

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: P459858

Luminaire Tested: **NAV-SA4A-AMB-U-SL2-HSS**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459858
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4A-AMB-U-SL2-HSS
Description: NAVION AREA AND ROADWAY LUMINAIRE
(4) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3173 lumens
Efficiency: N/A
Efficacy: 39.7 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

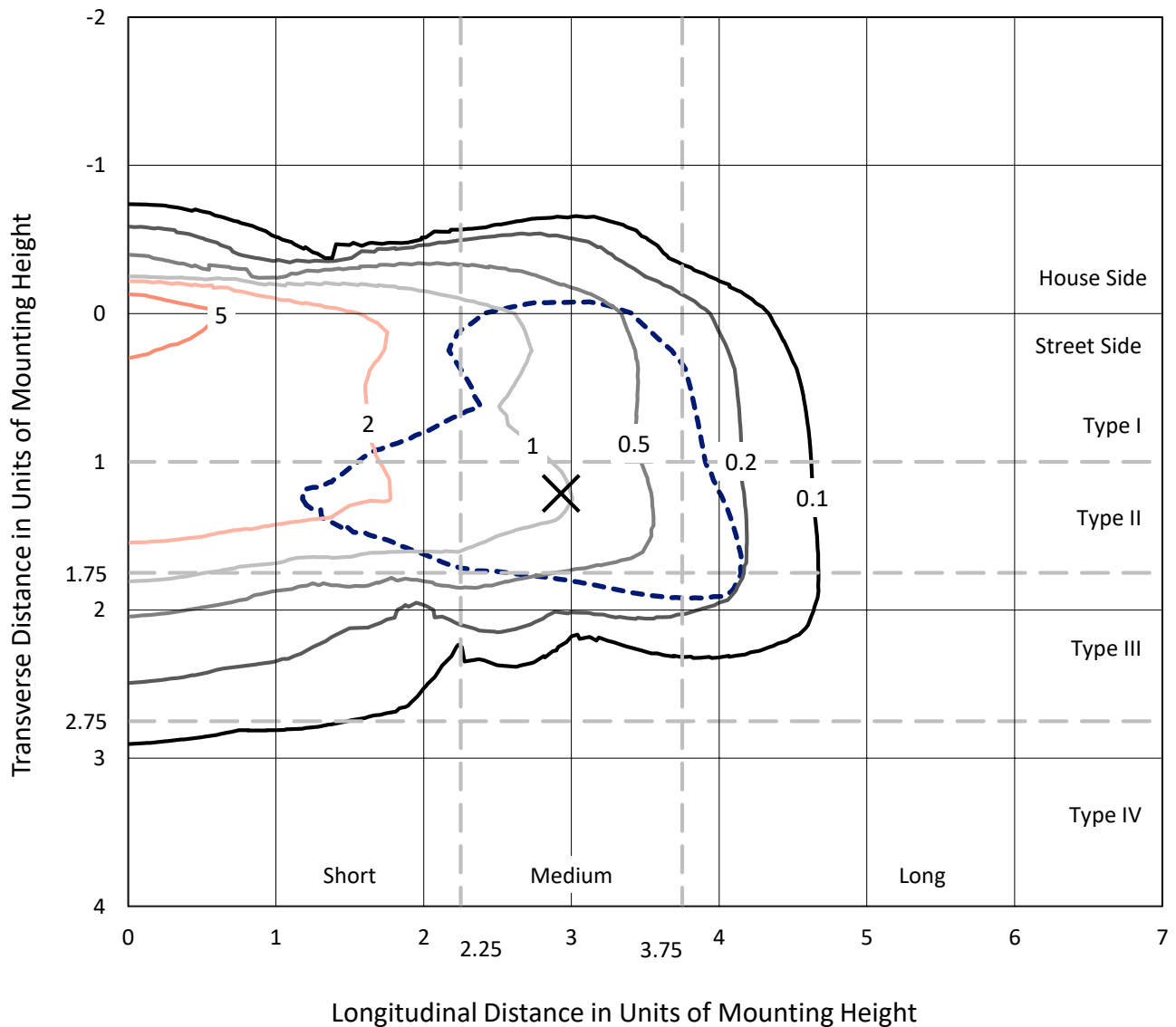
Input Watts (W): 79.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

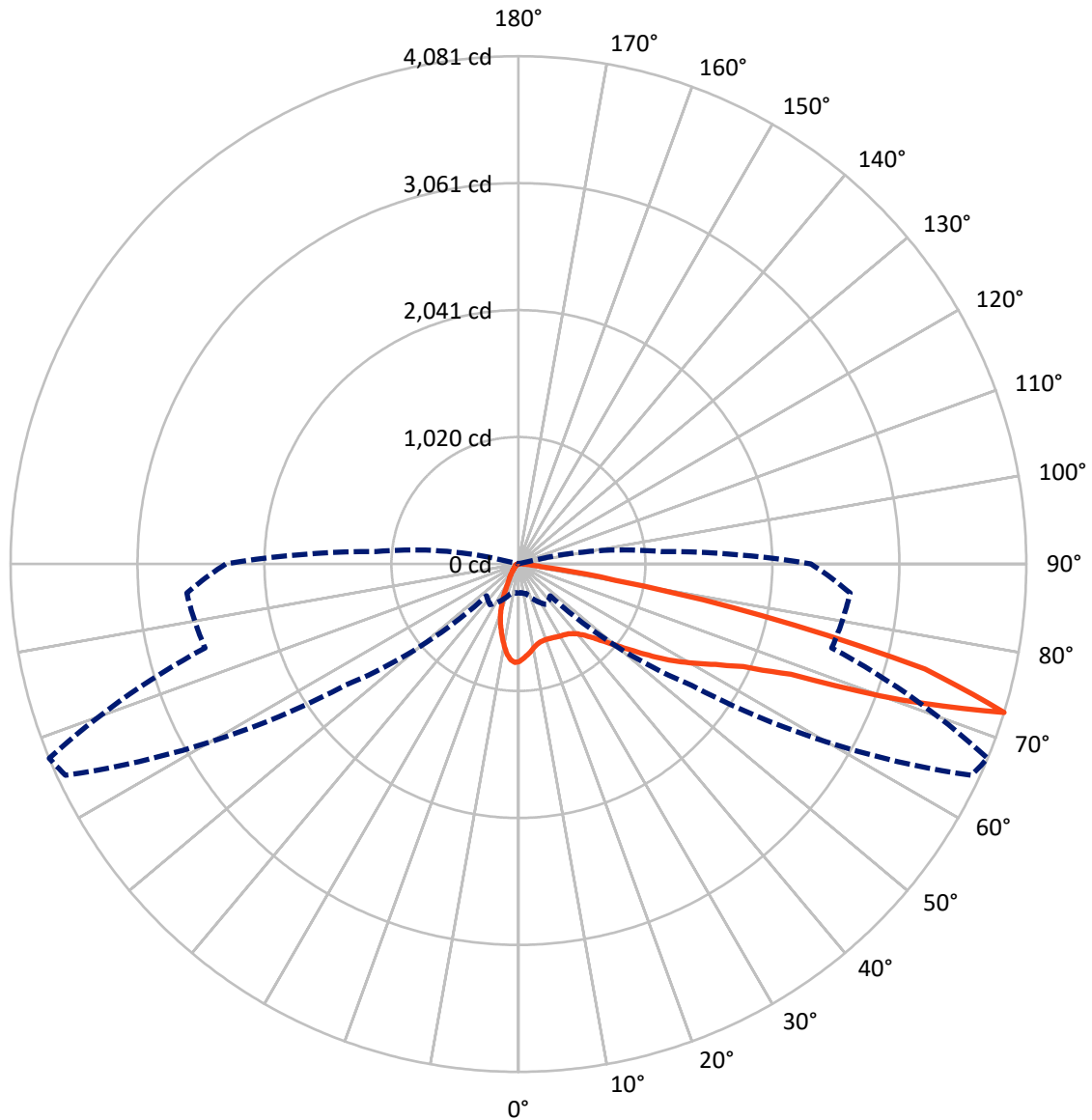


Based on 10 foot mounting height. Maximum calculated value = 7.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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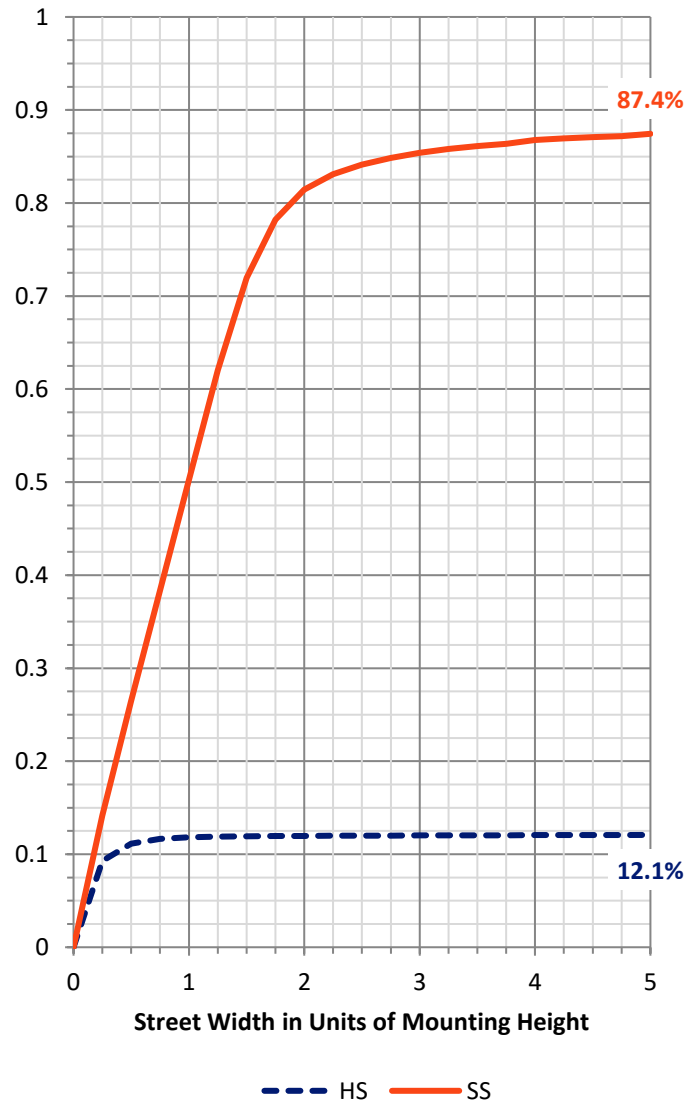
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	387.0	0.0	387.0
	% Fixture	12.2	0.0	12.2
Street Side	Lumens	2786.0	0.0	2786.0
	% Fixture	87.8	0.0	87.8
Total	Lumens	3173.0	0.0	3173.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	2.0
10°-20°	136.4	4.3
20°-30°	192.7	6.1
30°-40°	276.0	8.7
