

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: P195643

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7050-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195643
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7050-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5689 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

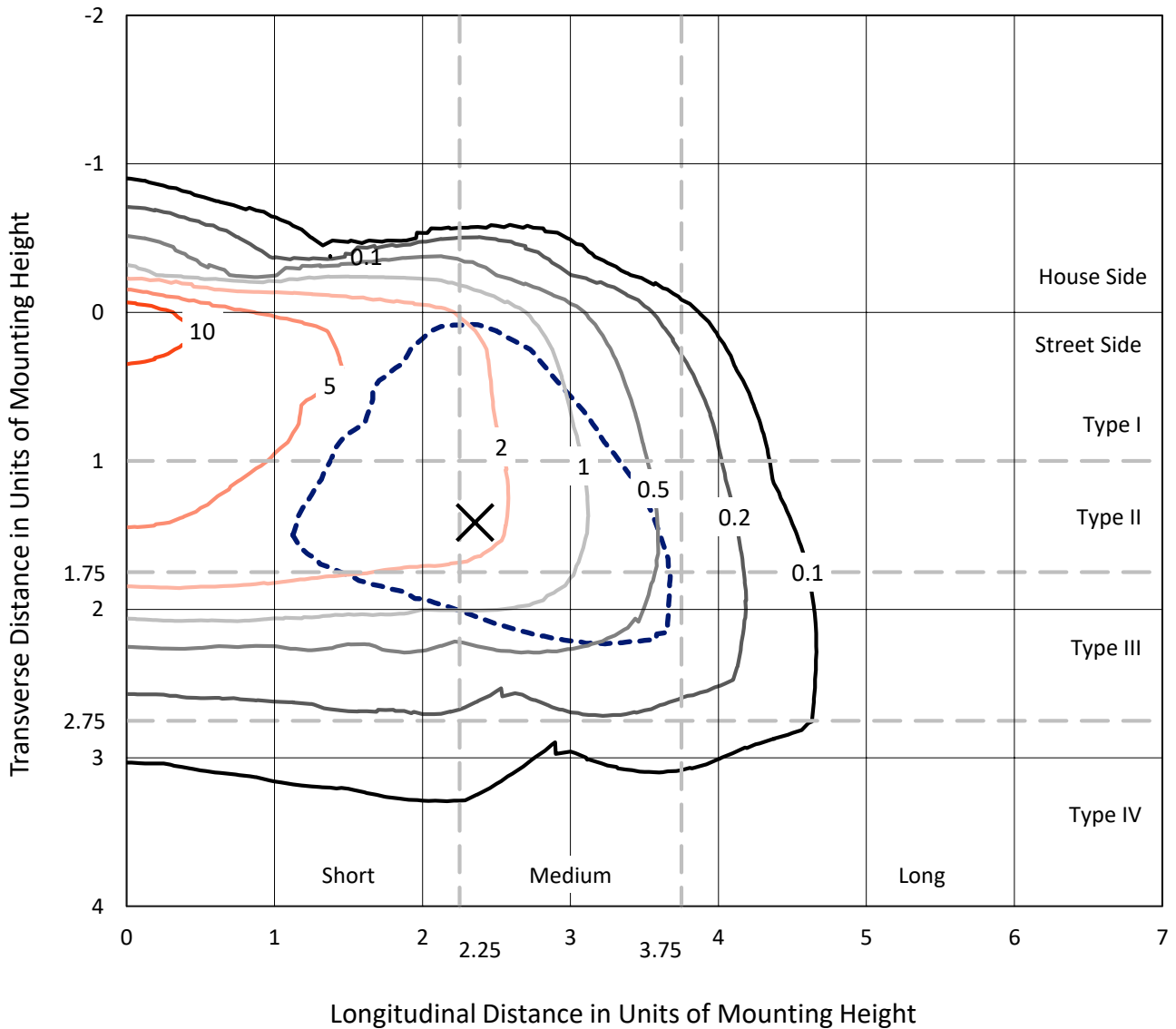
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

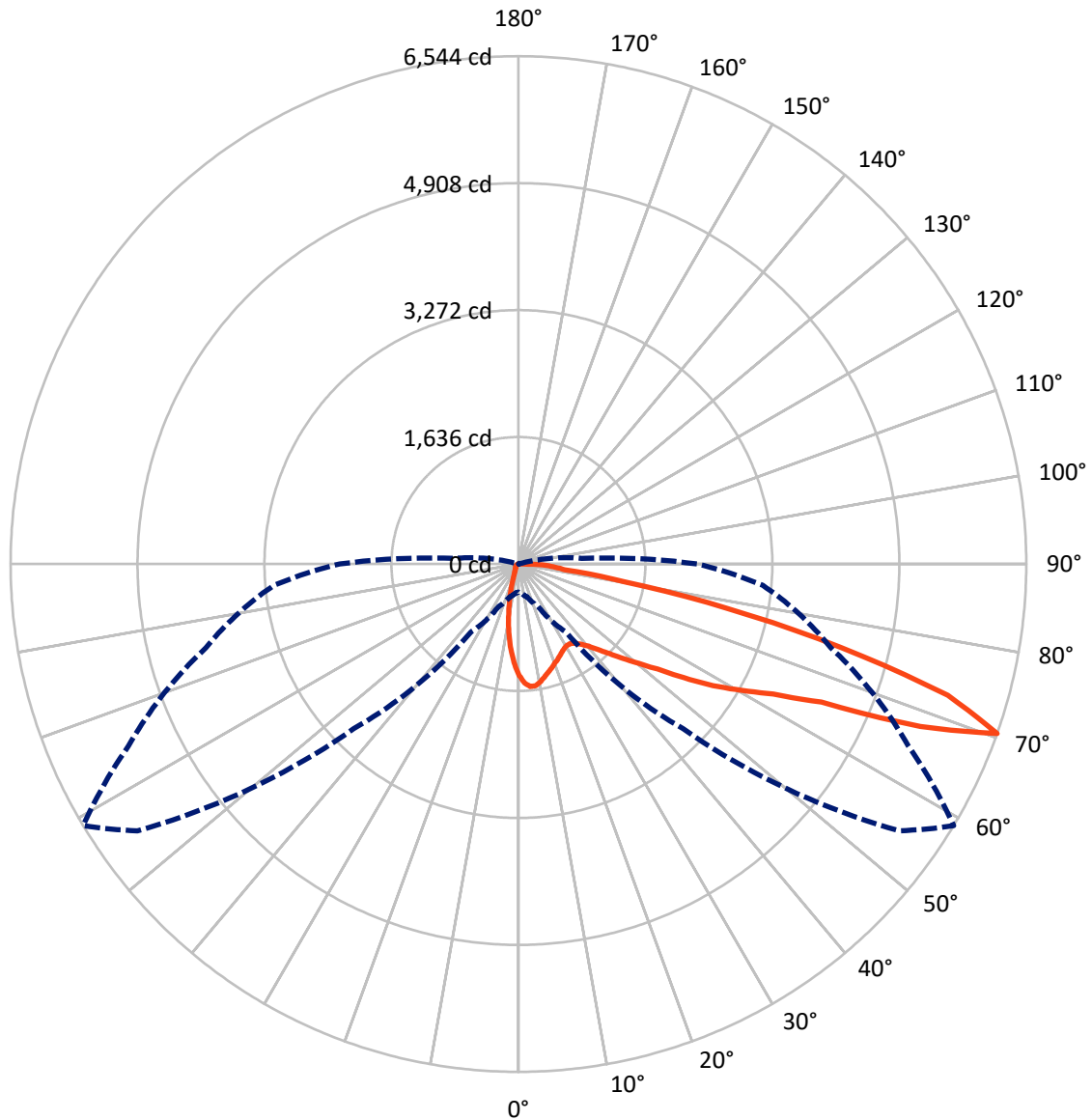


Based on 10 foot mounting height. Maximum calculated value = 15.3 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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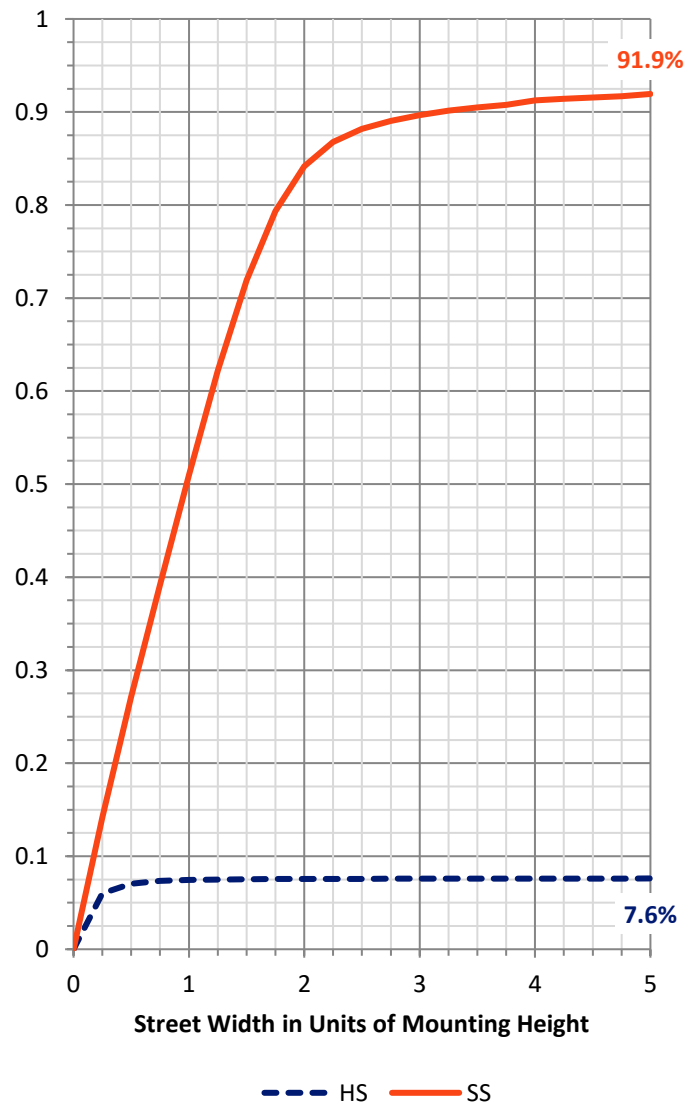
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	437.3	0.0	437.3
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	5251.7	0.0	5251.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	5689.0	0.0	5689.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	2.1
10°-20°	248.1	4.4
20°-30°	335.9	5.9
30°-40°	484.7	8.5
40°-50°	805.0	14.1
50°-60°	1231.3	21.6
60°-70°	1531.4	26.9
70°-80°	846.6	14.9
80°-90°	87.8	1.5
