

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: P196746

Luminaire Tested: **NAV-AF-06-D-UNV-T2-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196746
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-T2-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34100.9 lumens
Efficiency: N/A
Efficacy: 102.4 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

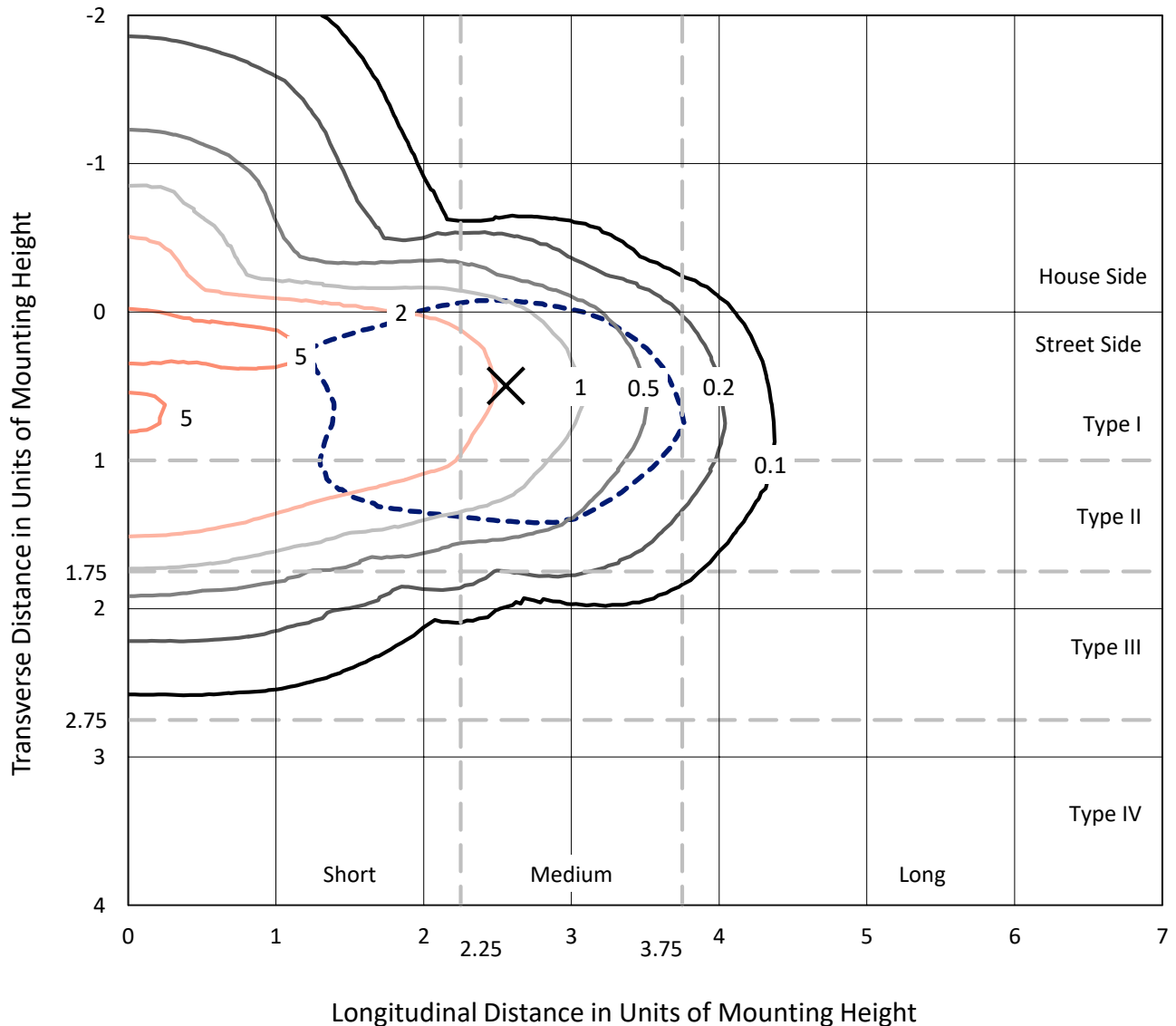
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

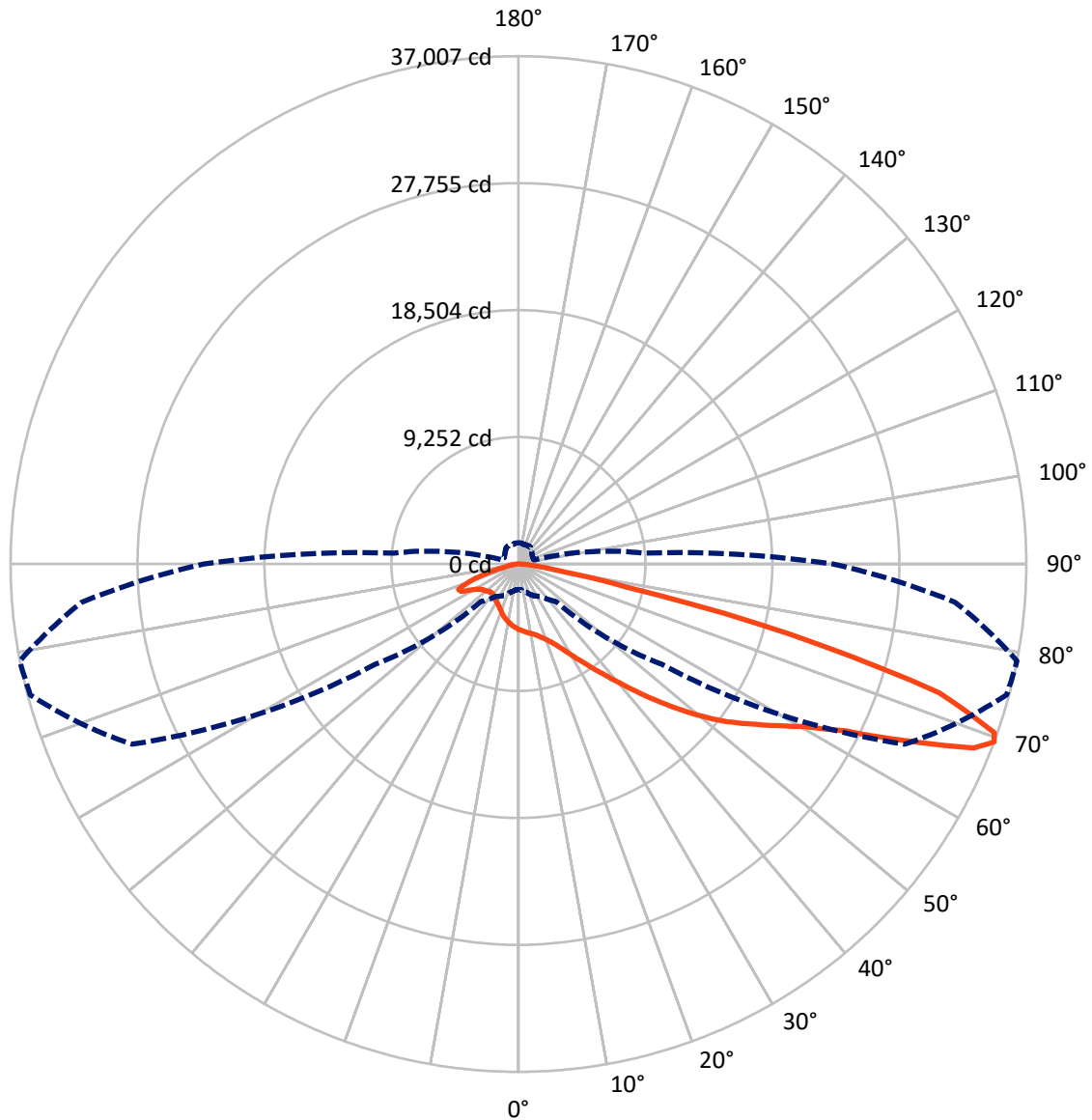
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.4 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	6415.0	0.0	6415.0
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	27685.9	0.0	27685.9
	% Fixture	81.2	0.0	81.2
Total	Lumens	34100.9	0.0	34100.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.6	1.3
10°-20°	1271.9	3.7
20°-30°	2101.7	6.2
30°-40°	3403.2	10.0
40°-50°	5436.6	15.9
50°-60°	7785.7	22.8
60°-70°	8674.5	25.4
70°-80°	4339.7	12.7
80°-90°	644.0	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°	34100.9	100.0
0°-180°	34100.9	100.0



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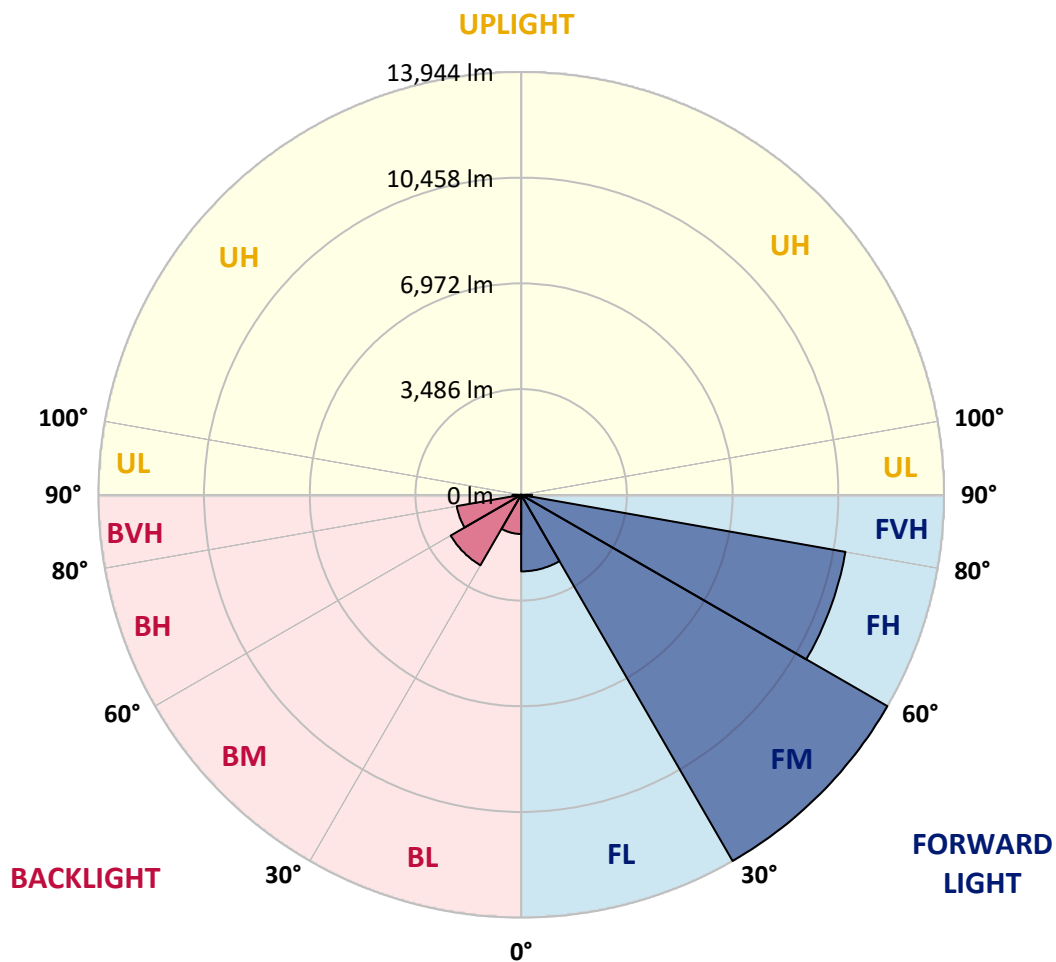
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2524.9	7.4			
FM (30°-60°)	13943.9	40.9			
FH (60°-80°)	10857.3	31.8			G4/12000
FVH (80°-90°)	359.9	1.1			G3/500
BL (0°-30°)	1292.3	3.8	B3/2500		
BM (30°-60°)	2681.6	7.9	B3/5000		
BH (60°-80°)	2156.9	6.3	B3/2500		G3/2500
BVH (80°-90°)	284.2	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°	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4
