

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: P197059

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197059  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-SL2-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5361 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

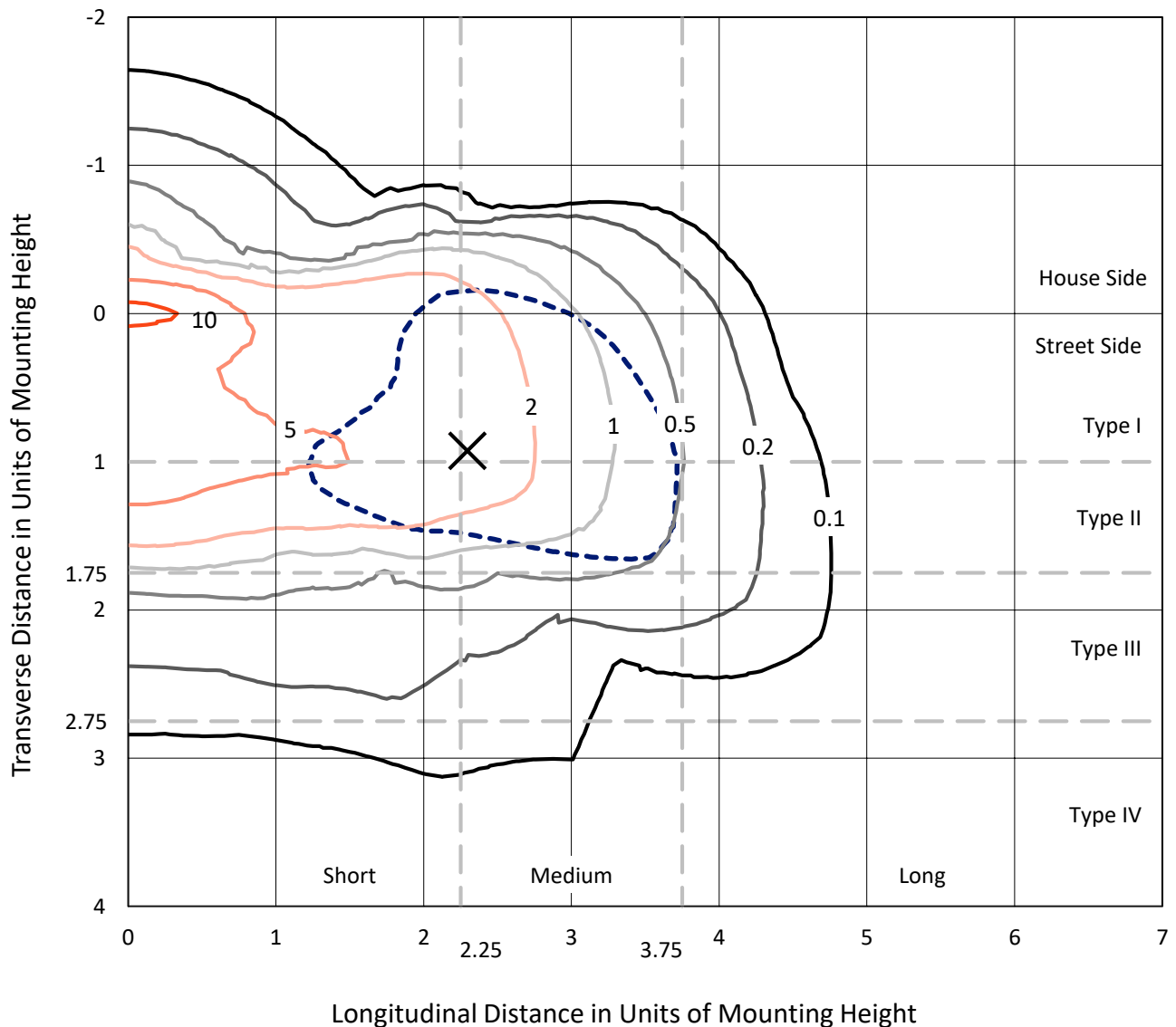
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

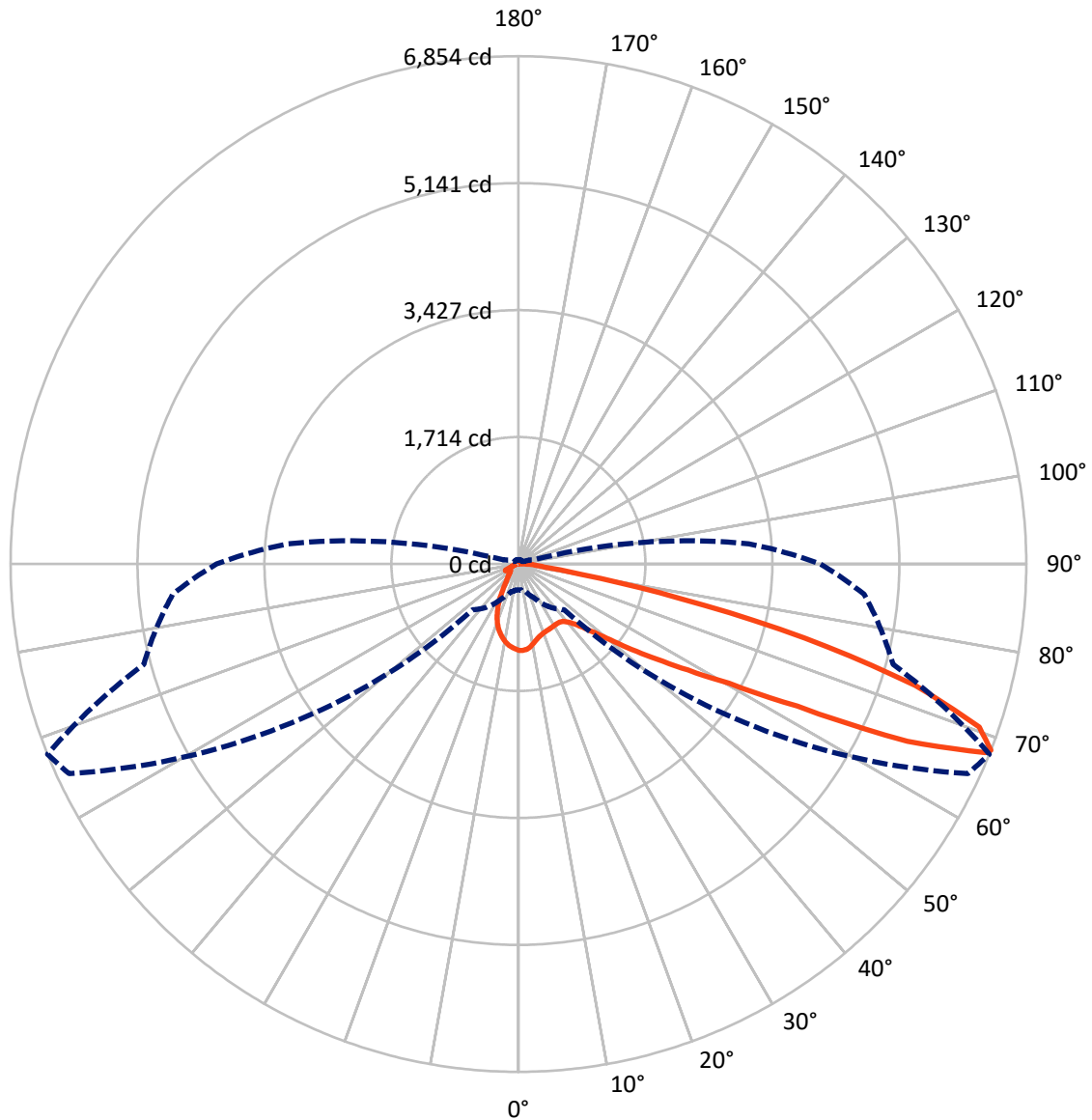
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.7 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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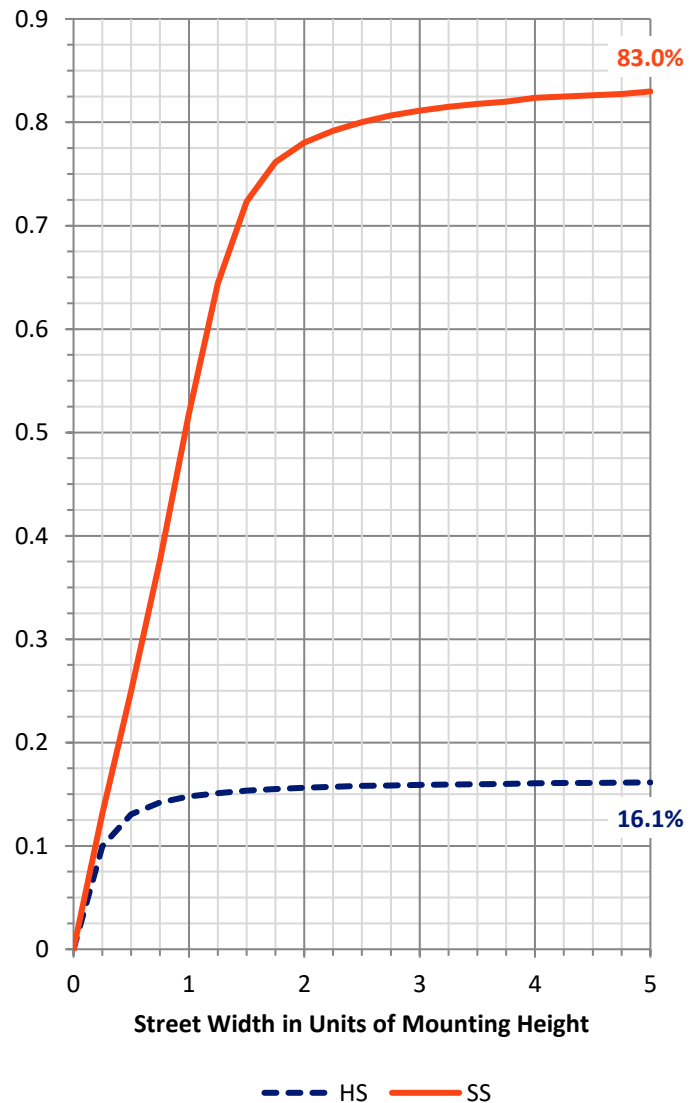
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	877.1	0.0	877.1
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	4483.9	0.0	4483.9
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	5361.0	0.0	5361.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.9	1.9
10°-20°	231.8	4.3
20°-30°	313.5	5.8
30°-40°	442.1	8.2
40°-50°	726.9	13.6
50°-60°	1126.8	21.0
60°-70°	1460.9	27.3
70°-80°	838.4	15.6
80°-90°	120.6	2.3
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°	5361.0	100.0
0°-180°	5361.0	100.0

