

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: P196117

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196117
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-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1050mA 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: 5305 lumens
Efficiency: N/A
Efficacy: 89.9 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

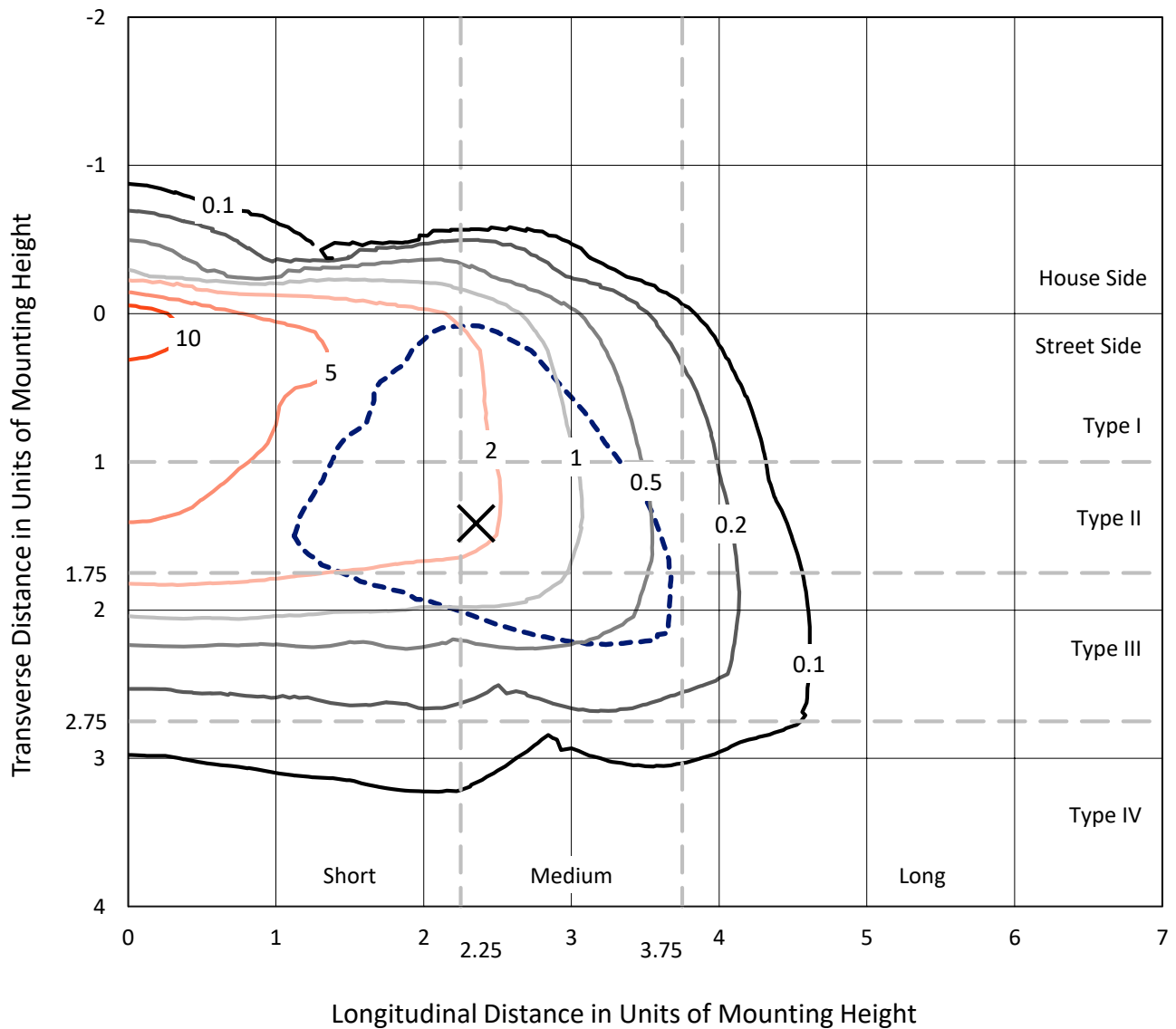
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196117
 CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-HSS