2.5°	5253.9	5242.8	5240.5	5207.1	5189.3	5151.3	5062.1	4970.6	4885.8	4841.2	4794.4
5°	5693.4	5671.1	5659.9	5604.2	5555.1	5470.4	5329.7	5184.8	5033.0	4955.0	4861.3
7.5°	5958.9	5961.1	5961.1	5916.5	5867.4	5764.8	5586.3	5387.8	5162.5	5059.8	4912.7
10°	5981.3	5983.5	6016.9	6028.1	6039.2	5985.7	5820.6	5570.7	5280.7	5146.8	4955.0
12.5°	5760.3	5776.0	5831.7	5912.1	6025.8	6083.9	6012.4	5767.0	5432.4	5269.6	5035.3
15°	5463.6	5479.3	5550.7	5673.4	5856.3	6050.4	6150.7	5992.5	5631.0	5439.2	5153.5
17.5°	5318.6	5336.4	5385.6	5483.7	5662.3	5923.3	6224.4	6233.3	5865.2	5644.4	5294.0
20°	5249.5	5262.9	5325.3	5405.6	5541.7	5791.7	6231.0	6487.7	6144.0	5887.6	5465.9
22.5°	5407.9	5412.3	5443.7	5488.2	5579.7	5771.5	6226.6	6750.9	6492.0	6193.2	5686.7
25°	5871.9	5842.9	5820.6	5764.8	5787.1	5923.3	6298.0	7032.0	6938.3	6594.8	5981.3
27.5°	6420.7	6416.2	6358.3	6228.9	6146.4	6233.3	6501.0	7346.6	7485.0	7105.6	6367.2
30°	7032.0	7034.2	6974.0	6815.6	6648.3	6657.1	6824.6	7710.2	8138.6	7721.4	6842.4
32.5°	7672.3	7712.5	7600.9	7442.5	7239.5	7174.8	7288.5	8149.7	8894.9	8448.7	7393.5
35°	8437.5	8444.2	8321.5	8089.5	7886.5	7783.8	7888.7	8698.5	9767.2	9303.2	8065.0
37.5°	9231.8	9236.2	9109.1	8812.3	8555.8	8488.9	8604.8	9365.6	10690.8	10275.9	8854.7
40°	9881.0	9927.9	9827.5	9548.6	9289.8	9249.6	9416.9	10164.3	11871.0	11427.0	9794.0
42.5°	10617.2	10670.7	10550.3	10260.2	10055.0	10041.6	10302.6	11074.5	13044.5	12759.0	10858.1
45°	11447.1	11522.9	11355.7	11029.9	10855.9	11150.4	11166.0	12083.0	14396.4	14249.3	12056.2
