

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: P196510

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196510  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)  
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-AFL-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26522.7 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B3 - U0 - G2

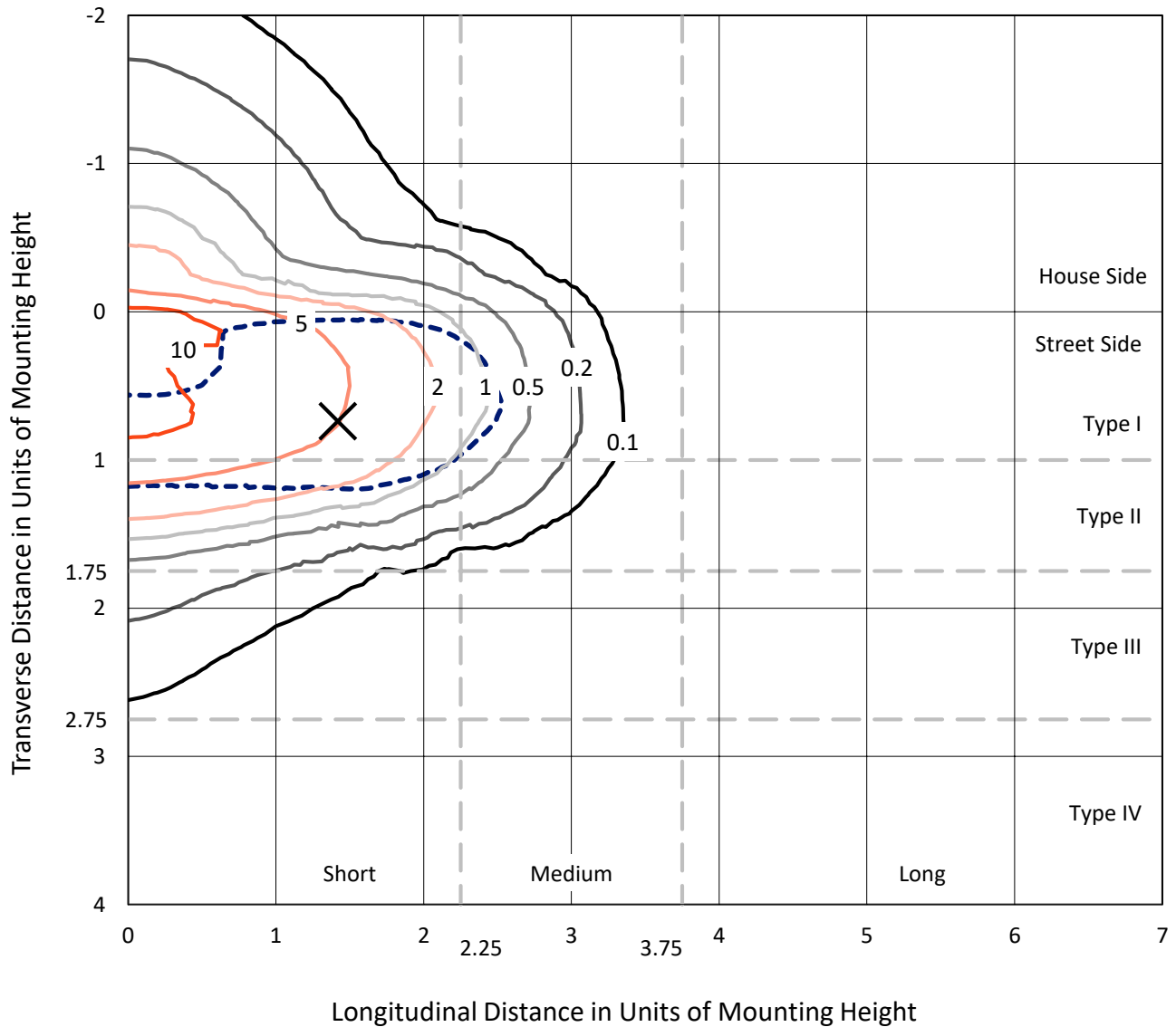
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

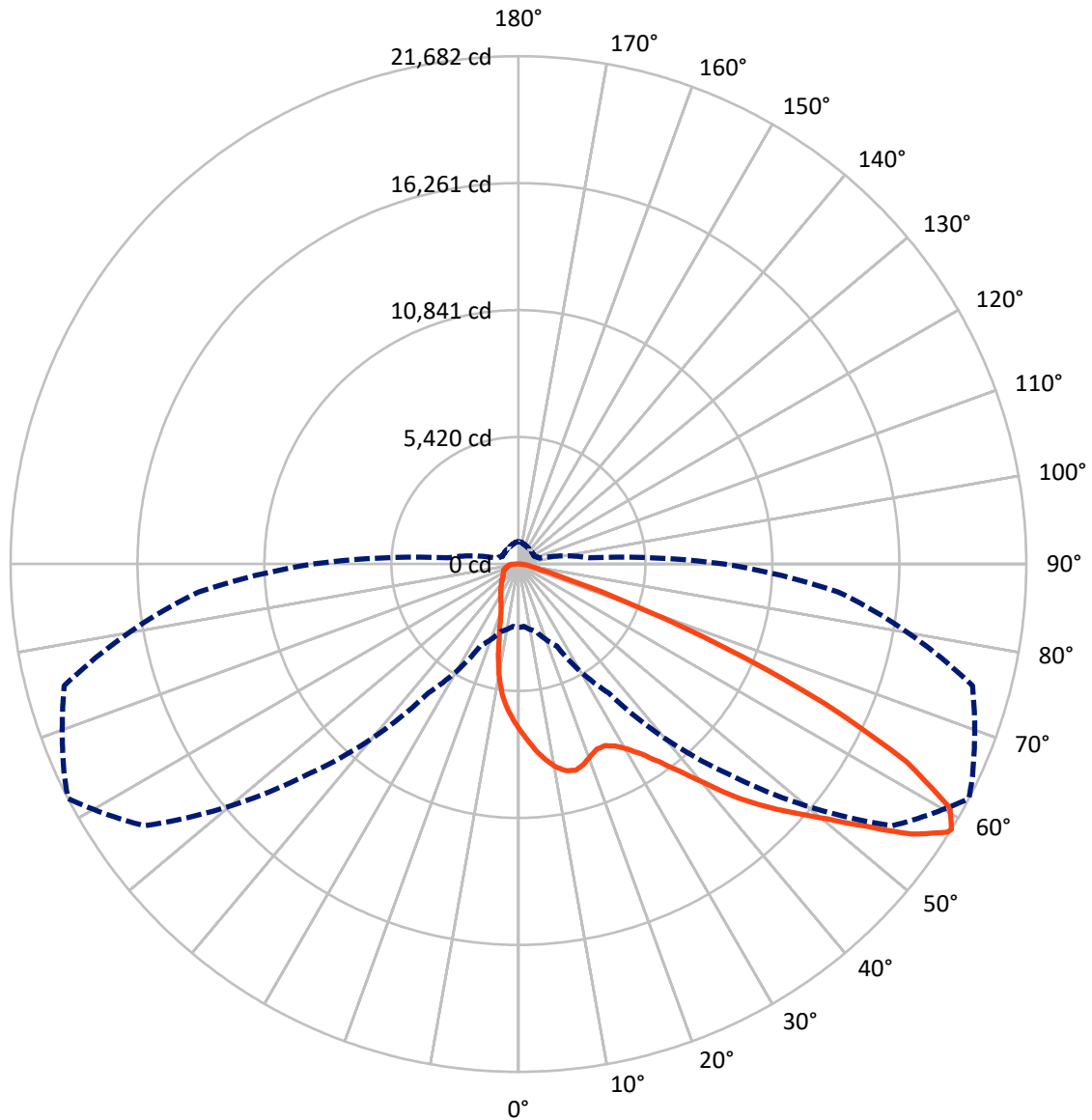
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.3 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4072.2	0.0	4072.2
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	22450.4	0.0	22450.4
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	26522.7	0.0	26522.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	633.0	2.4
10°-20°	1597.4	6.0
20°-30°	2588.8	9.8
30°-40°	4133.3	15.6
40°-50°	6012.0	22.7
50°-60°	6291.0	23.7
60°-70°	3835.2	14.5
70°-80°	1072.5	4.0
80°-90°	359.5	1.4
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°	26522.7	100.0
0°-180°	26522.7	100.0



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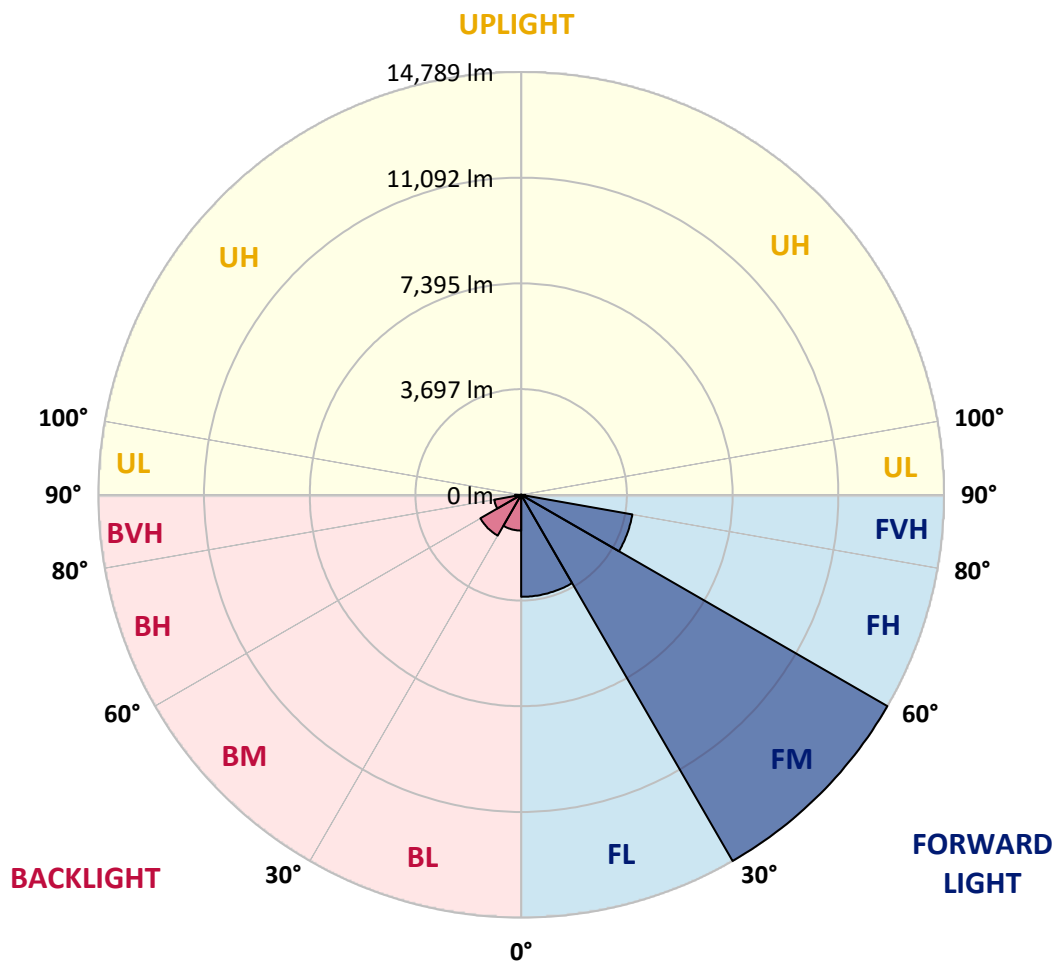
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3567.4	13.5			
FM	(30°-60°)	14789.4	55.8			
FH	(60°-80°)	3949.1	14.9			G2/5000
FVH	(80°-90°)	144.6	0.5			G2/225
BL	(0°-30°)	1251.8	4.7	B3/2500		
BM	(30°-60°)	1646.9	6.2	B2/2500		
BH	(60°-80°)	958.7	3.6	B2/1000		G2/1000
