

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: P195310

Luminaire Tested: **NAV-AF-04-D-UNV-T2-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195310
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-04-D-UNV-T2-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26197 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 258
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

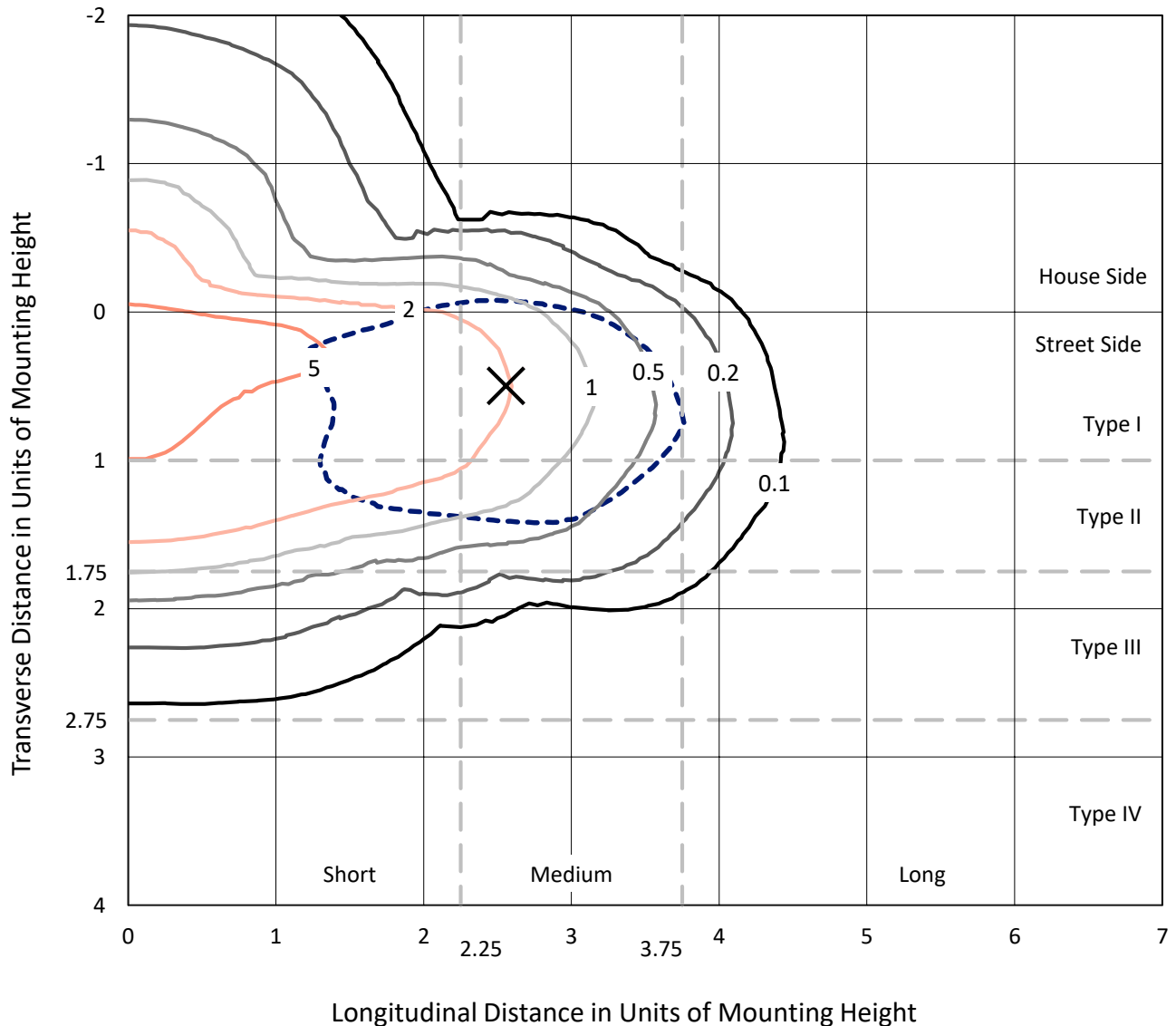


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Iso-Footcandle Lines of Horizontal Illumination

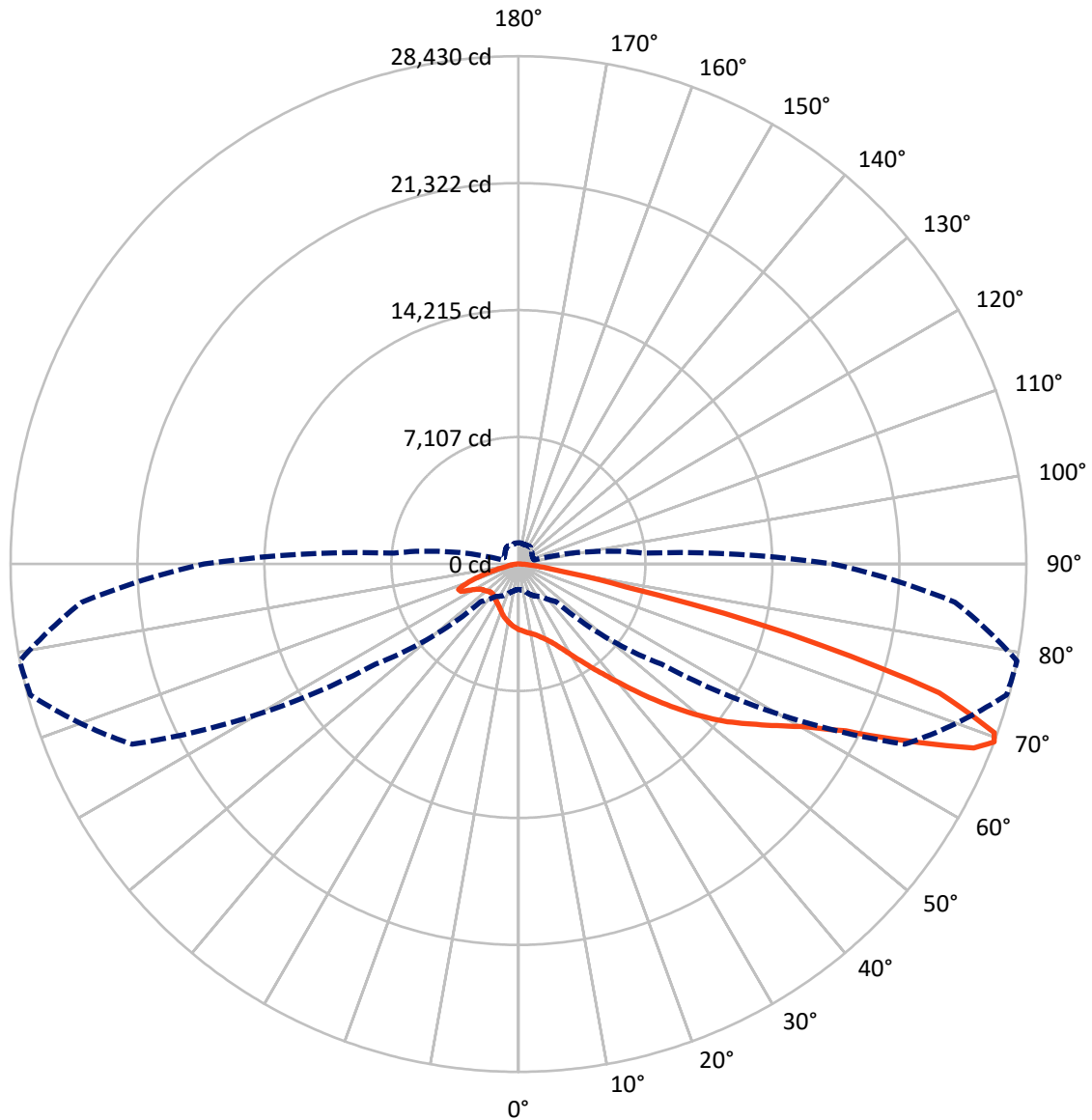
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 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	4928.1	0.0	4928.1
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	21268.9	0.0	21268.9
	% Fixture	81.2	0.0	81.2
Total	Lumens	26197.0	0.0	26197.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	340.8	1.3
10°-20°	977.1	3.7
20°-30°	1614.6	6.2
30°-40°	2614.4	10.0
40°-50°	4176.5	15.9
50°-60°	5981.2	22.8
60°-70°	6663.9	25.4
70°-80°	3333.9	12.7
80°-90°	494.8	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°	26197.0	100.0
0°-180°	26197.0	100.0

Coefficient of Utilization



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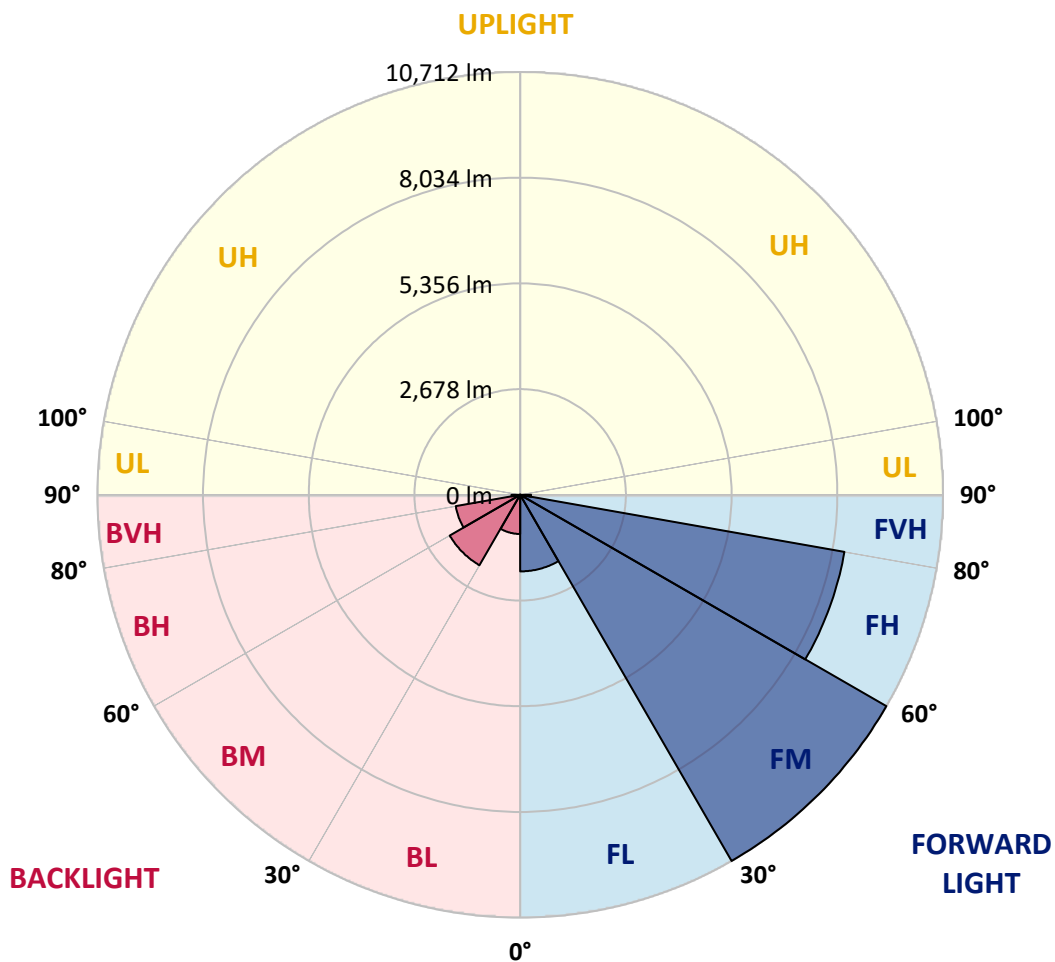
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1939.7	7.4			
FM (30°-60°)	10712.0	40.9			
FH (60°-80°)	8340.8	31.8			G4/12000
FVH (80°-90°)	276.5	1.1			G3/500
BL (0°-30°)	992.8	3.8	B2/1000		
BM (30°-60°)	2060.0	7.9	B2/2500		
BH (60°-80°)	1657.0	6.3	B3/2500		G3/2500
