

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: P459862

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

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459862
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-9)
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-HSS
Description: NAVION AREA AND ROADWAY LUMINAIRE
(4) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3126 lumens
Efficiency: N/A
Efficacy: 39.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G1

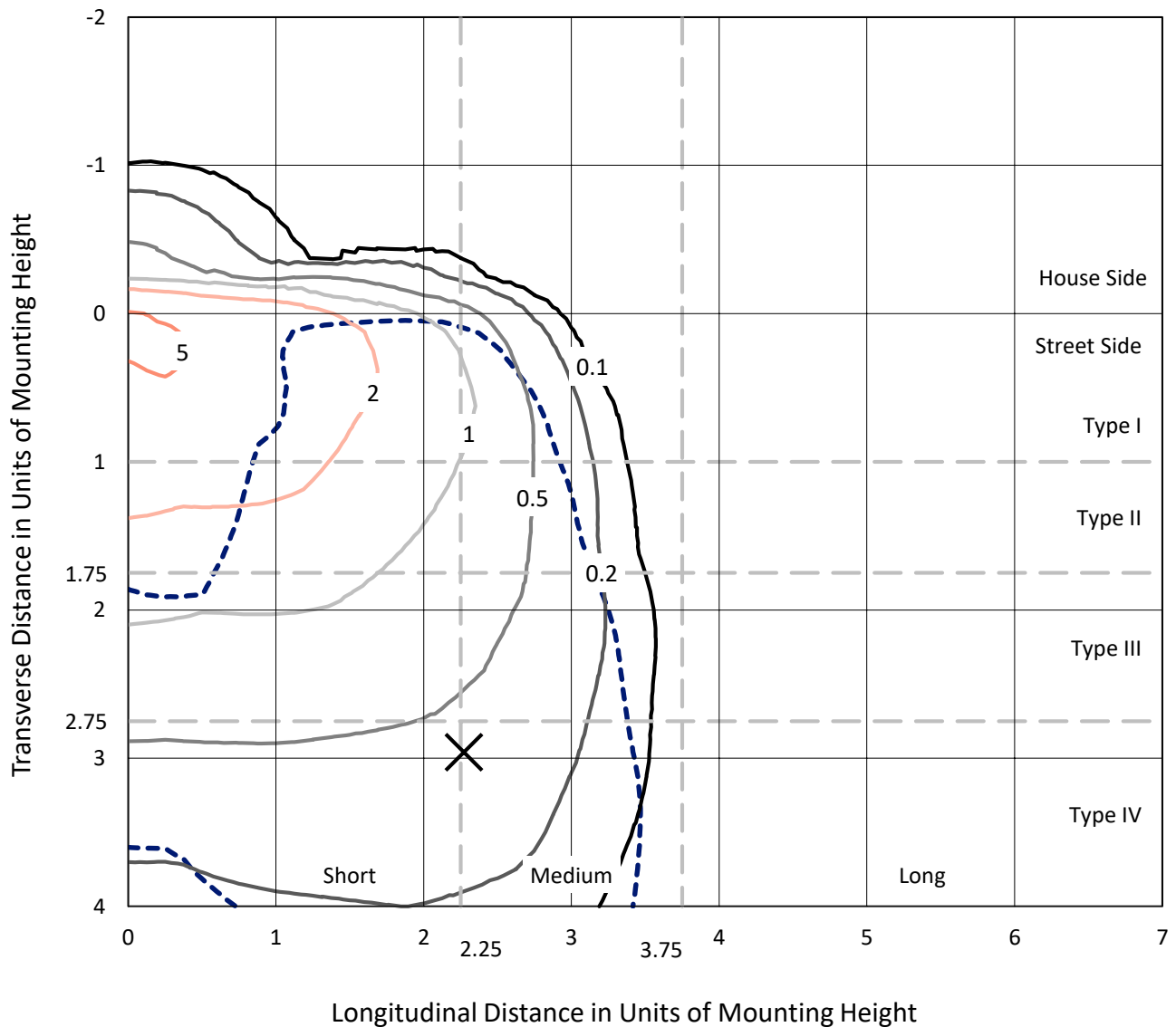
Input Watts (W): 79.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P459862
 CATALOG NUMBER: NAV-SA4A-AMB-U-SL4-HSS