BVH	(80°-90°)	214.9	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-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4
2.5°	8037.8	8032.8	7964.9	7920.1	7867.1	7744.4	7621.8	7530.5	7484.2	7306.8	7134.4
5°	8702.5	8682.7	8644.5	8596.4	8526.8	8372.6	8178.7	8011.3	7945.0	7630.0	7313.5
7.5°	8351.1	8382.6	8500.3	8632.9	8772.2	8782.1	8644.5	8445.6	8372.6	7951.7	7487.5
10°	7378.1	7364.8	7512.3	7770.9	8230.2	8684.3	8911.4	8813.6	8737.4	8256.6	7661.6
12.5°	7083.1	7079.7	7104.6	7170.9	7459.3	8082.6	8843.5	9055.6	9029.0	8579.9	7847.2
15°	7172.6	7175.8	7174.2	7182.4	7262.0	7558.8	8463.9	9136.8	9219.8	8899.8	8036.1
17.5°	7459.3	7447.7	7411.3	7371.5	7383.0	7489.1	8054.4	8997.6	9246.3	9184.9	8195.3
20°	7901.9	7901.9	7804.1	7693.1	7620.1	7643.3	7883.7	8758.9	9123.5	9426.9	8314.6
22.5°	8457.2	8465.5	8321.3	8119.0	7953.3	7890.2	7981.5	8581.6	8974.4	9650.7	8420.7
25°	9146.7	9145.1	8934.5	8644.5	8382.6	8231.8	8230.2	8589.9	8928.0	9912.6	8531.8
27.5°	10000.5	9922.6	9677.2	9264.5	8894.8	8664.4	8560.0	8798.6	9025.8	10234.2	8680.9
30°	10963.5	10884.0	10562.4	10031.9	9531.3	9194.8	9022.4	9160.1	9324.1	10643.6	8906.4
32.5°	11916.7	11934.9	11557.0	10958.6	10315.3	9841.3	9586.1	9670.6	9784.9	11144.2	9211.4
35°	13312.3	13310.7	12816.7	12069.3	11305.0	10648.6	10325.3	10370.2	10474.5	11850.4	9639.1
37.5°	14353.4	14336.8	14018.5	13357.2	12496.8	11709.5	11242.0	11248.7	11338.2	12737.2	10202.7
40°	14459.5	14456.2	14454.5	14360.1	13771.6	13028.9	12443.7	12322.8	12359.3	13678.7	10801.2
42.5°	13648.8	13770.0	14118.1	14651.7	14815.9	14426.4	13872.6	13602.4	13522.9	14759.5	11434.3