BVH (80°-90°)	218.3	0.8			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3
2.5°	4036.2	4027.6	4025.9	4000.2	3986.5	3957.3	3888.8	3818.5	3753.4	3719.1	3683.1
5°	4373.8	4356.7	4348.1	4305.3	4267.6	4202.4	4094.5	3983.1	3866.5	3806.5	3734.5
7.5°	4577.8	4579.5	4579.5	4545.2	4507.5	4428.7	4291.5	4139.0	3965.9	3887.1	3774.0
10°	4594.9	4596.6	4622.3	4630.9	4639.5	4598.3	4471.5	4279.6	4056.7	3953.9	3806.5
12.5°	4425.2	4437.2	4480.1	4541.8	4629.2	4673.7	4618.9	4430.4	4173.3	4048.2	3868.2
15°	4197.3	4209.3	4264.1	4358.4	4498.9	4648.0	4725.2	4603.5	4325.8	4178.4	3959.1
17.5°	4085.9	4099.6	4137.3	4212.7	4349.8	4550.3	4781.7	4788.6	4505.8	4336.1	4067.0
20°	4032.8	4043.0	4091.0	4152.7	4257.3	4449.2	4786.9	4984.0	4720.0	4522.9	4199.0
22.5°	4154.4	4157.9	4181.9	4216.1	4286.4	4433.8	4783.4	5186.2	4987.4	4757.7	4368.7
25°	4510.9	4488.6	4471.5	4428.7	4445.8	4550.3	4838.3	5402.1	5330.2	5066.2	4594.9
27.5°	4932.5	4929.1	4884.6	4785.1	4721.7	4788.6	4994.2	5643.8	5750.1	5458.7	4891.4
30°	5402.1	5403.9	5357.6	5235.9	5107.4	5114.2	5242.8	5923.2	6252.2	5931.7	5256.5
32.5°	5894.0	5924.9	5839.2	5717.5	5561.5	5511.8	5599.2	6260.8	6833.2	6490.5	5679.8
35°	6481.9	6487.0	6392.8	6214.5	6058.6	5979.7	6060.3	6682.4	7503.4	7146.9	6195.7
37.5°	7092.0	7095.5	6997.8	6769.8	6572.7	6521.3	6610.4	7194.9	8212.9	7894.1	6802.4
40°	7590.8	7626.8	7549.6	7335.4	7136.6	7105.7	7234.3	7808.4	9119.5	8778.5	7523.9
42.5°	8156.3	8197.5	8104.9	7882.1	7724.4	7714.2	7914.7	8507.7	10021.0	9801.7	8341.4
45°	8793.9	8852.2	8723.6	8473.4	8339.7	8566.0	8578.0	9282.4	11059.7	10946.5	9261.8
