

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: P459838

Luminaire Tested: **NAV-SA1A-AMB-U-SL4-HSS**

Issue Date: 1/6/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P459838  
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-SA1A-AMB-U-SL4-HSS  
Description: NAVION AREA AND ROADWAY LUMINAIRE  
(1) NARROW BAND AMBER, 500mA LIGHTSQUARE WITH 16 LEDS 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: 874 lumens  
Efficiency: N/A  
Efficacy: 38.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

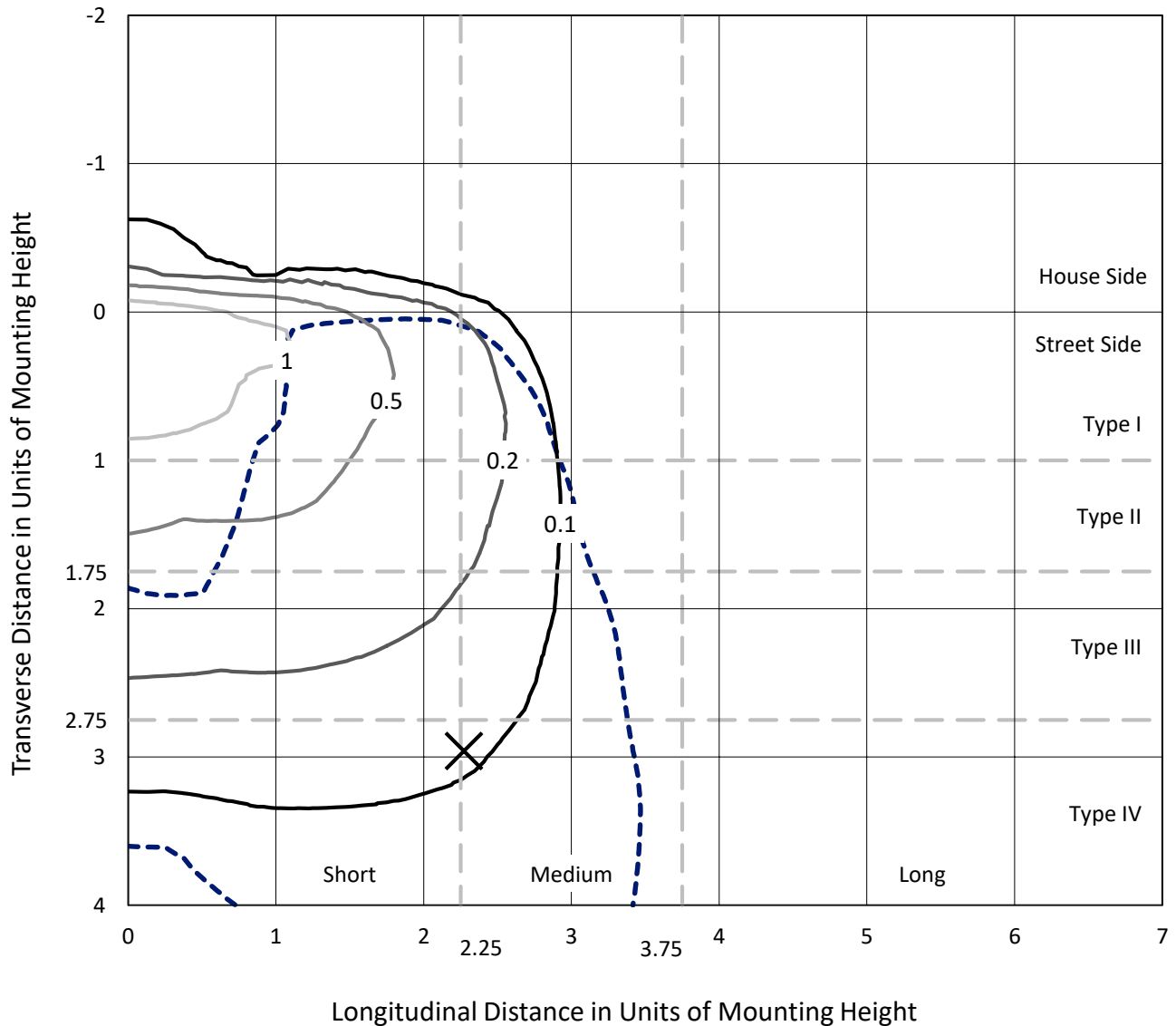


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

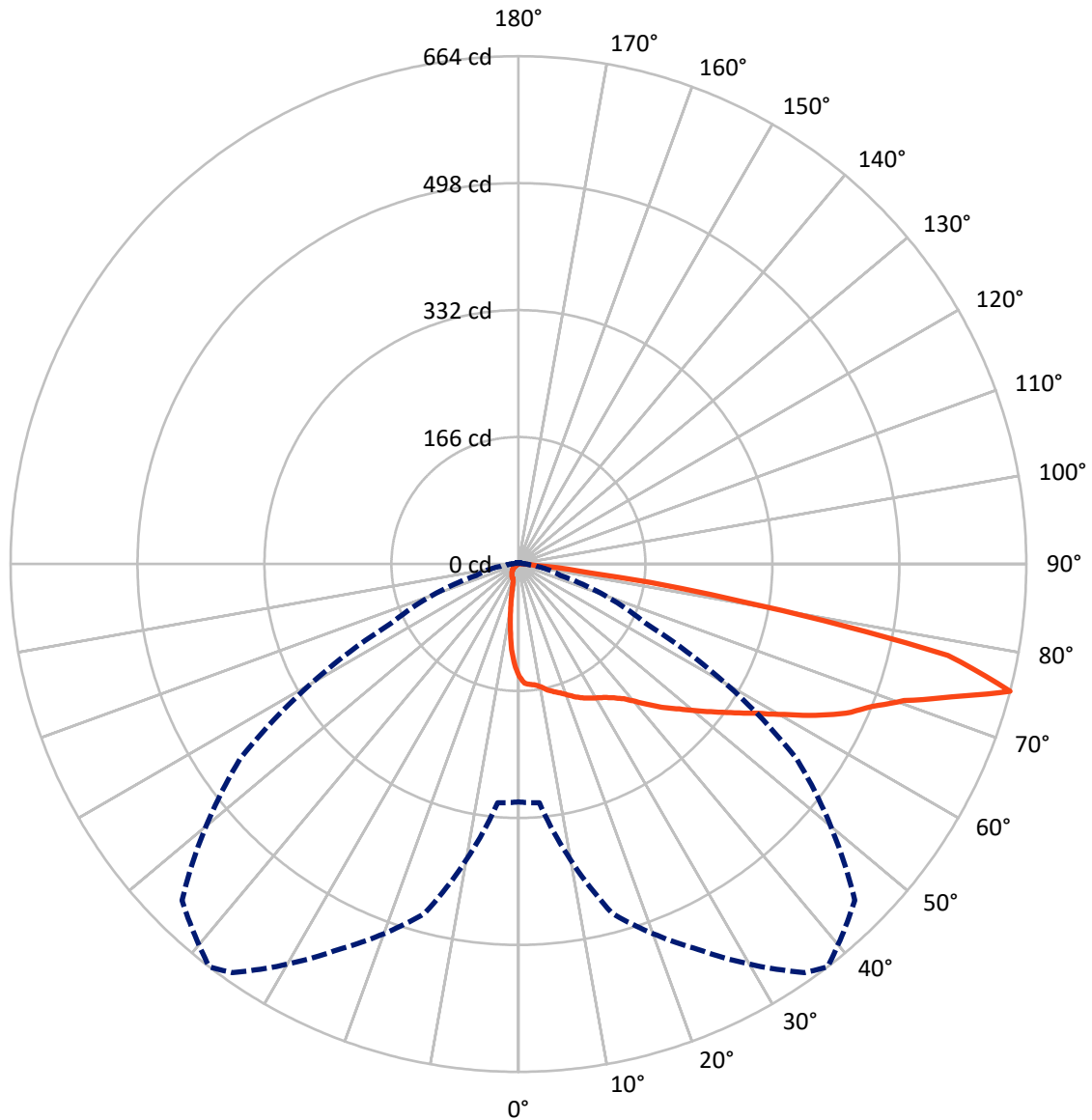


Based on 10 foot mounting height. Maximum calculated value = 1.6 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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



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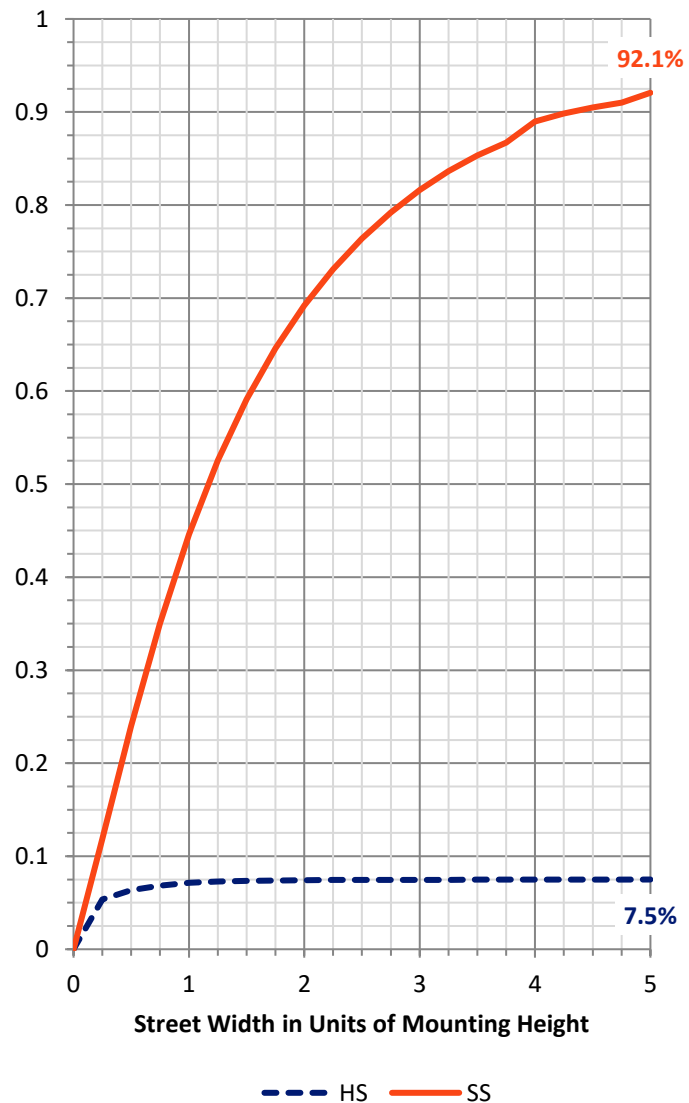
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	66.1	0.0	66.1
	% Fixture	7.6	0.0	7.6
<b>Street Side</b>	Lumens	807.9	0.0	807.9
	% Fixture	92.4	0.0	92.4