47.5°	12352.9	12415.3	12279.3	11929.0	11739.4	12165.5	12011.5	13173.9	15857.8	15846.6	13352.3
50°	13051.2	13120.4	13133.7	12979.8	12781.2	12834.8	12939.7	14320.6	17314.6	17488.6	14693.1
52.5°	12924.1	12990.9	13292.2	13695.9	14015.0	13876.7	14003.8	15538.8	18722.3	19090.5	15967.0
55°	11897.8	11933.6	12497.9	13457.3	14815.9	15476.2	15485.2	16863.9	20060.9	20576.2	17176.2
57.5°	10048.2	10052.7	10786.7	12201.2	14349.6	16513.7	17823.3	18528.1	21457.5	22218.2	18675.4
60°	7110.1	7128.0	7982.4	9831.9	12678.7	16388.7	20337.5	21506.6	23074.9	24063.3	20607.5
62.5°	4221.0	4261.1	4906.0	6389.5	9416.9	14782.4	21823.3	26805.1	25457.6	26769.4	23699.7
65°	2746.3	2779.8	3165.8	3910.9	5564.0	10755.5	21334.8	31936.4	29966.4	31026.2	28143.8
67.5°	2114.9	2141.7	2445.1	2895.8	3413.4	5813.9	17058.0	33011.7	35454.6	35784.8	31894.0
69°	1858.4	1880.7	2103.8	2536.6	2873.5	3848.4	12712.1	31059.5	36826.7	37007.3	31940.9
70°	1722.4	1740.2	1949.8	2324.7	2639.2	3072.1	9729.3	28792.9	36324.7	36786.5	31019.5
72.5°	1419.0	1434.5	1584.0	1871.8	2157.4	2188.6	4310.3	21024.6	30586.6	32063.5	26249.6
75°	1184.7	1193.5	1291.8	1501.4	1746.8	1742.3	2202.0	11908.9	18664.3	20424.6	16208.1
77.5°	988.4	995.1	1059.7	1189.1	1378.8	1372.1	1550.5	5140.2	8241.2	7951.3	5579.7
80°	872.3	876.8	910.2	943.7	1064.1	1057.5	1149.0	2360.3	3353.1	3098.8	2110.5
82.5°	662.5	671.5	841.1	856.7	825.5	796.5	800.9	1374.3	1717.9	1563.9	1133.3
85°	374.8	377.1	539.8	631.4	718.4	539.8	519.8	709.4	847.8	743.0	495.3
87.5°	167.2	174.0	258.8	299.0	388.2	316.9	296.7	301.2	365.9	303.4	196.3
