

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: P270697

Luminaire Tested: **NAV-AF-06-D-UNV-T2-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270697
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-06-D-UNV-T2-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30633 lumens
Efficiency: N/A
Efficacy: 92.0 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

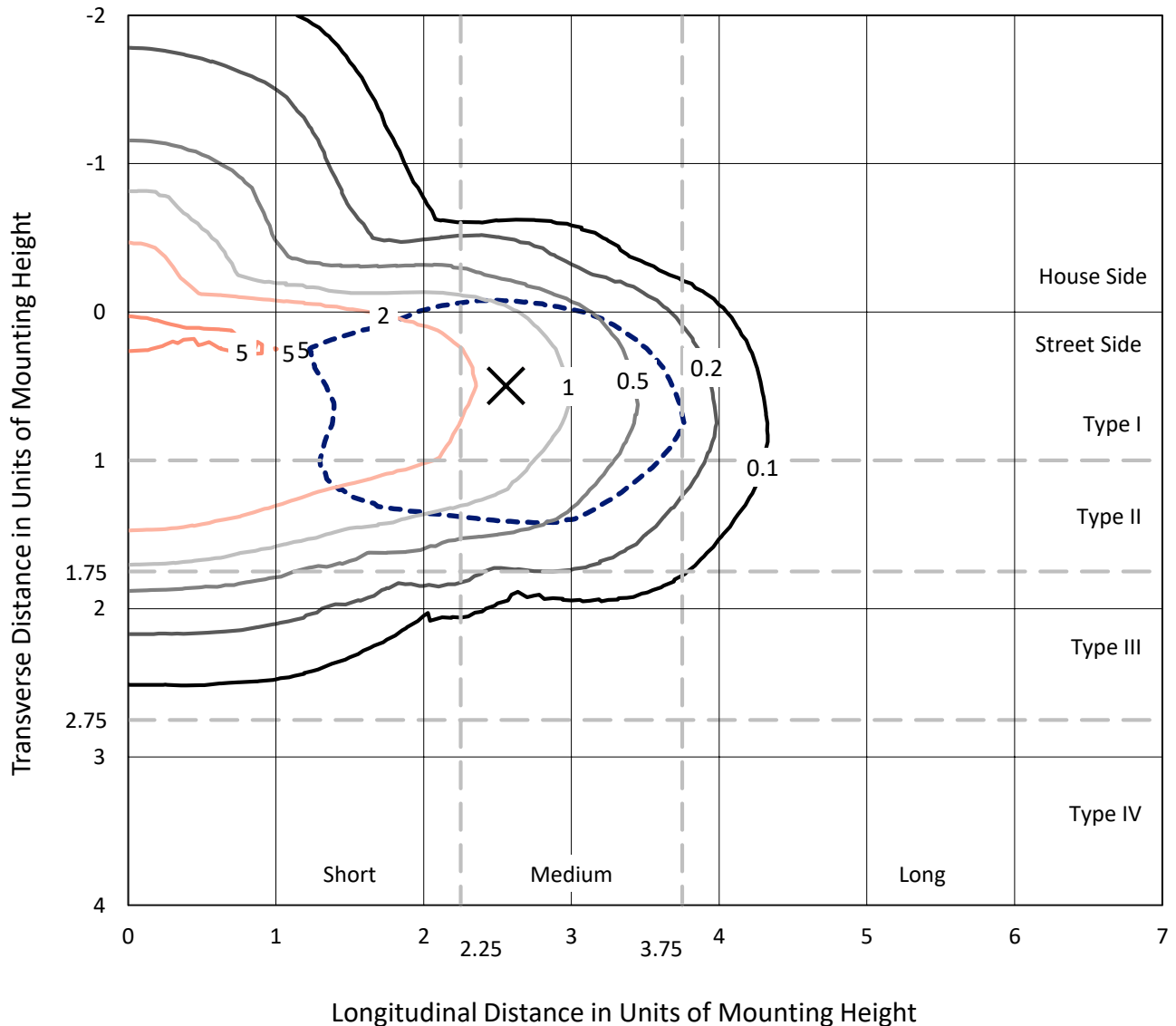
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

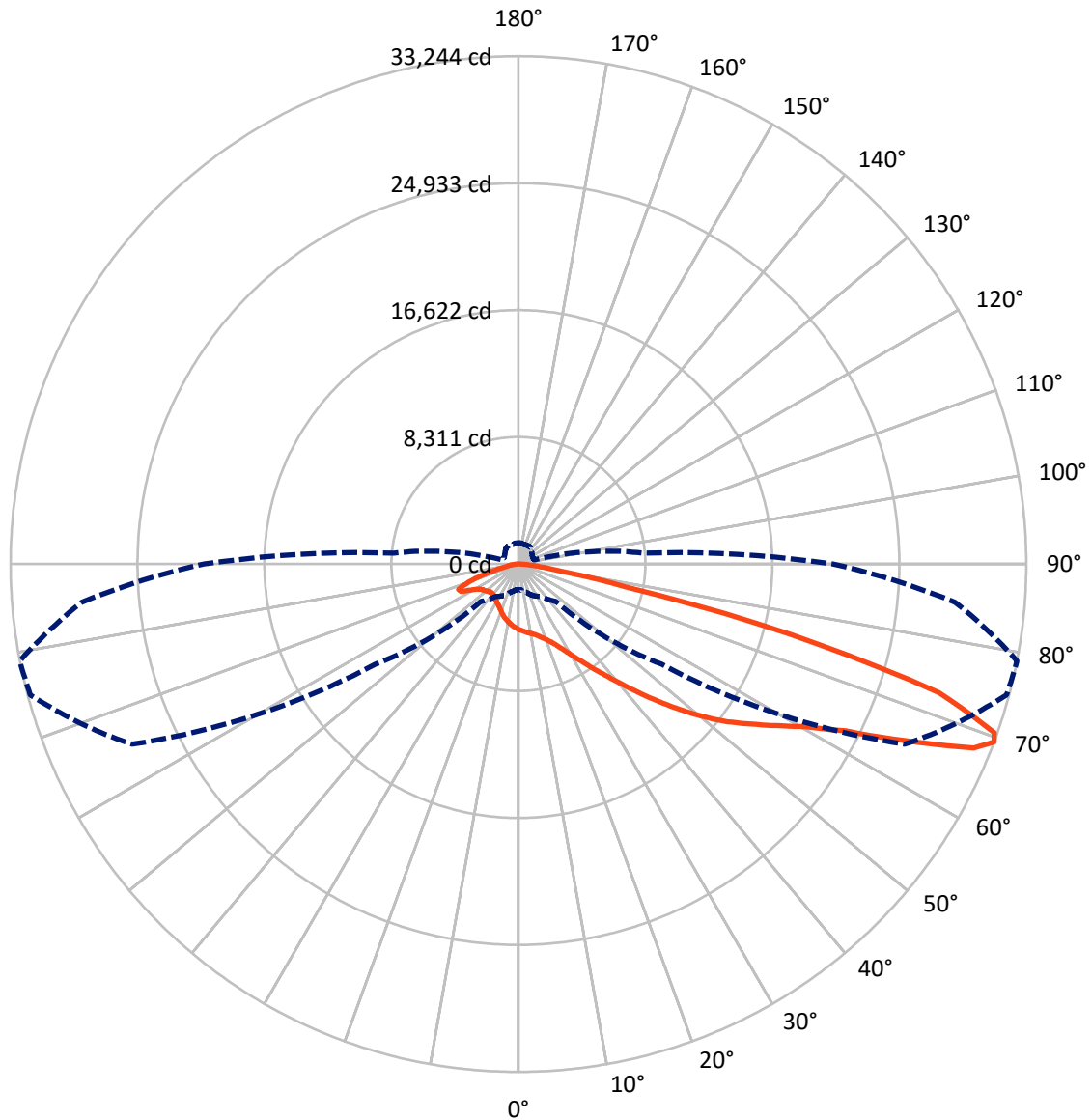
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.8 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	5762.6	0.0	5762.6
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	24870.4	0.0	24870.4
	% Fixture	81.2	0.0	81.2
Total	Lumens	30633.0	0.0	30633.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.5	1.3
10°-20°	1142.5	3.7
20°-30°	1887.9	6.2
30°-40°	3057.1	10.0
40°-50°	4883.7	15.9
50°-60°	6994.0	22.8
60°-70°	7792.3	25.4
70°-80°	3898.4	12.7
80°-90°	578.6	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°	30633.0	100.0
0°-180°	30633.0	100.0



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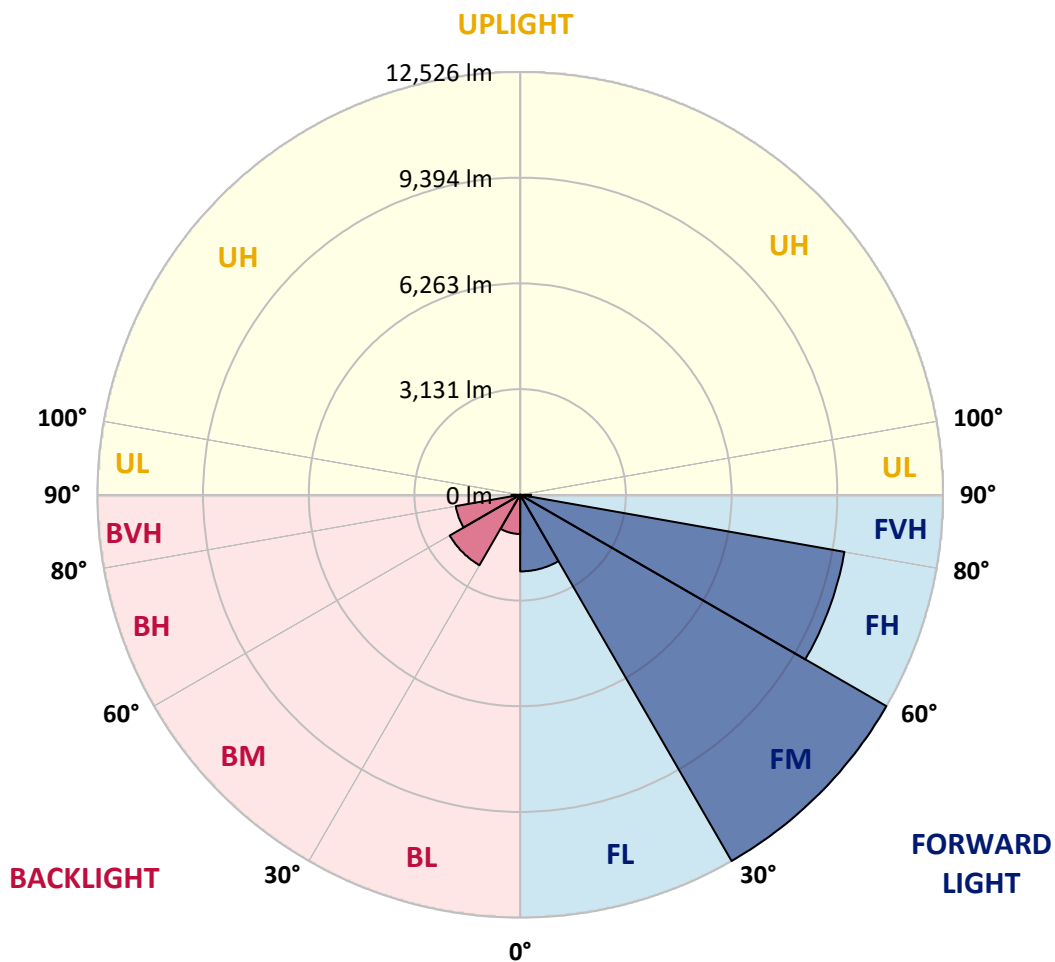
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2268.1	7.4			
FM	(30°-60°)	12525.9	40.9			
FH	(60°-80°)	9753.1	31.8			G4/12000
FVH	(80°-90°)	323.3	1.1			G3/500
BL	(0°-30°)	1160.9	3.8	B3/2500		
BM	(30°-60°)	2408.9	7.9	B2/2500		
BH	(60°-80°)	1937.6	6.3	B3/2500		G3/2500
BVH	(80°-90°)	255.3	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°	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7
