

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: P459846

Luminaire Tested: **NAV-SA2A-AMB-U-SL4-HSS**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459846
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-SA2A-AMB-U-SL4-HSS
Description: NAVION AREA AND ROADWAY LUMINAIRE
(2) 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: 1635 lumens
Efficiency: N/A
Efficacy: 39.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G1

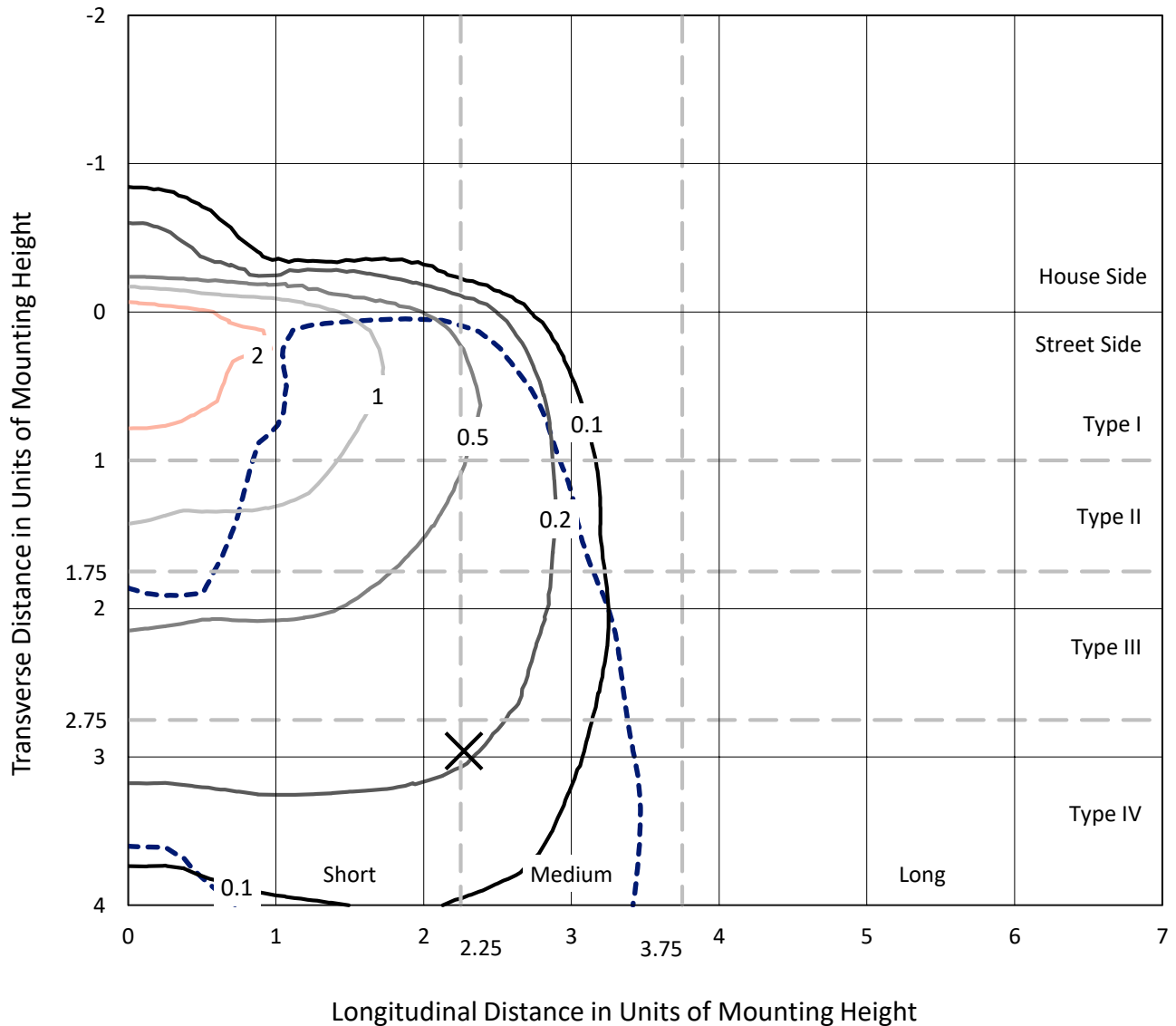
Input Watts (W): 41.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

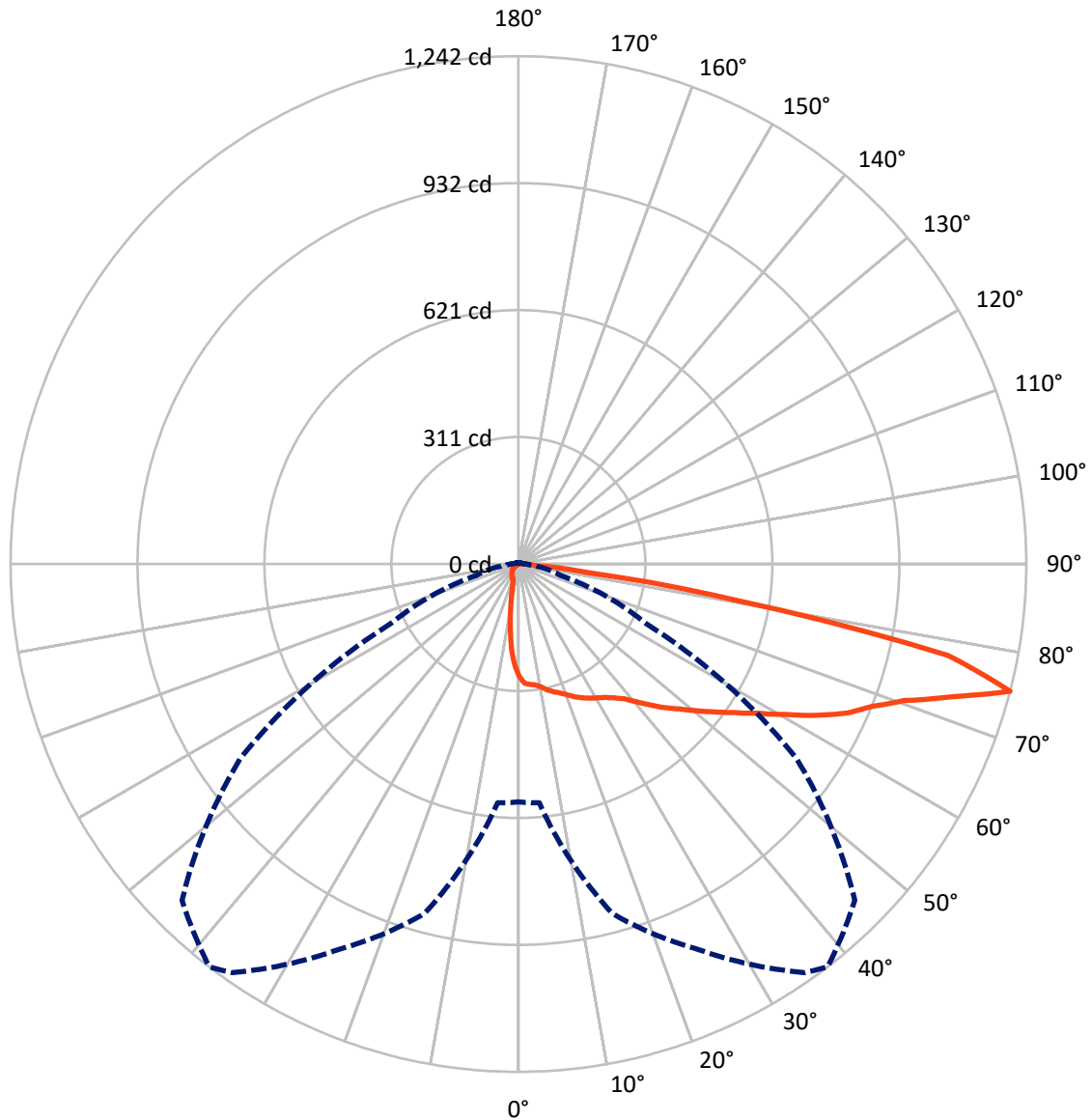
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.9 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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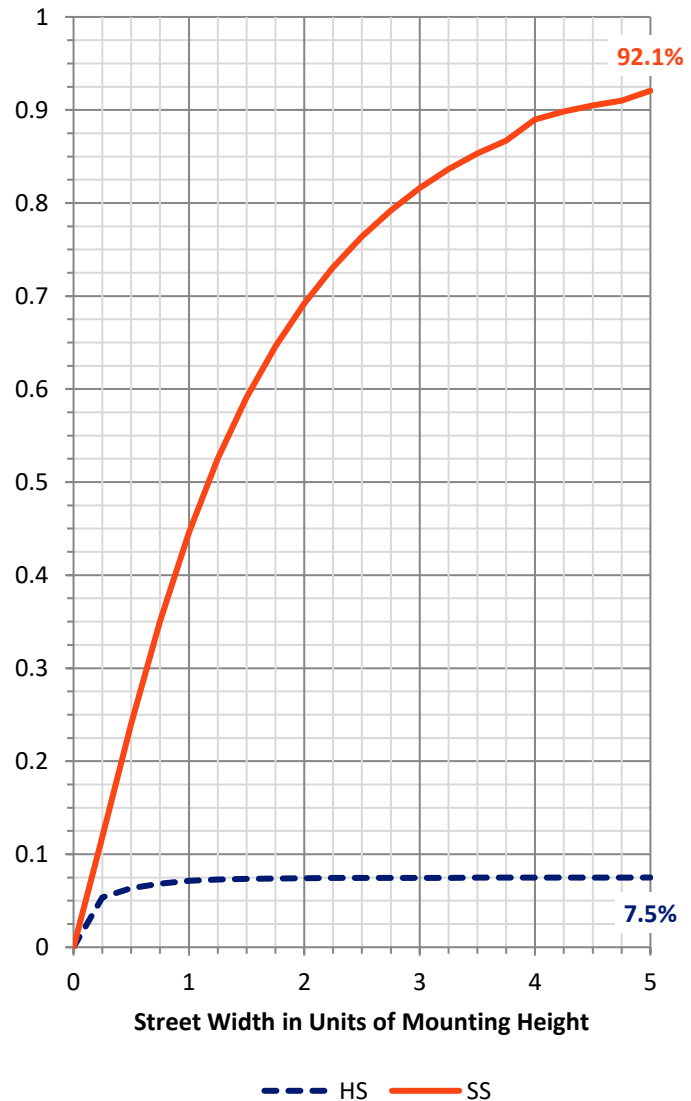
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	123.6	0.0	123.6
	% Fixture	7.6	0.0	7.6
Street Side	Lumens	1511.4	0.0	1511.4
	% Fixture	92.4	0.0	92.4
