

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: P195595

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7050-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195595
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-SL2-7050-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 5467 lumens
Efficiency: N/A
Efficacy: 81.6 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

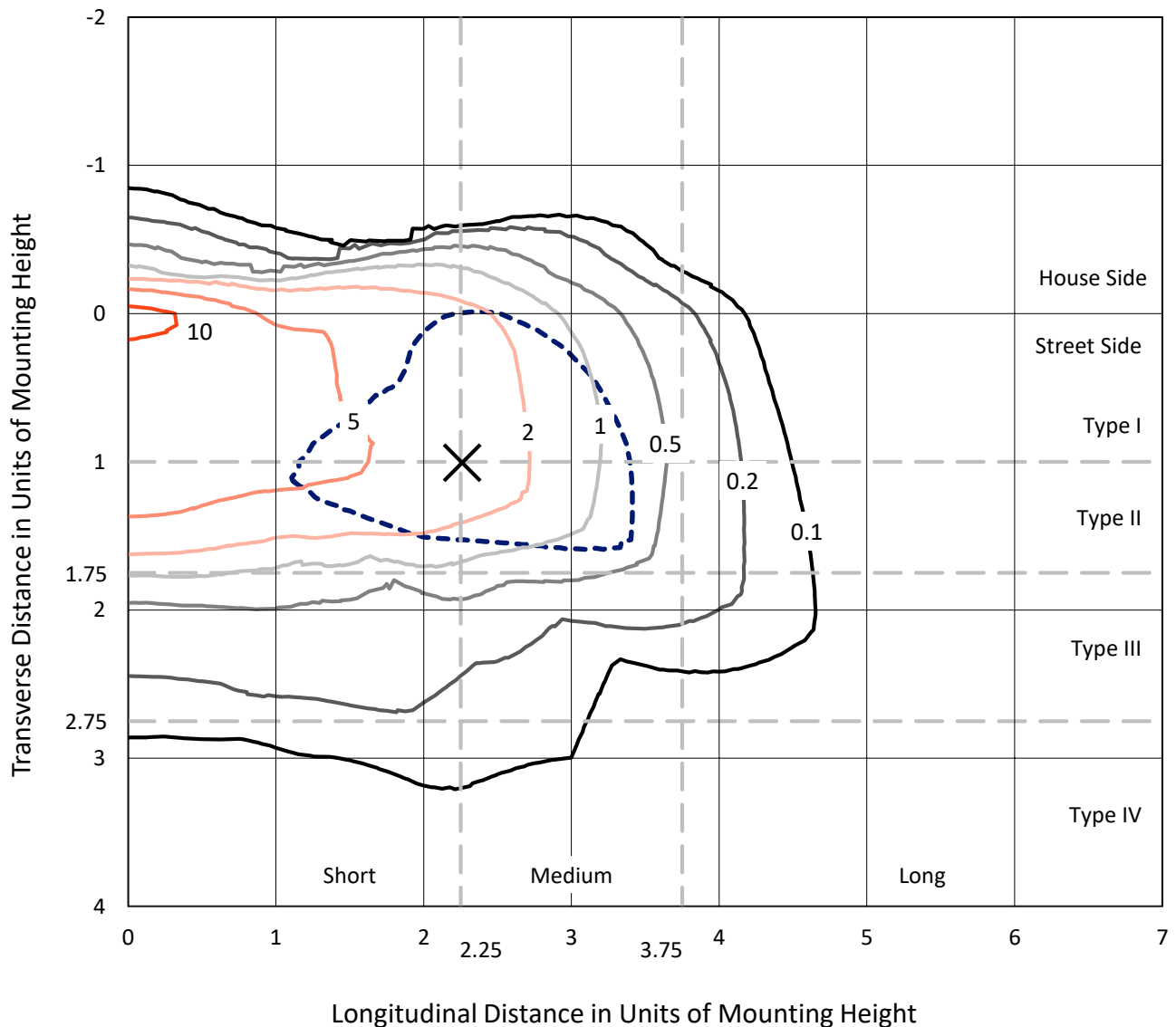


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

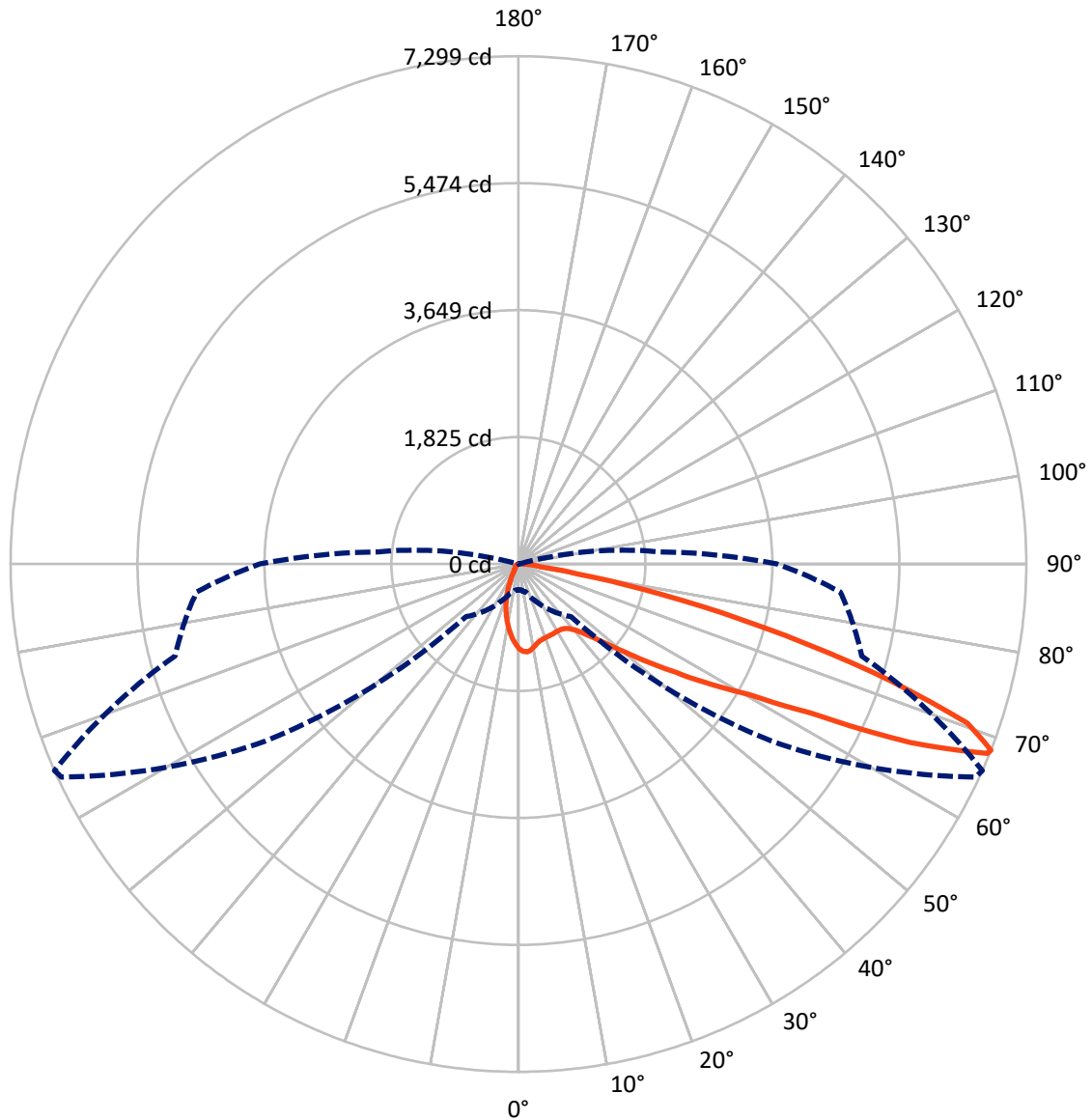


Based on 10 foot mounting height. Maximum calculated value = 12.2 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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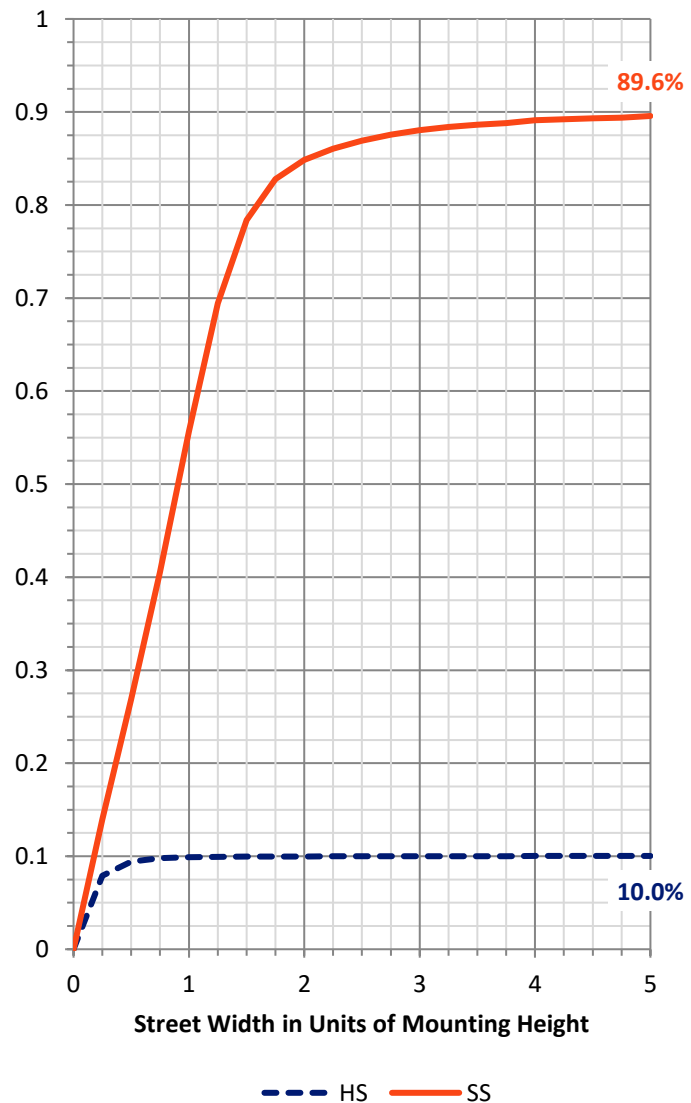
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	553.7	0.0	553.7
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	4913.2	0.0	4913.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	5467.0	0.0	5467.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	1.8
10°-20°	214.8	3.9
20°-30°	311.3	5.7
30°-40°	476.6	8.7
40°-50°	815.1	14.9
50°-60°	1275.1	23.3
60°-70°	1468.3	26.9
70°-80°	734.7	13.4