2.5°	4719.6	4709.6	4707.6	4677.6	4661.6	4627.4	4547.3	4465.1	4388.9	4348.9	4306.8
5°	5114.4	5094.4	5084.3	5034.3	4990.2	4914.1	4787.7	4657.5	4521.2	4451.1	4366.9
7.5°	5352.9	5354.9	5354.9	5314.8	5270.7	5178.5	5018.2	4839.9	4637.5	4545.2	4413.1
10°	5373.0	5375.0	5405.0	5415.1	5425.0	5377.0	5228.7	5004.2	4743.7	4623.4	4451.1
12.5°	5174.5	5188.6	5238.6	5310.9	5413.0	5465.2	5401.0	5180.5	4880.0	4733.7	4523.2
15°	4908.0	4922.1	4986.2	5096.4	5260.7	5435.1	5525.2	5383.1	5058.4	4886.1	4629.4
17.5°	4777.7	4793.7	4837.9	4926.0	5086.5	5320.9	5591.4	5599.4	5268.7	5070.4	4755.6
20°	4715.7	4727.7	4783.7	4855.9	4978.1	5202.7	5597.3	5827.9	5519.2	5288.9	4910.0
22.5°	4857.9	4861.9	4890.1	4930.1	5012.3	5184.6	5593.4	6064.4	5831.8	5563.4	5108.4
25°	5274.8	5248.7	5228.7	5178.5	5198.6	5320.9	5657.5	6316.9	6232.7	5924.1	5373.0
27.5°	5767.7	5763.7	5711.7	5595.5	5521.3	5599.4	5839.9	6599.5	6723.8	6383.0	5719.7
30°	6316.9	6318.9	6264.8	6122.5	5972.2	5980.1	6130.6	6926.1	7310.9	6936.2	6146.6
32.5°	6892.1	6928.2	6827.9	6685.6	6503.3	6445.2	6547.3	7320.9	7990.3	7589.5	6641.6
35°	7579.4	7585.5	7475.2	7266.8	7084.5	6992.2	7086.5	7813.9	8773.9	8357.1	7244.8
37.5°	8293.0	8296.9	8182.8	7916.1	7685.7	7625.6	7729.7	8413.2	9603.6	9230.9	7954.2
40°	8876.2	8918.3	8828.1	8577.6	8345.1	8309.0	8459.2	9130.6	10663.8	10264.9	8798.0
42.5°	9537.5	9585.5	9477.4	9216.8	9032.5	9020.4	9254.9	9948.3	11717.9	11461.5	9753.9
45°	10283.0	10351.1	10200.9	9908.2	9751.9	10016.5	10030.5	10854.2	12932.4	12800.2	10830.1
