

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: P270578

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270578  
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-05-D-UNV-AFL-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 29364 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B3 - U0 - G3

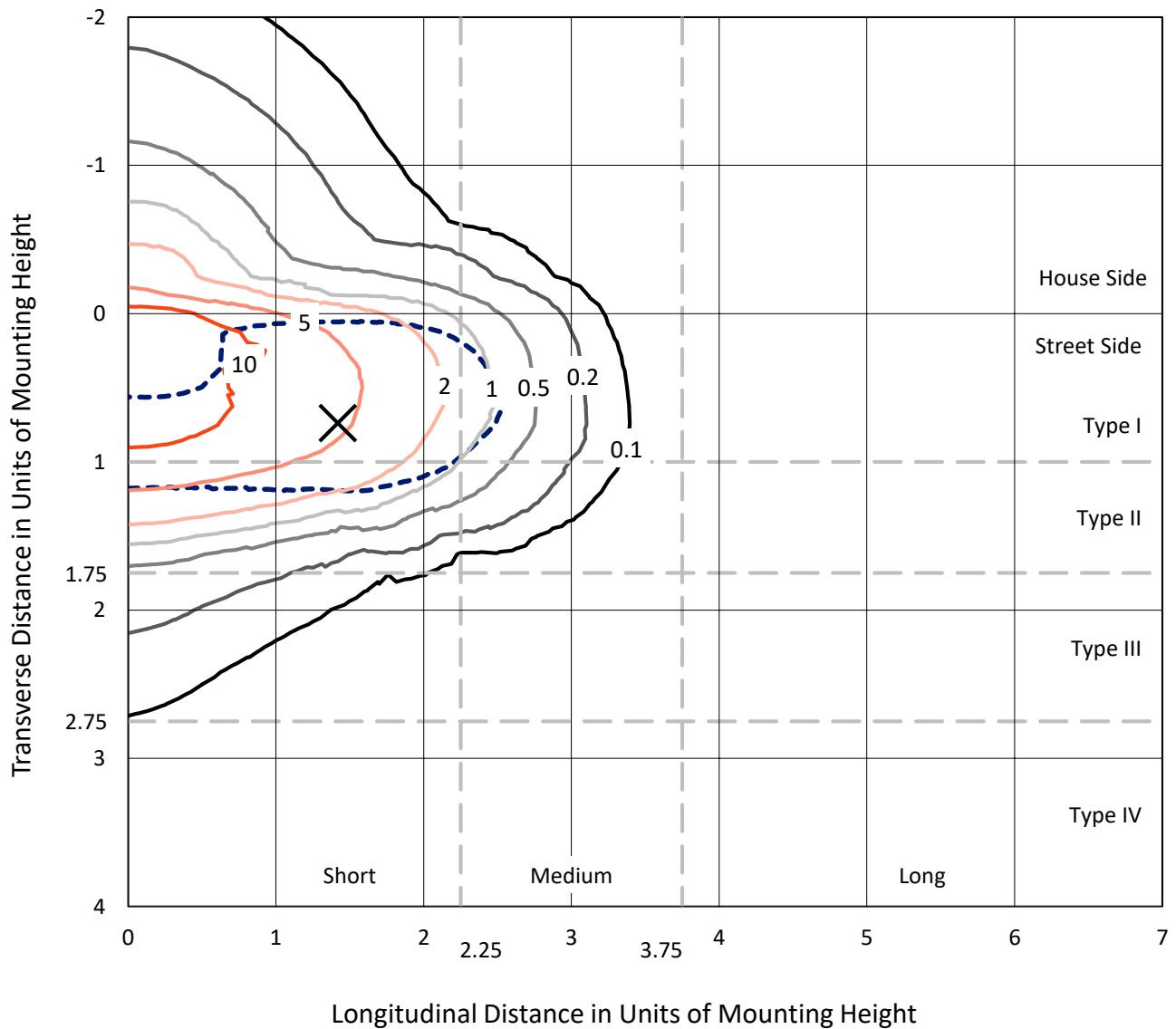
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

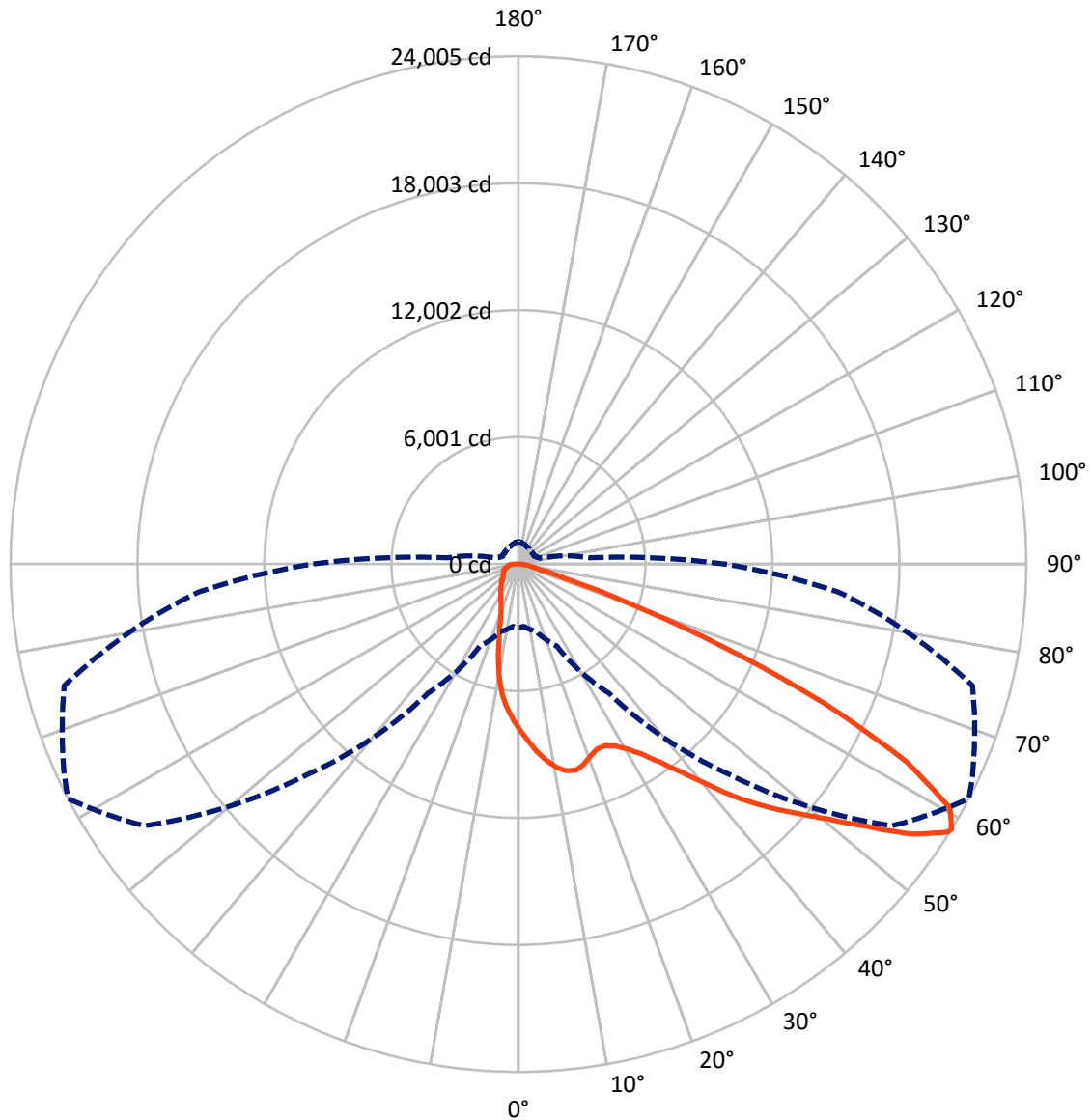
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.7 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	4508.5	0.0	4508.5
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	24855.5	0.0	24855.5
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	29364.0	0.0	29364.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	700.8	2.4
10°-20°	1768.6	6.0
20°-30°	2866.2	9.8
30°-40°	4576.0	15.6
40°-50°	6656.0	22.7
50°-60°	6964.9	23.7
60°-70°	4246.1	14.5
70°-80°	1187.4	4.0
80°-90°	398.0	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°	29364.0	100.0
0°-180°	29364.0	100.0



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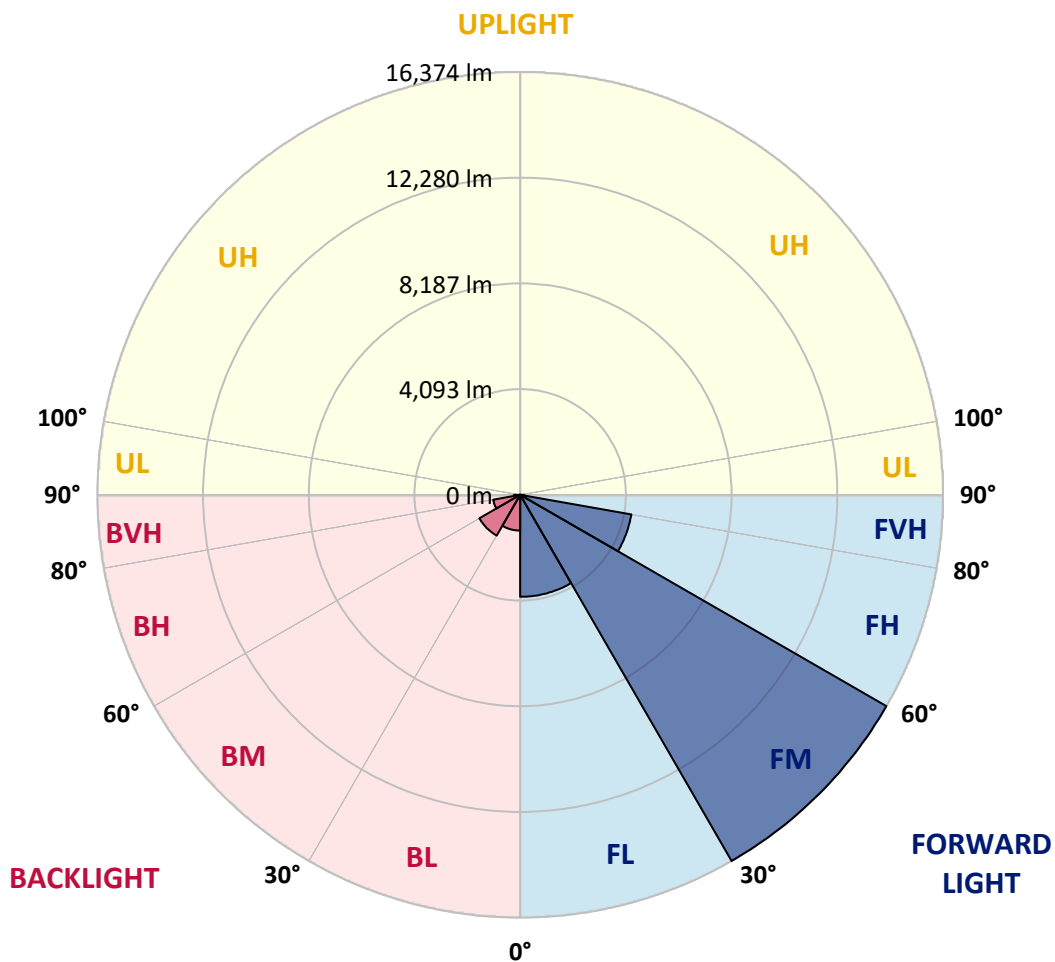
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3949.5	13.5			
FM	(30°-60°)	16373.7	55.8			
FH	(60°-80°)	4372.1	14.9			G2/5000
FVH	(80°-90°)	160.1	0.5			G2/225
BL	(0°-30°)	1385.9	4.7	B3/2500		
BM	(30°-60°)	1823.3	6.2	B2/2500		
BH	(60°-80°)	1061.4	3.6	B3/2500		G3/2500
BVH	(80°-90°)	237.9	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-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0