Iso-Footcandle Lines of Horizontal Illumination

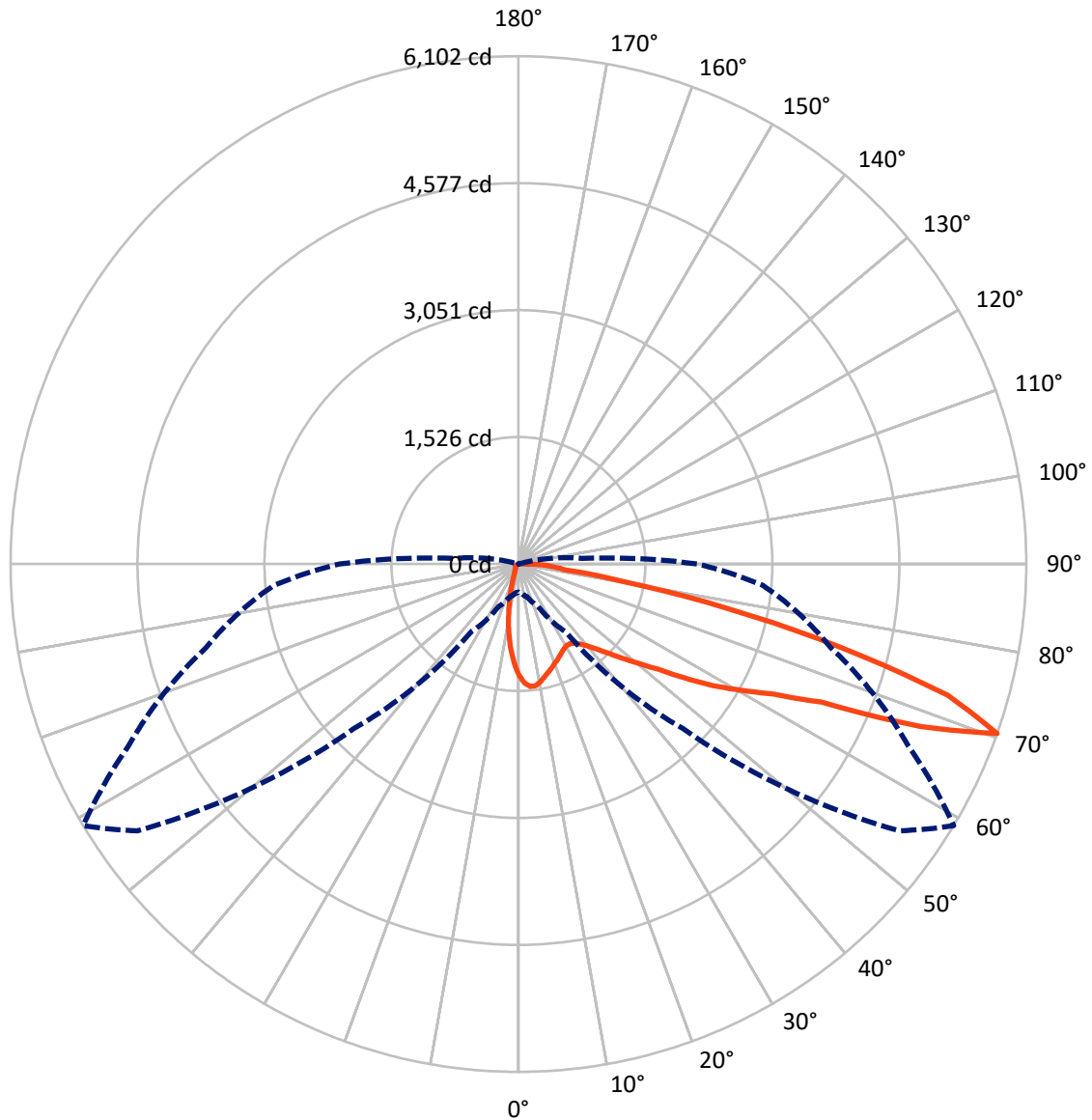
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.3 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196117
CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196117

