

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: P196332

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196332
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 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: 30281.4 lumens
Efficiency: N/A
Efficacy: 121.6 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

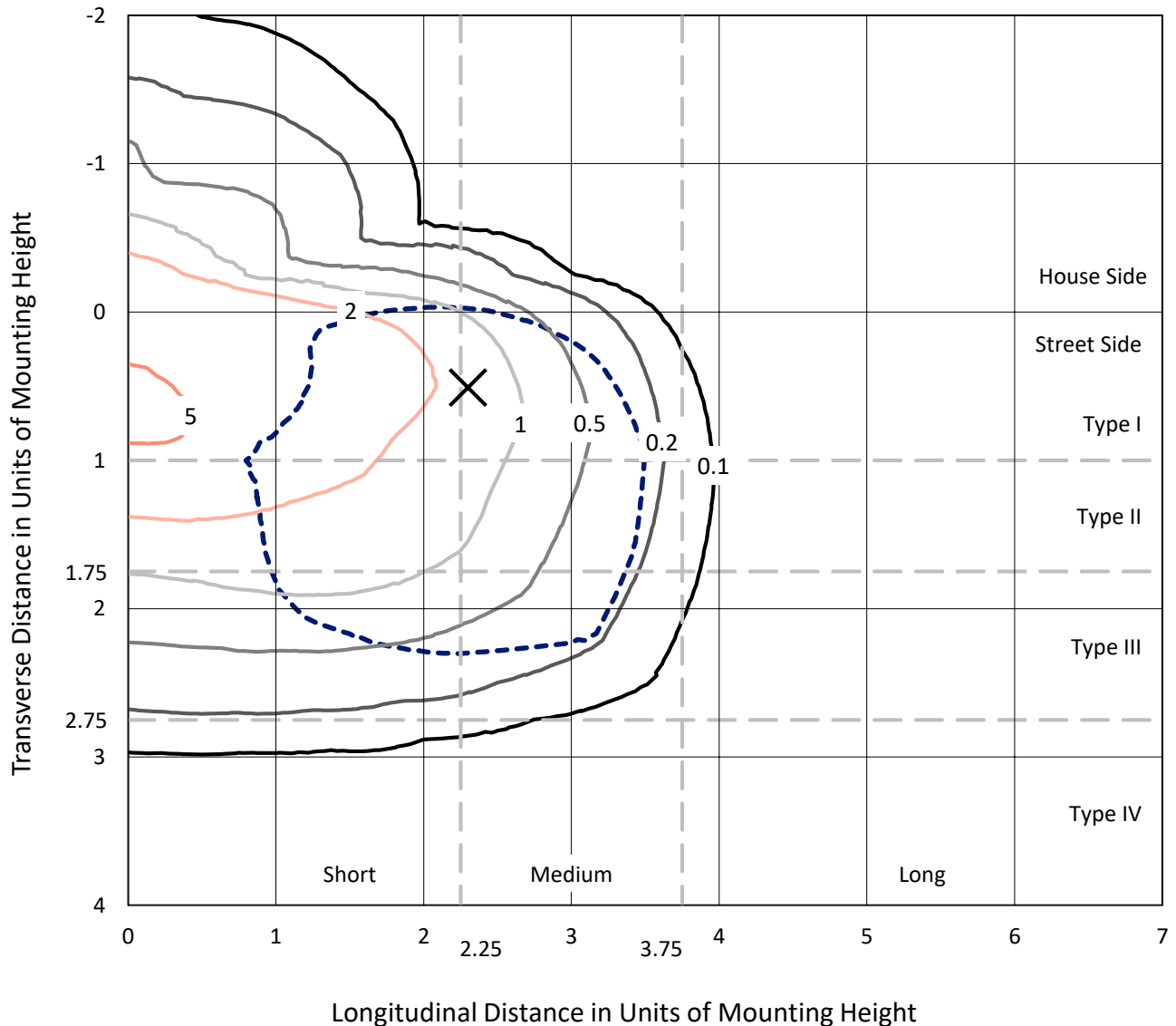
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196332
 CATALOG NUMBER: NAV-AF-06-D-UNV-T3R-800