Iso-Footcandle Lines of Horizontal Illumination

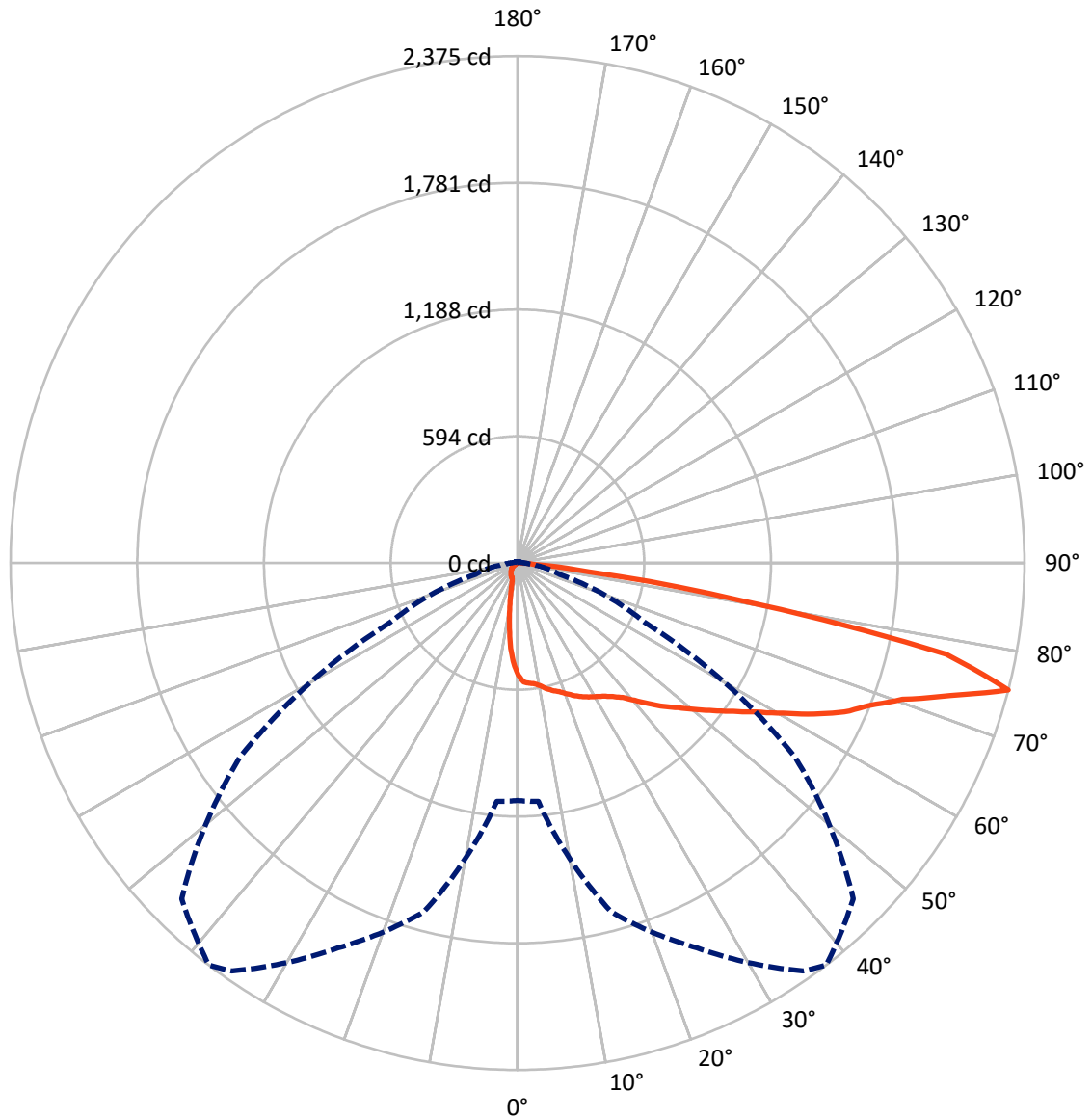
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P459862
CATALOG NUMBER: NAV-SA4A-AMB-U-SL4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 37.5-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical



REPORT NUMBER: P459862

CATALOG NUMBER: NAV-SA4A-AMB-U-SL4-HSS

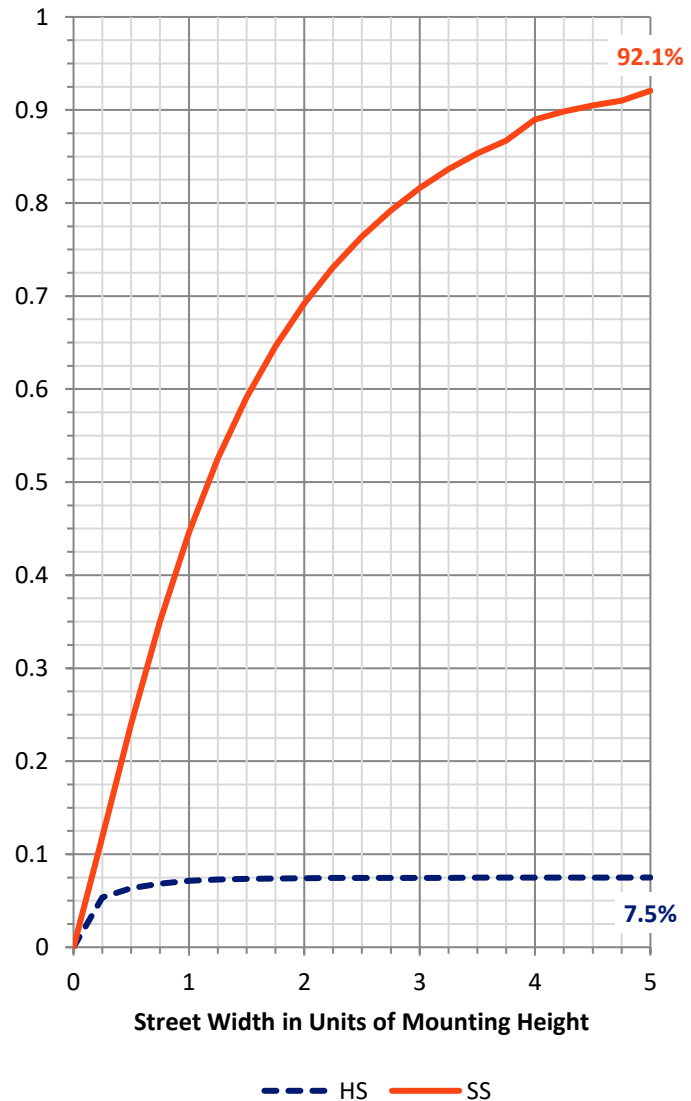
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	236.2	0.0	236.2
	% Fixture	7.6	0.0	7.6
Street Side	Lumens	2889.7	0.0	2889.7
	% Fixture	92.4	0.0	92.4
Total	Lumens	3126.0	0.0	3126.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.6	1.4
10°-20°	112.9	3.6
20°-30°	184.8	5.9
30°-40°	274.6	8.8
40°-50°	411.0	13.1
50°-60°	590.6	18.9
60°-70°	791.5	25.3
70°-80°	641.1	20.5
80°-90°	75.0	2.4
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°	3126.0	100.0
0°-180°	3126.0	100.0