40°-50°	416.4	13.1
50°-60°	667.6	21.0
60°-70°	789.2	24.9
70°-80°	576.5	18.2
80°-90°	53.3	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°	3173.0	100.0
0°-180°	3173.0	100.0



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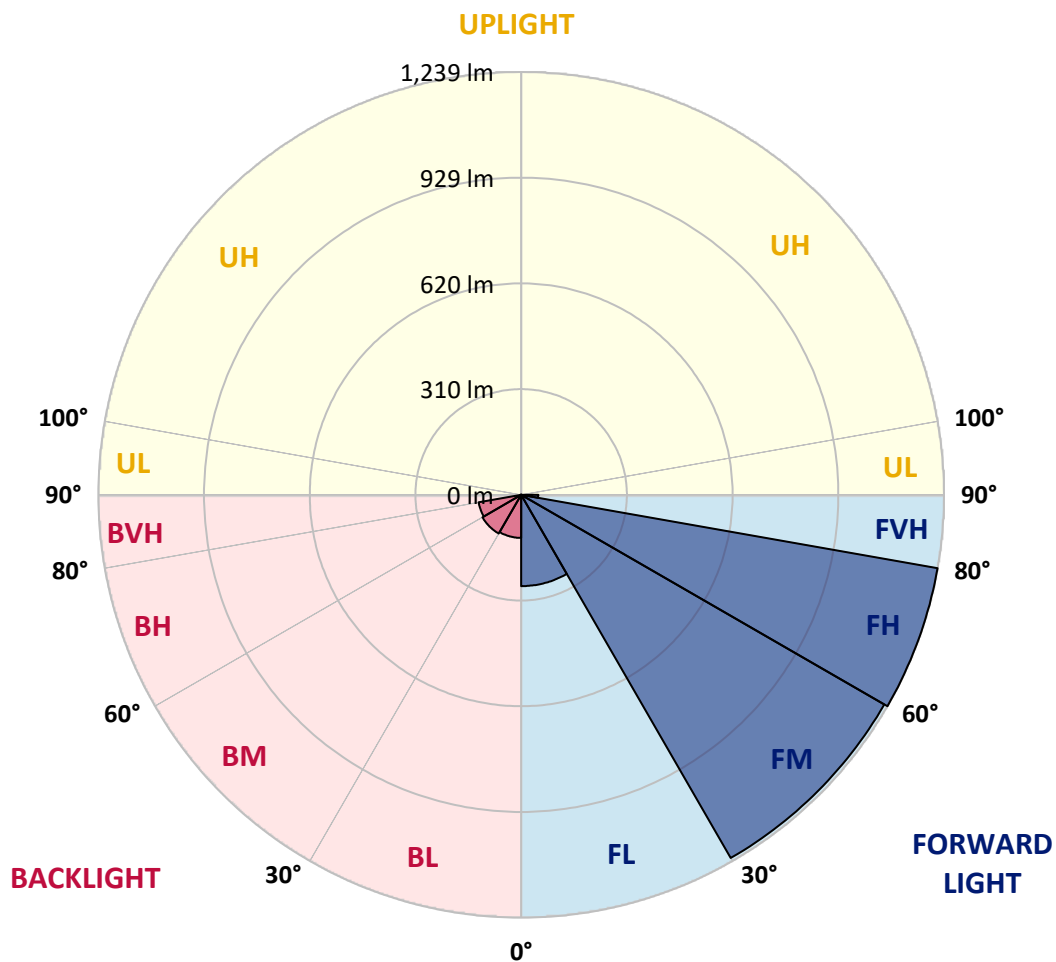
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	267.6	8.4			
FM	(30°-60°)	1229.0	38.7			
FH	(60°-80°)	1239.3	39.1			G1/1800
FVH	(80°-90°)	50.0	1.6			G1/100
BL	(0°-30°)	126.2	4.0	B1/500		
BM	(30°-60°)	131.1	4.1	B0/220		
BH	(60°-80°)	126.5	4.0	B1/500		G1/500
BVH	(80°-90°)	3.3	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°	65°	67.5°	75°	85°
0°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1
2.5°	735.2	738.7	738.7	744.0	745.7	747.5	758.0	761.4	759.7	770.2	777.2
5°	686.3	686.3	689.8	698.6	705.6	710.8	723.0	733.5	735.2	747.5	766.7
7.5°	646.2	649.7	649.7	654.9	665.4	674.1	689.8	707.3	710.8	726.5	749.2
10°	614.7	613.0	618.2	623.5	632.2	640.9	658.4	677.6	684.6	702.1	728.3
12.5°	585.1	586.8	588.5	597.3	607.8	616.5	634.0	656.7	663.6	686.3	717.8
15°	567.6	567.6	569.3	574.6	585.1	597.3	618.2	642.7	651.4	677.6	714.3
