

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: P459860

Luminaire Tested: **NAV-SA4A-AMB-U-SL3-HSS**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-7)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4A-AMB-U-SL3-HSS
Description: NAVION AREA AND ROADWAY LUMINAIRE
(4) NARROW BAND AMBER, 500mA LIGHTSQUARES 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: 3241 lumens
Efficiency: N/A
Efficacy: 40.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

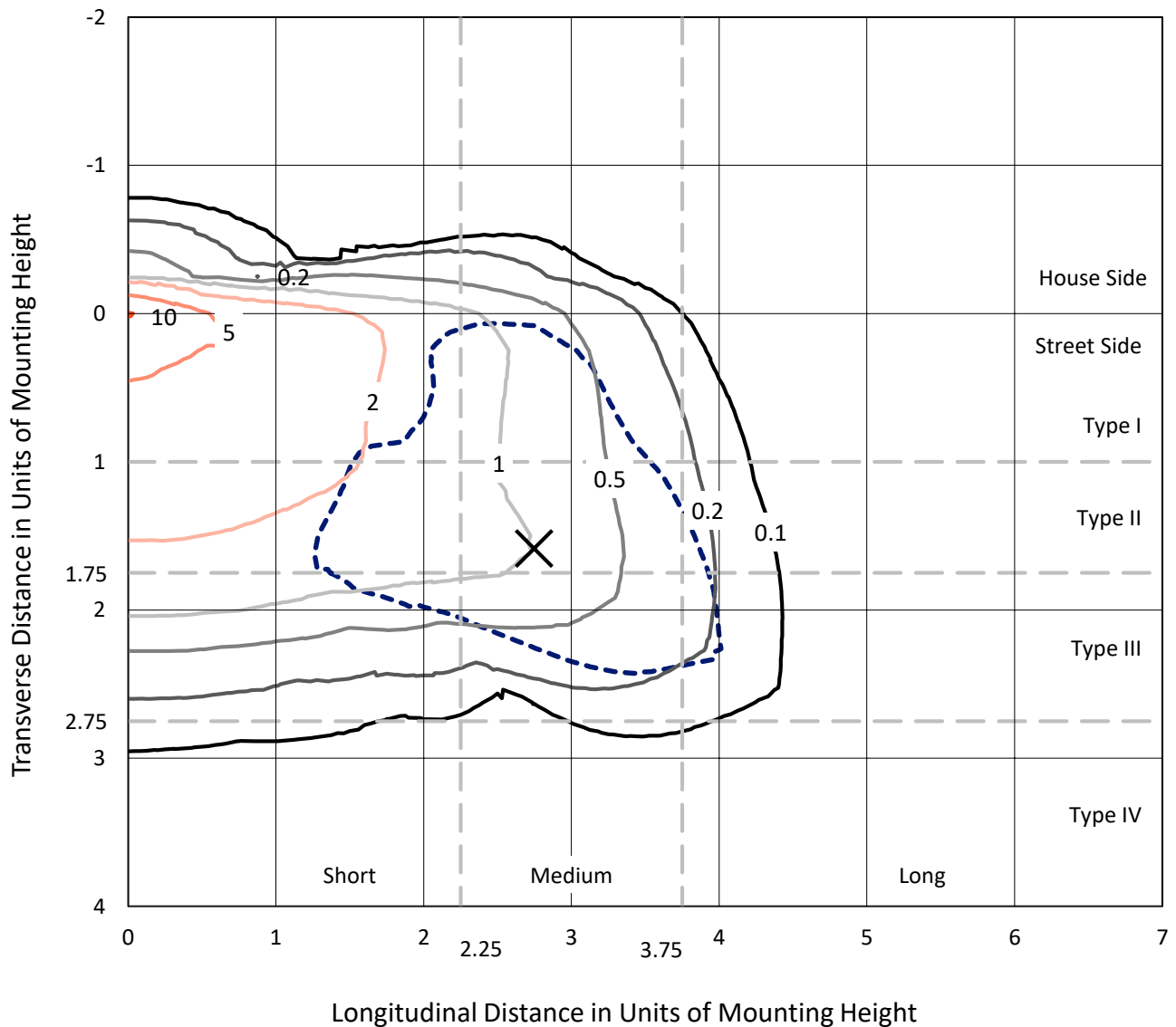
Input Watts (W): 79.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

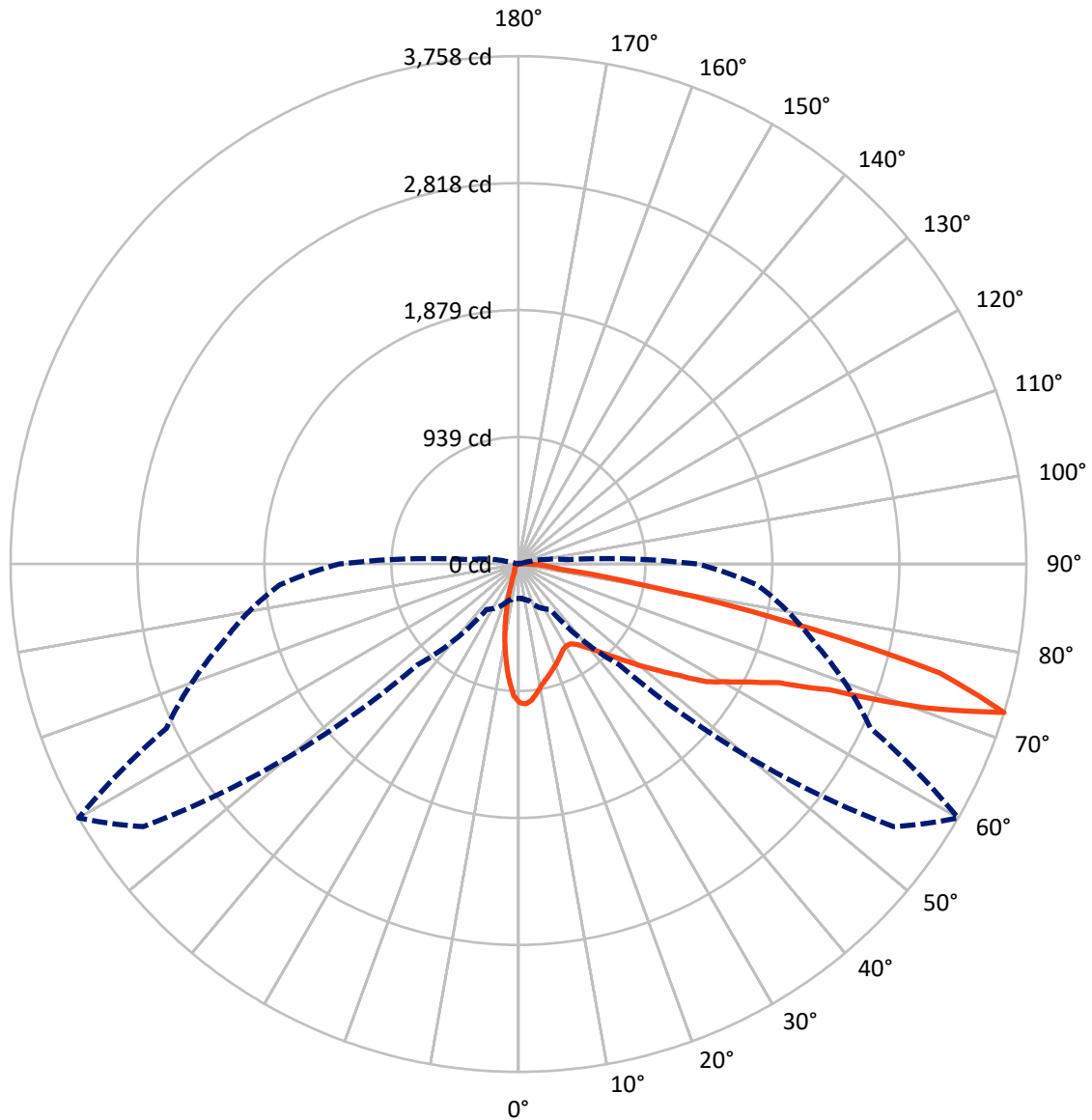
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical



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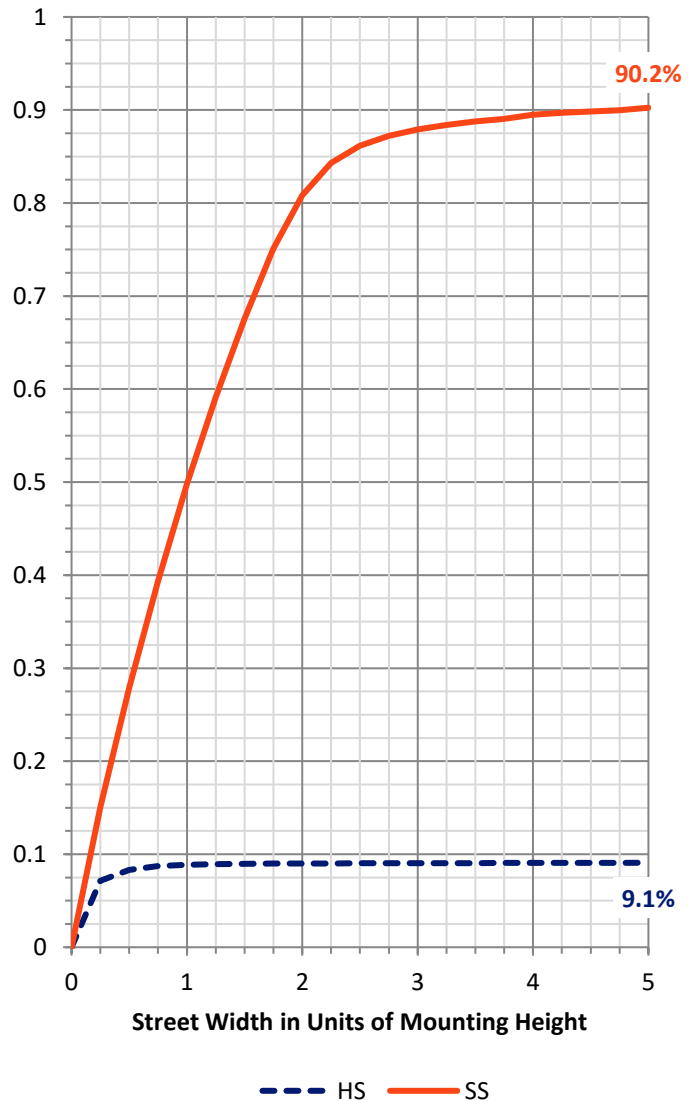
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	297.5	0.0	297.5
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2943.5	0.0	2943.5
	% Fixture	90.8	0.0	90.8
Total	Lumens	3241.0	0.0	3241.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.7	2.5
10°-20°	155.8	4.8
20°-30°	204.4	6.3
30°-40°	275.6	8.5