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°	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4	4785.4
2.5°	4749.7	4711.8	4622.5	4531.1	4439.6	4381.7	4321.4	4265.6	4243.3	4241.1	4198.8
5°	4769.8	4680.5	4477.6	4254.4	4042.5	3877.4	3739.1	3650.0	3562.8	3547.2	3509.3
7.5°	4776.5	4631.5	4301.3	3944.4	3620.9	3393.3	3255.0	3194.7	3152.3	3141.2	3127.9
10°	4774.3	4569.0	4105.0	3616.4	3248.3	3076.5	3025.2	3038.6	3056.4	3065.4	3065.4
12.5°	4810.0	4540.0	3908.6	3308.5	3007.4	2924.8	2965.0	3034.1	3087.6	3109.9	3114.4
15°	4874.7	4522.1	3692.3	3040.8	2837.8	2857.9	2956.0	3056.4	3132.3	3165.8	3174.6
17.5°	4955.0	4497.6	3442.4	2820.0	2739.6	2808.8	2935.9	3063.1	3154.7	3197.0	3203.7
20°	5044.3	4461.9	3183.6	2654.9	2652.6	2739.6	2866.8	3009.5	3107.8	3154.7	3152.3
22.5°	5164.6	4428.5	2942.7	2534.4	2556.6	2637.0	2741.9	2871.3	2962.8	3005.0	2996.2
25°	5325.3	4397.2	2726.2	2427.3	2447.4	2501.0	2574.5	2672.7	2737.4	2759.7	2744.0
27.5°	5541.7	4372.7	2556.6	2329.2	2326.9	2351.5	2396.0	2449.6	2480.8	2474.1	2449.6
30°	5807.2	4348.2	2431.8	2242.1	2210.9	2208.6	2228.8	2260.0	2280.0	2240.0	2219.8
32.5°	6104.0	4305.8	2320.2	2166.3	2110.5	2090.4	2099.3	2141.7	2224.3	2184.1	2168.5
35°	6454.2	4256.7	2208.6	2083.7	2041.3	2003.4	2010.2	2101.6	2351.5	2322.5	2306.8
37.5°	6875.9	4212.1	2106.1	1994.5	1992.3	1945.4	1941.0	2050.2	2384.9	2322.5	2309.0
40°	7382.3	4203.2	2014.5	1896.3	1932.0	1914.2	1898.6	1965.5	2199.7	2072.5	2048.1
42.5°	7993.6	4243.3	1947.6	1802.7	1862.9	1905.3	1876.2	1891.9	1987.8	1874.1	1853.9