Iso-Footcandle Lines of Horizontal Illumination

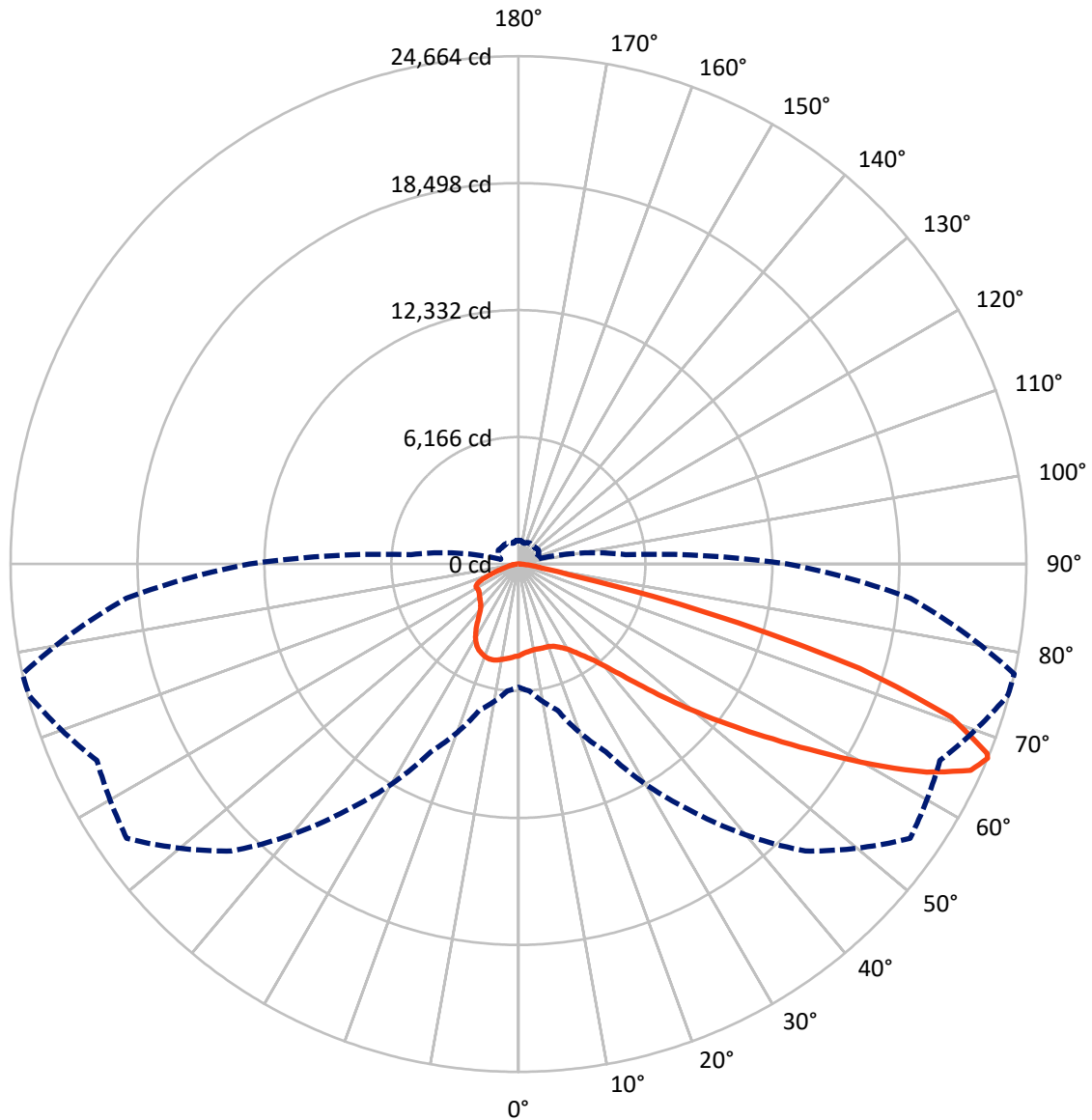
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P196332
CATALOG NUMBER: NAV-AF-06-D-UNV-T3R-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196332