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°	5689.0	100.0
0°-180°	5689.0	100.0



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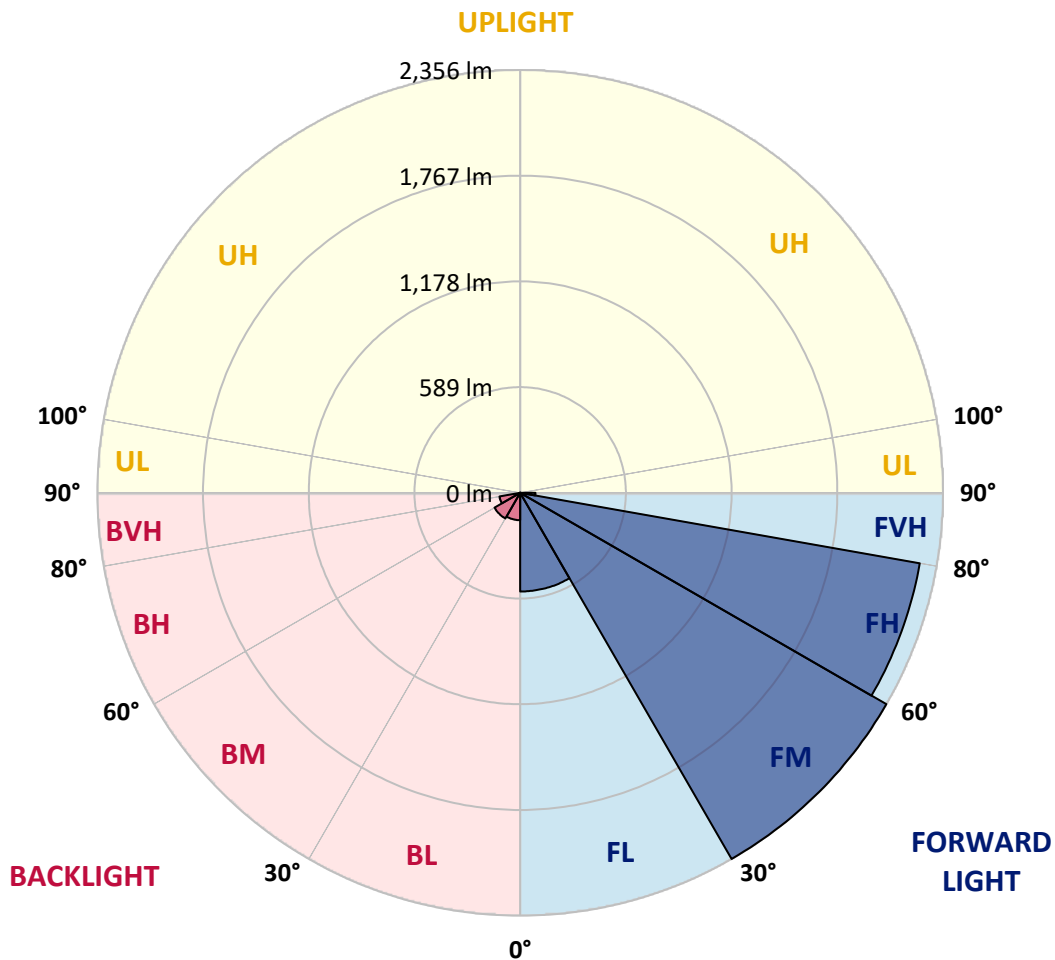
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	549.9	9.7			
FM	(30°-60°)	2355.9	41.4			
FH	(60°-80°)	2260.7	39.7			G2/5000
FVH	(80°-90°)	85.2	1.5			G1/100
BL	(0°-30°)	152.4	2.7	B1/500		
BM	(30°-60°)	165.1	2.9	B0/220		
BH	(60°-80°)	117.3	2.1	B1/500		G1/500
BVH	(80°-90°)	2.5	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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5
2.5°	1626.1	1623.5	1612.8	1610.6	1598.6	1574.6	1546.7	1535.5	1512.8	1476.7	1436.8
5°	1653.1	1654.4	1655.3	1650.5	1648.8	1629.1	1598.2	1584.9	1554.4	1495.2	1422.2
7.5°	1551.8	1555.3	1566.0	1570.7	1591.3	1599.0	1592.6	1584.0	1560.0	1490.0	1387.5
10°	1445.0	1451.4	1463.0	1470.7	1496.1	1516.7	1542.8	1545.0	1539.8	1472.9	1348.4
12.5°	1353.1	1359.1	1372.0	1387.5	1413.2	1439.8	1478.9	1492.6	1509.8	1461.7	1320.5
15°	1274.2	1275.9	1288.3	1307.6	1341.6	1378.0	1424.4	1444.6	1478.0	1457.4	1299.1
17.5°	1205.1	1205.5	1213.7	1231.3	1272.5	1320.5	1374.6	1401.2	1443.7	1451.4	1280.2