17.5°	562.4	562.4	560.6	562.4	571.1	583.3	607.8	637.4	646.2	674.1	719.5
20°	564.1	564.1	560.6	558.9	564.1	576.3	604.3	635.7	646.2	679.4	733.5
22.5°	574.6	572.8	569.3	564.1	564.1	576.3	606.0	639.2	649.7	686.3	745.7
25°	600.8	593.8	590.3	579.8	572.8	578.1	607.8	644.4	654.9	691.6	763.2
27.5°	625.2	623.5	623.5	613.0	590.3	585.1	614.7	653.2	661.9	698.6	785.9
30°	667.1	663.6	663.6	651.4	623.5	599.0	621.7	660.2	670.6	703.8	808.6
32.5°	719.5	721.3	717.8	702.1	667.1	625.2	634.0	668.9	677.6	707.3	831.3
35°	777.2	778.9	787.6	770.2	724.8	665.4	653.2	684.6	689.8	714.3	848.8
37.5°	824.3	824.3	847.0	850.5	794.6	714.3	684.6	710.8	709.1	723.0	866.2
40°	876.7	876.7	902.9	923.9	883.7	780.7	724.8	742.2	738.7	742.2	890.7
42.5°	932.6	936.1	964.0	1000.7	979.7	866.2	782.4	791.1	784.1	773.7	916.9
45°	986.7	995.5	1033.9	1082.8	1081.0	967.5	857.5	859.2	847.0	826.1	971.0
47.5°	1049.6	1056.6	1110.7	1171.9	1187.6	1082.8	953.6	946.6	930.8	897.7	1044.4
50°	1156.1	1159.6	1198.1	1269.7	1299.3	1210.3	1061.8	1049.6	1032.1	990.2	1143.9
52.5°	1283.6	1281.9	1299.3	1374.4	1454.8	1358.7	1203.3	1185.8	1157.9	1103.7	1266.2