CATALOG NUMBER: NAV-AF-06-D-UNV-T3R-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5203.8	0.0	5203.8
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	25077.5	0.0	25077.5
	% Fixture	82.8	0.0	82.8
Total	Lumens	30281.4	0.0	30281.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	396.9	1.3
10°-20°	1099.2	3.6
20°-30°	1867.7	6.2
30°-40°	2987.9	9.9
40°-50°	4599.9	15.2
50°-60°	6381.9	21.1
60°-70°	8513.0	28.1
70°-80°	4051.3	13.4
80°-90°	383.6	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°	30281.4	100.0
0°-180°	30281.4	100.0



REPORT NUMBER: P196332

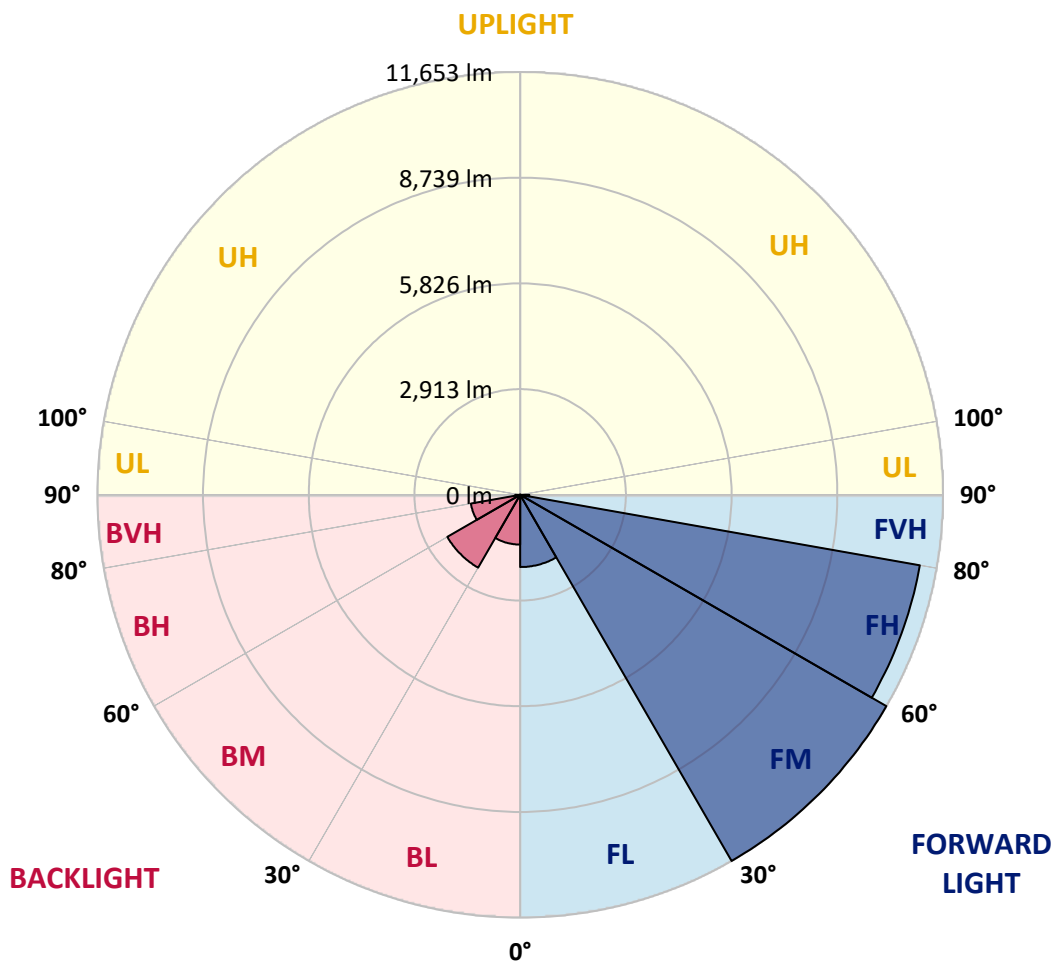
CATALOG NUMBER: NAV-AF-06-D-UNV-T3R-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1991.3	6.6			
FM (30°-60°)	11652.6	38.5			
FH (60°-80°)	11184.5	36.9			G4/12000
FVH (80°-90°)	249.1	0.8			G3/500
BL (0°-30°)	1372.6	4.5	B3/2500		
BM (30°-60°)	2317.0	7.7	B2/2500		
BH (60°-80°)	1379.8	4.6	B3/2500		G3/2500
BVH (80°-90°)	134.5	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