40°-50°	410.3	12.7
50°-60°	636.6	19.6
60°-70°	873.1	26.9
70°-80°	550.4	17.0
80°-90°	55.1	1.7
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°	3241.0	100.0
0°-180°	3241.0	100.0

Coefficient of Utilization



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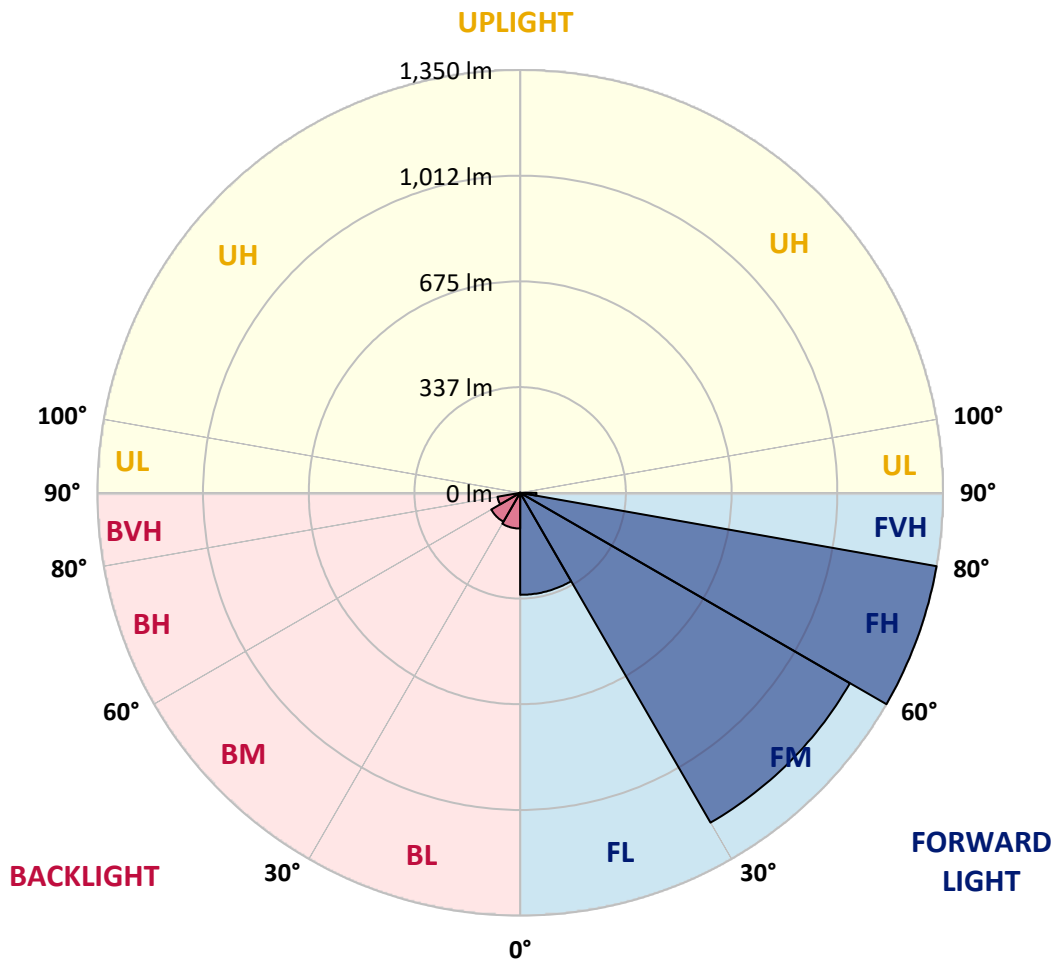
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	325.7	10.0			
FM	(30°-60°)	1215.7	37.5			
FH	(60°-80°)	1349.9	41.7			G1/1800
FVH	(80°-90°)	52.1	1.6			G1/100
BL	(0°-30°)	114.1	3.5	B1/500		
BM	(30°-60°)	106.8	3.3	B0/220		
BH	(60°-80°)	73.6	2.3	B0/110		G0/110
BVH	(80°-90°)	3.0	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9
2.5°	1042.4	1040.6	1040.6	1042.4	1044.1	1038.9	1038.9	1037.1	1031.9	1030.2	1019.7
5°	976.0	981.3	981.3	988.3	995.2	998.7	1012.7	1012.7	1011.0	1011.0	995.2
7.5°	895.7	895.7	907.9	920.2	937.6	942.9	958.6	965.6	969.0	977.8	963.8
10°	824.1	829.4	831.1	848.6	864.3	883.5	909.7	918.4	927.1	944.6	930.6
12.5°	770.0	773.5	778.7	794.4	813.6	834.6	866.0	881.7	890.5	914.9	904.4
15°	714.1	717.6	728.1	742.1	768.3	794.4	829.4	850.3	866.0	894.0	885.2
