

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: P196075

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196075
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5592.5 lumens
Efficiency: N/A
Efficacy: 83.5 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

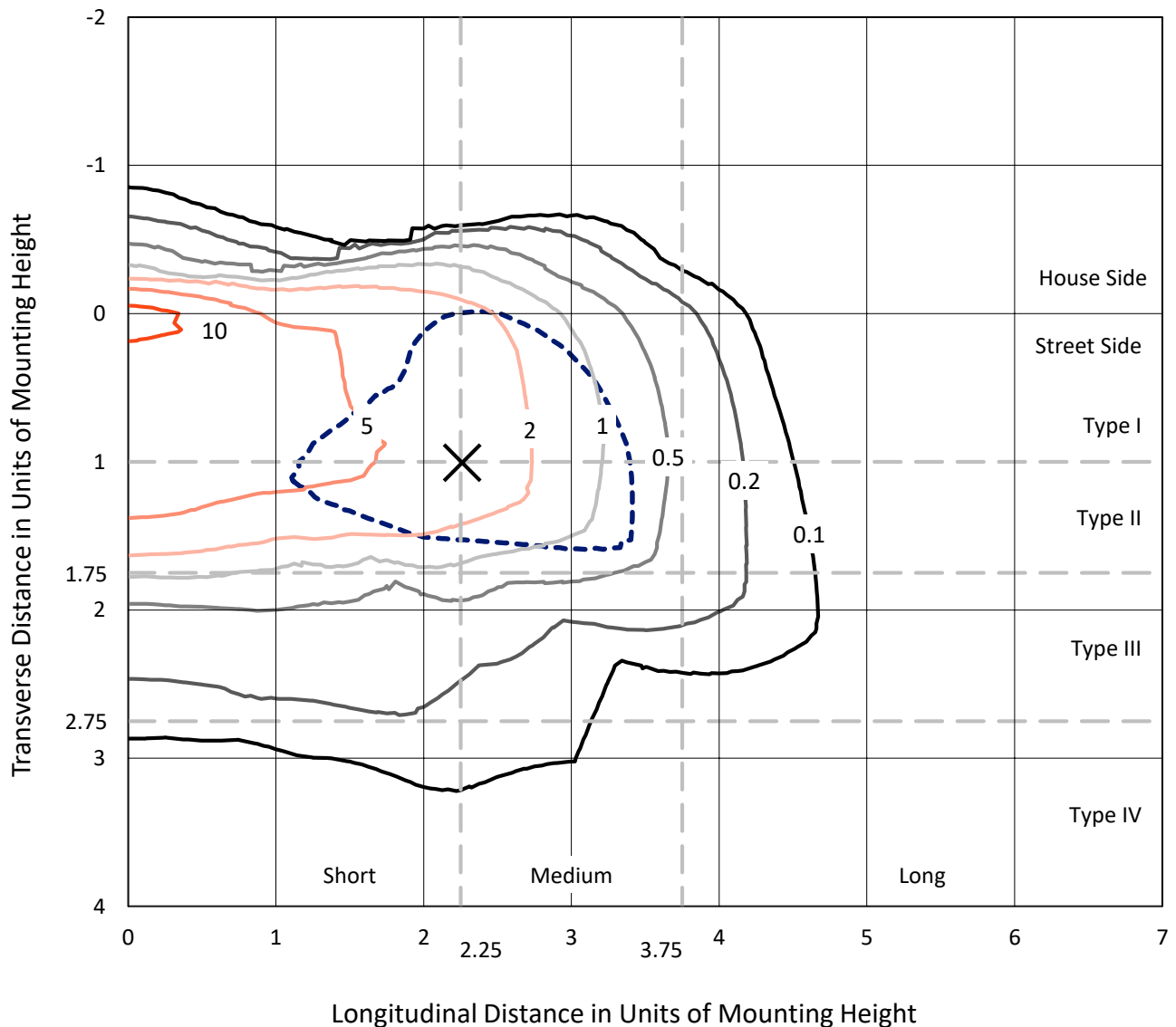
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

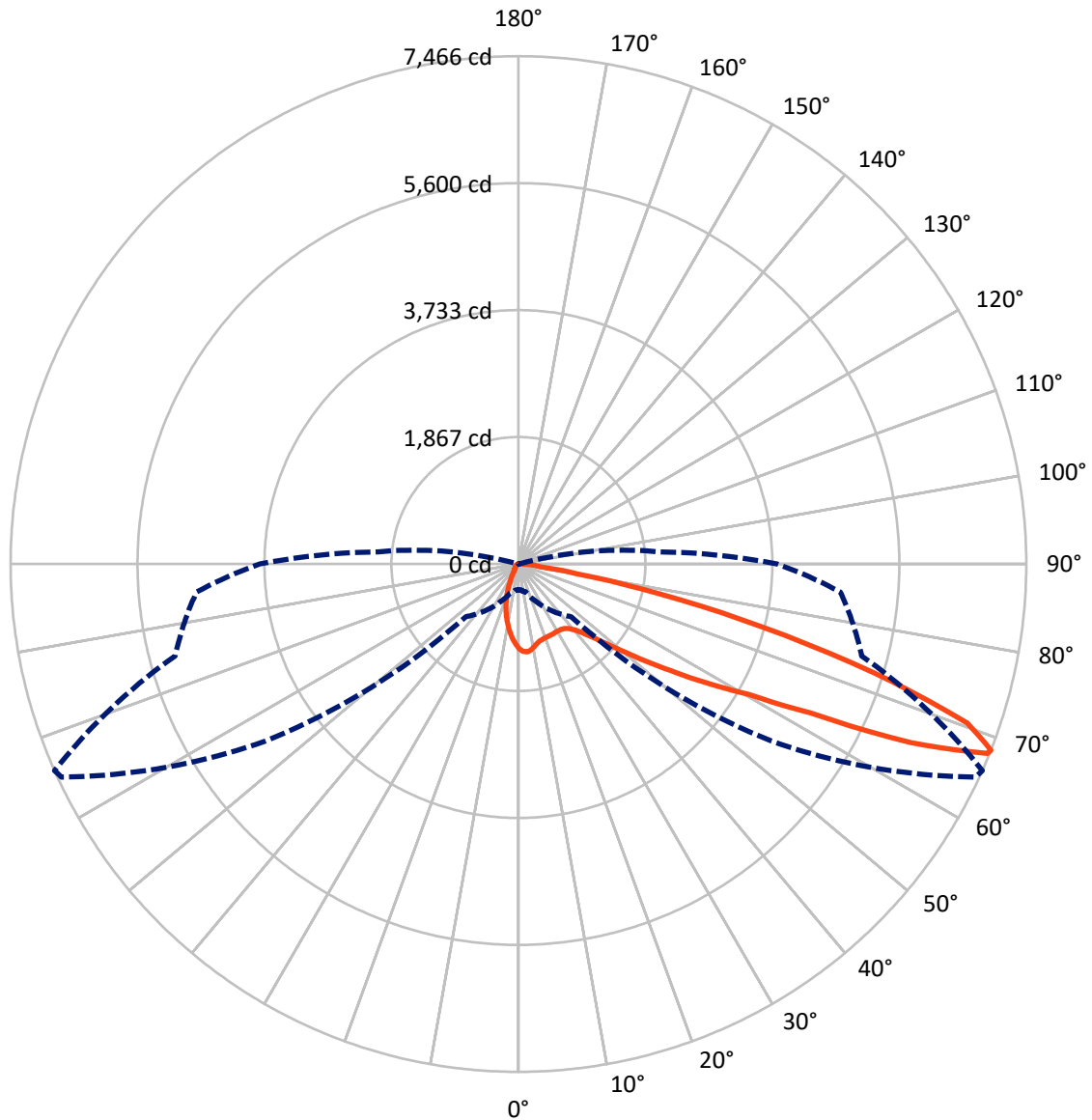
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.5 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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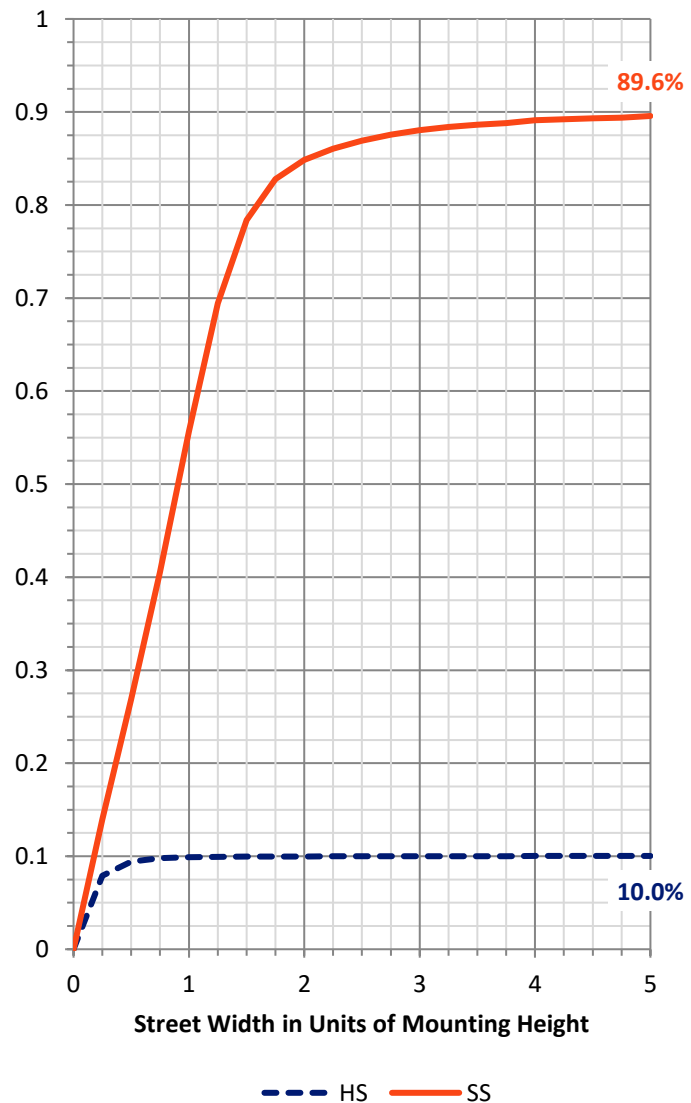
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	566.5	0.0	566.5
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	5026.0	0.0	5026.0
	% Fixture	89.9	0.0	89.9
Total	Lumens	5592.5	0.0	5592.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	1.8
10°-20°	219.8	3.9
20°-30°	318.5	5.7
30°-40°	487.5	8.7
40°-50°	833.9	14.9
50°-60°	1304.4	23.3
60°-70°	1502.0	26.9
70°-80°	751.6	13.4
80°-90°	72.8	1.3
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°	5592.5	100.0
0°-180°	5592.5	100.0

Coefficient of Utilization