55°	1339.5	1344.8	1371.0	1461.8	1617.2	1575.3	1362.2	1337.8	1308.1	1238.2	1391.9
57.5°	1241.7	1241.7	1294.1	1437.3	1708.0	1861.7	1540.4	1501.9	1465.3	1376.2	1535.1
60°	993.7	992.0	1054.8	1227.7	1639.9	2111.4	1788.3	1673.1	1617.2	1498.4	1678.3
62.5°	696.8	682.9	710.8	855.8	1343.0	2114.9	2251.2	1851.2	1776.1	1624.2	1830.3
65°	499.5	490.7	496.0	536.2	770.2	1912.3	2762.9	2121.9	1987.4	1756.9	2013.6
67.5°	408.7	398.2	396.4	445.3	443.6	1266.2	2916.5	2656.3	2362.9	1950.8	2221.5
70°	326.6	321.3	319.6	389.5	410.4	412.2	2719.2	3798.5	3278.1	2238.9	2499.1
72.5°	232.3	232.3	246.2	323.1	398.2	361.5	1701.0	4016.8	4081.4	2607.4	2675.5
75°	139.7	138.0	172.9	256.7	384.2	349.3	525.7	3314.7	3374.1	2441.5	2069.5
77.5°	66.4	66.4	96.1	172.9	340.6	328.3	300.4	1982.2	1996.2	1482.7	1049.6
80°	26.2	26.2	41.9	106.5	258.5	324.8	279.4	817.3	787.6	408.7	145.0
82.5°	10.5	10.5	17.5	59.4	160.7	267.2	248.0	270.7	202.6	47.2	38.4
85°	1.7	3.5	7.0	34.9	90.8	141.5	200.8	167.7	106.5	27.9	27.9
87.5°	0.0	1.7	3.5	10.5	26.2	59.4	101.3	76.8	48.9	8.7	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°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1