17.5°	677.5	679.2	681.0	693.2	719.4	754.3	797.9	818.9	839.8	874.8	871.3
20°	660.0	661.7	660.0	667.0	682.7	712.4	764.8	792.7	815.4	866.0	860.8
22.5°	654.8	656.5	653.0	651.3	658.3	684.4	731.6	763.0	794.4	864.3	857.3
25°	658.3	658.3	653.0	647.8	647.8	661.7	701.9	735.1	773.5	867.8	853.8
27.5°	672.2	670.5	665.2	654.8	646.0	651.3	682.7	712.4	754.3	873.0	853.8
30°	689.7	687.9	686.2	677.5	661.7	651.3	674.0	701.9	743.8	885.2	855.6
32.5°	708.9	710.6	710.6	703.6	686.2	663.5	679.2	705.4	745.6	902.7	860.8
35°	743.8	740.3	745.6	742.1	722.9	693.2	705.4	728.1	763.0	921.9	873.0
37.5°	777.0	777.0	784.0	785.7	768.3	731.6	747.3	770.0	791.0	953.3	895.7
40°	815.4	813.6	824.1	834.6	820.6	789.2	804.9	824.1	843.3	1000.5	934.1
42.5°	846.8	850.3	866.0	883.5	888.7	845.1	871.3	892.2	901.0	1052.9	991.7
45°	876.5	881.7	911.4	939.4	956.8	921.9	951.6	974.3	983.0	1119.2	1061.6
47.5°	907.9	914.9	951.6	995.2	1026.7	1009.2	1042.4	1070.3	1075.6	1201.3	1166.3
50°	941.1	948.1	990.0	1049.4	1101.7	1112.2	1154.1	1187.3	1182.1	1283.3	1272.9
52.5°	983.0	991.7	1049.4	1115.7	1187.3	1218.7	1283.3	1313.0	1297.3	1389.8	1370.6