REPORT NUMBER: P459862

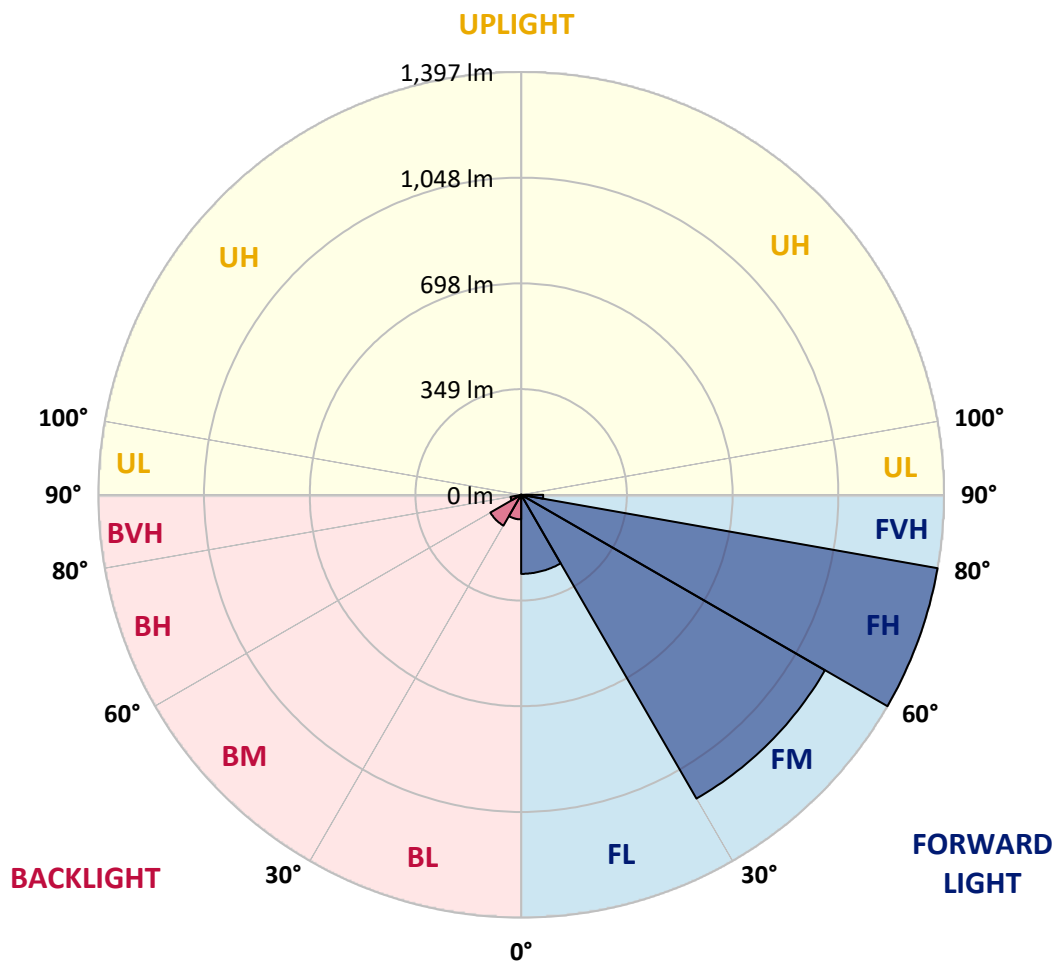
CATALOG NUMBER: NAV-SA4A-AMB-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	261.1	8.4			
FM	(30°-60°)	1158.8	37.1			
FH	(60°-80°)	1397.0	44.7			G1/1800
FVH	(80°-90°)	72.8	2.3			G1/100
BL	(0°-30°)	81.2	2.6	B0/110		
BM	(30°-60°)	117.3	3.8	B0/220		
BH	(60°-80°)	35.6	1.1	B0/110		G0/110
BVH	(80°-90°)	2.1	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Medium