47.5°	11096.7	11152.7	11030.6	10715.9	10545.6	10928.3	10790.0	11834.2	14245.1	14235.1	11994.4
50°	11724.0	11786.1	11798.1	11659.8	11481.4	11529.6	11623.8	12864.3	15553.8	15710.1	13198.9
52.5°	11609.8	11669.8	11940.5	12303.1	12589.7	12465.5	12579.7	13958.6	16818.3	17149.1	14343.2
55°	10687.9	10720.0	11226.9	12088.8	13309.2	13902.3	13910.4	15148.9	18020.8	18483.7	15429.5
57.5°	9026.3	9030.4	9689.7	10960.4	12890.3	14834.3	16010.8	16643.9	19275.4	19958.7	16776.2
60°	6387.0	6403.1	7170.6	8832.0	11389.3	14722.1	18269.3	19319.5	20728.3	21616.2	18511.8
62.5°	3791.7	3827.8	4407.1	5739.7	8459.2	13279.1	19604.0	24079.2	22868.7	24047.1	21289.6
65°	2467.0	2497.1	2843.9	3513.2	4998.2	9661.7	19165.2	28688.6	26919.0	27871.0	25281.7
67.5°	1899.8	1923.9	2196.4	2601.3	3066.3	5222.7	15323.3	29654.6	31849.0	32145.7	28650.5
69°	1669.4	1689.4	1889.9	2278.6	2581.3	3457.0	11419.3	27900.9	33081.6	33243.8	28692.7
70°	1547.2	1563.2	1751.5	2088.3	2370.8	2759.7	8739.9	25864.8	32630.7	33045.5	27865.0
72.5°	1274.7	1288.6	1422.9	1681.4	1938.0	1966.0	3872.0	18886.5	27476.1	28802.8	23580.1
75°	1064.2	1072.1	1160.4	1348.7	1569.2	1565.1	1978.1	10697.8	16766.2	18347.5	14559.8
77.5°	887.9	893.9	951.9	1068.2	1238.6	1232.6	1392.8	4617.5	7403.1	7142.7	5012.3
80°	783.6	787.6	817.6	847.7	955.9	950.0	1032.2	2120.3	3012.1	2783.7	1895.9
82.5°	595.1	603.2	755.6	769.6	741.6	715.5	719.5	1234.5	1543.2	1404.9	1018.0
85°	336.7	338.8	484.9	567.2	645.3	484.9	466.9	637.3	761.6	667.4	444.9
87.5°	150.2	156.3	232.5	268.6	348.7	284.7	266.5	270.6	328.7	272.5	176.3