**Coefficient of Utilization**



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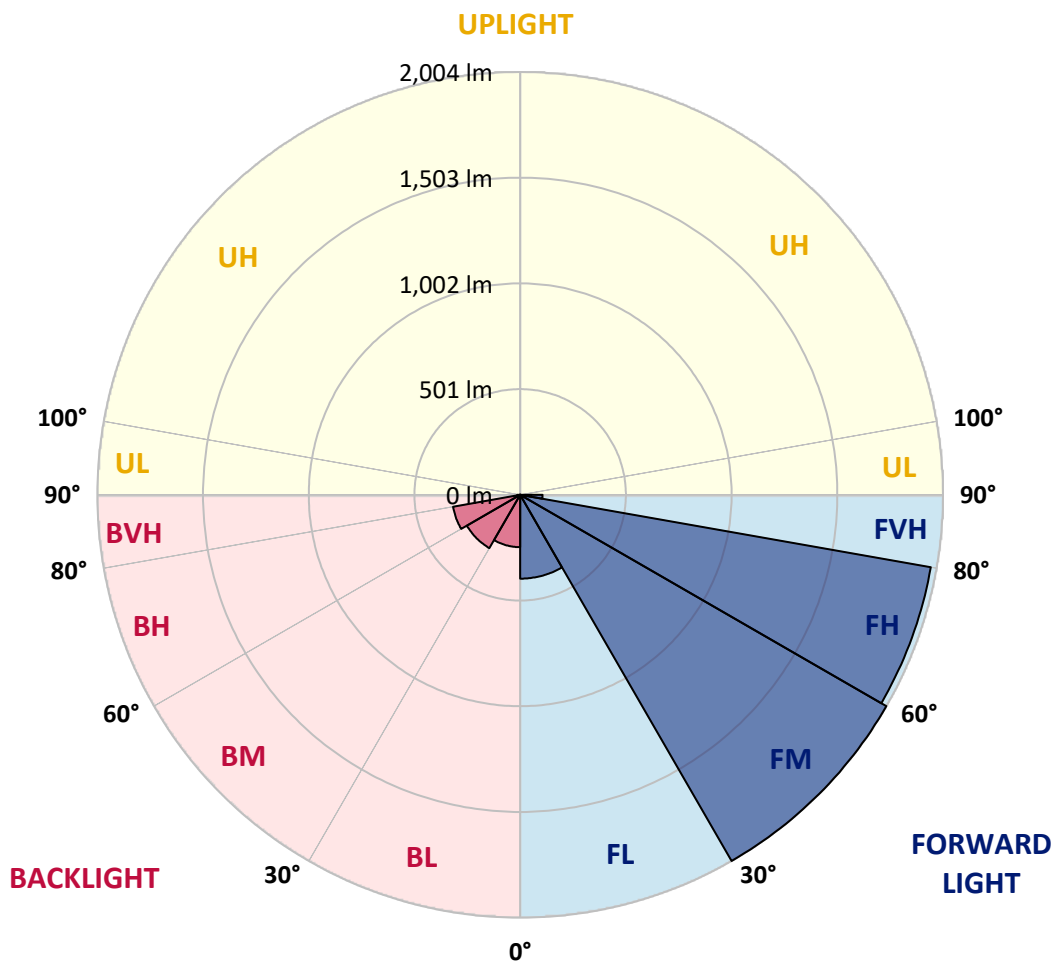
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	397.3	7.4			
FM (30°-60°)	2004.0	37.4			
FH (60°-80°)	1976.3	36.9			G2/5000
FVH (80°-90°)	106.2	2.0			G2/225
BL (0°-30°)	248.0	4.6	B1/500		
BM (30°-60°)	291.7	5.4	B1/1000		
BH (60°-80°)	323.0	6.0	B1/500		G1/500
BVH (80°-90°)	14.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5
2.5°	1135.3	1144.4	1144.4	1151.1	1157.1	1162.0	1166.2	1166.2	1166.2	1163.4	1160.9
5°	1015.9	1028.2	1029.9	1046.7	1068.8	1095.8	1125.9	1152.5	1157.8	1167.6	1171.4
7.5°	932.9	936.8	943.4	955.0	977.4	1010.7	1057.9	1117.5	1131.8	1162.7	1178.8
10°	874.1	877.2	882.8	894.4	914.7	944.8	991.4	1068.8	1092.6	1147.2	1179.1
12.5°	831.0	833.5	838.7	849.2	869.9	896.9	944.5	1025.0	1054.4	1131.8	1184.0
15°	797.4	801.6	805.8	816.0	837.0	862.9	911.2	993.2	1025.0	1119.6	1193.1
17.5°	784.1	786.2	786.9	792.1	811.1	837.3	885.6	970.7	1003.7	1109.8	1200.1
20°	792.5	792.8	785.8	782.3	793.2	817.4	864.3	953.9	987.6	1101.0	1202.9
22.5°	829.3	829.3	811.1	795.6	788.3	803.4	849.9	942.4	978.8	1094.4	1202.9