REPORT NUMBER: P459862

CATALOG NUMBER: NAV-SA4A-AMB-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	45°	55°	65°	75°	85°
0°	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7
2.5°	565.8	564.1	564.1	560.6	558.8	558.8	551.9	550.1	543.1	536.1	527.4
5°	567.6	567.6	565.8	567.6	565.8	565.8	562.3	560.6	553.6	539.6	523.9
7.5°	578.1	576.3	574.6	574.6	571.1	571.1	562.3	558.8	551.9	543.1	520.4
10°	578.1	578.1	581.6	585.0	585.0	585.0	576.3	565.8	555.4	546.6	520.4
12.5°	576.3	576.3	581.6	593.8	602.5	604.3	599.0	585.0	567.6	551.9	527.4
15°	574.6	576.3	583.3	600.8	616.5	620.0	618.2	607.7	585.0	562.3	536.1
17.5°	578.1	581.6	590.3	614.7	632.2	633.9	635.7	628.7	604.3	576.3	550.1
20°	583.3	585.0	604.3	633.9	651.4	653.2	651.4	640.9	620.0	593.8	565.8
22.5°	592.0	595.5	620.0	653.2	672.4	674.1	668.9	651.4	628.7	607.7	583.3
25°	609.5	613.0	642.7	675.9	689.8	693.3	688.1	667.1	637.4	623.5	602.5
27.5°	630.5	635.7	667.1	698.6	707.3	710.8	705.5	681.1	649.7	644.4	627.0
30°	661.9	665.4	695.1	721.3	724.8	726.5	723.0	695.1	667.1	667.1	651.4
32.5°	700.3	705.5	724.8	744.0	742.2	744.0	742.2	712.5	688.1	702.1	681.1
35°	745.7	740.5	763.2	771.9	764.9	768.4	770.2	740.5	719.5	747.5	721.3
37.5°	780.6	780.6	792.9	801.6	796.4	799.9	805.1	777.2	763.2	812.1	782.4
40°	810.3	810.3	819.1	836.5	838.3	845.3	855.7	822.6	822.6	887.2	854.0
42.5°	833.0	836.5	843.5	866.2	888.9	901.1	911.6	878.4	894.2	983.2	948.3
45°	855.7	859.2	862.7	895.9	941.3	958.8	979.7	948.3	976.2	1084.5	1046.1
47.5°	883.7	883.7	881.9	934.3	990.2	1012.9	1049.6	1023.4	1074.0	1208.5	1149.1
50°	918.6	915.1	899.4	974.5	1049.6	1077.5	1133.4	1107.2	1184.1	1337.7	1226.0
52.5°	958.8	950.0	925.6	1016.4	1114.2	1149.1	1220.7	1203.3	1299.3	1440.8	1269.6
55°	1009.4	995.5	962.3	1067.1	1192.8	1227.7	1311.6	1322.0	1409.3	1500.2	1315.0
57.5°	1074.0	1047.8	1011.2	1129.9	1283.6	1316.8	1414.6	1437.3	1482.7	1557.8	1372.7
60°	1138.7	1110.7	1077.5	1215.5	1383.2	1428.6	1524.6	1533.3	1542.1	1638.1	1435.5
62.5°	1196.3	1180.6	1161.4	1311.6	1519.4	1559.5	1618.9	1606.7	1617.2	1732.4	1486.2
65°	1269.6	1253.9	1250.4	1421.6	1648.6	1683.5	1690.5	1695.8	1734.2	1825.0	1512.4
67.5°	1332.5	1327.3	1358.7	1552.6	1765.6	1779.6	1805.8	1835.5	1856.4	1866.9	1337.7
70°	1421.6	1412.8	1482.7	1683.5	1882.6	1912.3	2004.9	2034.6	1889.6	1529.9	819.1
72.5°	1430.3	1446.0	1636.4	1819.8	2057.3	2121.9	2237.1	2078.2	1468.7	820.8	255.0
75°	1112.5	1121.2	1690.5	1989.2	2333.2	2375.1	2224.9	1589.2	656.6	202.6	57.6
77.5°	620.0	653.2	1129.9	1846.0	2120.1	2053.8	1521.1	702.1	169.4	45.4	29.7
80°	454.1	469.8	544.9	1056.6	1199.8	1054.8	633.9	267.2	92.6	31.4	21.0
82.5°	134.5	145.0	281.2	340.5	424.4	337.1	190.4	204.3	59.4	22.7	17.5
85°	36.7	38.4	96.1	134.5	122.2	78.6	69.9	176.4	24.4	15.7	14.0
87.5°	17.5	17.5	29.7	59.4	50.6	41.9	57.6	103.0	5.2	5.2	3.5
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: P459862