Total	Lumens	1635.0	0.0	1635.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.3	1.4
10°-20°	59.1	3.6
20°-30°	96.6	5.9
30°-40°	143.6	8.8
40°-50°	215.0	13.1
50°-60°	308.9	18.9
60°-70°	414.0	25.3
70°-80°	335.3	20.5
80°-90°	39.2	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°	1635.0	100.0
0°-180°	1635.0	100.0



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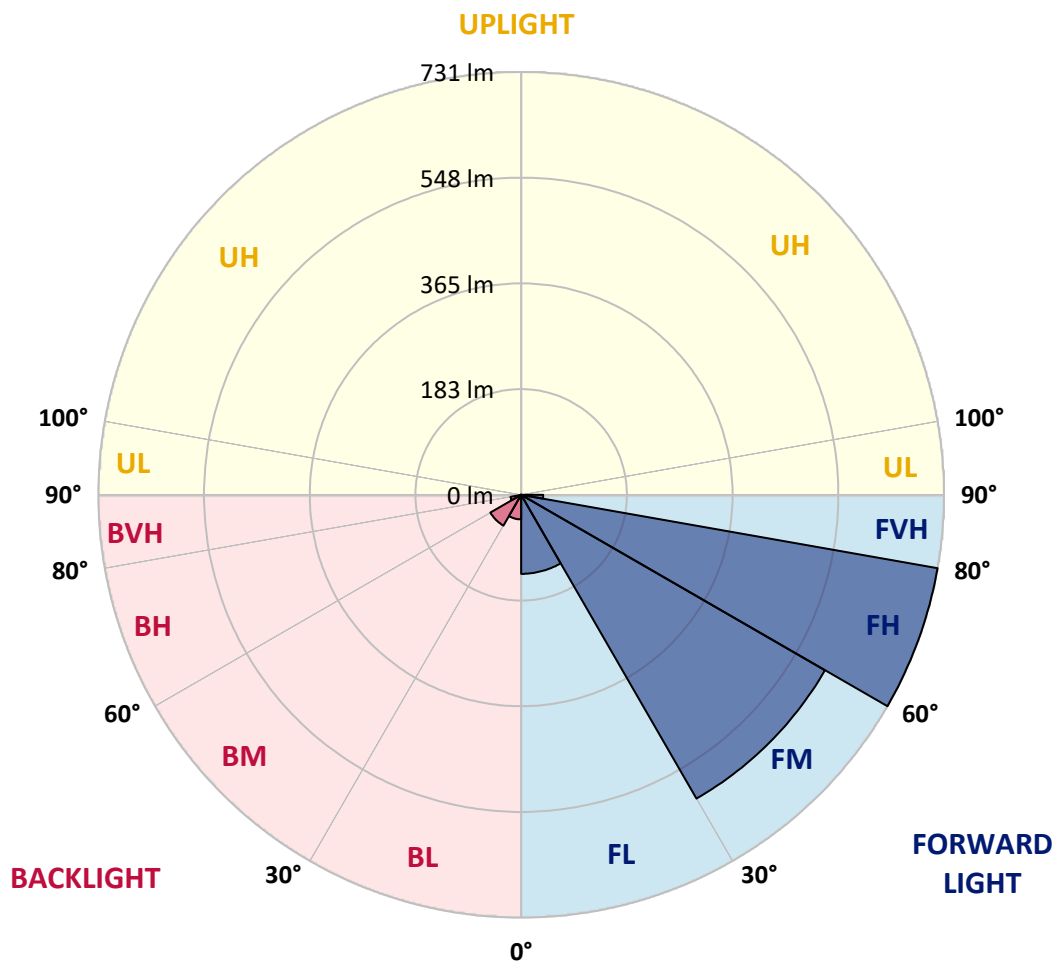
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	136.6	8.4			
FM (30°-60°)	606.1	37.1			
FH (60°-80°)	730.7	44.7			G1/1800
FVH (80°-90°)	38.1	2.3			G1/100
BL (0°-30°)	42.4	2.6	B0/110		
BM (30°-60°)	61.4	3.8	B0/220		
BH (60°-80°)	18.6	1.1	B0/110		G0/110
BVH (80°-90°)	1.1	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	45°	55°	65°	75°	85°
0°	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9
2.5°	296.0	295.0	295.0	293.2	292.3	292.3	288.6	287.7	284.1	280.4	275.9
5°	296.9	296.9	296.0	296.9	296.0	296.0	294.1	293.2	289.6	282.2	274.0