2.5°	778.9	782.4	789.4	792.9	794.6	787.6	787.6	780.7	778.9	778.9	778.9
5°	770.2	777.2	782.4	770.2	751.0	726.5	698.6	681.1	663.6	667.1	660.2
7.5°	759.7	768.4	761.4	721.3	672.4	627.0	578.1	550.1	516.9	513.5	504.7
10°	744.0	752.7	726.5	656.7	581.6	515.2	443.6	399.9	365.0	337.1	330.1
12.5°	740.5	745.7	684.6	588.5	490.7	396.4	303.9	221.8	172.9	148.4	148.4
15°	742.2	742.2	646.2	520.4	392.9	262.0	146.7	106.5	89.1	87.3	85.6
17.5°	751.0	740.5	607.8	454.1	288.2	136.2	87.3	80.3	76.8	76.8	76.8
20°	766.7	740.5	574.6	384.2	181.6	85.6	75.1	71.6	69.9	68.1	68.1
22.5°	782.4	733.5	532.7	303.9	104.8	71.6	66.4	64.6	61.1	59.4	59.4
25°	799.9	726.5	492.5	218.3	73.4	62.9	57.6	54.1	50.6	48.9	48.9
27.5°	815.6	719.5	445.3	138.0	64.6	55.9	50.6	45.4	40.2	38.4	38.4
30°	826.1	707.3	399.9	87.3	57.6	50.6	43.7	36.7	31.4	29.7	29.7
32.5°	827.8	691.6	344.0	64.6	52.4	43.7	34.9	29.7	26.2	24.5	24.5
35°	822.6	672.4	282.9	57.6	47.2	38.4	29.7	24.5	21.0	21.0	21.0
37.5°	815.6	653.2	220.1	52.4	41.9	33.2	24.5	21.0	19.2	17.5	17.5
40°	813.8	634.0	146.7	48.9	38.4	27.9	21.0	17.5	15.7	14.0	14.0