20°	1159.6	1159.2	1159.6	1169.0	1205.5	1262.6	1328.2	1356.1	1410.6	1444.1	1260.9
22.5°	1144.1	1142.0	1132.1	1128.7	1151.9	1202.1	1280.6	1317.1	1381.0	1442.0	1246.7
25°	1163.0	1161.7	1140.7	1121.0	1123.1	1154.4	1232.1	1276.8	1357.9	1449.7	1243.3
27.5°	1224.0	1221.4	1189.2	1150.6	1126.1	1131.7	1196.1	1242.8	1339.4	1468.6	1248.0
30°	1303.8	1304.2	1269.9	1223.1	1165.6	1133.8	1176.8	1221.0	1327.0	1496.9	1258.3
32.5°	1392.6	1392.2	1367.7	1313.7	1240.3	1173.3	1185.3	1222.7	1328.7	1538.5	1278.0
35°	1484.5	1479.7	1471.6	1424.0	1338.1	1242.4	1224.4	1251.9	1346.7	1593.5	1311.5
37.5°	1590.5	1588.7	1596.9	1546.7	1459.1	1344.1	1293.1	1311.5	1392.2	1674.6	1365.6
40°	1759.1	1749.7	1753.5	1685.3	1595.6	1481.0	1389.2	1393.9	1464.7	1781.9	1451.0
42.5°	2080.6	2042.4	1970.7	1842.8	1745.8	1633.0	1514.9	1506.8	1567.3	1911.9	1563.4
45°	2464.7	2420.9	2240.2	2016.6	1896.0	1796.0	1670.3	1648.4	1693.5	2066.8	1708.5
47.5°	2785.2	2738.0	2498.6	2198.2	2048.8	1964.3	1842.4	1816.6	1844.5	2246.7	1882.7
50°	2894.7	2868.5	2658.2	2349.2	2202.9	2153.1	2058.3	2015.3	2022.2	2440.6	2086.1
52.5°	2844.5	2835.5	2694.7	2452.6	2345.4	2361.7	2294.7	2249.7	2241.9	2652.6	2311.0