<b>Total</b>	Lumens	874.0	0.0	874.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	12.5	1.4
10°-20°	31.6	3.6
20°-30°	51.7	5.9
30°-40°	76.8	8.8
40°-50°	114.9	13.1
50°-60°	165.1	18.9
60°-70°	221.3	25.3
70°-80°	179.3	20.5
80°-90°	21.0	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°	874.0	100.0
0°-180°	874.0	100.0



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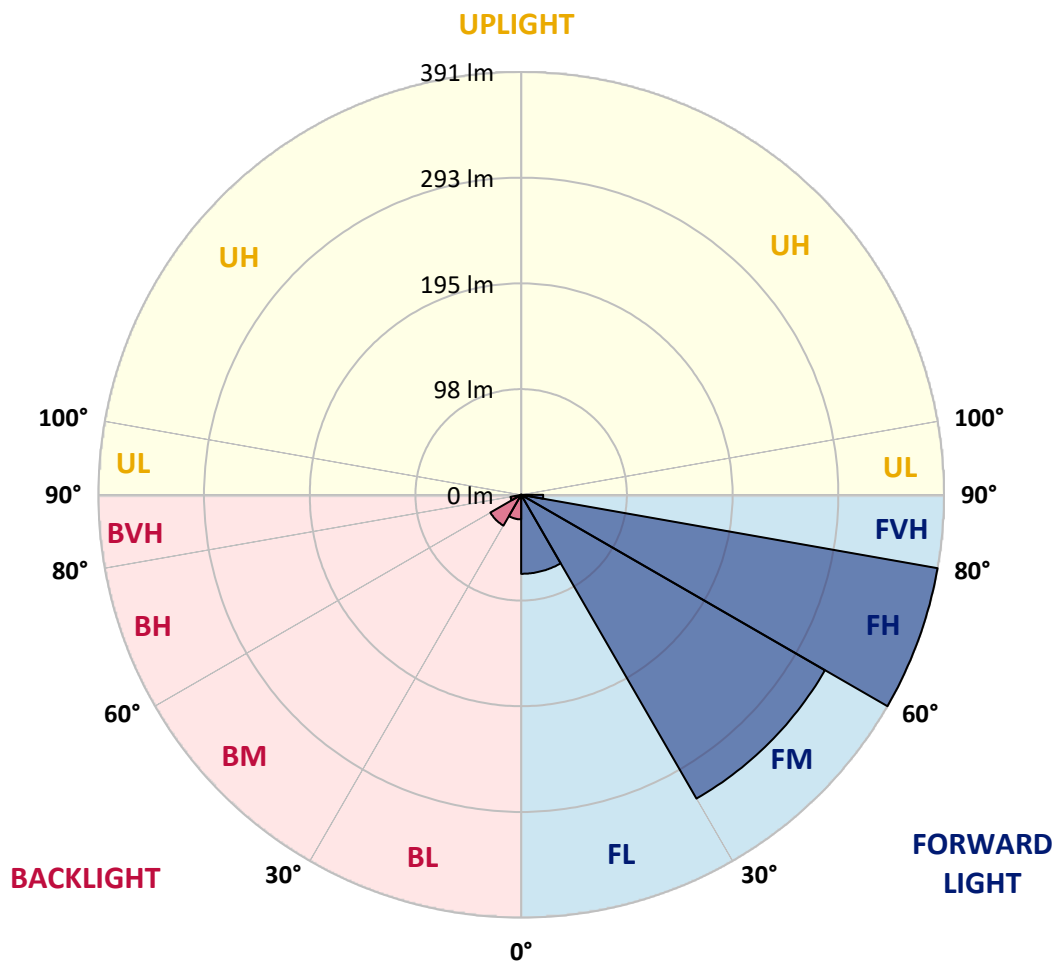
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	73.0	8.4			
FM	(30°-60°)	324.0	37.1			
FH	(60°-80°)	390.6	44.7			G0/660
FVH	(80°-90°)	20.4	2.3			G1/100
BL	(0°-30°)	22.7	2.6	B0/110		
BM	(30°-60°)	32.8	3.8	B0/220		
BH	(60°-80°)	10.0	1.1	B0/110		G0/110
BVH	(80°-90°)	0.6	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37.5°	45°	55°	65°	75°	85°
0°	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
2.5°	158.2	157.7	157.7	156.7	156.2	156.2	154.3	153.8	151.9	149.9	147.5
5°	158.7	158.7	158.2	158.7	158.2	158.2	157.2	156.7	154.8	150.9	146.5
7.5°	161.6	161.1	160.6	160.6	159.7	159.7	157.2	156.2	154.3	151.9	145.5
10°	161.6	161.6	162.6	163.6	163.6	163.6	161.1	158.2	155.3	152.8	145.5