45°	8707.5	4352.7	1898.6	1720.1	1789.2	1898.6	1865.0	1851.7	1867.4	1804.9	1791.6
47.5°	9539.7	4546.8	1865.0	1650.9	1720.1	1880.7	1860.6	1833.8	1827.2	1791.6	1782.6
50°	10429.8	4807.7	1842.7	1588.4	1657.6	1849.4	1858.4	1820.5	1809.4	1793.7	1789.2
52.5°	11313.2	5091.1	1816.0	1534.9	1606.3	1811.5	1860.6	1807.0	1791.6	1782.6	1778.0
55°	12192.2	5385.6	1766.9	1488.1	1568.4	1766.9	1858.4	1789.2	1771.4	1771.4	1771.4
57.5°	13332.3	5834.0	1702.3	1450.1	1519.2	1709.0	1829.4	1769.1	1744.7	1746.8	1749.1
60°	14978.8	6585.8	1630.8	1407.7	1454.6	1641.9	1784.7	1733.5	1704.5	1713.4	1715.6
62.5°	17729.5	7899.9	1532.7	1347.5	1387.7	1570.6	1726.8	1684.3	1657.6	1673.2	1675.5
65°	21397.3	9490.6	1403.3	1271.7	1318.5	1490.3	1653.2	1626.4	1597.4	1635.3	1633.1
67.5°	23635.0	9956.8	1267.2	1191.4	1251.6	1405.5	1561.7	1550.5	1530.4	1597.4	1592.9
69°	22901.0	9113.6	1189.1	1140.0	1204.7	1347.5	1503.6	1499.2	1483.6	1548.3	1543.9
70°	21760.9	8326.0	1140.0	1106.6	1180.2	1311.7	1465.7	1465.7	1450.1	1505.9	1494.7
72.5°	17479.7	6175.4	1026.3	1021.8	1095.5	1213.7	1363.1	1374.3	1365.3	1385.4	1374.3
75°	10262.5	3721.3	914.7	928.0	992.7	1108.8	1249.4	1258.2	1249.4	1247.0	1249.4
77.5°	3558.3	1668.7	807.7	827.6	883.5	1001.7	1124.4	1142.3	1128.8	1113.3	1117.7
80°	1392.1	970.4	691.6	720.6	767.4	881.2	999.5	1010.6	990.6	988.4	970.4
82.5°	836.6	591.2	537.7	584.5	642.6	765.3	863.3	858.9	843.3	934.8	818.8
85°	363.7	328.0	392.7	439.6	468.5	573.4	729.6	709.4	671.5	591.2	577.9
87.5°	147.3	169.6	216.5	261.0	281.2	370.4	499.8	482.0	488.6	401.5	399.4
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)