

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: P270620

Luminaire Tested: **NAV-AF-05-D-UNV-T2-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270620
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28050.7 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - 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

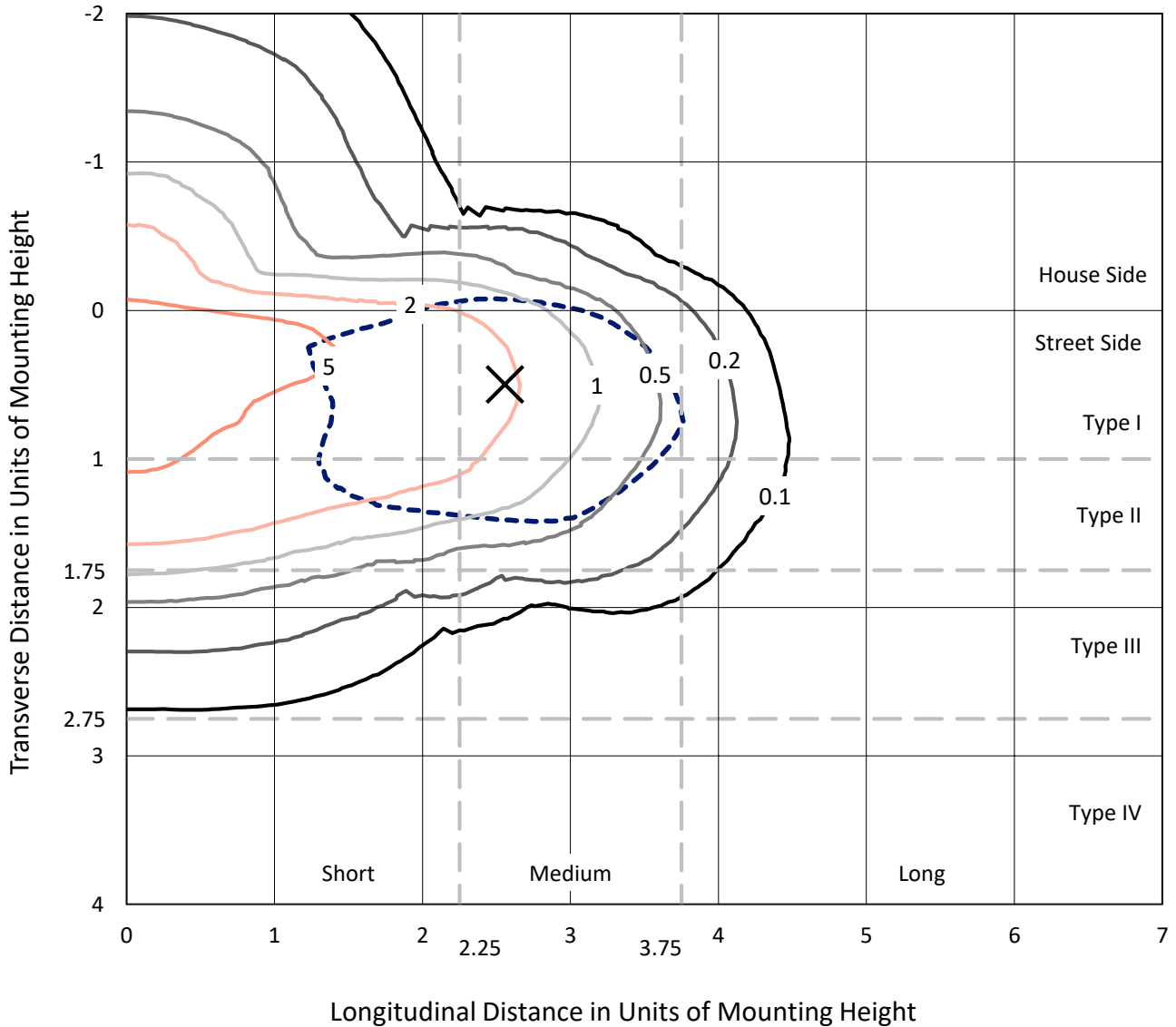


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Iso-Footcandle Lines of Horizontal Illumination

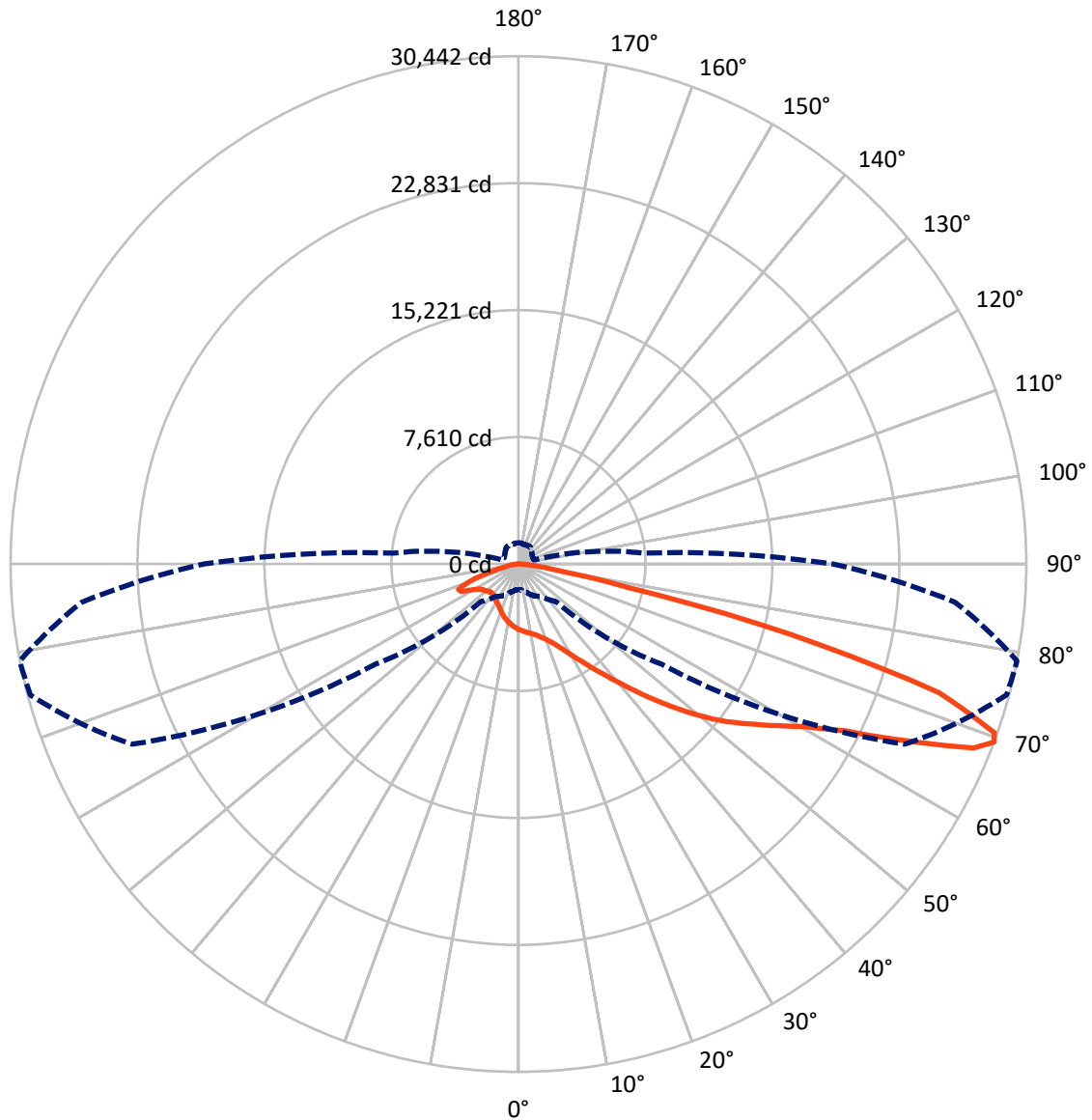
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5276.8	0.0	5276.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	22773.9	0.0	22773.9
	% Fixture	81.2	0.0	81.2
Total	Lumens	28050.7	0.0	28050.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.9	1.3
10°-20°	1046.2	3.7
20°-30°	1728.8	6.2
30°-40°	2799.4	10.0
40°-50°	4472.0	15.9
50°-60°	6404.4	22.8
60°-70°	7135.4	25.4
70°-80°	3569.8	12.7
80°-90°	529.8	1.9
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°	28050.7	100.0
0°-180°	28050.7	100.0

Coefficient of Utilization



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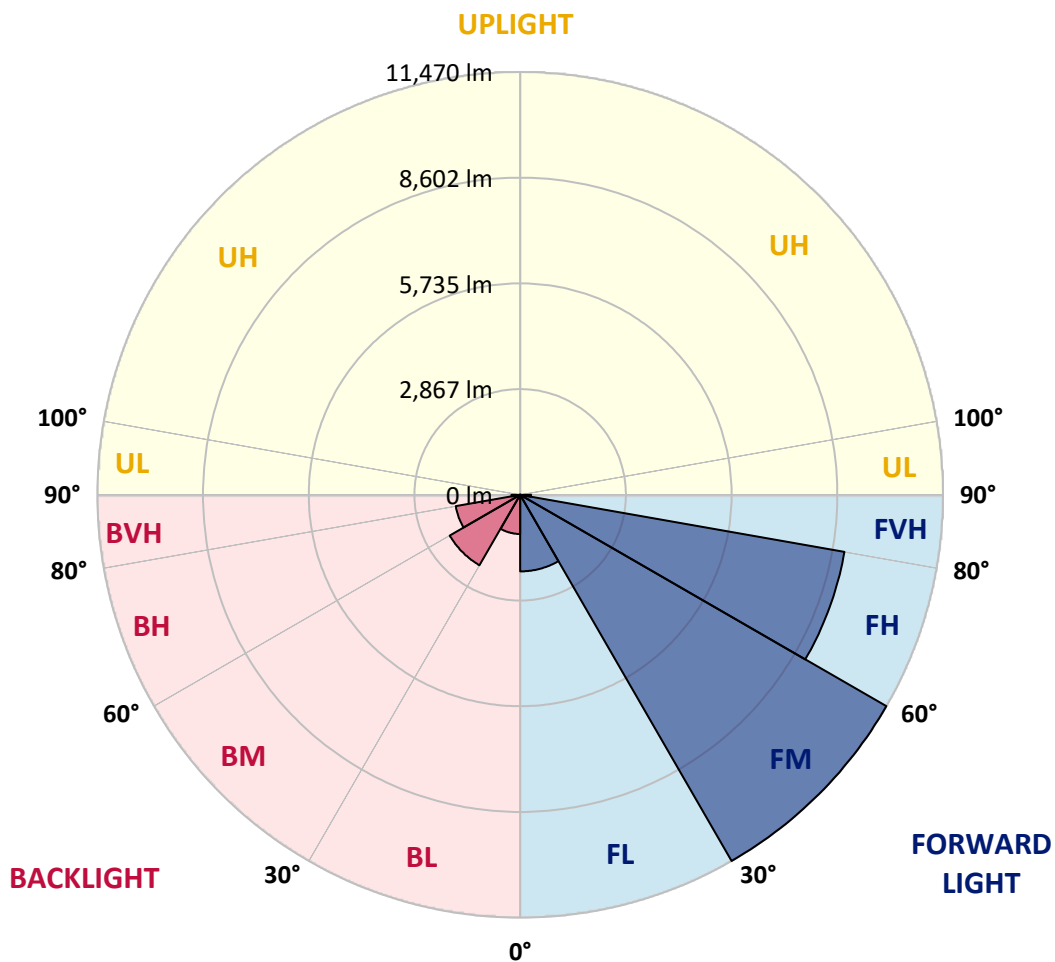
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2076.9	7.4			
FM (30°-60°)	11470.0	40.9			
FH (60°-80°)	8931.0	31.8			G4/12000
FVH (80°-90°)	296.0	1.1			G3/500
BL (0°-30°)	1063.0	3.8	B3/2500		
BM (30°-60°)	2205.8	7.9	B2/2500		
BH (60°-80°)	1774.2	6.3	B3/2500		G3/2500
BVH (80°-90°)	233.8	0.8			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5