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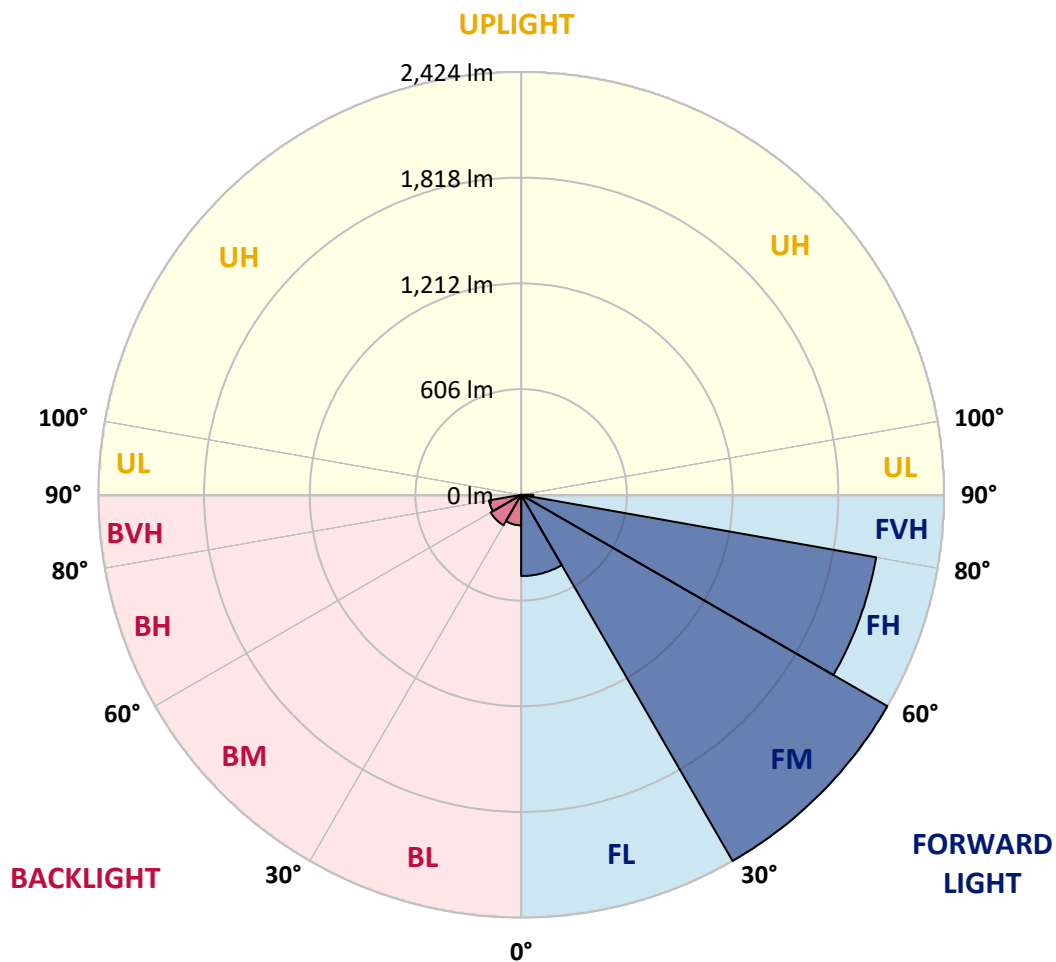
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	465.5	8.3			
FM (30°-60°)	2424.0	43.3			
FH (60°-80°)	2066.4	36.9			G2/5000
FVH (80°-90°)	70.0	1.3			G1/100
BL (0°-30°)	174.8	3.1	B1/500		
BM (30°-60°)	201.7	3.6	B0/220		
BH (60°-80°)	187.2	3.3	B1/500		G1/500
BVH (80°-90°)	2.8	0.0			G0/10
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°	66°	75°	85°
0°	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0
2.5°	1310.5	1311.3	1310.9	1312.2	1311.3	1304.8	1297.7	1282.8	1284.1	1264.9	1243.3
5°	1218.3	1225.8	1233.2	1240.6	1258.6	1274.5	1293.3	1297.7	1297.7	1281.0	1249.4
7.5°	1124.3	1124.7	1133.1	1143.2	1167.4	1196.3	1240.2	1279.7	1280.6	1285.0	1250.4
10°	1053.6	1055.9	1061.5	1072.6	1096.7	1125.2	1174.3	1236.3	1241.1	1273.6	1241.6
12.5°	998.8	1001.4	1007.6	1020.3	1042.3	1071.6	1123.5	1194.2	1200.7	1262.6	1238.9
15°	956.7	960.1	964.9	977.7	1001.4	1032.6	1089.2	1166.1	1173.9	1258.2	1247.3
17.5°	939.1	939.1	938.7	947.5	971.1	1002.7	1062.0	1151.1	1161.3	1261.7	1261.3
20°	946.5	945.2	936.0	933.9	948.3	979.9	1040.4	1141.5	1152.9	1268.4	1278.5