12.5°	161.1	161.1	162.6	166.0	168.5	168.9	167.5	163.6	158.7	154.3	147.5
15°	160.6	161.1	163.1	168.0	172.4	173.3	172.9	169.9	163.6	157.2	149.9
17.5°	161.6	162.6	165.0	171.9	176.8	177.2	177.7	175.8	168.9	161.1	153.8
20°	163.1	163.6	168.9	177.2	182.1	182.6	182.1	179.2	173.3	166.0	158.2
22.5°	165.5	166.5	173.3	182.6	188.0	188.5	187.0	182.1	175.8	169.9	163.1
25°	170.4	171.4	179.7	189.0	192.9	193.8	192.4	186.5	178.2	174.3	168.5
27.5°	176.3	177.7	186.5	195.3	197.8	198.7	197.3	190.4	181.6	180.2	175.3
30°	185.1	186.0	194.3	201.7	202.6	203.1	202.1	194.3	186.5	186.5	182.1
32.5°	195.8	197.3	202.6	208.0	207.5	208.0	207.5	199.2	192.4	196.3	190.4
35°	208.5	207.0	213.4	215.8	213.9	214.8	215.3	207.0	201.2	209.0	201.7
37.5°	218.3	218.3	221.7	224.1	222.7	223.6	225.1	217.3	213.4	227.0	218.7
40°	226.6	226.6	229.0	233.9	234.4	236.3	239.3	230.0	230.0	248.0	238.8
42.5°	232.9	233.9	235.8	242.2	248.5	252.0	254.9	245.6	250.0	274.9	265.1
45°	239.3	240.2	241.2	250.5	263.2	268.1	273.9	265.1	272.9	303.2	292.5
47.5°	247.1	247.1	246.6	261.2	276.9	283.2	293.5	286.1	300.3	337.9	321.3
