

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: P459863

Luminaire Tested: **NAV-SA4A-AMB-U-SL4**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459863
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-18)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4A-AMB-U-SL4
Description: NAVION AREA AND ROADWAY LUMINAIRE
(4) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3889 lumens
Efficiency: N/A
Efficacy: 48.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 79.9
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: 28.75 FT

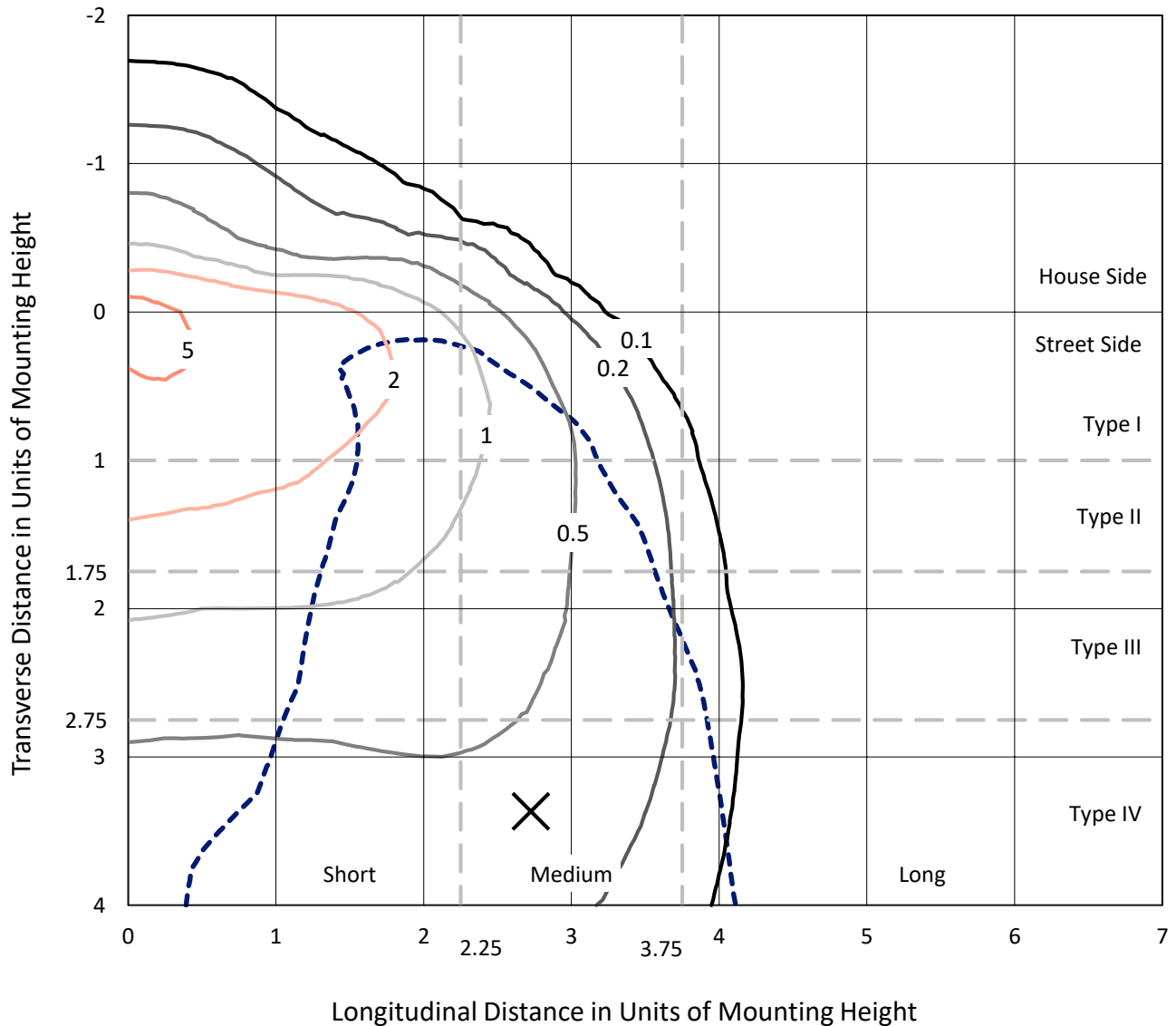


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

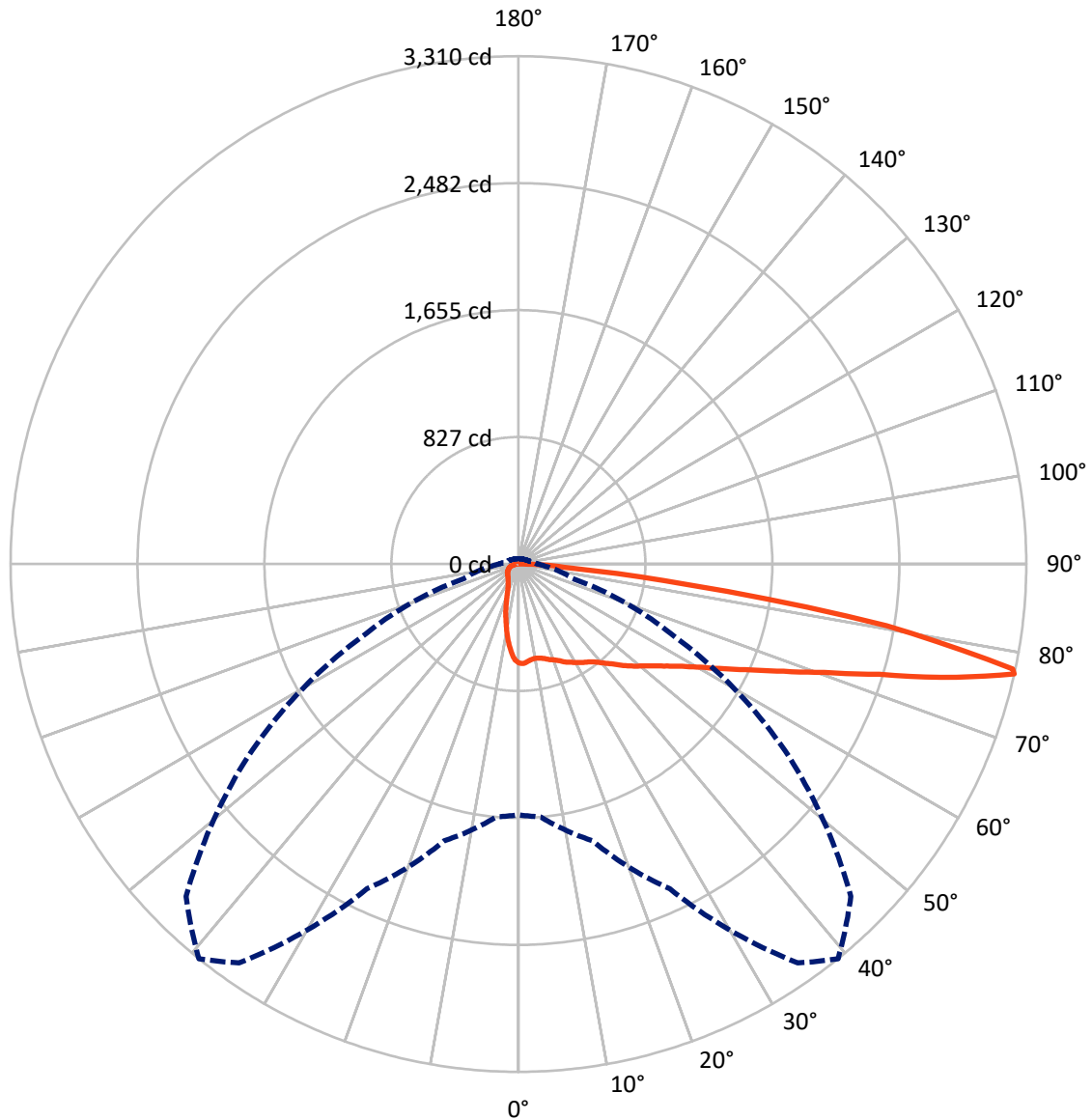


Based on 10 foot mounting height. Maximum calculated value = 6.5 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 77-Deg Vertical

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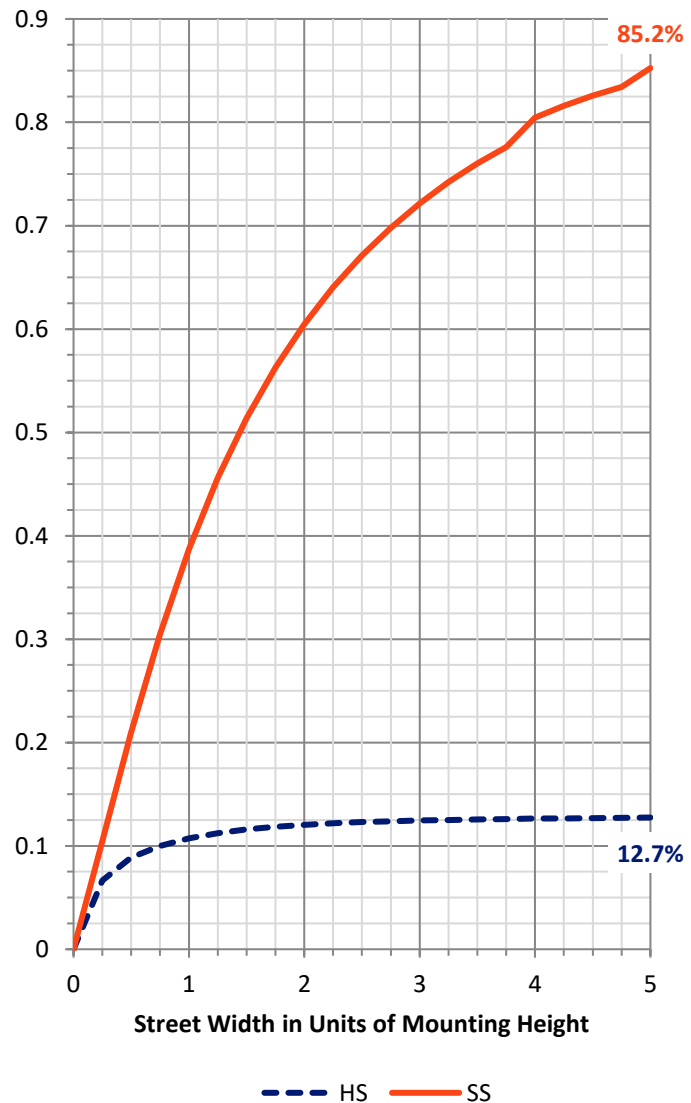
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	501.8	0.0	501.8
	% Fixture	12.9	0.0	12.9
Street Side	Lumens	3387.2	0.0	3387.2
	% Fixture	87.1	0.0	87.1
Total	Lumens	3889.0	0.0	3889.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.4	1.5
10°-20°	141.6	3.6