22.5°	986.0	983.4	962.8	945.6	941.2	962.3	1026.0	1134.9	1148.5	1282.0	1301.3
25°	1069.9	1062.0	1033.5	994.8	960.1	958.0	1015.9	1131.4	1145.8	1297.7	1326.3
27.5°	1178.7	1176.6	1131.0	1079.1	1012.4	972.4	1012.8	1128.7	1143.2	1309.2	1346.5
30°	1314.0	1314.9	1262.2	1194.6	1093.6	1013.2	1022.4	1127.4	1142.3	1310.1	1355.3
32.5°	1453.6	1454.5	1410.5	1338.1	1204.7	1083.5	1049.8	1133.5	1147.1	1306.5	1354.8
35°	1587.9	1589.3	1563.0	1504.6	1353.1	1181.0	1101.1	1154.6	1164.3	1308.8	1354.0
37.5°	1757.8	1763.2	1730.6	1676.2	1539.2	1324.1	1184.9	1197.3	1205.1	1326.8	1360.5
40°	2047.6	2040.6	1947.5	1855.3	1741.2	1498.4	1306.1	1270.5	1273.2	1373.3	1385.6
42.5°	2385.2	2376.4	2217.0	2058.2	1948.8	1708.6	1461.1	1382.9	1382.5	1451.4	1440.0
45°	2675.8	2670.6	2502.9	2290.8	2178.9	1940.9	1652.1	1545.0	1539.6	1586.6	1539.2
47.5°	2882.2	2877.8	2750.9	2538.5	2445.0	2196.5	1890.4	1765.7	1754.8	1763.6	1700.3
50°	2902.4	2897.5	2853.2	2716.7	2755.7	2571.4	2185.0	2055.1	2041.0	2027.4	1944.0
52.5°	2713.6	2713.2	2736.4	2727.7	2973.5	3053.8	2546.3	2412.8	2396.2	2361.5	2278.5
55°	2327.7	2325.5	2413.8	2541.9	2968.7	3551.7	3097.3	2838.7	2816.8	2747.4	2638.5