55°	2738.5	2734.2	2665.5	2510.2	2471.1	2552.6	2626.5	2587.4	2514.4	2877.9	2496.9
57.5°	2587.0	2603.3	2652.6	2620.9	2625.6	2754.3	2934.6	2954.8	2845.8	3057.3	2634.6
60°	2182.3	2226.1	2452.2	2739.8	2959.9	3089.9	3264.6	3302.4	3126.4	3180.1	2793.8
62.5°	1613.2	1675.9	1998.2	2526.5	3144.0	3728.1	3703.6	3686.9	3394.2	3344.4	3083.5
65°	947.6	1021.0	1293.5	1974.1	2866.4	4138.4	4523.3	4291.6	3802.4	3686.1	3544.9
67.5°	472.1	472.5	595.7	1042.0	2118.3	3852.1	5719.8	5585.9	4670.1	4189.5	3726.8
70°	363.1	372.9	440.7	605.5	1071.2	3000.3	5994.1	6543.8	5542.2	4167.1	3162.0
72.5°	307.7	314.1	392.3	527.0	800.8	1647.1	5189.0	5784.2	5288.5	3520.8	2330.8
75°	221.4	226.6	347.2	478.1	737.3	817.1	3559.5	4289.9	3968.0	2476.7	1282.8
77.5°	54.9	54.5	121.0	388.0	659.6	680.6	2042.4	2750.9	2276.7	1014.1	329.6
80°	24.5	23.6	27.5	81.5	613.7	642.5	898.2	1389.2	873.3	164.4	100.9
82.5°	17.2	16.3	17.2	30.0	205.1	596.1	542.9	602.1	319.7	56.2	42.9
85°	5.6	5.1	9.4	25.3	57.5	343.8	529.6	449.8	237.8	24.0	28.8
87.5°	0.9	0.9	3.4	13.7	16.7	114.6	310.7	311.6	106.9	14.2	12.9
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°	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5	1438.5