REPORT NUMBER: P196332

CATALOG NUMBER: NAV-AF-06-D-UNV-T3R-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6
2.5°	3996.2	4014.9	4016.7	4071.0	4095.4	4157.2	4224.5	4284.4	4336.8	4355.5	4389.3
5°	3595.7	3595.7	3601.2	3636.8	3706.0	3805.3	3945.6	4099.2	4260.1	4299.4	4398.6
7.5°	3386.0	3389.8	3393.4	3429.0	3483.4	3571.3	3711.7	3921.3	4189.0	4254.5	4428.6
10°	3404.7	3399.1	3380.3	3372.9	3395.4	3451.5	3573.2	3788.4	4129.0	4230.1	4482.9
12.5°	3698.6	3687.3	3625.5	3535.7	3453.4	3432.8	3517.0	3721.0	4101.0	4230.1	4574.5
15°	4202.1	4209.5	4087.9	3900.7	3685.5	3539.5	3528.3	3696.7	4091.6	4241.4	4681.2
17.5°	4857.2	4861.0	4692.5	4421.1	4063.6	3762.2	3605.0	3696.7	4091.6	4252.6	4784.1
20°	5553.5	5527.3	5336.3	4995.7	4531.5	4071.0	3745.3	3719.1	4102.9	4269.5	4881.5
22.5°	6150.6	6126.2	5926.0	5568.4	5036.9	4436.0	3934.4	3794.0	4164.6	4338.7	5018.2
25°	6672.8	6687.7	6493.1	6090.6	5540.4	4847.9	4217.0	3966.2	4293.7	4464.2	5186.6
27.5°	7307.2	7279.2	7054.6	6670.9	6058.8	5274.5	4570.9	4183.4	4447.3	4615.8	5392.5
30°	8041.0	8027.9	7724.7	7329.7	6629.7	5751.8	4920.8	4417.3	4647.6	4823.5	5650.8
32.5°	8932.0	8930.1	8604.4	8119.7	7271.7	6290.9	5334.5	4737.4	4939.5	5117.3	5993.4
35°	9940.8	9939.0	9602.0	8961.9	8011.0	6888.0	5821.1	5126.7	5300.8	5487.9	6401.3
37.5°	10640.8	10629.7	10453.7	9832.3	8829.0	7582.4	6429.5	5650.8	5710.7	5920.3	6893.7
40°	10775.7	10843.0	10994.7	10627.7	9721.8	8353.6	7039.6	6214.2	6270.4	6539.8	7513.2
42.5°	10629.7	10717.7	11221.2	11324.1	10614.6	9287.6	7803.3	6994.7	7065.8	7400.8	8241.3
45°	10502.3	10579.2	11209.9	11709.6	11496.2	10305.8	8756.0	7947.4	8082.2	8497.8	9072.3