57.5°	1700.8	1689.4	1873.7	2145.5	2760.1	3769.5	3972.3	3367.8	3331.3	3111.4	2943.6
60°	939.1	943.5	1180.5	1502.3	2266.2	3726.4	4777.5	3984.6	3888.8	3425.2	3256.3
62.5°	526.4	537.4	713.8	976.4	1444.8	3377.4	5209.5	5046.1	4815.6	3791.4	3651.3
65°	398.2	404.8	493.5	753.4	910.9	2360.2	5278.4	6530.5	6331.6	4346.3	4280.4
67.5°	374.9	380.2	423.7	624.7	829.7	1224.0	4759.5	7408.5	7433.6	5103.2	4767.8
68°	377.6	384.1	427.6	601.0	828.5	1095.0	4538.2	7412.9	7466.0	5225.2	4751.1
70°	346.8	348.6	452.1	589.6	803.0	862.7	3283.1	6904.9	7000.3	5370.6	4313.0
72.5°	132.6	133.0	202.9	510.6	841.2	867.5	1653.8	5457.5	5462.4	4673.9	3362.4
75°	68.9	58.0	63.6	159.8	803.4	845.6	829.7	3726.4	3703.2	3161.0	2060.3
77.5°	47.5	40.4	42.6	55.3	334.1	845.2	599.2	2142.9	2138.1	1344.8	587.9
80°	26.8	23.2	25.5	46.5	117.2	793.3	558.4	921.1	868.0	236.2	95.2
82.5°	13.6	11.5	13.6	39.1	72.8	499.2	543.1	361.3	321.8	56.2	61.9
85°	3.5	3.5	6.5	27.2	45.2	163.8	486.9	260.8	234.5	24.6	43.9
87.5°	0.9	0.4	2.7	10.1	16.3	35.6	270.0	145.4	125.1	12.7	25.5
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°	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0	1246.0