80°-90°	71.2	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°	5467.0	100.0
0°-180°	5467.0	100.0



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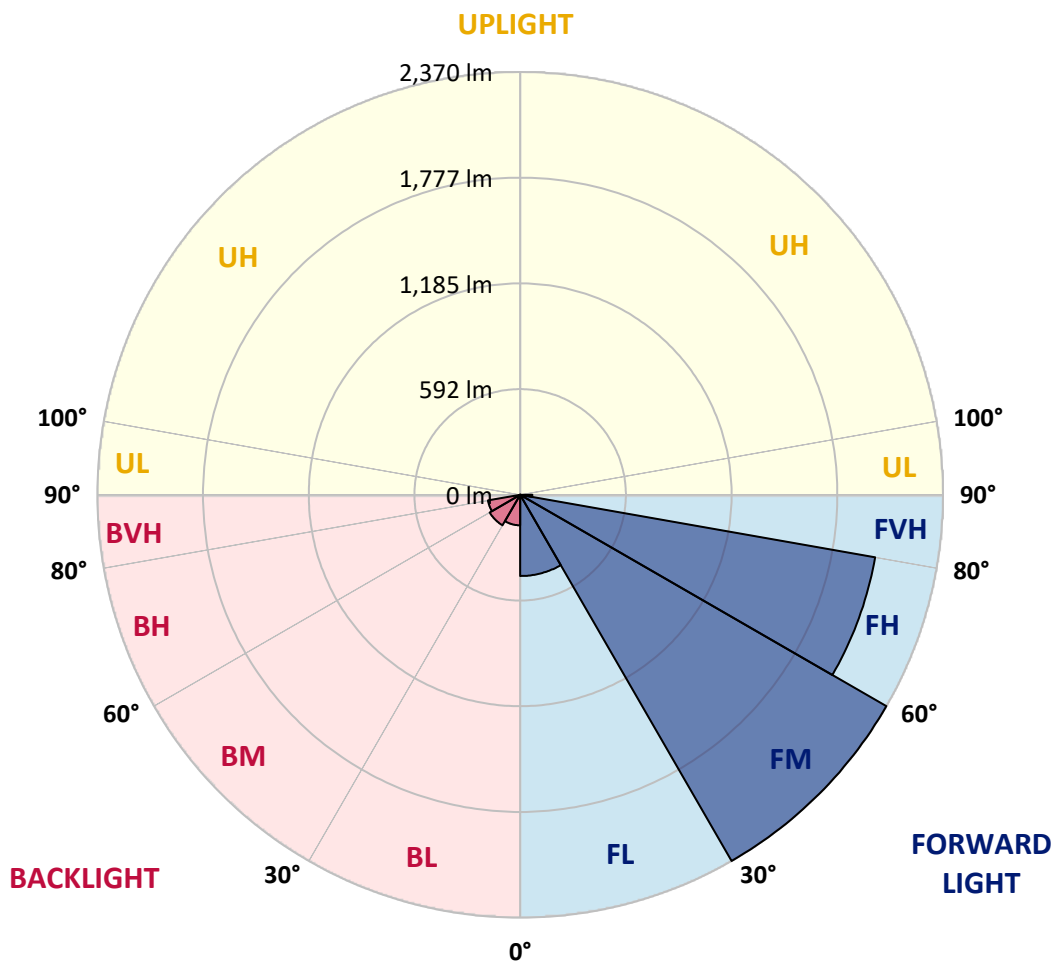
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	455.1	8.3			
FM	(30°-60°)	2369.7	43.3			
FH	(60°-80°)	2020.0	36.9			G2/5000
FVH	(80°-90°)	68.5	1.3			G1/100
BL	(0°-30°)	170.9	3.1	B1/500		
BM	(30°-60°)	197.2	3.6	B0/220		
BH	(60°-80°)	183.0	3.3	B1/500		G1/500
BVH	(80°-90°)	2.7	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°	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0
2.5°	1281.1	1281.9	1281.5	1282.8	1281.9	1275.5	1268.6	1254.0	1255.3	1236.5	1215.4
5°	1191.0	1198.3	1205.5	1212.8	1230.4	1245.9	1264.3	1268.6	1268.6	1252.3	1221.4
7.5°	1099.1	1099.5	1107.7	1117.6	1141.2	1169.5	1212.4	1251.0	1251.9	1256.2	1222.3
10°	1030.0	1032.2	1037.7	1048.5	1072.1	1100.0	1148.0	1208.6	1213.3	1245.0	1213.7
12.5°	976.4	978.9	985.0	997.4	1018.9	1047.6	1098.3	1167.4	1173.8	1234.3	1211.1
15°	935.2	938.6	943.3	955.8	978.9	1009.4	1064.8	1139.9	1147.6	1230.0	1219.3
17.5°	918.0	918.0	917.6	926.2	949.3	980.2	1038.2	1125.3	1135.2	1233.4	1233.0