CATALOG NUMBER: NAV-SA4A-AMB-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7	525.7
2.5°	522.2	518.7	504.7	497.7	490.7	478.5	471.5	466.3	464.5	461.1	462.8
5°	513.4	501.2	478.5	459.3	436.6	412.2	398.2	382.5	366.7	363.3	361.5
7.5°	506.5	489.0	454.1	417.4	379.0	337.1	298.6	274.2	249.7	246.2	244.5
10°	503.0	478.5	427.9	373.7	310.9	253.2	211.3	183.4	165.9	157.2	153.7
12.5°	503.0	473.3	406.9	330.1	249.7	186.9	145.0	117.0	104.8	99.5	97.8
15°	506.5	469.8	382.5	279.4	195.6	132.7	101.3	87.3	82.1	80.3	82.1
17.5°	515.2	469.8	359.8	235.8	148.4	97.8	80.3	78.6	76.8	76.8	76.8
20°	527.4	473.3	335.3	197.3	110.0	80.3	75.1	75.1	75.1	75.1	75.1
22.5°	541.4	475.0	307.4	160.7	89.1	73.3	71.6	71.6	71.6	71.6	71.6
25°	555.4	478.5	277.7	125.7	73.3	69.9	68.1	69.9	69.9	69.9	69.9
27.5°	572.8	482.0	248.0	99.5	68.1	66.4	66.4	66.4	66.4	66.4	66.4
30°	588.5	482.0	220.0	82.1	64.6	62.9	62.9	62.9	62.9	62.9	62.9
32.5°	607.7	480.3	190.4	68.1	61.1	59.4	57.6	59.4	59.4	59.4	57.6
35°	635.7	480.3	157.2	62.9	57.6	55.9	54.1	54.1	54.1	54.1	54.1
37.5°	672.4	487.2	124.0	57.6	52.4	50.6	50.6	50.6	48.9	48.9	48.9
40°	726.5	499.5	99.5	54.1	48.9	47.2	45.4	45.4	43.7	41.9	41.9
42.5°	791.1	513.4	82.1	50.6	45.4	43.7	41.9	40.2	38.4	36.7	36.7
45°	855.7	523.9	64.6	47.2	41.9	40.2	38.4	36.7	33.2	31.4	29.7
47.5°	923.8	523.9	52.4	43.7	40.2	36.7	34.9	31.4	27.9	24.4	24.4
50°	964.0	504.7	47.2	40.2	36.7	33.2	31.4	26.2	22.7	19.2	19.2
52.5°	986.7	478.5	43.7	36.7	34.9	31.4	26.2	22.7	17.5	14.0	14.0
55°	1005.9	466.3	40.2	34.9	31.4	27.9	22.7	17.5	12.2	10.5	10.5
57.5°	1030.4	447.1	36.7	31.4	27.9	24.4	19.2	14.0	8.7	7.0	7.0
60°	1051.3	420.9	33.2	29.7	26.2	21.0	15.7	10.5	5.2	3.5	3.5
62.5°	1061.8	380.7	29.7	26.2	22.7	17.5	12.2	7.0	3.5	1.7	1.7
65°	1032.1	319.6	27.9	22.7	19.2	14.0	8.7	3.5	1.7	0.0	0.0
67.5°	843.5	206.1	22.7	19.2	15.7	10.5	7.0	3.5	1.7	0.0	0.0
70°	433.1	87.3	19.2	15.7	14.0	8.7	5.2	1.7	0.0	0.0	0.0
72.5°	113.5	31.4	15.7	14.0	12.2	8.7	3.5	1.7	0.0	0.0	0.0
75°	34.9	21.0	12.2	10.5	10.5	7.0	3.5	1.7	0.0	0.0	0.0
77.5°	24.4	15.7	10.5	8.7	8.7	7.0	3.5	1.7	0.0	0.0	0.0
80°	19.2	14.0	8.7	7.0	8.7	8.7	3.5	1.7	0.0	0.0	0.0
82.5°	15.7	12.2	7.0	7.0	8.7	8.7	5.2	1.7	0.0	0.0	0.0
85°	12.2	8.7	7.0	7.0	8.7	7.0	3.5	1.7	0.0	0.0	0.0
87.5°	3.5	3.5	1.7	1.7	1.7	3.5	3.5	1.7	0.0	0.0	0.0
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)