50°	256.8	255.9	251.5	272.5	293.5	301.3	316.9	309.6	331.1	374.0	342.8
52.5°	268.1	265.6	258.8	284.2	311.5	321.3	341.3	336.4	363.3	402.8	355.0
55°	282.2	278.3	269.0	298.3	333.5	343.3	366.7	369.6	394.0	419.4	367.7
57.5°	300.3	293.0	282.7	315.9	358.9	368.2	395.5	401.9	414.5	435.5	383.8
60°	318.4	310.5	301.3	339.8	386.7	399.4	426.3	428.7	431.1	458.0	401.4
62.5°	334.5	330.1	324.7	366.7	424.8	436.0	452.6	449.2	452.1	484.4	415.5
65°	355.0	350.6	349.6	397.5	460.9	470.7	472.7	474.1	484.9	510.3	422.8
67.5°	372.6	371.1	379.9	434.1	493.6	497.6	504.9	513.2	519.0	522.0	374.0
70°	397.5	395.0	414.5	470.7	526.4	534.7	560.5	568.8	528.3	427.7	229.0
72.5°	399.9	404.3	457.5	508.8	575.2	593.3	625.5	581.1	410.6	229.5	71.3
75°	311.0	313.5	472.7	556.1	652.3	664.1	622.1	444.3	183.6	56.6	16.1
77.5°	173.3	182.6	315.9	516.1	592.8	574.2	425.3	196.3	47.4	12.7	8.3
80°	127.0	131.3	152.3	295.4	335.4	294.9	177.2	74.7	25.9	8.8	5.9
82.5°	37.6	40.5	78.6	95.2	118.7	94.2	53.2	57.1	16.6	6.3	4.9
85°	10.3	10.7	26.9	37.6	34.2	22.0	19.5	49.3	6.8	4.4	3.9
87.5°	4.9	4.9	8.3	16.6	14.2	11.7	16.1	28.8	1.5	1.5	1.0