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°	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7	4298.7
2.5°	4266.7	4232.6	4152.4	4070.3	3988.1	3936.1	3881.9	3831.8	3811.8	3809.8	3771.8
5°	4284.7	4204.5	4022.3	3821.7	3631.4	3483.1	3358.9	3278.8	3200.5	3186.5	3152.4
7.5°	4290.8	4160.5	3863.9	3543.3	3252.7	3048.2	2924.0	2869.8	2831.7	2821.8	2809.8
10°	4288.8	4104.4	3687.5	3248.6	2918.0	2763.6	2717.6	2729.6	2745.6	2753.7	2753.7
12.5°	4320.8	4078.3	3511.1	2972.0	2701.6	2627.4	2663.5	2725.5	2773.6	2793.6	2797.7
15°	4379.0	4062.2	3316.8	2731.6	2549.2	2567.3	2655.4	2745.6	2813.8	2843.9	2851.8
17.5°	4451.1	4040.2	3092.3	2533.2	2461.0	2523.2	2637.3	2751.6	2833.9	2871.9	2877.9
20°	4531.3	4008.1	2859.8	2384.9	2382.8	2461.0	2575.3	2703.4	2791.8	2833.9	2831.7
22.5°	4639.4	3978.1	2643.4	2276.7	2296.6	2368.8	2463.1	2579.3	2661.5	2699.4	2691.5
25°	4783.7	3950.0	2449.0	2180.5	2198.5	2246.7	2312.7	2400.9	2459.0	2479.1	2464.9
27.5°	4978.1	3928.0	2296.6	2092.3	2090.3	2112.4	2152.3	2200.5	2228.5	2222.5	2200.5
30°	5216.6	3906.0	2184.5	2014.1	1986.1	1984.0	2002.1	2030.2	2048.1	2012.2	1994.1
32.5°	5483.3	3867.9	2084.2	1946.0	1895.9	1877.8	1885.8	1923.9	1998.1	1962.0	1948.0
35°	5797.8	3823.8	1984.0	1871.8	1833.7	1799.7	1805.8	1887.9	2112.4	2086.3	2072.2
37.5°	6176.7	3783.8	1891.9	1791.7	1789.7	1747.6	1743.6	1841.7	2142.4	2086.3	2074.2
40°	6631.6	3775.8	1809.6	1703.5	1735.5	1719.5	1705.5	1765.6	1976.0	1861.7	1839.8
42.5°	7180.7	3811.8	1749.5	1619.4	1673.5	1711.5	1685.4	1699.5	1785.7	1683.5	1665.4