20°-30°	216.4	5.6
30°-40°	311.2	8.0
40°-50°	451.8	11.6
50°-60°	648.5	16.7
60°-70°	893.2	23.0
70°-80°	963.7	24.8
80°-90°	206.2	5.3
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°	3889.0	100.0
0°-180°	3889.0	100.0

Coefficient of Utilization



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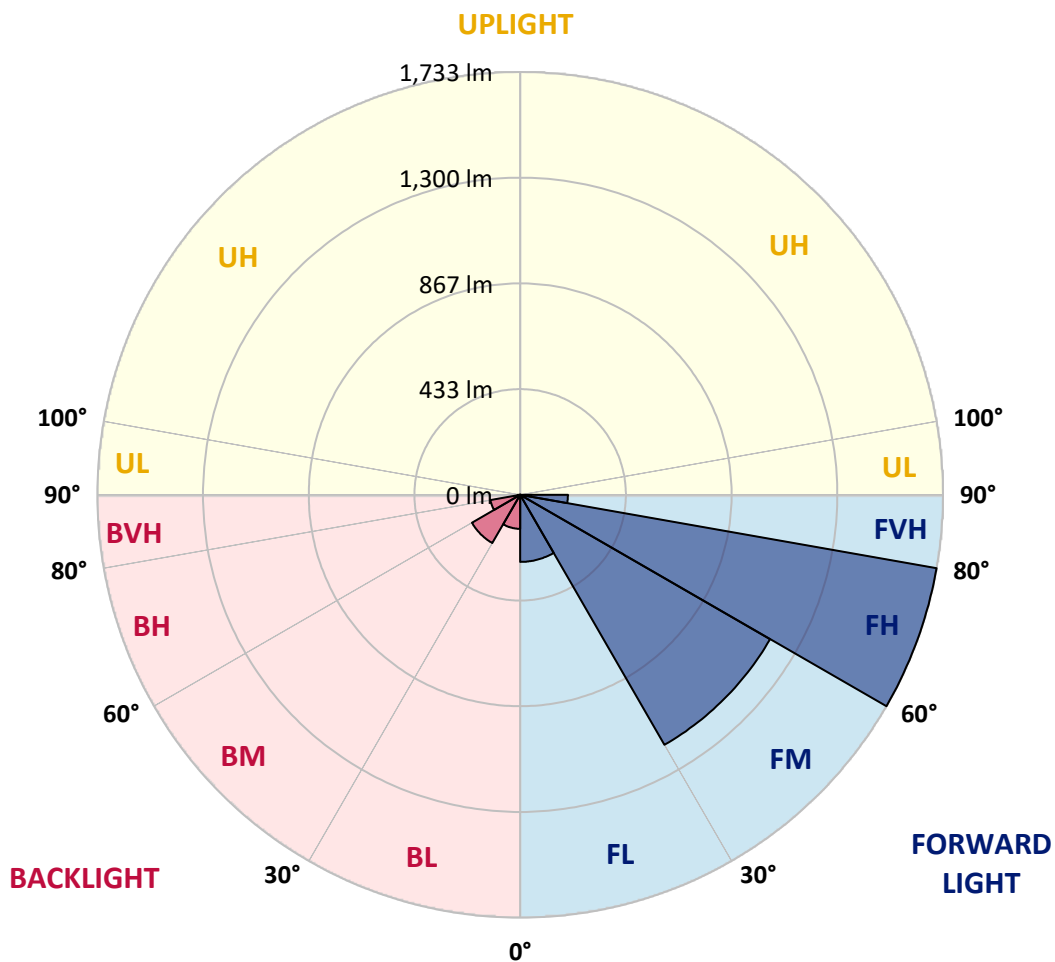
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	275.1	7.1			
FM (30°-60°)	1183.1	30.4			
FH (60°-80°)	1733.3	44.6			G1/1800
FVH (80°-90°)	195.8	5.0			G2/225
BL (0°-30°)	139.4	3.6	B1/500		
BM (30°-60°)	228.4	5.9	B1/1000		
BH (60°-80°)	123.6	3.2	B1/500		G1/500
BVH (80°-90°)	10.4	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 IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3
2.5°	653.2	648.0	648.0	653.2	649.8	649.8	646.3	649.8	646.3	642.8	646.3
5°	644.5	641.0	639.3	644.5	641.0	637.5	641.0	639.3	637.5	630.5	630.5
7.5°	628.8	625.3	625.3	630.5	632.3	627.0	628.8	630.5	625.3	618.3	620.1
10°	614.8	613.1	616.6	623.6	627.0	623.6	627.0	625.3	618.3	611.3	609.6
12.5°	604.3	602.6	607.8	621.8	628.8	628.8	630.5	625.3	620.1	611.3	604.3
15°	597.4	597.4	607.8	625.3	635.8	639.3	641.0	637.5	625.3	613.1	604.3
17.5°	600.8	599.1	613.1	634.0	646.3	655.0	655.0	649.8	634.0	618.3	607.8