7.5°	302.3	301.4	300.5	300.5	298.7	298.7	294.1	292.3	288.6	284.1	272.2
10°	302.3	302.3	304.2	306.0	306.0	306.0	301.4	296.0	290.5	285.9	272.2
12.5°	301.4	301.4	304.2	310.6	315.1	316.0	313.3	306.0	296.9	288.6	275.9
15°	300.5	301.4	305.1	314.2	322.4	324.3	323.4	317.9	306.0	294.1	280.4
17.5°	302.3	304.2	308.7	321.5	330.7	331.6	332.5	328.8	316.0	301.4	287.7
20°	305.1	306.0	316.0	331.6	340.7	341.6	340.7	335.2	324.3	310.6	296.0
22.5°	309.7	311.5	324.3	341.6	351.7	352.6	349.8	340.7	328.8	317.9	305.1
25°	318.8	320.6	336.1	353.5	360.8	362.6	359.9	348.9	333.4	326.1	315.1
27.5°	329.7	332.5	348.9	365.4	369.9	371.8	369.0	356.2	339.8	337.1	327.9
30°	346.2	348.0	363.5	377.2	379.1	380.0	378.2	363.5	348.9	348.9	340.7
32.5°	366.3	369.0	379.1	389.1	388.2	389.1	388.2	372.7	359.9	367.2	356.2
35°	390.0	387.3	399.2	403.7	400.1	401.9	402.8	387.3	376.3	390.9	377.2
37.5°	408.3	408.3	414.7	419.3	416.5	418.3	421.1	406.5	399.2	424.7	409.2
40°	423.8	423.8	428.4	437.5	438.4	442.1	447.6	430.2	430.2	464.0	446.7