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-HSS

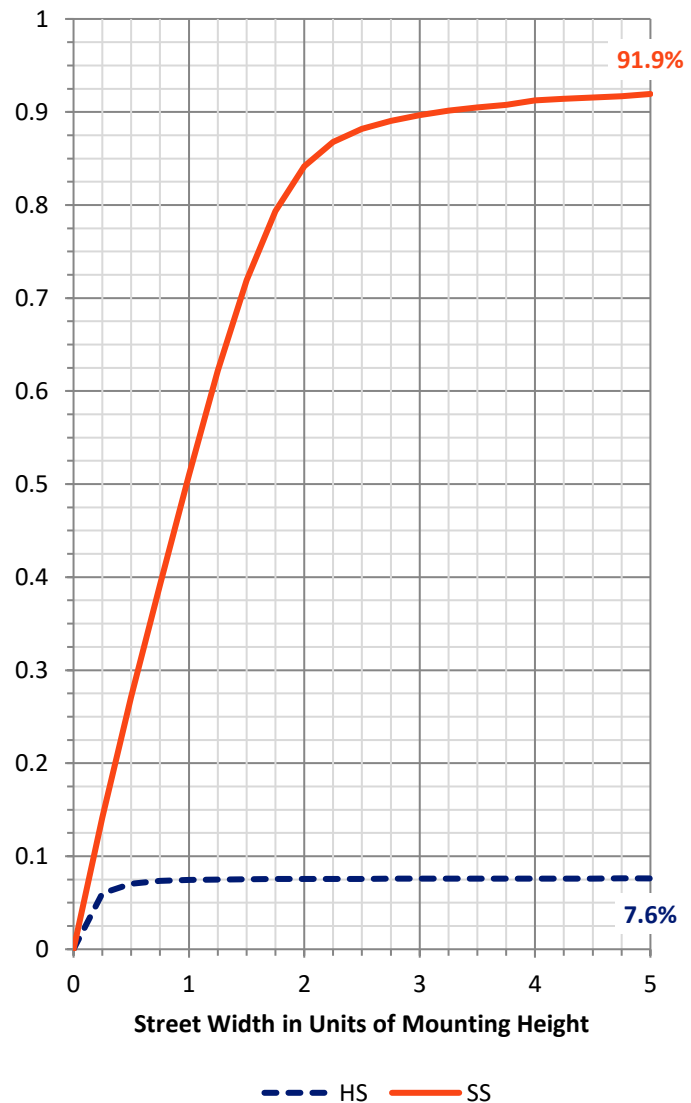
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	407.8	0.0	407.8
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	4897.2	0.0	4897.2
	% Fixture	92.3	0.0	92.3
Total	Lumens	5305.0	0.0	5305.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.3	2.1
10°-20°	231.4	4.4
20°-30°	313.2	5.9
30°-40°	452.0	8.5
40°-50°	750.6	14.1
50°-60°	1148.2	21.6
60°-70°	1428.1	26.9
70°-80°	789.4	14.9
80°-90°	81.9	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°	5305.0	100.0
0°-180°	5305.0	100.0