25°	899.3	896.2	867.8	837.3	804.8	798.4	840.8	935.0	972.1	1090.9	1198.4
27.5°	991.4	988.6	952.5	907.4	848.5	809.0	837.7	929.1	965.5	1085.6	1188.6
30°	1103.5	1101.0	1060.0	1000.9	914.0	842.2	845.0	924.9	960.2	1076.9	1172.1
32.5°	1215.2	1213.8	1181.2	1120.6	1004.4	898.6	864.3	924.2	957.4	1066.3	1152.1
35°	1327.6	1327.6	1307.6	1256.5	1125.9	983.4	904.6	937.1	962.7	1060.7	1135.0
37.5°	1493.6	1486.9	1449.8	1396.9	1278.9	1093.3	969.7	964.4	983.0	1070.2	1129.4
40°	1750.6	1731.4	1638.6	1549.6	1446.0	1234.1	1064.9	1017.3	1028.5	1102.4	1142.7
42.5°	2019.6	1989.1	1866.2	1724.0	1618.6	1407.8	1190.0	1103.1	1102.8	1164.8	1185.1
45°	2250.4	2234.6	2101.5	1921.2	1815.8	1603.2	1347.9	1230.6	1218.0	1261.4	1266.7
47.5°	2384.5	2374.0	2293.8	2129.9	2049.7	1834.0	1548.2	1407.4	1383.6	1409.5	1401.5
50°	2347.4	2357.5	2334.4	2250.7	2301.1	2158.3	1803.5	1649.8	1604.6	1630.5	1610.9
52.5°	2152.0	2179.3	2199.9	2216.0	2445.8	2592.2	2124.3	1952.3	1914.9	1910.3	1891.4
55°	1800.0	1843.4	1908.6	2026.9	2406.9	2940.6	2684.6	2318.3	2263.7	2235.0	2242.3
57.5°	1225.0	1290.8	1431.3	1656.4	2204.8	3089.1	3513.2	2791.1	2698.6	2596.4	2620.2
60°	674.8	729.8	896.9	1123.8	1743.6	3067.0	4247.5	3559.4	3268.4	2997.3	3046.4