2.5°	1234.5	1222.2	1198.1	1170.9	1151.5	1130.5	1118.2	1103.3	1091.9	1081.8	1089.2
5°	1230.1	1206.5	1152.9	1092.7	1042.3	994.0	958.0	923.7	897.8	881.6	888.1
7.5°	1218.7	1183.7	1096.7	1002.7	920.1	842.5	779.3	722.6	678.7	655.0	662.5
10°	1199.4	1149.8	1033.0	902.7	787.2	677.4	583.5	499.2	435.5	405.7	412.7
12.5°	1185.4	1119.9	967.2	806.1	654.2	498.3	373.6	277.0	227.4	197.5	200.2
15°	1179.3	1096.7	905.7	704.2	508.8	320.1	201.9	146.2	129.1	123.0	123.4
17.5°	1180.1	1078.3	847.3	598.4	362.2	183.9	123.8	111.5	108.8	107.5	107.5
20°	1182.3	1059.8	786.8	488.2	231.8	118.6	103.2	99.2	97.9	96.2	96.6
22.5°	1188.9	1045.8	725.7	377.6	142.7	96.6	91.3	87.8	85.6	83.0	83.4
25°	1199.0	1035.2	665.5	271.8	100.6	84.3	79.5	74.7	70.7	67.6	68.0
27.5°	1205.1	1020.3	601.5	185.3	83.4	73.8	67.2	60.6	56.2	53.6	53.1
30°	1200.7	996.1	528.6	121.6	73.8	63.6	55.8	48.3	43.9	41.7	41.7
32.5°	1188.9	964.9	448.3	88.7	65.4	54.8	45.2	38.7	35.6	34.3	34.7
35°	1175.3	932.5	362.6	75.1	58.8	46.5	36.9	31.6	30.3	29.9	29.9
37.5°	1167.8	904.4	280.5	68.0	52.7	38.7	30.3	27.2	25.9	25.9	25.9
40°	1176.2	882.9	207.7	62.8	46.5	32.0	25.5	23.2	22.8	22.8	22.8
42.5°	1211.7	875.4	151.9	58.4	40.4	26.8	22.0	20.2	19.7	20.2	20.2