55°	1093.0	1096.5	1136.7	1204.8	1278.1	1341.0	1435.2	1461.4	1421.3	1468.4	1470.2
57.5°	1279.8	1279.8	1288.6	1309.5	1377.6	1470.2	1620.3	1643.0	1567.9	1548.7	1557.5
60°	1391.6	1409.0	1445.7	1485.9	1517.3	1609.8	1767.0	1767.0	1660.5	1632.5	1636.0
62.5°	1363.6	1377.6	1485.9	1576.7	1718.1	1836.8	1925.9	1922.4	1765.2	1711.1	1735.6
65°	998.7	1023.2	1162.9	1447.5	1796.7	2151.1	2191.3	2114.4	1894.4	1829.8	1929.4
67.5°	536.0	555.2	672.2	927.1	1417.8	2365.9	2736.0	2484.6	2126.7	2072.5	2126.7
70°	352.7	349.2	357.9	455.7	775.2	1960.8	3465.9	3179.5	2512.5	2266.3	2128.4
72.5°	254.9	254.9	277.6	352.7	410.3	1052.9	3387.3	3757.5	2874.0	2271.6	1774.0
75°	171.1	174.6	211.3	284.6	382.4	345.7	2634.8	3219.7	2825.1	1705.9	925.4
77.5°	89.0	94.3	139.7	225.2	351.0	309.0	1475.4	1994.0	1660.5	784.0	206.0
80°	40.2	41.9	61.1	169.4	321.3	286.3	481.9	888.7	525.6	94.3	34.9
82.5°	19.2	19.2	26.2	83.8	265.4	246.2	296.8	316.0	124.0	29.7	24.4
85°	7.0	7.0	14.0	47.1	157.1	148.4	253.2	211.3	69.8	19.2	17.5
87.5°	3.5	3.5	5.2	14.0	41.9	120.5	174.6	139.7	29.7	7.0	7.0
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°	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9	1024.9
