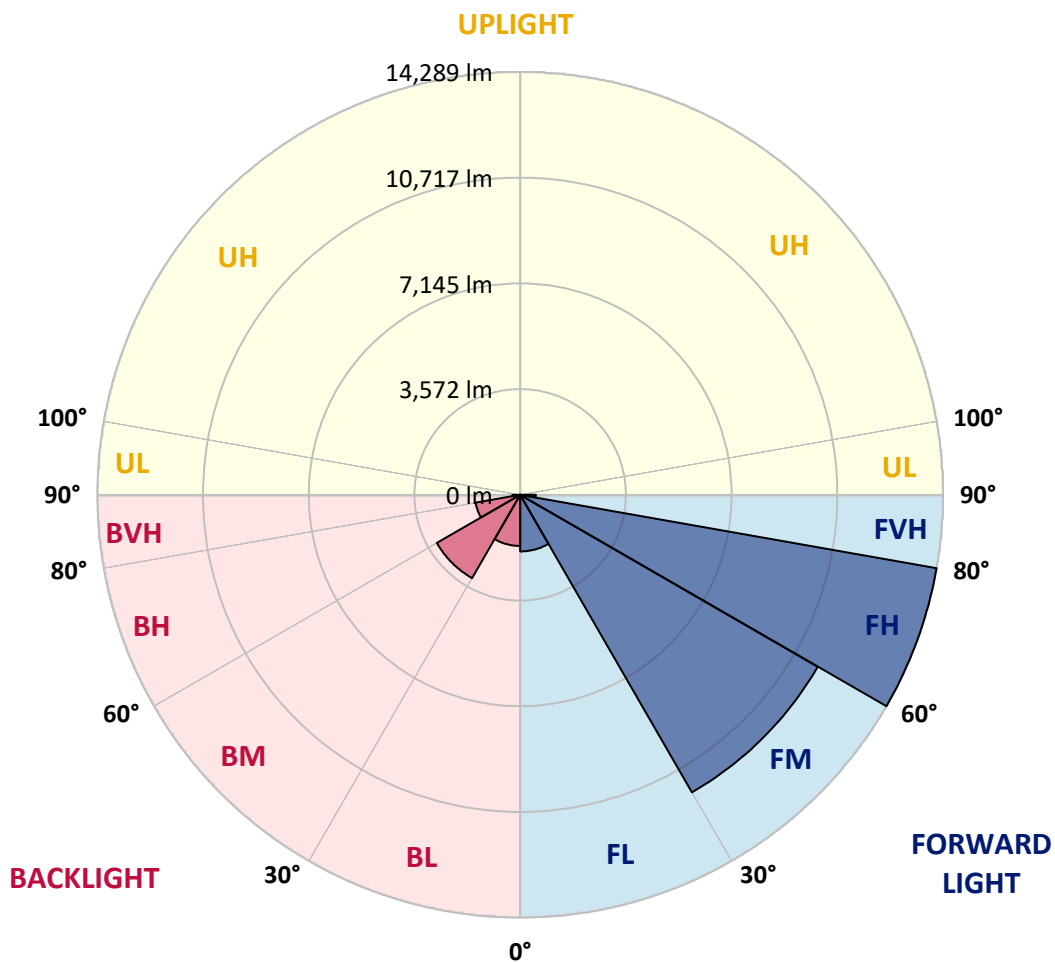
CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1913.4	5.4			
FM	(30°-60°)	11610.2	33.1			
FH	(60°-80°)	14289.2	40.7			G5
FVH	(80°-90°)	530.9	1.5			G4/750
BL	(0°-30°)	1728.4	4.9	B3/2500		
BM	(30°-60°)	3251.9	9.3	B3/5000		
BH	(60°-80°)	1530.2	4.4	B3/2500		G3/2500
BVH	(80°-90°)	260.7	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





REPORT NUMBER: P196842

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8
2.5°	5115.8	5129.2	5131.5	5147.1	5147.1	5144.8	5151.6	5178.4	5191.7	5222.9	5249.7
5°	4863.7	4879.4	4886.1	4912.9	4946.2	4948.6	4973.1	5024.4	5073.5	5142.7	5200.6
7.5°	4580.3	4598.2	4616.1	4671.8	4721.0	4725.5	4772.2	4854.8	4919.5	5004.3	5109.2
10°	4306.0	4310.4	4328.3	4399.7	4464.4	4471.1	4538.0	4631.7	4718.7	4837.0	4955.2
12.5°	4080.7	4094.1	4089.6	4143.1	4198.9	4203.3	4292.6	4410.8	4538.0	4671.8	4812.5
15°	4002.5	4000.3	3953.4	3951.3	3975.7	3980.2	4067.2	4205.6	4348.4	4513.5	4694.3
17.5°	4056.1	4038.2	3915.6	3839.7	3824.1	3828.6	3893.2	4044.9	4196.6	4386.3	4602.6
20°	4350.6	4281.5	3993.7	3810.6	3759.4	3759.4	3797.3	3920.0	4087.3	4308.2	4580.3
22.5°	5048.9	4941.8	4328.3	4002.5	3821.8	3804.0	3775.0	3868.7	4053.8	4319.3	4671.8
25°	5928.0	5876.6	4941.8	4513.5	4140.8	4082.9	3890.9	3924.5	4123.0	4439.9	4921.7
27.5°	6742.3	6653.1	5747.2	5256.4	4729.9	4640.7	4234.6	4098.6	4288.1	4662.9	5283.2
30°	7217.5	7157.2	6575.0	6106.4	5479.5	5365.7	4783.4	4442.1	4582.7	5031.1	5796.3
32.5°	7735.1	7699.4	7404.9	6978.8	6291.5	6160.0	5492.9	5002.1	5033.2	5519.7	6414.3
35°	8237.2	8283.9	8116.7	7804.3	7166.2	7043.5	6445.5	5733.8	5588.8	6068.5	7074.7
37.5°	8839.5	8850.6	8745.7	8542.8	8085.4	7985.0	7491.9	6514.7	6193.5	6653.1	7712.8
40°	10042.0	9865.8	9455.3	9294.6	9022.4	8960.1	8397.7	7230.9	6755.7	7253.1	8315.1
42.5°	11342.8	11068.4	10425.8	10162.5	10053.2	9995.2	9151.9	7708.4	7282.2	7853.3	8906.5
45°	12391.4	12168.3	11539.1	11213.4	11226.7	11133.1	9810.1	8134.5	7853.3	8455.8	9566.8
47.5°	13424.3	13051.8	12346.8	12299.9	12456.1	12317.8	10439.1	8560.6	8449.0	9111.6	10227.2
50°	13491.4	13152.2	12866.6	13241.4	13509.2	13337.4	11010.4	9118.3	9067.1	9906.0	11079.6
52.5°	12677.0	12627.8	13062.9	13694.3	14138.2	13984.3	11476.6	9691.8	9698.5	10898.8	12117.0