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°	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
2.5°	146.0	145.0	141.1	139.2	137.2	133.8	131.8	130.4	129.9	128.9	129.4
5°	143.6	140.1	133.8	128.4	122.1	115.2	111.3	106.9	102.5	101.6	101.1
7.5°	141.6	136.7	127.0	116.7	106.0	94.2	83.5	76.7	69.8	68.8	68.4
10°	140.6	133.8	119.6	104.5	86.9	70.8	59.1	51.3	46.4	43.9	43.0
12.5°	140.6	132.3	113.8	92.3	69.8	52.2	40.5	32.7	29.3	27.8	27.3
15°	141.6	131.3	106.9	78.1	54.7	37.1	28.3	24.4	22.9	22.5	22.9
17.5°	144.0	131.3	100.6	65.9	41.5	27.3	22.5	22.0	21.5	21.5	21.5
20°	147.5	132.3	93.7	55.2	30.8	22.5	21.0	21.0	21.0	21.0	21.0
22.5°	151.4	132.8	85.9	44.9	24.9	20.5	20.0	20.0	20.0	20.0	20.0
25°	155.3	133.8	77.6	35.2	20.5	19.5	19.0	19.5	19.5	19.5	19.5
27.5°	160.2	134.8	69.3	27.8	19.0	18.6	18.6	18.6	18.6	18.6	18.6
30°	164.5	134.8	61.5	22.9	18.1	17.6	17.6	17.6	17.6	17.6	17.6
32.5°	169.9	134.3	53.2	19.0	17.1	16.6	16.1	16.6	16.6	16.6	16.1
35°	177.7	134.3	43.9	17.6	16.1	15.6	15.1	15.1	15.1	15.1	15.1
37.5°	188.0	136.2	34.7	16.1	14.6	14.2	14.2	14.2	13.7	13.7	13.7