45°	12493.6	12554.9	13164.8	14365.0	15341.3	15739.2	15323.1	14752.8	14616.9	15810.5	11949.8
47.5°	11956.5	11929.9	12283.0	13590.9	15290.0	16783.5	16813.4	15878.4	15648.0	16717.2	12389.1
50°	10804.4	10769.5	11215.5	12452.1	14729.7	17302.3	18343.3	17105.1	16679.1	17579.2	12786.9
52.5°	8508.6	8475.5	9073.9	10666.9	13476.5	17108.4	19632.9	18610.1	17884.1	18409.6	13158.2
55°	5536.5	5539.8	6110.0	7752.7	10905.5	15977.8	20238.0	20349.0	19535.1	19240.1	13458.2
57.5°	3048.4	3020.2	3426.3	4435.8	7502.4	13410.2	19734.1	21602.2	21177.8	19952.8	13675.4
58°	2710.1	2677.1	2990.3	3860.5	6726.6	12685.9	19480.4	21681.7	21388.4	20070.6	13706.9
60°	1931.1	1874.8	1826.7	2176.5	3875.5	9146.7	17789.7	21166.2	21449.7	20306.0	13677.1
62.5°	1627.8	1563.2	1390.8	1377.5	1825.0	4473.9	14068.3	18588.6	19382.6	19763.9	13196.4
65°	1511.7	1447.1	1220.0	1138.8	1238.2	1931.1	8699.2	14353.4	15414.3	17879.1	11986.3
67.5°	1428.9	1352.6	1109.0	1002.9	1022.7	1155.4	3691.6	9387.1	10617.0	13942.3	9615.9
70°	1354.3	1269.7	1021.1	898.4	881.8	878.6	1442.1	4901.6	6086.9	9123.5	6441.5
72.5°	1269.7	1186.9	943.2	812.3	775.7	712.8	867.0	2025.6	2776.5	4472.3	2952.1
75°	1147.1	1079.2	857.0	741.0	678.0	578.5	639.8	971.5	1196.8	1712.3	1370.8
77.5°	1009.4	954.8	769.1	681.2	596.8	472.4	489.1	658.1	739.2	964.8	794.0
80°	714.4	734.3	671.3	600.1	525.4	381.2	376.3	482.4	530.5	648.1	533.7
82.5°	492.3	507.2	547.1	474.0	424.4	296.7	276.9	334.9	359.7	391.1	258.6
85°	351.4	341.4	379.5	339.8	311.6	189.0	177.3	212.2	227.0	238.7	124.3