20°	609.6	606.1	623.6	649.8	665.5	667.2	670.7	660.2	644.5	627.0	614.8
22.5°	613.1	621.8	641.0	670.7	679.4	684.7	684.7	674.2	651.5	639.3	625.3
25°	641.0	642.8	665.5	691.7	700.4	707.4	703.9	681.2	662.0	655.0	642.8
27.5°	670.7	672.5	695.2	714.4	719.6	724.9	726.6	695.2	676.0	674.2	658.5
30°	696.9	703.9	726.6	740.6	740.6	745.8	744.1	716.1	695.2	698.7	682.9
32.5°	742.3	740.6	763.3	765.0	756.3	765.0	765.0	733.6	719.6	735.3	710.9
35°	780.8	787.7	798.2	789.5	777.3	784.2	787.7	758.0	751.1	782.5	756.3
37.5°	833.2	827.9	833.2	817.4	800.0	808.7	817.4	791.2	794.7	840.1	807.0
40°	873.3	864.6	868.1	847.1	829.7	847.1	855.9	831.4	847.1	920.5	880.3
42.5°	906.5	899.5	892.5	880.3	866.3	889.0	903.0	883.8	917.0	1009.6	971.1
45°	929.2	924.0	913.5	911.8	913.5	941.4	958.9	943.2	988.6	1121.4	1072.4
47.5°	943.2	938.0	939.7	943.2	957.2	993.8	1025.3	1009.6	1082.9	1238.4	1168.5
50°	962.4	953.7	955.4	985.1	1006.1	1044.5	1095.2	1088.2	1184.2	1362.4	1273.3
52.5°	986.9	972.9	972.9	1025.3	1058.5	1102.1	1166.8	1175.5	1289.0	1489.9	1379.9
55°	1027.0	1009.6	997.3	1069.0	1126.6	1173.8	1248.9	1287.3	1402.6	1622.6	1477.7
57.5°	1070.7	1053.2	1034.0	1124.8	1201.7	1257.6	1343.2	1399.1	1531.8	1741.4	1547.5