2.5°	1014.4	1009.2	995.2	983.0	967.3	946.3	942.9	921.9	904.4	902.7	897.5
5°	986.5	970.8	935.9	885.2	838.1	799.7	757.8	731.6	717.6	701.9	712.4
7.5°	948.1	921.9	852.1	773.5	696.7	630.3	565.7	518.6	499.4	471.4	476.7
10°	907.9	871.3	770.0	651.3	551.7	454.0	370.2	300.3	263.7	251.4	251.4
12.5°	880.0	827.6	686.2	537.8	406.8	281.1	204.3	148.4	111.7	99.5	99.5
15°	852.1	787.5	609.4	429.5	268.9	162.4	97.8	83.8	82.1	82.1	82.1
17.5°	827.6	740.3	529.0	328.3	176.3	90.8	80.3	78.6	76.8	76.8	76.8
20°	803.2	698.4	461.0	235.7	97.8	76.8	73.3	73.3	73.3	73.3	71.6
22.5°	780.5	661.7	387.6	162.4	75.1	69.8	68.1	68.1	68.1	66.3	66.3
25°	763.0	628.6	321.3	103.0	66.3	64.6	62.9	61.1	59.4	59.4	59.4
27.5°	745.6	597.1	251.4	71.6	61.1	57.6	55.9	54.1	50.6	50.6	48.9
30°	733.3	565.7	200.8	61.1	55.9	52.4	48.9	45.4	41.9	40.2	40.2
32.5°	726.3	541.3	150.2	55.9	50.6	45.4	41.9	38.4	34.9	31.4	31.4
35°	721.1	516.8	103.0	50.6	45.4	40.2	36.7	31.4	26.2	24.4	24.4
37.5°	729.8	499.4	69.8	47.1	41.9	36.7	29.7	26.2	22.7	21.0	21.0
40°	749.0	485.4	55.9	43.7	38.4	31.4	26.2	21.0	17.5	15.7	15.7