47.5°	9489.7	9537.7	9433.2	9164.1	9018.4	9345.8	9227.5	10120.4	12182.2	12173.7	10257.6
50°	10026.2	10079.3	10089.6	9971.3	9818.8	9859.9	9940.5	11001.4	13301.4	13435.1	11287.6
52.5°	9928.5	9979.9	10211.3	10521.5	10766.6	10660.3	10758.0	11937.2	14382.9	14665.6	12266.2
55°	9140.1	9167.5	9601.1	10338.1	11381.9	11889.2	11896.0	12955.2	15411.2	15807.1	13195.1
57.5°	7719.3	7722.7	8286.6	9373.2	11023.7	12686.1	13692.2	14233.8	16484.1	17068.5	14346.9
60°	5462.1	5475.8	6132.3	7553.1	9740.0	12590.1	15623.7	16521.8	17726.6	18485.9	15831.1
62.5°	3242.7	3273.5	3768.8	4908.5	7234.3	11356.2	16765.1	20592.2	19557.1	20564.8	18206.5
65°	2109.8	2135.5	2432.0	3004.4	4274.4	8262.6	16389.8	24534.2	23020.8	23834.9	21620.6
67.5°	1624.8	1645.3	1878.4	2224.6	2622.2	4466.4	13104.3	25360.2	27236.9	27490.6	24501.6
69°	1427.7	1444.8	1616.2	1948.7	2207.5	2956.4	9765.7	23860.6	28291.0	28429.8	24537.6
70°	1323.1	1336.8	1497.9	1785.9	2027.5	2360.0	7474.2	22119.3	27905.4	28260.1	23829.8
72.5°	1090.0	1102.0	1216.9	1437.9	1657.3	1681.3	3311.2	16151.6	23497.3	24631.8	20165.5
75°	910.1	916.9	992.3	1153.4	1342.0	1338.5	1691.6	9148.7	14338.3	15690.5	12451.3
77.5°	759.2	764.4	814.1	913.5	1059.2	1054.0	1191.1	3948.8	6331.1	6108.3	4286.4
80°	670.1	673.6	699.3	725.0	817.5	812.4	882.6	1813.3	2576.0	2380.6	1621.3
82.5°	509.0	515.9	646.1	658.1	634.1	611.9	615.3	1055.7	1319.7	1201.4	870.6
85°	287.9	289.6	414.8	485.0	551.9	414.8	399.3	545.0	651.3	570.7	380.5
87.5°	128.5	133.7	198.8	229.7	298.2	243.4	227.9	231.4	281.1	233.1	150.8