60°	1138.8	1107.4	1088.2	1196.5	1306.5	1364.1	1468.9	1540.6	1668.1	1849.7	1610.4
62.5°	1187.7	1163.3	1158.0	1287.3	1435.8	1502.1	1601.7	1676.8	1793.8	1954.5	1664.6
65°	1238.4	1224.4	1226.2	1385.1	1589.5	1662.8	1771.1	1851.5	1956.3	2050.6	1669.8
67.5°	1310.0	1296.0	1325.7	1503.9	1767.6	1863.7	1973.7	2043.6	2110.0	2066.3	1575.5
70°	1404.3	1386.8	1441.0	1647.1	1989.4	2113.5	2239.2	2314.3	2185.1	2012.1	1273.3
72.5°	1502.1	1489.9	1579.0	1851.5	2300.3	2459.3	2602.5	2560.6	2221.7	1725.7	829.7
75°	1620.9	1624.4	1767.6	2115.2	2796.4	2948.4	3068.9	2654.9	1875.9	1020.0	316.1
77°	1634.9	1654.1	1867.2	2335.3	3173.7	3309.9	3063.6	2120.4	1128.3	365.1	178.2
77.5°	1577.2	1594.7	1844.5	2366.7	3219.1	3294.2	2967.6	1980.7	904.8	293.4	157.2
80°	1175.5	1158.0	1430.5	1973.7	2586.8	2433.1	1776.3	768.5	263.7	152.0	96.1
82.5°	464.6	496.1	669.0	972.9	1264.6	1110.9	665.5	335.4	158.9	82.1	40.2
85°	214.8	230.6	251.5	258.5	326.6	337.1	249.8	310.9	115.3	38.4	24.5
87.5°	157.2	164.2	185.1	164.2	158.9	150.2	183.4	338.9	57.6	22.7	12.2
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°	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3	646.3
2.5°	641.0	635.8	637.5	635.8	632.3	628.8	625.3	621.8	623.6	623.6	618.3