2.5°	1416.7	1391.3	1355.7	1320.1	1287.9	1254.9	1228.3	1215.8	1210.2	1202.5	1185.8
5°	1384.0	1338.1	1260.0	1183.2	1111.5	1042.9	984.1	950.6	914.5	912.8	895.2
7.5°	1331.7	1266.5	1143.3	1024.0	914.5	809.8	719.7	661.3	621.4	596.5	579.4
10°	1273.3	1189.6	1026.6	858.7	709.8	569.9	454.1	378.5	332.6	309.4	296.1
12.5°	1227.0	1121.8	911.5	700.4	513.7	353.2	245.5	190.5	166.1	156.6	152.4
15°	1187.1	1059.6	803.8	558.8	342.9	203.0	142.1	124.0	120.2	120.2	119.7
17.5°	1146.7	999.5	699.1	419.7	215.9	133.0	112.0	109.4	109.9	111.2	111.2
20°	1108.5	942.4	598.2	299.1	141.6	106.4	101.7	100.9	102.1	103.9	103.4
22.5°	1077.6	892.2	503.8	205.6	109.0	96.6	93.6	92.3	93.1	94.4	94.0
25°	1055.7	849.3	417.1	143.3	94.8	88.0	84.5	82.8	82.0	82.8	82.4
27.5°	1042.4	813.3	335.6	107.7	85.0	79.4	75.1	71.7	69.5	69.5	68.7
30°	1033.8	779.4	263.1	89.3	76.8	70.8	64.8	60.1	56.6	55.8	55.4
32.5°	1033.4	750.2	196.6	79.0	69.1	62.2	54.9	48.9	45.1	44.2	43.8
35°	1044.1	726.6	144.6	71.2	62.2	54.1	45.9	39.5	36.0	36.0	35.6
37.5°	1072.0	712.8	109.4	65.2	56.6	47.2	38.6	32.6	29.6	30.5	30.5
40°	1124.0	710.3	89.3	60.5	51.9	41.2	31.3	26.6	25.3	26.6	26.6