47.5°	10285.3	10356.4	10989.0	11778.9	11999.7	11286.6	9903.4	9092.9	9325.0	9828.5	10019.5
50°	10274.0	10305.8	10687.7	11546.8	12173.8	12031.5	11174.3	10433.1	10788.8	11369.0	11067.6
52.5°	9989.5	10212.2	10558.5	11176.1	12177.6	12465.8	12426.5	11902.4	12450.8	13092.8	12216.9
55°	8248.8	8505.2	10128.0	10994.7	12155.1	12838.3	13570.2	13465.3	14322.6	14998.3	13504.7
57.5°	7702.2	7810.8	8885.1	11048.9	12342.3	13454.1	14713.8	15144.3	16463.9	17201.3	15048.8
60°	7552.4	7666.7	8636.3	11075.1	12849.5	14575.3	16265.4	17040.4	18981.4	19763.7	16802.7
62.5°	7385.9	7533.7	8655.0	11099.4	13740.5	16233.6	18324.4	19097.4	21566.3	22264.4	18446.1
65°	6899.3	7095.8	8308.7	10946.0	14715.7	18315.0	21045.9	21242.4	23701.9	24145.5	19438.1
67°	5976.5	6191.7	7357.9	10058.8	14625.8	19717.0	23222.7	22584.5	24609.7	24664.0	19116.1
67.5°	5684.5	5907.2	7035.9	9690.0	14369.4	19900.4	23608.3	22769.8	24602.2	24542.3	18816.7
70°	3827.7	4078.5	4982.6	7114.5	11526.2	18520.9	23514.8	22198.9	22988.8	22301.9	16166.3
72.5°	1899.8	1907.3	2485.7	3896.9	6983.5	13283.7	19615.9	18990.8	18635.1	17338.0	11863.2
75°	915.2	932.1	1173.6	1722.0	2944.3	6858.1	13377.3	12814.0	10910.4	9446.7	5937.2
77.5°	698.2	715.0	911.6	1121.2	1227.8	2236.8	6626.0	5355.0	3161.3	2524.9	1673.3
80°	539.1	570.9	769.3	861.0	812.3	896.6	2083.2	1639.7	1229.7	1128.6	829.2
82.5°	421.1	439.9	653.3	653.3	561.5	600.9	969.6	947.2	763.6	688.8	445.5
85°	297.6	335.0	526.0	486.6	368.8	372.5	580.2	555.9	393.0	316.3	174.1
87.5°	132.9	170.3	374.4	318.2	196.5	151.6	237.7	204.0	155.4	119.8	80.5
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: P196332