REPORT NUMBER: P196117

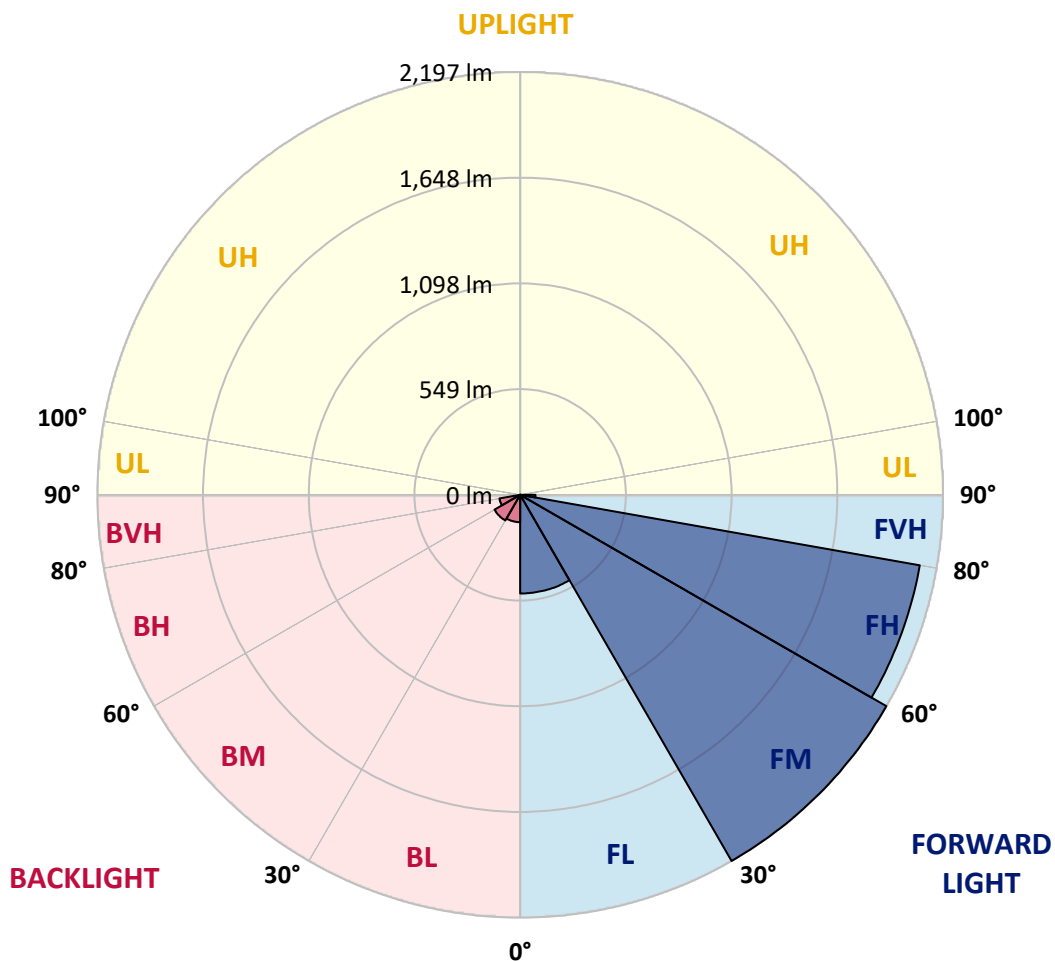
CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	512.7	9.7			
FM	(30°-60°)	2196.9	41.4			
FH	(60°-80°)	2108.1	39.7			G2/5000
FVH	(80°-90°)	79.5	1.5			G1/100
BL	(0°-30°)	142.1	2.7	B1/500		
BM	(30°-60°)	153.9	2.9	B0/220		
BH	(60°-80°)	109.4	2.1	B0/110		G0/110
BVH	(80°-90°)	2.4	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