2.5°	4321.7	4312.7	4310.7	4283.3	4268.6	4237.3	4164.0	4088.7	4018.9	3982.2	3943.7
5°	4683.4	4665.0	4655.7	4609.9	4569.6	4499.8	4384.2	4265.0	4140.1	4075.9	3998.7
7.5°	4901.7	4903.6	4903.6	4866.8	4826.5	4742.1	4595.2	4431.9	4246.6	4162.1	4041.0
10°	4920.0	4921.9	4949.4	4958.6	4967.7	4923.7	4788.0	4582.3	4343.8	4233.7	4075.9
12.5°	4738.4	4751.2	4797.0	4863.2	4956.8	5004.5	4945.8	4743.9	4468.6	4334.6	4141.9
15°	4494.3	4507.2	4565.8	4666.8	4817.3	4976.9	5059.6	4929.2	4631.9	4474.1	4239.2
17.5°	4375.0	4389.7	4430.0	4510.7	4657.6	4872.3	5120.1	5127.4	4824.6	4642.9	4354.9
20°	4318.2	4329.1	4380.6	4446.6	4558.4	4764.0	5125.5	5336.7	5054.0	4842.9	4496.1
22.5°	4448.3	4452.1	4477.8	4514.5	4589.7	4747.5	5122.0	5553.2	5340.3	5094.4	4677.8
25°	4830.1	4806.3	4788.0	4742.1	4760.4	4872.3	5180.6	5784.4	5707.3	5424.8	4920.0
27.5°	5281.6	5277.9	5230.2	5123.8	5055.8	5127.4	5347.6	6043.2	6157.0	5844.9	5237.6
30°	5784.4	5786.3	5736.7	5606.4	5468.7	5476.1	5613.8	6342.4	6694.7	6351.5	5628.4
32.5°	6311.1	6344.1	6252.4	6122.0	5955.0	5901.9	5995.5	6703.8	7316.8	6949.7	6081.6
35°	6940.6	6946.1	6845.2	6654.3	6487.3	6402.8	6489.0	7155.3	8034.4	7652.7	6634.2
37.5°	7593.8	7597.5	7492.9	7248.9	7037.9	6982.7	7078.1	7704.0	8794.0	8452.7	7283.7
40°	8128.0	8166.4	8083.8	7854.5	7641.6	7608.6	7746.2	8361.0	9764.8	9399.7	8056.3
42.5°	8733.5	8777.6	8678.4	8439.8	8271.1	8260.0	8474.7	9109.7	10730.2	10495.3	8931.7
45°	9416.2	9478.6	9340.9	9073.1	8929.8	9172.1	9184.9	9939.1	11842.3	11721.2	9917.2