55°	12380.1	12317.8	12839.8	13616.2	14216.4	14124.9	11824.7	10338.7	10399.1	12103.5	13230.2
57.5°	12880.0	12723.8	12826.4	13468.9	14033.5	13979.9	12186.1	11057.1	11166.6	13491.4	14258.8
60°	14430.5	14111.5	13567.2	13687.7	14040.2	14008.9	12703.7	11858.1	12041.1	14937.1	14910.3
62.5°	16753.2	16391.7	15282.8	14747.4	14669.2	14609.0	13558.2	12842.0	12933.6	15981.2	14530.9
65°	19300.9	18912.8	17594.2	16717.4	16257.8	16128.5	14937.1	14029.0	13455.6	15978.9	13054.0
67.5°	22161.3	21750.7	20436.6	19600.0	19102.5	18881.5	17174.8	14988.3	13286.0	14626.9	10445.8
70°	25090.7	24700.2	24097.7	24390.1	24608.7	24271.8	20699.9	15307.3	12067.9	11467.8	7014.5
72.5°	23535.5	23504.4	23961.7	26732.7	30947.2	31014.2	24220.5	14406.1	9323.6	6815.9	3739.3
73°	22092.1	22223.7	23071.5	26386.8	31489.4	31511.7	24289.7	13939.8	8560.6	5872.1	3284.2
75°	11445.5	12337.9	15483.6	21396.0	29157.9	29262.7	21411.6	10553.1	5102.4	3261.8	2213.3
77.5°	3065.5	3025.3	4988.7	10423.6	19439.3	19300.9	13529.2	5109.2	2445.2	2045.9	1552.8
80°	1050.8	1064.1	1697.9	3812.9	9073.8	9397.3	5872.1	2228.9	1608.7	1425.7	1099.9
82.5°	535.5	553.3	888.0	1622.0	3795.0	3714.7	1889.7	1311.8	1077.7	865.7	615.7
85°	285.6	294.5	488.6	841.1	1392.2	1407.8	664.9	700.6	684.9	490.8	303.4
87.5°	140.5	145.0	234.3	370.4	515.3	497.5	232.0	303.4	336.8	276.7	167.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196842

CATALOG NUMBER: NAV-AF-06-D-UNV-T4FT-7030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8	5318.8
2.5°	5283.2	5283.2	5312.1	5361.3	5397.0	5430.4	5452.7	5488.4	5508.6	5506.3	5504.1
5°	5247.5	5269.8	5327.8	5388.0	5428.2	5455.0	5455.0	5470.6	5470.6	5463.9	5455.0
7.5°	5164.9	5202.8	5287.6	5341.1	5352.4	5323.3	5265.3	5220.7	5164.9	5135.9	5124.8
10°	5033.2	5082.4	5189.5	5214.0	5156.1	5053.3	4912.9	4792.3	4685.2	4636.2	4620.6
12.5°	4903.9	4968.6	5069.0	5031.1	4892.7	4691.9	4475.5	4310.4	4190.0	4143.1	4127.5
15°	4796.8	4874.9	4952.9	4834.7	4593.8	4314.8	4076.1	3922.2	3830.7	3795.0	3786.2
17.5°	4725.5	4816.9	4843.7	4622.8	4288.1	3975.7	3763.9	3663.5	3623.2	3607.6	3603.2
20°	4729.9	4832.5	4767.8	4417.6	3993.7	3679.1	3538.5	3509.5	3509.5	3509.5	3507.2
22.5°	4852.5	4941.8	4736.6	4225.6	3710.2	3429.2	3368.9	3393.5	3411.3	3411.3	3409.1