2.5°	8898.9	8893.4	8818.1	8768.5	8709.8	8574.1	8438.3	8337.3	8286.0	8089.5	7898.6
5°	9634.9	9612.9	9570.6	9517.4	9440.3	9269.6	9054.8	8869.5	8796.2	8447.4	8097.0
7.5°	9245.7	9280.6	9411.0	9557.7	9711.8	9723.0	9570.6	9350.4	9269.6	8803.5	8289.6
10°	8168.5	8153.8	8317.1	8603.4	9111.8	9614.6	9866.1	9757.7	9673.4	9141.2	8482.2
12.5°	7841.8	7838.2	7865.6	7939.1	8258.4	8948.5	9790.7	10025.8	9996.3	9498.9	8687.9
15°	7940.9	7944.6	7942.8	7951.9	8040.0	8368.5	9370.5	10115.6	10207.4	9853.1	8897.1
17.5°	8258.4	8245.5	8205.2	8161.1	8173.9	8291.4	8917.3	9961.5	10236.7	10168.9	9073.2
20°	8748.5	8748.5	8640.2	8517.2	8436.4	8462.2	8728.2	9697.3	10100.9	10436.8	9205.4
22.5°	9363.3	9372.3	9212.7	8988.8	8805.2	8735.6	8836.4	9500.8	9935.9	10684.5	9322.8
25°	10126.7	10124.7	9891.7	9570.6	9280.6	9113.7	9111.8	9510.0	9884.4	10974.6	9445.8
27.5°	11071.8	10985.6	10713.9	10256.9	9847.7	9592.6	9476.9	9741.3	9992.7	11330.5	9611.0
30°	12138.0	12050.0	11694.0	11106.6	10552.4	10179.9	9989.1	10141.3	10323.1	11783.8	9860.5
32.5°	13193.2	13213.4	12795.0	12132.5	11420.4	10895.6	10612.9	10706.5	10833.2	12338.1	10198.2
35°	14738.5	14736.6	14189.7	13362.1	12516.1	11789.4	11431.6	11481.1	11596.6	13119.8	10671.8
37.5°	15890.9	15872.7	15520.2	14788.1	13835.5	12963.9	12446.3	12453.7	12552.7	14101.8	11295.6
40°	16008.4	16004.8	16002.9	15898.4	15246.8	14424.8	13776.9	13642.9	13683.3	15144.0	11958.1
42.5°	15111.1	15245.0	15630.4	16221.4	16403.1	15971.8	15358.9	15059.6	14971.6	16340.7	12659.3