47.5°	10161.3	10212.7	10100.7	9812.5	9656.6	10007.1	9880.5	10836.6	13044.3	13035.0	10983.3
50°	10735.6	10792.5	10803.6	10677.0	10513.7	10557.6	10643.8	11779.8	14242.6	14385.7	12086.3
52.5°	10631.0	10686.1	10933.8	11266.1	11528.5	11414.7	11519.2	12781.9	15400.6	15703.5	13134.2
55°	9786.9	9816.3	10280.6	11069.6	12187.2	12730.5	12737.7	13871.9	16501.8	16925.7	14128.8
57.5°	8265.6	8269.2	8873.0	10036.5	11803.6	13583.8	14661.1	15241.0	17650.4	18276.2	15362.0
60°	5848.7	5863.2	6566.3	8087.5	10429.2	13481.0	16729.2	17691.0	18980.9	19794.0	16951.3
62.5°	3472.0	3505.1	4035.5	5255.9	7746.2	12159.7	17951.5	22049.3	20941.0	22020.1	19494.8
65°	2259.1	2286.5	2604.0	3217.0	4576.9	8847.2	17549.6	26270.3	24649.9	25521.4	23150.5
67.5°	1739.7	1761.8	2011.3	2382.0	2807.8	4782.3	14031.5	27154.8	29164.3	29435.9	26235.4
69°	1528.6	1547.1	1730.6	2086.6	2363.7	3165.6	10456.7	25549.1	30293.0	30441.6	26273.8
70°	1416.7	1431.4	1604.0	1912.2	2170.9	2527.0	8003.1	23684.5	29880.1	30259.9	25515.9
72.5°	1167.2	1180.1	1302.9	1539.7	1774.6	1800.4	3545.5	17294.4	25160.0	26374.9	21592.4
75°	974.5	981.8	1062.5	1235.1	1436.8	1433.2	1811.3	9796.0	15352.9	16800.8	13332.4
77.5°	813.0	818.4	871.6	978.2	1134.1	1128.6	1275.5	4228.2	6779.1	6540.5	4589.7
80°	717.6	721.2	748.7	776.2	875.4	869.9	945.0	1941.5	2758.2	2549.0	1736.1
82.5°	545.0	552.4	691.9	704.7	678.9	655.1	658.8	1130.4	1413.0	1286.5	932.3
85°	308.3	310.2	444.1	519.3	590.9	444.1	427.7	583.5	697.4	611.0	407.4
87.5°	137.6	143.1	212.9	246.0	319.3	260.6	244.1	247.8	300.9	249.5	161.4