62.5°	436.7	448.6	572.9	767.6	1070.2	2707.7	4655.5	4843.6	4226.9	3526.1	3595.1
65°	350.9	359.3	420.2	619.1	745.6	1741.9	4673.7	6175.7	5769.1	4244.7	4246.8
67.5°	342.8	346.7	382.1	520.7	699.3	948.3	4039.9	6701.0	6795.2	5092.9	4682.8
68°	347.7	352.3	388.0	504.6	699.0	874.1	3733.8	6693.0	6854.4	5234.7	4682.8
70°	306.8	312.4	395.7	522.1	669.2	751.5	2556.8	6337.5	6597.4	5560.8	4443.3
72.5°	160.4	155.8	195.8	412.2	753.3	783.0	1350.7	5294.6	5597.9	5150.0	3838.9
75°	125.0	113.8	109.6	162.8	662.6	812.1	784.4	3763.2	3992.2	3712.4	2565.9
77.5°	117.7	104.0	96.0	96.3	291.7	845.0	634.6	2214.6	2214.6	1770.9	818.8
80°	94.6	81.9	76.7	87.5	140.8	778.8	662.2	1009.3	860.8	457.7	225.5
82.5°	62.3	55.7	56.0	71.1	106.8	520.0	766.9	498.3	374.4	202.8	132.7
85°	39.6	34.0	37.8	49.7	79.8	231.8	759.2	346.3	247.9	113.8	66.2
87.5°	20.0	15.4	18.9	25.9	48.7	66.5	625.1	309.2	183.9	47.3	36.1
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°	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5
2.5°	1160.9	1153.2	1149.3	1143.0	1135.3	1127.6	1122.4	1119.9	1118.5	1119.2	1118.9
5°	1169.3	1159.2	1142.7	1119.2	1095.1	1069.5	1049.9	1034.8	1025.4	1022.6	1021.9