20°	925.3	924.0	915.0	912.9	927.0	957.9	1017.1	1115.9	1127.0	1239.9	1249.8
22.5°	963.9	961.3	941.2	924.4	920.1	940.7	1003.0	1109.4	1122.7	1253.2	1272.1
25°	1045.9	1038.2	1010.3	972.5	938.6	936.5	993.1	1106.0	1120.1	1268.6	1296.5
27.5°	1152.3	1150.2	1105.6	1054.9	989.7	950.6	990.1	1103.4	1117.6	1279.8	1316.3
30°	1284.5	1285.4	1233.9	1167.8	1069.1	990.5	999.5	1102.1	1116.7	1280.7	1324.9
32.5°	1421.0	1421.9	1378.9	1308.1	1177.7	1059.2	1026.2	1108.1	1121.4	1277.2	1324.4
35°	1552.3	1553.6	1527.9	1470.8	1322.7	1154.5	1076.4	1128.7	1138.2	1279.4	1323.6
37.5°	1718.4	1723.6	1691.8	1638.6	1504.7	1294.4	1158.3	1170.4	1178.1	1297.0	1330.0
40°	2001.7	1994.8	1903.8	1813.7	1702.1	1464.8	1276.8	1242.0	1244.6	1342.5	1354.5
42.5°	2331.7	2323.1	2167.3	2012.0	1905.1	1670.3	1428.3	1351.9	1351.5	1418.8	1407.7
45°	2615.8	2610.7	2446.7	2239.4	2130.0	1897.4	1615.0	1510.3	1505.1	1551.0	1504.7
47.5°	2817.5	2813.2	2689.2	2481.5	2390.1	2147.2	1848.0	1726.1	1715.4	1724.0	1662.2
50°	2837.3	2832.5	2789.2	2655.7	2693.9	2513.7	2136.0	2009.0	1995.2	1981.9	1900.4
52.5°	2652.7	2652.3	2675.0	2666.5	2906.8	2985.3	2489.2	2358.7	2342.4	2308.5	2227.4
55°	2275.5	2273.3	2359.6	2484.9	2902.1	3472.0	3027.8	2775.0	2753.6	2685.8	2579.3