5°	627.0	620.1	616.6	607.8	597.4	586.9	574.6	565.9	558.9	555.4	558.9
7.5°	613.1	604.3	597.4	576.4	558.9	529.2	510.0	483.8	480.3	476.8	473.3
10°	602.6	595.6	578.1	550.2	513.5	478.6	434.9	407.0	389.5	379.0	382.5
12.5°	595.6	586.9	558.9	515.3	468.1	415.7	366.8	330.1	309.2	295.2	291.7
15°	593.9	578.1	538.0	480.3	417.5	358.1	309.2	265.5	232.3	221.8	218.3
17.5°	593.9	572.9	518.8	443.7	370.3	303.9	249.8	209.6	181.7	171.2	167.7
20°	597.4	571.2	496.1	407.0	323.1	249.8	202.6	169.4	153.7	146.7	146.7
22.5°	602.6	569.4	471.6	366.8	277.7	209.6	167.7	148.5	141.5	136.2	136.2
25°	613.1	567.7	450.6	330.1	237.5	179.9	150.2	138.0	131.0	129.3	129.3
27.5°	627.0	569.4	429.7	295.2	200.9	158.9	138.0	131.0	127.5	125.8	125.8
30°	641.0	572.9	407.0	256.8	174.7	143.2	129.3	124.0	122.3	120.5	120.5
32.5°	656.7	576.4	380.8	225.3	155.5	131.0	122.3	118.8	118.8	117.0	115.3
35°	682.9	583.4	351.1	195.6	139.7	122.3	117.0	113.5	113.5	111.8	111.8
37.5°	719.6	592.1	321.4	174.7	129.3	115.3	110.0	110.0	108.3	108.3	106.5
40°	773.8	616.6	296.9	157.2	120.5	110.0	106.5	104.8	104.8	103.1	103.1
42.5°	834.9	646.3	274.2	145.0	115.3	104.8	101.3	101.3	101.3	99.6	97.8
45°	906.5	674.2	253.3	136.2	110.0	101.3	97.8	97.8	96.1	94.3	94.3