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°	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5	3936.5
2.5°	3907.1	3875.8	3802.4	3727.2	3652.0	3604.2	3554.8	3508.8	3490.5	3488.7	3453.8
5°	3923.5	3850.1	3683.1	3499.6	3325.3	3189.5	3075.7	3002.3	2930.7	2917.9	2886.8
7.5°	3929.0	3809.8	3538.2	3244.6	2978.5	2791.3	2677.5	2627.9	2593.0	2583.9	2572.8
10°	3927.2	3758.4	3376.6	2974.7	2672.0	2530.6	2488.5	2499.4	2514.1	2521.5	2521.5
12.5°	3956.6	3734.6	3215.3	2721.5	2473.8	2405.9	2438.9	2495.9	2539.9	2558.3	2561.8
15°	4009.9	3719.8	3037.2	2501.3	2334.3	2350.9	2431.6	2514.1	2576.6	2604.0	2611.5
17.5°	4075.9	3699.7	2831.6	2319.7	2253.6	2310.5	2415.1	2519.7	2594.9	2629.8	2635.3
20°	4149.4	3670.4	2618.7	2183.8	2182.1	2253.6	2358.2	2475.5	2556.3	2594.9	2593.0
22.5°	4248.4	3642.7	2420.6	2084.7	2103.1	2169.1	2255.5	2361.9	2437.1	2472.0	2464.6
25°	4380.6	3617.0	2242.6	1996.7	2013.1	2057.2	2117.8	2198.5	2251.7	2270.0	2257.3
27.5°	4558.4	3597.0	2103.1	1915.8	1914.1	1934.2	1970.9	2015.0	2040.7	2035.2	2015.0
30°	4776.8	3576.7	2000.3	1844.3	1818.7	1816.8	1833.4	1859.0	1875.5	1842.6	1826.0
32.5°	5020.9	3541.8	1908.5	1782.0	1736.1	1719.5	1726.9	1761.8	1829.7	1796.6	1783.8
35°	5309.2	3501.5	1816.8	1714.1	1679.1	1648.0	1653.5	1728.7	1934.2	1910.3	1897.6
37.5°	5656.0	3464.8	1732.4	1640.7	1638.8	1600.2	1596.6	1686.5	1961.8	1910.3	1899.3
40°	6072.5	3457.4	1657.2	1559.8	1589.2	1574.5	1561.8	1616.8	1809.5	1704.9	1684.7
42.5°	6575.4	3490.5	1602.0	1482.8	1532.4	1567.3	1543.4	1556.3	1635.2	1541.5	1525.1