CATALOG NUMBER: NAV-AF-06-D-UNV-T3R-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6	4456.6
2.5°	4426.7	4456.6	4503.4	4531.5	4568.9	4583.9	4598.9	4625.1	4645.6	4640.1	4630.7
5°	4467.8	4518.4	4576.4	4595.1	4595.1	4576.4	4565.2	4567.1	4561.4	4557.7	4546.5
7.5°	4527.8	4597.0	4638.2	4619.4	4561.4	4488.4	4419.1	4378.0	4338.7	4314.4	4321.9
10°	4612.0	4688.7	4690.6	4608.2	4469.7	4310.6	4173.9	4086.0	4001.8	3964.3	3975.6
12.5°	4733.6	4810.4	4744.9	4567.1	4323.7	4074.8	3824.0	3642.4	3479.6	3440.3	3429.0
15°	4864.6	4924.6	4778.6	4479.1	4114.1	3704.2	3283.1	3011.7	2830.1	2798.3	2787.0
17.5°	4978.8	5012.6	4761.7	4321.9	3782.8	3137.1	2646.7	2463.3	2425.8	2444.5	2444.5
20°	5079.9	5068.7	4688.7	4078.5	3260.6	2508.2	2223.6	2221.7	2272.3	2319.1	2322.8
22.5°	5207.2	5119.3	4572.7	3717.3	2637.3	2092.7	2044.0	2092.7	2148.8	2201.2	2206.8
25°	5358.8	5175.4	4417.3	3202.6	2120.7	1899.8	1920.4	1961.6	1997.1	2038.3	2040.2
27.5°	5510.4	5218.4	4198.3	2598.0	1839.9	1776.3	1798.8	1815.6	1824.9	1851.1	1851.1
30°	5686.4	5252.1	3882.0	2081.4	1710.8	1667.7	1654.6	1647.2	1654.6	1690.2	1692.1
32.5°	5907.2	5312.0	3449.6	1785.7	1650.8	1591.0	1523.6	1486.1	1512.3	1576.1	1587.2
35°	6158.1	5383.2	2931.2	1667.7	1630.3	1553.6	1430.0	1372.0	1381.4	1439.4	1448.7
37.5°	6472.5	5474.8	2420.2	1639.7	1650.8	1549.8	1386.9	1304.6	1263.4	1265.3	1263.4
40°	6874.9	5566.6	2015.8	1647.2	1695.8	1559.2	1366.4	1237.3	1151.1	1154.9	1162.4
42.5°	7296.1	5626.4	1759.5	1669.6	1750.1	1572.3	1358.9	1171.7	1096.8	1160.4	1218.5
45°	7788.3	5609.7	1626.6	1690.2	1791.3	1577.9	1330.9	1164.2	1102.4	1293.4	1402.0
47.5°	8353.6	5536.6	1551.7	1699.5	1802.5	1576.1	1310.2	1188.6	1149.3	1480.5	1604.1
50°	8967.5	5422.5	1491.8	1684.6	1796.9	1568.5	1332.7	1218.5	1168.0	1521.7	1617.2
52.5°	9639.5	5317.6	1430.0	1650.8	1768.8	1546.1	1360.7	1205.4	1115.5	1402.0	1474.9
55°	10435.0	5293.3	1360.7	1592.8	1722.0	1521.7	1345.8	1164.2	1057.5	1242.9	1287.8
57.5°	11344.6	5444.9	1270.9	1521.7	1658.4	1473.0	1310.2	1141.7	1037.0	1130.6	1154.9
60°	12499.5	5780.0	1175.5	1446.9	1579.7	1400.1	1278.4	1147.3	1042.6	1113.7	1119.3
62.5°	13401.7	6081.3	1089.3	1355.1	1474.9	1312.1	1244.7	1153.0	1059.4	1136.2	1126.8
65°	13729.2	5933.4	982.6	1218.5	1327.1	1214.8	1197.9	1156.8	1059.4	1149.3	1128.6
67°	13057.3	5227.8	881.6	1081.9	1186.7	1128.6	1153.0	1141.7	1040.6	1147.3	1111.8
67.5°	12737.3	4978.8	855.4	1059.4	1149.3	1102.4	1141.7	1134.2	1035.1	1143.7	1102.4
70°	10504.3	3571.3	722.5	889.0	962.1	971.4	1072.5	1085.7	990.1	1074.4	999.5
72.5°	7473.9	2234.8	623.3	688.8	776.7	831.0	979.0	1020.1	930.3	934.0	872.3
75°	3698.6	1199.8	555.9	531.5	604.6	692.5	853.6	930.3	842.3	778.7	758.0
77.5°	1248.4	679.4	469.8	428.6	469.8	555.9	707.5	812.3	743.1	658.9	645.8
80°	645.8	494.2	366.8	344.4	370.6	430.5	554.0	675.7	634.5	638.2	526.0
82.5°	402.4	301.4	263.9	262.1	280.8	329.4	408.1	548.4	544.7	466.1	338.8
85°	187.2	174.1	168.5	174.1	179.7	187.2	265.8	391.2	413.7	250.8	222.7
87.5°	78.6	76.7	67.4	73.0	80.5	78.6	106.7	166.5	232.1	157.2	144.1
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)