REPORT NUMBER: P196117

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1516.3	1514.0	1503.9	1501.9	1490.7	1468.3	1442.3	1431.9	1410.6	1377.1	1339.9
5°	1541.6	1542.7	1543.5	1539.1	1537.5	1519.2	1490.3	1478.0	1449.5	1394.3	1326.3
7.5°	1447.1	1450.3	1460.3	1464.7	1483.9	1491.2	1485.1	1477.1	1454.7	1389.5	1293.8
10°	1347.4	1353.5	1364.3	1371.5	1395.1	1414.3	1438.7	1440.7	1435.9	1373.4	1257.4
12.5°	1261.8	1267.4	1279.4	1293.8	1317.9	1342.6	1379.0	1391.8	1407.9	1363.1	1231.4
15°	1188.2	1189.8	1201.4	1219.4	1251.0	1285.0	1328.2	1347.0	1378.2	1359.1	1211.4
17.5°	1123.7	1124.1	1131.8	1148.2	1186.6	1231.4	1281.9	1306.6	1346.2	1353.5	1193.8
20°	1081.4	1081.0	1081.4	1090.2	1124.1	1177.4	1238.6	1264.6	1315.4	1346.6	1175.8
22.5°	1066.9	1064.9	1055.7	1052.5	1074.1	1120.9	1194.2	1228.2	1287.8	1344.7	1162.6
25°	1084.5	1083.3	1063.7	1045.4	1047.3	1076.6	1149.0	1190.6	1266.2	1351.8	1159.3
27.5°	1141.3	1139.0	1109.0	1072.9	1050.1	1055.3	1115.3	1159.0	1249.0	1369.4	1163.8
30°	1215.8	1216.2	1184.2	1140.6	1086.9	1057.3	1097.3	1138.5	1237.4	1395.9	1173.3
32.5°	1298.6	1298.2	1275.4	1225.0	1156.5	1094.1	1105.3	1140.2	1239.0	1434.7	1191.7
35°	1384.3	1379.9	1372.3	1327.9	1247.8	1158.6	1141.7	1167.4	1255.8	1485.9	1223.0
37.5°	1483.1	1481.5	1489.1	1442.3	1360.6	1253.4	1205.8	1223.0	1298.2	1561.5	1273.4
40°	1640.4	1631.6	1635.2	1571.6	1487.9	1381.1	1295.5	1299.9	1365.8	1661.6	1353.1
42.5°	1940.1	1904.5	1837.7	1718.5	1628.0	1522.8	1412.7	1405.1	1461.5	1782.9	1457.9
45°	2298.3	2257.4	2089.0	1880.5	1768.1	1674.8	1557.5	1537.2	1579.1	1927.3	1593.1
47.5°	2597.3	2553.3	2330.0	2049.8	1910.6	1831.7	1718.0	1694.0	1720.0	2095.0	1755.7
50°	2699.3	2674.9	2478.8	2190.6	2054.2	2007.7	1919.4	1879.3	1885.7	2275.9	1945.3
52.5°	2652.5	2644.1	2512.8	2287.1	2187.1	2202.3	2139.8	2097.8	2090.6	2473.6	2155.1
55°	2553.6	2549.6	2485.6	2340.7	2304.3	2380.3	2449.1	2412.7	2344.7	2683.7	2328.3
57.5°	2412.3	2427.6	2473.6	2444.0	2448.4	2568.4	2736.5	2755.3	2653.6	2851.0	2456.8
60°	2035.0	2075.8	2286.7	2554.8	2760.1	2881.3	3044.3	3079.5	2915.4	2965.4	2605.3
62.5°	1504.4	1562.8	1863.3	2356.0	2931.8	3476.5	3453.7	3438.0	3165.1	3118.7	2875.4
65°	883.6	952.1	1206.2	1840.9	2672.9	3859.1	4218.0	4002.0	3545.8	3437.2	3305.6
67.5°	440.2	440.6	555.5	971.7	1975.3	3592.1	5333.8	5209.0	4354.9	3906.6	3475.3
70°	338.6	347.8	411.0	564.7	998.9	2797.8	5589.5	6102.1	5168.2	3885.9	2948.7
72.5°	286.9	293.0	365.8	491.4	746.8	1536.0	4838.8	5393.8	4931.5	3283.2	2173.5
75°	206.5	211.3	323.8	445.8	687.5	762.0	3319.2	4000.4	3700.2	2309.5	1196.1
77.5°	51.2	50.8	112.8	361.8	615.1	634.7	1904.5	2565.3	2123.0	945.6	307.4
80°	22.8	22.0	25.6	76.0	572.2	599.0	837.6	1295.5	814.4	153.2	94.0
82.5°	16.0	15.2	16.0	28.0	191.3	555.9	506.3	561.5	298.2	52.4	40.0
85°	5.2	4.8	8.8	23.6	53.6	320.6	493.9	419.4	221.7	22.4	26.8
87.5°	0.8	0.8	3.2	12.8	15.7	106.9	289.7	290.5	99.6	13.2	12.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196117