40°	203.1	139.6	27.8	15.1	13.7	13.2	12.7	12.7	12.2	11.7	11.7
42.5°	221.2	143.6	22.9	14.2	12.7	12.2	11.7	11.2	10.7	10.3	10.3
45°	239.3	146.5	18.1	13.2	11.7	11.2	10.7	10.3	9.3	8.8	8.3
47.5°	258.3	146.5	14.6	12.2	11.2	10.3	9.8	8.8	7.8	6.8	6.8
50°	269.5	141.1	13.2	11.2	10.3	9.3	8.8	7.3	6.3	5.4	5.4
52.5°	275.9	133.8	12.2	10.3	9.8	8.8	7.3	6.3	4.9	3.9	3.9
55°	281.2	130.4	11.2	9.8	8.8	7.8	6.3	4.9	3.4	2.9	2.9
57.5°	288.1	125.0	10.3	8.8	7.8	6.8	5.4	3.9	2.4	2.0	2.0
60°	293.9	117.7	9.3	8.3	7.3	5.9	4.4	2.9	1.5	1.0	1.0
62.5°	296.9	106.4	8.3	7.3	6.3	4.9	3.4	2.0	1.0	0.5	0.5
65°	288.6	89.4	7.8	6.3	5.4	3.9	2.4	1.0	0.5	0.0	0.0
67.5°	235.8	57.6	6.3	5.4	4.4	2.9	2.0	1.0	0.5	0.0	0.0
70°	121.1	24.4	5.4	4.4	3.9	2.4	1.5	0.5	0.0	0.0	0.0
72.5°	31.7	8.8	4.4	3.9	3.4	2.4	1.0	0.5	0.0	0.0	0.0
75°	9.8	5.9	3.4	2.9	2.9	2.0	1.0	0.5	0.0	0.0	0.0
77.5°	6.8	4.4	2.9	2.4	2.4	2.0	1.0	0.5	0.0	0.0	0.0
80°	5.4	3.9	2.4	2.0	2.4	2.4	1.0	0.5	0.0	0.0	0.0
82.5°	4.4	3.4	2.0	2.0	2.4	2.4	1.5	0.5	0.0	0.0	0.0
85°	3.4	2.4	2.0	2.0	2.4	2.0	1.0	0.5	0.0	0.0	0.0
87.5°	1.0	1.0	0.5	0.5	0.5	1.0	1.0	0.5	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)