42.5°	819.1	620.0	103.0	45.4	33.2	24.5	19.2	15.7	12.2	12.2	10.5
45°	845.3	616.5	75.1	41.9	29.7	21.0	15.7	12.2	10.5	8.7	8.7
47.5°	888.9	623.5	61.1	38.4	26.2	17.5	14.0	10.5	8.7	7.0	7.0
50°	951.8	649.7	55.9	34.9	21.0	15.7	10.5	8.7	7.0	7.0	7.0
52.5°	1049.6	691.6	52.4	31.4	17.5	12.2	8.7	7.0	5.2	5.2	5.2
55°	1154.4	740.5	50.6	27.9	15.7	10.5	7.0	5.2	5.2	3.5	3.5
57.5°	1274.9	805.1	47.2	24.5	14.0	10.5	7.0	5.2	3.5	3.5	3.5
60°	1426.8	892.4	41.9	21.0	12.2	8.7	5.2	3.5	3.5	3.5	3.5
62.5°	1584.0	983.2	36.7	17.5	10.5	7.0	5.2	3.5	3.5	3.5	3.5
65°	1776.1	1088.0	31.4	14.0	8.7	7.0	5.2	3.5	3.5	1.7	1.7
67.5°	2008.4	1194.6	24.5	12.2	8.7	5.2	5.2	3.5	3.5	1.7	1.7
70°	2305.3	1330.8	21.0	10.5	7.0	5.2	5.2	3.5	3.5	1.7	1.7
72.5°	2350.7	1149.2	17.5	10.5	7.0	5.2	5.2	3.5	3.5	1.7	1.7
75°	1606.7	548.4	15.7	8.7	7.0	7.0	5.2	3.5	3.5	1.7	1.7
77.5°	700.3	129.2	14.0	8.7	7.0	7.0	7.0	5.2	3.5	1.7	1.7
80°	82.1	24.5	12.2	8.7	7.0	8.7	7.0	5.2	3.5	1.7	1.7
82.5°	33.2	15.7	12.2	10.5	8.7	7.0	7.0	5.2	3.5	1.7	1.7
85°	24.5	12.2	12.2	12.2	8.7	5.2	5.2	3.5	3.5	1.7	1.7
87.5°	12.2	5.2	3.5	3.5	3.5	3.5	3.5	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)