45°	7822.0	3910.1	1705.5	1545.2	1607.2	1705.5	1675.3	1663.4	1677.5	1621.4	1609.4
47.5°	8569.6	4084.4	1675.3	1483.0	1545.2	1689.4	1671.4	1647.3	1641.4	1609.4	1601.3
50°	9369.1	4318.8	1655.3	1426.9	1489.0	1661.3	1669.4	1635.4	1625.4	1611.3	1607.2
52.5°	10162.7	4573.4	1631.3	1378.8	1442.9	1627.3	1671.4	1623.2	1609.4	1601.3	1597.2
55°	10952.3	4837.9	1587.2	1336.8	1408.9	1587.2	1669.4	1607.2	1591.3	1591.3	1591.3
57.5°	11976.5	5240.7	1529.2	1302.6	1364.7	1535.2	1643.4	1589.2	1567.3	1569.2	1571.2
60°	13455.5	5916.1	1465.0	1264.5	1306.7	1474.9	1603.2	1557.2	1531.2	1539.2	1541.1
62.5°	15926.5	7096.5	1376.8	1210.5	1246.6	1410.9	1551.2	1513.0	1489.0	1503.0	1505.1
65°	19221.3	8525.5	1260.6	1142.4	1184.4	1338.7	1485.1	1461.0	1435.0	1469.0	1467.0
67.5°	21231.4	8944.2	1138.3	1070.2	1124.3	1262.6	1402.9	1392.8	1374.8	1435.0	1430.9
69°	20572.1	8186.8	1068.2	1024.1	1082.2	1210.5	1350.7	1346.7	1332.7	1390.8	1386.9
70°	19547.9	7479.3	1024.1	994.1	1060.2	1178.3	1316.6	1316.6	1302.6	1352.8	1342.7
72.5°	15702.1	5547.4	921.9	917.9	984.1	1090.3	1224.5	1234.5	1226.5	1244.5	1234.5
75°	9218.9	3342.9	821.7	833.6	891.7	996.0	1122.3	1130.2	1122.3	1120.2	1122.3
77.5°	3196.4	1499.0	725.6	743.4	793.7	899.8	1010.1	1026.1	1014.0	1000.1	1004.0
80°	1250.5	871.7	621.3	647.3	689.4	791.6	897.9	907.8	889.9	887.9	871.7
82.5°	751.5	531.1	483.0	525.1	577.3	687.5	775.5	771.6	757.5	839.7	735.5
85°	326.7	294.6	352.8	394.9	420.9	515.1	655.4	637.3	603.2	531.1	519.1
87.5°	132.3	152.4	194.5	234.5	252.6	332.7	449.0	433.0	438.9	360.7	358.8
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)