47.5°	983.4	709.1	239.3	131.0	108.3	99.6	96.1	92.6	92.6	90.8	90.8
50°	1060.2	738.8	227.1	127.5	106.5	96.1	92.6	90.8	89.1	85.6	85.6
52.5°	1133.6	770.3	223.6	124.0	103.1	94.3	89.1	87.3	85.6	82.1	82.1
55°	1196.5	807.0	227.1	122.3	101.3	90.8	85.6	83.8	82.1	78.6	78.6
57.5°	1241.9	826.2	228.8	122.3	99.6	85.6	80.3	82.1	78.6	76.9	76.9
60°	1289.0	843.6	227.1	122.3	97.8	80.3	75.1	78.6	76.9	75.1	75.1
62.5°	1320.5	836.6	218.3	122.3	96.1	76.9	71.6	76.9	78.6	75.1	76.9
65°	1275.1	758.0	192.1	118.8	96.1	73.4	66.4	75.1	80.3	78.6	78.6
67.5°	1110.9	572.9	160.7	111.8	92.6	71.6	61.1	68.1	75.1	73.4	75.1
70°	787.7	345.8	132.7	99.6	83.8	68.1	57.6	57.6	59.4	61.1	62.9
72.5°	408.7	188.6	108.3	87.3	73.4	61.1	52.4	48.9	48.9	48.9	50.7
75°	179.9	124.0	89.1	71.6	61.1	52.4	47.2	41.9	41.9	40.2	40.2
77°	125.8	97.8	73.4	59.4	50.7	43.7	41.9	36.7	36.7	34.9	34.9
77.5°	113.5	90.8	71.6	55.9	48.9	41.9	40.2	34.9	34.9	34.9	34.9
80°	76.9	71.6	54.1	41.9	38.4	33.2	31.4	29.7	27.9	27.9	27.9
82.5°	45.4	52.4	38.4	29.7	27.9	24.5	22.7	22.7	22.7	21.0	19.2
85°	27.9	38.4	24.5	19.2	19.2	15.7	15.7	14.0	14.0	12.2	12.2
87.5°	12.2	24.5	14.0	8.7	7.0	5.2	7.0	5.2	5.2	3.5	5.2
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)