87.5°	213.8	212.2	218.8	175.7	162.5	96.1	87.9	101.1	107.7	104.5	59.6
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°	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4	7081.4
2.5°	7069.7	6988.6	6811.2	6668.6	6514.5	6396.8	6279.1	6212.8	6139.9	6098.5	6093.4
5°	7147.7	6981.8	6603.9	6252.6	5891.3	5566.3	5248.0	5012.7	4820.4	4710.9	4704.3
7.5°	7233.8	6973.7	6390.1	5781.8	5138.7	4498.8	3933.6	3534.1	3277.1	3157.8	3149.5
10°	7300.1	6938.8	6129.9	5183.4	4164.0	3318.5	2804.6	2569.3	2491.4	2471.6	2468.1
12.5°	7379.8	6913.9	5801.6	4415.9	3182.6	2526.2	2370.4	2355.5	2372.0	2382.0	2383.7
15°	7454.3	6865.9	5359.0	3565.5	2491.4	2257.8	2261.0	2292.5	2325.7	2340.6	2342.2
17.5°	7489.1	6748.2	4777.3	2809.7	2179.8	2136.7	2174.8	2216.3	2246.1	2257.8	2257.8
20°	7489.1	6559.3	4102.5	2275.9	2017.4	2025.6	2072.0	2103.6	2110.2	2100.2	2095.3
22.5°	7457.7	6325.4	3446.2	1985.8	1884.7	1916.2	1952.7	1931.1	1853.2	1793.6	1781.9
25°	7429.5	6048.7	2814.6	1808.5	1768.7	1810.1	1795.2	1647.6	1528.3	1467.1	1457.1
27.5°	7383.0	5713.8	2287.6	1662.6	1656.0	1689.1	1541.5	1399.1	1339.4	1306.2	1299.5
30°	7371.5	5350.9	1914.5	1533.4	1544.9	1498.5	1329.4	1283.0	1269.7	1251.4	1243.3
32.5°	7409.6	4987.8	1680.9	1427.3	1438.8	1286.3	1221.6	1228.3	1226.7	1203.5	1195.2
35°	7514.0	4634.8	1531.6	1331.1	1297.9	1152.0	1160.4	1180.2	1180.2	1152.0	1142.1
37.5°	7696.3	4306.6	1437.2	1249.8	1135.4	1082.4	1103.9	1130.5	1130.5	1110.6	1102.3
40°	7890.2	3986.6	1365.8	1185.3	1032.7	1034.3	1055.9	1075.7	1084.1	1087.4	1080.8