45°	13831.9	13899.8	14575.2	15903.9	16984.9	17425.2	16964.6	16333.3	16182.8	17504.2	13230.0
47.5°	13237.3	13208.0	13598.8	15046.8	16927.9	18581.4	18614.5	17579.4	17324.4	18508.0	13716.3
50°	11961.8	11923.4	12417.0	13786.1	16307.7	19155.8	20308.3	18937.4	18465.7	19462.3	14156.7
52.5°	9420.0	9383.3	10045.8	11809.5	14920.2	18941.1	21736.2	20603.9	19800.0	20381.7	14567.9
55°	6129.6	6133.3	6764.5	8583.2	12073.8	17689.6	22406.0	22529.0	21627.9	21301.1	14899.9
57.5°	3374.9	3343.8	3793.4	4911.0	8306.1	14846.7	21848.0	23916.4	23446.5	22090.3	15140.5
58°	3000.6	2963.9	3310.8	4274.1	7447.3	14044.8	21567.2	24004.5	23679.6	22220.7	15175.2
60°	2138.1	2075.7	2022.4	2409.7	4290.8	10126.7	19695.3	23433.6	23747.6	22481.3	15142.3
62.5°	1802.2	1730.6	1539.8	1525.1	2020.6	4953.3	15575.4	20580.0	21459.0	21881.2	14610.0
65°	1673.7	1602.1	1350.7	1260.9	1371.0	2138.1	9631.2	15890.9	17065.6	19794.5	13270.3
67.5°	1581.9	1497.6	1227.8	1110.2	1132.4	1279.1	4087.0	10392.8	11754.5	15435.8	10646.1
70°	1499.5	1405.8	1130.4	994.7	976.3	972.7	1596.6	5426.8	6738.8	10100.9	7131.6
72.5°	1405.8	1314.0	1044.2	899.3	858.9	789.2	959.7	2242.6	3074.0	4951.4	3268.6
75°	1269.9	1194.7	948.8	820.3	750.7	640.5	708.5	1075.5	1325.0	1895.8	1517.6
77.5°	1117.6	1057.0	851.6	754.2	660.7	523.1	541.4	728.5	818.4	1068.1	879.0
80°	791.0	813.0	743.3	664.3	581.7	422.2	416.6	534.0	587.2	717.6	590.9
82.5°	545.0	561.6	605.5	524.9	469.9	328.5	306.5	370.7	398.3	433.2	286.3
85°	389.1	378.0	420.2	376.2	344.9	209.2	196.4	234.8	251.4	264.3	137.6