57.5°	1662.6	1651.5	1831.7	2097.4	2698.2	3684.9	3883.2	3292.2	3256.6	3041.6	2877.6
60°	918.0	922.3	1154.0	1468.6	2215.4	3642.8	4670.3	3895.2	3801.6	3348.4	3183.2
62.5°	514.6	525.3	697.8	954.5	1412.4	3301.6	5092.6	4932.9	4707.6	3706.3	3569.4
65°	389.3	395.7	482.4	736.5	890.5	2307.2	5160.0	6384.0	6189.5	4248.8	4184.4
67.5°	366.5	371.7	414.2	610.7	811.1	1196.5	4652.7	7242.3	7266.8	4988.7	4660.8
68°	369.1	375.5	418.0	587.5	809.9	1070.4	4436.4	7246.6	7298.5	5108.0	4644.5
70°	339.0	340.8	442.0	576.4	785.0	843.3	3209.4	6750.0	6843.2	5250.1	4216.2
72.5°	129.6	130.0	198.3	499.1	822.3	848.0	1616.7	5335.1	5339.8	4569.0	3287.0
75°	67.4	56.7	62.2	156.2	785.4	826.6	811.1	3642.8	3620.1	3090.1	2014.1
77.5°	46.4	39.5	41.6	54.1	326.6	826.2	585.8	2094.8	2090.1	1314.6	574.7
80°	26.2	22.7	24.9	45.5	114.6	775.5	545.9	900.4	848.5	230.9	93.1
82.5°	13.3	11.2	13.3	38.2	71.2	488.0	530.9	353.2	314.6	54.9	60.5
85°	3.4	3.4	6.4	26.6	44.2	160.1	476.0	254.9	229.2	24.0	42.9
87.5°	0.9	0.4	2.6	9.9	15.9	34.8	263.9	142.1	122.3	12.4	24.9
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°	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0	1218.0