25°	5106.9	5156.1	4758.9	4040.5	3444.7	3212.8	3215.0	3261.8	3277.4	3277.4	3273.0
27.5°	5495.0	5455.0	4799.0	3835.2	3183.7	3016.4	3047.7	3090.1	3101.3	3094.5	3092.2
30°	5981.5	5820.9	4832.5	3594.3	2938.3	2833.4	2860.2	2884.8	2875.8	2860.2	2858.0
32.5°	6525.8	6193.5	4812.5	3324.3	2721.8	2643.8	2659.5	2672.8	2659.5	2621.4	2621.4
35°	7065.8	6530.3	4703.1	3029.8	2550.1	2460.8	2458.7	2501.1	2498.8	2454.2	2456.3
37.5°	7538.8	6795.8	4491.1	2759.9	2402.8	2327.0	2336.0	2362.7	2376.1	2315.9	2309.2
40°	7951.6	6978.8	4192.2	2530.0	2284.6	2289.1	2264.5	2222.2	2206.5	2179.7	2175.3
42.5°	8339.8	7106.0	3875.4	2338.1	2224.4	2275.7	2193.2	2092.8	2050.4	2075.0	2090.5
45°	8721.3	7248.8	3569.7	2179.7	2148.5	2235.6	2121.7	2010.2	1961.1	1972.2	1987.9
47.5°	9187.5	7447.3	3201.7	2010.2	2032.5	2161.9	2077.1	1956.7	1883.0	1838.4	1825.0
50°	9801.1	7735.1	2724.2	1827.3	1909.9	2081.6	2039.3	1878.6	1798.3	1709.1	1686.8
52.5°	10568.5	8007.3	2242.2	1680.0	1809.5	2012.4	1976.7	1811.6	1713.5	1606.3	1588.5
55°	11333.9	8045.2	1827.3	1552.8	1695.6	1918.7	1900.9	1758.1	1619.8	1532.8	1514.9
57.5°	11869.3	7686.1	1548.3	1445.7	1586.3	1802.7	1831.7	1693.4	1541.6	1474.8	1463.6
60°	11878.2	6827.1	1378.9	1374.4	1503.7	1702.3	1760.2	1617.5	1492.6	1448.0	1439.1
62.5°	10934.4	5501.9	1269.5	1320.8	1443.6	1619.8	1706.7	1575.2	1481.4	1463.6	1454.7
65°	9165.2	4065.0	1182.5	1271.7	1387.7	1550.6	1662.2	1561.8	1476.9	1470.3	1463.6
67.5°	6766.9	2786.6	1108.9	1209.3	1325.2	1479.2	1619.8	1541.6	1450.2	1476.9	1468.0
70°	4256.8	1860.6	1039.7	1137.8	1242.8	1396.7	1563.9	1505.9	1416.8	1401.1	1372.1
72.5°	2402.8	1345.3	957.1	1046.3	1135.6	1287.3	1488.1	1445.7	1340.8	1278.5	1249.4
73°	2170.9	1274.0	937.0	1024.1	1111.0	1265.0	1470.3	1427.9	1318.5	1249.4	1222.6
75°	1588.5	1041.9	845.5	932.6	1008.5	1162.4	1385.5	1338.7	1220.4	1137.8	1120.0
77.5°	1151.3	803.2	727.3	805.5	872.3	1019.6	1258.3	1204.8	1088.8	1044.2	1026.3
80°	830.0	609.1	602.3	678.3	736.3	885.8	1122.2	1066.5	954.9	1086.6	1057.5
82.5°	495.3	390.4	441.7	526.5	586.7	743.0	975.0	910.2	803.2	812.2	691.6
85°	236.5	220.9	274.5	345.8	388.2	508.7	812.2	760.8	642.6	526.5	515.3
87.5°	104.9	100.4	131.6	153.9	207.5	305.7	555.6	493.1	466.3	278.8	218.6
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)