87.5°	236.8	234.8	242.3	194.6	179.8	106.4	97.2	112.0	119.3	115.6	66.0
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°	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0	7840.0
2.5°	7827.1	7737.2	7540.8	7383.0	7212.3	7082.1	6951.8	6878.3	6797.6	6751.8	6746.2
5°	7913.3	7729.8	7311.5	6922.3	6522.4	6162.6	5810.2	5549.6	5336.8	5215.6	5208.4
7.5°	8008.7	7720.8	7074.7	6401.2	5689.1	4980.7	4355.0	3912.7	3628.3	3496.1	3487.0
10°	8082.2	7682.1	6786.5	5738.7	4610.0	3674.1	3105.3	2844.6	2758.3	2736.2	2732.6
12.5°	8170.4	7654.6	6423.2	4888.9	3523.6	2796.9	2624.4	2607.8	2626.1	2637.2	2639.0
15°	8252.9	7601.4	5933.2	3947.5	2758.3	2499.5	2503.1	2538.2	2574.8	2591.3	2593.1
17.5°	8291.4	7471.2	5289.0	3110.7	2413.2	2365.5	2407.7	2453.7	2486.7	2499.5	2499.5
20°	8291.4	7261.9	4542.1	2519.7	2233.5	2242.6	2294.0	2328.9	2336.2	2325.3	2319.8
22.5°	8256.6	7003.1	3815.5	2198.6	2086.7	2121.4	2162.0	2138.1	2051.8	1985.8	1972.9
25°	8225.4	6696.7	3116.2	2002.2	1958.1	2004.1	1987.5	1824.2	1692.0	1624.1	1613.1
27.5°	8173.9	6326.0	2532.6	1840.6	1833.4	1870.1	1706.7	1548.9	1482.8	1446.1	1438.7
30°	8161.1	5924.1	2119.7	1697.5	1710.5	1659.0	1471.9	1420.4	1405.8	1385.5	1376.5
32.5°	8203.3	5522.2	1860.8	1580.1	1593.0	1424.2	1352.6	1359.9	1358.1	1332.4	1323.2
35°	8318.9	5131.2	1695.7	1473.7	1437.0	1275.5	1284.7	1306.7	1306.7	1275.5	1264.5
37.5°	8520.9	4767.8	1591.1	1383.7	1257.1	1198.3	1222.2	1251.6	1251.6	1229.6	1220.3
40°	8735.6	4413.6	1512.1	1312.2	1143.4	1145.2	1169.1	1191.1	1200.2	1203.9	1196.5
42.5°	8930.1	4046.7	1427.8	1235.1	1091.9	1104.7	1115.9	1132.4	1170.9	1196.5	1192.9