2.5°	1206.8	1194.8	1171.2	1144.6	1125.7	1105.1	1093.1	1078.5	1067.4	1057.5	1064.8
5°	1202.5	1179.4	1127.0	1068.2	1018.9	971.7	936.5	903.0	877.7	861.8	868.2
7.5°	1191.4	1157.1	1072.1	980.2	899.5	823.6	761.8	706.4	663.5	640.3	647.6
10°	1172.5	1124.0	1009.8	882.4	769.5	662.2	570.4	488.0	425.7	396.6	403.4
12.5°	1158.8	1094.8	945.5	788.0	639.5	487.1	365.2	270.8	222.3	193.1	195.7
15°	1152.8	1072.1	885.4	688.4	497.4	312.9	197.4	142.9	126.2	120.2	120.6
17.5°	1153.6	1054.1	828.3	585.0	354.1	179.8	121.0	109.0	106.4	105.1	105.1
20°	1155.8	1036.0	769.1	477.2	226.6	115.9	100.9	97.0	95.7	94.0	94.4
22.5°	1162.2	1022.3	709.4	369.1	139.5	94.4	89.3	85.8	83.7	81.1	81.5
25°	1172.1	1012.0	650.6	265.7	98.3	82.4	77.7	73.0	69.1	66.1	66.5
27.5°	1178.1	997.4	588.0	181.1	81.5	72.1	65.7	59.2	54.9	52.4	51.9
30°	1173.8	973.8	516.7	118.9	72.1	62.2	54.5	47.2	42.9	40.8	40.8
32.5°	1162.2	943.3	438.2	86.7	63.9	53.6	44.2	37.8	34.8	33.5	33.9
35°	1148.9	911.6	354.5	73.4	57.5	45.5	36.1	30.9	29.6	29.2	29.2
37.5°	1141.6	884.1	274.2	66.5	51.5	37.8	29.6	26.6	25.3	25.3	25.3
40°	1149.8	863.1	203.0	61.4	45.5	31.3	24.9	22.7	22.3	22.3	22.3
42.5°	1184.5	855.8	148.5	57.1	39.5	26.2	21.5	19.7	19.3	19.7	19.7