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°	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3	3676.3
2.5°	3648.8	3619.7	3551.2	3480.9	3410.6	3366.1	3319.8	3276.9	3259.8	3258.1	3225.5
5°	3664.3	3595.7	3439.8	3268.4	3105.5	2978.7	2872.5	2803.9	2737.1	2725.1	2695.9
7.5°	3669.4	3558.0	3304.4	3030.1	2781.6	2606.8	2500.5	2454.3	2421.7	2413.1	2402.9
10°	3667.7	3510.0	3153.5	2778.2	2495.4	2363.4	2324.0	2334.3	2348.0	2354.9	2354.9
12.5°	3695.1	3487.7	3002.7	2541.7	2310.3	2246.9	2277.7	2330.9	2372.0	2389.1	2392.6
15°	3744.8	3474.0	2836.5	2336.0	2180.1	2195.5	2270.9	2348.0	2406.3	2432.0	2438.8
17.5°	3806.5	3455.2	2644.5	2166.3	2104.6	2157.8	2255.5	2353.2	2423.4	2456.0	2461.1
20°	3875.1	3427.8	2445.7	2039.5	2037.8	2104.6	2202.3	2312.0	2387.4	2423.4	2421.7
22.5°	3967.6	3402.0	2260.6	1947.0	1964.1	2025.8	2106.4	2205.8	2276.0	2308.6	2301.7
25°	4091.0	3378.1	2094.4	1864.7	1880.1	1921.3	1977.8	2053.2	2102.9	2120.1	2108.1
27.5°	4257.3	3359.2	1964.1	1789.3	1787.6	1806.4	1840.7	1881.8	1905.8	1900.7	1881.8
30°	4461.2	3340.3	1868.1	1722.4	1698.5	1696.7	1712.2	1736.2	1751.6	1720.7	1705.3
32.5°	4689.2	3307.8	1782.4	1664.2	1621.3	1605.9	1612.8	1645.3	1708.7	1677.9	1665.9
35°	4958.2	3270.1	1696.7	1600.8	1568.2	1539.1	1544.2	1614.5	1806.4	1784.1	1772.1
37.5°	5282.2	3235.8	1617.9	1532.2	1530.5	1494.5	1491.1	1575.1	1832.1	1784.1	1773.9
40°	5671.2	3228.9	1547.6	1456.8	1484.2	1470.5	1458.5	1509.9	1689.9	1592.2	1573.3
42.5°	6140.8	3259.8	1496.2	1384.8	1431.1	1463.7	1441.4	1453.4	1527.1	1439.7	1424.2