45°	1281.0	891.7	115.0	54.0	34.7	22.0	18.9	17.6	17.6	18.0	18.0
47.5°	1398.7	933.3	94.4	49.6	28.9	18.4	16.3	15.3	15.3	15.9	15.9
50°	1581.4	1010.7	84.7	44.8	24.1	15.9	13.6	13.2	13.2	13.6	14.0
52.5°	1858.8	1157.7	79.9	40.0	19.7	13.2	11.5	10.9	11.5	11.9	11.9
55°	2167.4	1346.0	74.2	35.1	16.7	10.9	9.2	9.2	9.6	10.5	10.5
57.5°	2455.0	1527.8	68.9	28.9	14.5	8.8	7.5	7.5	8.4	9.2	9.2
60°	2758.8	1706.1	61.9	23.2	12.3	7.1	6.1	6.1	7.5	8.4	8.8
62.5°	3134.2	1913.2	52.7	18.4	9.6	5.3	4.4	5.7	7.1	8.4	8.4
65°	3676.8	2171.0	41.2	14.5	7.5	4.0	3.5	5.3	6.5	7.9	8.4
67.5°	3873.9	2138.1	31.2	11.9	5.7	3.1	3.1	4.8	6.5	7.9	7.9
68°	3801.9	2066.1	29.9	11.5	5.3	3.1	3.1	4.8	6.5	7.9	7.9
70°	3312.8	1688.9	24.6	8.8	4.4	2.7	2.7	4.4	6.5	7.5	7.9
72.5°	2480.5	1122.2	21.1	5.7	4.0	2.7	2.1	4.4	6.1	7.5	7.5
75°	1422.9	465.9	18.0	4.4	3.5	2.1	2.1	4.0	6.1	7.5	7.5
77.5°	402.1	108.8	14.5	3.5	3.1	2.1	1.7	4.0	5.7	7.1	7.1
80°	73.8	32.5	11.5	3.1	2.7	2.1	1.7	4.0	5.7	7.1	7.1
82.5°	48.7	15.3	8.4	3.1	2.7	2.1	1.7	3.5	5.3	6.5	6.5
85°	36.4	10.9	5.3	3.1	2.7	2.1	1.7	3.5	5.3	6.5	6.5
87.5°	20.2	4.8	4.0	3.5	3.1	2.1	1.7	3.1	4.8	6.1	6.1
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)