45°	1252.3	871.7	112.4	52.8	33.9	21.5	18.5	17.2	17.2	17.6	17.6
47.5°	1367.3	912.4	92.3	48.5	28.3	18.0	15.9	15.0	15.0	15.5	15.5
50°	1545.9	988.0	82.8	43.8	23.6	15.5	13.3	12.9	12.9	13.3	13.7
52.5°	1817.1	1131.7	78.1	39.1	19.3	12.9	11.2	10.7	11.2	11.6	11.6
55°	2118.8	1315.8	72.5	34.3	16.3	10.7	9.0	9.0	9.4	10.3	10.3
57.5°	2399.9	1493.5	67.4	28.3	14.2	8.6	7.3	7.3	8.2	9.0	9.0
60°	2696.9	1667.8	60.5	22.7	12.0	6.9	6.0	6.0	7.3	8.2	8.6
62.5°	3063.9	1870.3	51.5	18.0	9.4	5.2	4.3	5.6	6.9	8.2	8.2
65°	3594.3	2122.3	40.3	14.2	7.3	3.9	3.4	5.2	6.4	7.7	8.2
67.5°	3787.0	2090.1	30.5	11.6	5.6	3.0	3.0	4.7	6.4	7.7	7.7
68°	3716.6	2019.7	29.2	11.2	5.2	3.0	3.0	4.7	6.4	7.7	7.7
70°	3238.5	1651.0	24.0	8.6	4.3	2.6	2.6	4.3	6.4	7.3	7.7
72.5°	2424.8	1097.0	20.6	5.6	3.9	2.6	2.1	4.3	6.0	7.3	7.3
75°	1391.0	455.4	17.6	4.3	3.4	2.1	2.1	3.9	6.0	7.3	7.3
77.5°	393.1	106.4	14.2	3.4	3.0	2.1	1.7	3.9	5.6	6.9	6.9
80°	72.1	31.8	11.2	3.0	2.6	2.1	1.7	3.9	5.6	6.9	6.9
82.5°	47.6	15.0	8.2	3.0	2.6	2.1	1.7	3.4	5.2	6.4	6.4
85°	35.6	10.7	5.2	3.0	2.6	2.1	1.7	3.4	5.2	6.4	6.4
87.5°	19.7	4.7	3.9	3.4	3.0	2.1	1.7	3.0	4.7	6.0	6.0
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)