45°	6689.3	3343.8	1458.5	1321.4	1374.5	1458.5	1432.8	1422.5	1434.5	1386.5	1376.2
47.5°	7328.5	3492.9	1432.8	1268.3	1321.4	1444.8	1429.4	1408.8	1403.7	1376.2	1369.4
50°	8012.4	3693.4	1415.7	1220.3	1273.4	1420.8	1427.7	1398.5	1390.0	1378.0	1374.5
52.5°	8691.1	3911.1	1395.1	1179.1	1234.0	1391.7	1429.4	1388.2	1376.2	1369.4	1366.0
55°	9366.3	4137.3	1357.4	1143.2	1204.9	1357.4	1427.7	1374.5	1360.8	1360.8	1360.8
57.5°	10242.1	4481.8	1307.7	1114.0	1167.2	1312.8	1405.4	1359.1	1340.3	1342.0	1343.7
60°	11507.0	5059.4	1252.8	1081.5	1117.4	1261.4	1371.1	1331.7	1309.4	1316.3	1318.0
62.5°	13620.2	6068.8	1177.4	1035.2	1066.0	1206.6	1326.5	1294.0	1273.4	1285.4	1287.1
65°	16437.8	7290.8	1078.0	976.9	1012.9	1144.9	1270.0	1249.4	1227.1	1256.3	1254.6
67.5°	18156.8	7649.0	973.5	915.2	961.5	1079.7	1199.7	1191.1	1175.7	1227.1	1223.7
69°	17593.0	7001.2	913.5	875.8	925.5	1035.2	1155.2	1151.7	1139.7	1189.4	1186.0
70°	16717.2	6396.2	875.8	850.1	906.6	1007.8	1126.0	1126.0	1114.0	1156.9	1148.3
72.5°	13428.2	4744.0	788.4	785.0	841.5	932.3	1047.2	1055.7	1048.9	1064.3	1055.7
75°	7883.8	2858.7	702.7	713.0	762.7	851.8	959.8	966.6	959.8	958.1	959.8
77.5°	2733.6	1282.0	620.4	635.8	678.7	769.5	863.8	877.5	867.2	855.2	858.7
80°	1069.5	745.5	531.3	553.6	589.6	677.0	767.8	776.4	761.0	759.2	745.5
82.5°	642.7	454.2	413.0	449.0	493.6	587.9	663.3	659.8	647.8	718.1	629.0
85°	279.4	251.9	301.6	337.6	359.9	440.5	560.4	545.0	515.9	454.2	443.9
87.5°	113.1	130.3	166.2	200.5	215.9	284.5	383.9	370.2	375.3	308.5	306.8
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)