7.5°	1175.6	1160.9	1130.1	1087.4	1046.0	1001.2	963.0	932.6	911.9	902.5	902.1
10°	1174.6	1155.6	1107.0	1043.9	983.4	917.5	857.6	806.5	769.4	751.5	750.8
12.5°	1175.6	1149.7	1078.6	993.2	906.3	812.1	723.2	643.7	588.3	562.1	561.0
15°	1179.8	1143.4	1049.5	936.4	816.3	683.2	556.1	456.3	405.9	388.7	388.7
17.5°	1179.5	1132.9	1015.9	870.6	709.5	531.2	379.6	318.0	313.1	328.8	331.3
20°	1172.5	1116.1	972.5	792.5	584.1	367.7	257.4	248.6	287.9	331.3	336.2
22.5°	1161.6	1094.4	922.4	701.8	438.1	239.5	198.6	211.9	265.1	319.0	326.7
25°	1146.5	1068.1	865.0	596.4	291.4	172.3	165.6	182.1	219.6	255.6	261.2
27.5°	1124.5	1034.8	802.3	482.2	186.0	141.8	144.3	155.8	171.9	187.4	190.5
30°	1096.8	996.0	734.0	355.8	141.1	126.8	131.0	138.0	145.0	154.8	156.9
32.5°	1068.8	956.4	662.9	244.4	123.3	118.7	122.9	126.8	132.7	139.4	140.8
35°	1043.6	919.6	589.7	170.5	115.6	113.5	115.6	118.0	124.0	130.6	131.3
37.5°	1025.4	889.5	513.4	134.8	111.0	108.9	110.0	111.0	118.0	127.8	128.9
40°	1022.9	869.5	436.0	121.2	107.5	104.7	104.0	104.7	113.8	125.0	126.1
42.5°	1046.7	870.6	360.4	115.6	104.7	101.6	98.8	100.2	108.2	117.0	117.7
45°	1103.1	895.1	294.9	113.1	102.3	99.8	95.6	96.3	100.2	104.7	105.4
47.5°	1202.6	948.7	244.8	111.7	100.2	98.1	92.8	90.7	91.1	93.5	93.5