42.5°	782.2	480.2	48.9	41.9	34.9	27.9	21.0	17.5	15.7	14.0	14.0
45°	843.3	478.4	45.4	38.4	31.4	22.7	17.5	14.0	12.2	10.5	10.5
47.5°	911.4	481.9	43.7	36.7	27.9	21.0	15.7	12.2	10.5	8.7	8.7
50°	995.2	495.9	40.2	33.2	26.2	17.5	12.2	10.5	7.0	7.0	7.0
52.5°	1075.6	509.8	38.4	31.4	22.7	15.7	10.5	7.0	7.0	5.2	5.2
55°	1154.1	541.3	34.9	31.4	21.0	12.2	8.7	7.0	5.2	3.5	3.5
57.5°	1232.7	564.0	33.2	27.9	17.5	10.5	7.0	5.2	3.5	3.5	3.5
60°	1313.0	584.9	29.7	24.4	14.0	8.7	5.2	3.5	3.5	3.5	3.5
62.5°	1414.3	619.8	26.2	21.0	12.2	7.0	5.2	3.5	1.7	1.7	1.7
65°	1604.6	679.2	22.7	17.5	8.7	7.0	5.2	3.5	1.7	1.7	1.7
67.5°	1726.8	670.5	19.2	14.0	8.7	5.2	3.5	3.5	1.7	1.7	1.7
70°	1702.4	605.9	15.7	12.2	7.0	5.2	3.5	3.5	1.7	1.7	1.7
72.5°	1323.5	368.4	14.0	10.5	7.0	5.2	3.5	3.5	1.7	1.7	1.7
75°	604.1	82.1	12.2	8.7	5.2	5.2	3.5	3.5	1.7	1.7	1.7
77.5°	106.5	21.0	10.5	7.0	7.0	5.2	5.2	3.5	1.7	1.7	1.7
80°	27.9	14.0	10.5	7.0	7.0	8.7	7.0	5.2	1.7	1.7	1.7
82.5°	19.2	10.5	10.5	8.7	8.7	10.5	8.7	5.2	1.7	1.7	1.7
85°	14.0	8.7	10.5	10.5	7.0	8.7	8.7	5.2	1.7	1.7	1.7
87.5°	7.0	3.5	3.5	3.5	3.5	5.2	5.2	1.7	1.7	1.7	1.7
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)