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1321.0	1297.4	1264.2	1231.0	1200.9	1170.2	1145.4	1133.7	1128.5	1121.4	1105.7
5°	1290.7	1247.8	1175.0	1103.4	1036.5	972.5	917.7	886.4	852.8	851.2	834.8
7.5°	1241.8	1181.0	1066.1	954.8	852.8	755.1	671.2	616.7	579.5	556.3	540.2
10°	1187.3	1109.3	957.3	800.8	662.0	531.4	423.4	353.0	310.2	288.6	276.1
12.5°	1144.2	1046.1	850.0	653.2	479.0	329.4	228.9	177.7	154.9	146.1	142.1
15°	1106.9	988.1	749.5	521.1	319.8	189.2	132.5	115.7	112.0	112.0	111.6
17.5°	1069.3	932.0	651.9	391.4	201.3	124.1	104.4	102.1	102.5	103.6	103.6
20°	1033.7	878.8	557.9	279.0	132.1	99.2	94.8	94.0	95.2	96.9	96.5
22.5°	1004.8	832.0	469.8	191.7	101.7	90.0	87.3	86.0	86.8	88.1	87.7
25°	984.5	792.0	389.0	133.7	88.5	82.0	78.9	77.2	76.4	77.2	76.8
27.5°	972.1	758.4	312.9	100.5	79.3	74.1	70.1	66.8	64.9	64.9	64.0
30°	964.0	726.7	245.3	83.3	71.6	66.1	60.5	56.1	52.8	52.1	51.7
32.5°	963.6	699.5	183.3	73.7	64.4	58.0	51.2	45.6	42.0	41.2	40.8
35°	973.6	677.5	134.8	66.4	58.0	50.4	42.9	36.8	33.7	33.7	33.2
37.5°	999.7	664.7	102.1	60.9	52.8	44.0	36.0	30.4	27.6	28.4	28.4
40°	1048.1	662.4	83.3	56.5	48.4	38.5	29.3	24.9	23.6	24.9	24.9
42.5°	1122.2	675.1	74.1	53.2	44.4	32.8	24.4	21.2	20.8	22.0	22.0
45°	1218.5	700.3	68.8	50.4	40.0	27.2	20.5	18.4	18.0	19.6	19.6
47.5°	1335.5	734.4	64.0	47.3	35.6	22.4	17.2	15.7	15.7	17.2	17.6
50°	1473.9	780.4	59.2	44.0	32.0	18.8	14.4	13.2	13.6	15.2	15.7
52.5°	1633.1	836.8	54.8	41.2	28.0	15.2	12.0	11.3	11.6	13.2	13.6
55°	1770.4	886.1	49.6	38.5	22.8	12.4	10.0	9.6	10.0	12.0	12.0
57.5°	1890.1	933.2	44.8	34.1	18.0	10.0	8.0	8.0	8.8	10.8	11.3
60°	2049.0	1007.7	40.8	28.8	13.6	7.6	6.4	6.9	8.0	9.6	10.0
62.5°	2330.3	1134.1	35.6	24.0	10.0	6.0	5.2	5.6	7.2	9.2	9.6
65°	2682.5	1253.8	29.6	20.0	7.6	4.4	4.0	5.2	7.2	9.2	9.6
67.5°	2646.5	1090.6	23.2	16.0	5.6	3.6	3.2	4.8	6.9	9.2	9.6
70°	2146.3	764.3	17.2	10.8	4.4	3.2	3.2	4.8	6.9	8.8	9.2
72.5°	1488.7	425.4	13.2	7.2	4.0	3.2	2.8	4.4	6.4	8.8	9.2
75°	708.4	130.4	10.4	5.2	3.6	2.8	2.4	4.4	6.4	8.8	9.2
77.5°	136.1	33.2	8.4	4.4	3.2	2.8	2.4	4.0	6.4	8.4	8.8
80°	46.0	14.8	6.9	4.0	3.2	2.8	2.4	4.0	6.0	8.0	8.4
82.5°	25.2	8.4	6.0	3.6	3.2	2.4	2.0	3.6	5.6	8.0	8.4
85°	19.6	6.0	4.8	3.6	3.2	2.4	2.0	3.6	5.6	7.6	8.0
87.5°	10.0	4.4	4.0	3.6	3.2	2.4	2.0	3.2	5.2	7.2	8.0
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)