42.5°	8066.1	3655.0	1289.6	1115.5	986.3	997.9	1007.8	1022.7	1057.5	1080.8	1077.4
45°	8168.8	3321.9	1206.8	1029.4	954.8	959.8	956.4	983.0	1024.5	1059.3	1059.3
47.5°	8263.3	3048.4	1138.8	943.2	923.4	923.4	913.3	939.8	978.0	1019.4	1022.7
50°	8352.8	2871.0	1090.7	877.0	883.5	878.6	875.2	900.1	951.4	1001.3	1009.4
52.5°	8444.0	2811.3	1047.6	828.8	842.1	835.4	838.8	873.5	931.6	983.0	991.3
55°	8571.6	2849.5	1002.9	795.6	802.3	800.7	813.9	853.7	905.1	956.4	959.8
57.5°	8729.0	2988.7	964.8	770.9	764.2	774.1	795.6	833.7	883.5	944.9	949.8
58°	8760.5	3021.9	958.1	764.2	755.8	770.9	792.3	828.8	880.2	944.9	949.8
60°	8808.6	3139.6	941.5	750.9	727.6	754.2	780.7	817.3	873.5	953.2	963.1
62.5°	8576.6	3162.7	936.6	736.0	697.8	731.1	762.5	803.9	867.0	981.3	1002.9
65°	7772.6	2924.1	901.7	711.2	673.0	712.8	745.9	794.0	886.8	1065.9	1075.7
67.5°	6239.4	2428.4	817.3	673.0	644.8	691.3	732.7	794.0	895.2	1079.2	1085.7
70°	4289.9	1825.0	711.2	631.5	611.7	664.8	727.6	812.3	867.0	1021.1	1001.3
72.5°	2241.1	1269.7	623.3	583.5	571.9	641.5	775.7	794.0	833.7	953.2	933.3
75°	1128.8	863.5	548.7	528.9	527.1	633.2	868.6	764.2	799.0	896.8	939.8
77.5°	666.4	676.4	489.1	477.4	485.6	618.3	870.2	734.3	759.3	825.5	871.9
80°	455.8	558.7	442.6	439.2	445.9	568.5	802.3	697.8	712.8	780.7	830.5
82.5°	257.0	308.3	387.9	409.4	406.1	465.8	692.9	634.9	653.2	923.4	976.3
85°	124.3	185.6	324.9	383.0	346.5	310.0	563.6	563.6	568.5	661.3	669.6
87.5°	46.4	82.9	218.8	303.3	242.0	185.6	383.0	399.5	444.2	457.5	467.4
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)