45°	7162.5	3580.4	1561.8	1414.9	1471.9	1561.8	1534.1	1523.2	1536.0	1484.7	1473.6
47.5°	7847.1	3740.1	1534.1	1358.0	1414.9	1547.1	1530.5	1508.6	1503.0	1473.6	1466.4
50°	8579.4	3954.8	1515.8	1306.7	1363.4	1521.3	1528.6	1497.5	1488.3	1475.5	1471.9
52.5°	9306.1	4187.8	1493.8	1262.6	1321.2	1490.2	1530.5	1486.4	1473.6	1466.4	1462.6
55°	10029.0	4430.0	1453.5	1224.0	1290.1	1453.5	1528.6	1471.9	1457.1	1457.1	1457.1
57.5°	10966.9	4798.9	1400.2	1192.9	1249.7	1405.8	1504.8	1455.3	1435.1	1436.8	1438.7
60°	12321.2	5417.4	1341.4	1157.9	1196.5	1350.7	1468.1	1425.9	1402.1	1409.4	1411.2
62.5°	14584.0	6498.2	1260.7	1108.4	1141.4	1291.9	1420.4	1385.5	1363.4	1376.4	1378.2
65°	17601.0	7806.7	1154.3	1046.0	1084.6	1225.8	1359.9	1337.8	1314.0	1345.1	1343.3
67.5°	19441.6	8190.2	1042.4	980.1	1029.5	1156.2	1284.5	1275.5	1259.0	1314.0	1310.3
69°	18837.8	7496.5	978.2	937.8	991.0	1108.4	1236.8	1233.3	1220.3	1273.5	1269.9
70°	17900.0	6848.8	937.8	910.3	970.8	1079.0	1205.6	1205.6	1192.9	1238.8	1229.6
72.5°	14378.5	5079.6	844.1	840.5	901.1	998.3	1121.3	1130.4	1123.2	1139.6	1130.4
75°	8441.7	3061.1	752.4	763.4	816.6	912.0	1027.8	1035.0	1027.8	1025.9	1027.8
77.5°	2927.0	1372.7	664.3	680.8	726.6	823.9	925.0	939.5	928.6	915.7	919.4
80°	1145.1	798.4	568.8	592.7	631.2	724.9	822.2	831.3	814.9	813.0	798.4
82.5°	688.2	486.3	442.2	480.9	528.6	629.4	710.2	706.5	693.8	768.9	673.5
85°	299.1	269.9	323.0	361.5	385.5	471.6	600.1	583.5	552.4	486.3	475.4
87.5°	121.1	139.4	178.0	214.8	231.3	304.6	411.1	396.4	401.9	330.3	328.5
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)