45°	9043.9	3677.8	1336.0	1139.7	1057.0	1062.5	1058.9	1088.2	1134.2	1172.6	1172.6
47.5°	9148.5	3374.9	1260.9	1044.2	1022.2	1022.2	1011.2	1040.5	1082.7	1128.6	1132.4
50°	9247.6	3178.6	1207.5	970.8	978.2	972.7	969.0	996.5	1053.4	1108.5	1117.6
52.5°	9348.5	3112.4	1159.8	917.6	932.4	925.0	928.6	967.1	1031.3	1088.2	1097.5
55°	9489.9	3154.7	1110.2	880.9	888.2	886.4	901.1	945.1	1002.0	1058.9	1062.5
57.5°	9664.1	3308.8	1068.1	853.4	846.1	857.1	880.9	923.1	978.2	1046.0	1051.6
58°	9699.0	3345.6	1060.8	846.1	836.9	853.4	877.3	917.6	974.5	1046.0	1051.6
60°	9752.3	3475.9	1042.5	831.3	805.7	835.1	864.3	904.8	967.1	1055.2	1066.3
62.5°	9495.4	3501.6	1037.0	814.9	772.6	809.4	844.1	890.1	959.7	1086.4	1110.2
65°	8605.3	3237.3	998.3	787.4	745.1	789.2	825.8	879.0	981.8	1180.1	1191.1
67.5°	6907.6	2688.5	904.8	745.1	714.0	765.3	811.2	879.0	991.0	1194.7	1202.0
70°	4749.5	2020.6	787.4	699.2	677.2	735.9	805.7	899.3	959.7	1130.4	1108.5
72.5°	2481.2	1405.8	690.1	646.1	633.1	710.2	858.9	879.0	923.1	1055.2	1033.2
75°	1249.8	956.2	607.4	585.4	583.5	701.0	961.6	846.1	884.7	992.8	1040.5
77.5°	737.8	748.7	541.4	528.6	537.7	684.5	963.5	813.0	840.5	913.9	965.3
80°	504.7	618.5	489.9	486.3	493.7	629.5	888.2	772.6	789.2	864.3	919.4
82.5°	284.5	341.4	429.4	453.3	449.6	515.6	767.2	702.8	723.0	1022.2	1080.9
85°	137.6	205.5	359.7	423.9	383.5	343.2	624.0	624.0	629.5	732.3	741.5
87.5°	51.5	91.7	242.3	335.8	268.0	205.5	423.9	442.2	491.8	506.6	517.6
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)