42.5°	1203.4	724.0	79.4	57.1	47.6	35.2	26.2	22.7	22.3	23.6	23.6
45°	1306.8	751.0	73.8	54.1	42.9	29.2	21.9	19.7	19.3	21.0	21.0
47.5°	1432.1	787.5	68.7	50.6	38.2	24.0	18.5	16.7	16.7	18.5	18.9
50°	1580.6	836.9	63.5	47.2	34.3	20.2	15.4	14.2	14.6	16.3	16.7
52.5°	1751.4	897.4	58.8	44.2	30.0	16.3	12.9	12.0	12.4	14.2	14.6
55°	1898.6	950.2	53.2	41.2	24.5	13.3	10.7	10.3	10.7	12.9	12.9
57.5°	2026.9	1000.8	48.1	36.5	19.3	10.7	8.6	8.6	9.4	11.6	12.0
60°	2197.3	1080.6	43.8	30.9	14.6	8.2	6.9	7.3	8.6	10.3	10.7
62.5°	2499.0	1216.2	38.2	25.7	10.7	6.4	5.6	6.0	7.7	9.9	10.3
65°	2876.7	1344.6	31.8	21.5	8.2	4.7	4.3	5.6	7.7	9.9	10.3
67.5°	2838.0	1169.5	24.9	17.2	6.0	3.9	3.4	5.1	7.3	9.9	10.3
70°	2301.6	819.7	18.5	11.6	4.7	3.4	3.4	5.1	7.3	9.4	9.9
72.5°	1596.5	456.2	14.2	7.7	4.3	3.4	3.0	4.7	6.9	9.4	9.9
75°	759.6	139.9	11.2	5.6	3.9	3.0	2.6	4.7	6.9	9.4	9.9
77.5°	145.9	35.6	9.0	4.7	3.4	3.0	2.6	4.3	6.9	9.0	9.4
80°	49.4	15.9	7.3	4.3	3.4	3.0	2.6	4.3	6.4	8.6	9.0
82.5°	27.0	9.0	6.4	3.9	3.4	2.6	2.1	3.9	6.0	8.6	9.0
85°	21.0	6.4	5.1	3.9	3.4	2.6	2.1	3.9	6.0	8.2	8.6
87.5°	10.7	4.7	4.3	3.9	3.4	2.6	2.1	3.4	5.6	7.7	8.6
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)