50°	1361.6	1038.3	214.3	110.3	98.4	94.6	88.6	84.4	83.3	84.7	85.1
52.5°	1598.6	1192.1	199.6	107.5	95.3	90.0	83.3	79.1	77.4	78.8	78.8
55°	1919.1	1437.6	192.6	103.7	91.4	84.4	78.4	74.9	73.5	74.6	74.6
57.5°	2284.3	1756.6	204.5	98.4	86.5	78.4	74.2	71.8	70.7	71.8	72.1
60°	2718.2	2174.0	286.5	91.8	81.2	73.2	70.7	69.3	68.6	69.7	69.7
62.5°	3295.0	2729.4	443.3	86.5	75.6	68.3	67.6	66.9	66.2	67.2	67.2
65°	3917.7	3234.8	456.3	83.3	70.7	64.1	64.4	64.4	63.7	64.8	64.8
67.5°	4115.9	3191.0	254.9	79.5	64.8	59.9	61.3	61.3	60.9	62.0	61.6
68°	4073.8	3121.7	222.0	78.4	63.7	58.8	60.2	60.6	60.2	61.3	60.9
70°	3760.8	2740.6	146.0	72.5	59.2	55.3	57.4	57.8	57.4	58.8	58.5
72.5°	3104.5	2055.7	107.9	63.4	53.6	50.8	52.9	53.2	53.6	55.0	54.6
75°	1971.6	1135.3	85.1	53.9	48.0	45.5	47.6	48.7	49.4	51.5	50.4
77.5°	540.0	344.6	69.0	45.9	41.3	40.3	41.7	43.1	43.8	46.2	44.5
80°	189.1	152.3	57.4	38.9	34.3	34.0	35.4	36.8	37.5	39.6	37.5
82.5°	114.9	99.5	45.9	30.5	27.0	26.6	28.4	29.8	30.5	30.5	29.1
85°	59.9	52.5	33.6	21.4	18.6	17.5	20.7	22.4	22.8	22.4	21.4
87.5°	33.6	29.8	17.9	10.2	8.4	8.8	10.9	13.3	14.4	14.0	13.3
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)