42.5°	435.7	437.5	441.2	453.1	464.9	471.3	476.8	459.5	467.7	514.3	496.0
45°	447.6	449.4	451.2	468.6	492.3	501.5	512.4	496.0	510.6	567.2	547.1
47.5°	462.2	462.2	461.3	488.7	517.9	529.8	549.0	535.3	561.8	632.1	601.0
50°	480.5	478.6	470.4	509.7	549.0	563.6	592.8	579.1	619.3	699.7	641.2
52.5°	501.5	496.9	484.1	531.6	582.8	601.0	638.5	629.4	679.6	753.6	664.1
55°	528.0	520.7	503.3	558.1	623.9	642.1	686.0	691.5	737.1	784.6	687.8
57.5°	561.8	548.1	528.9	591.0	671.4	688.7	739.9	751.8	775.5	814.8	718.0
60°	595.6	580.9	563.6	635.7	723.4	747.2	797.4	802.0	806.6	856.8	750.8
62.5°	625.7	617.5	607.4	686.0	794.7	815.7	846.7	840.4	845.8	906.1	777.3
65°	664.1	655.8	654.0	743.5	862.3	880.5	884.2	886.9	907.0	954.5	791.0
67.5°	696.9	694.2	710.6	812.0	923.5	930.8	944.5	960.0	971.0	976.5	699.7
70°	743.5	739.0	775.5	880.5	984.7	1000.2	1048.6	1064.1	988.3	800.2	428.4
72.5°	748.1	756.3	855.9	951.8	1076.0	1109.8	1170.1	1087.0	768.2	429.3	133.4
75°	581.9	586.4	884.2	1040.4	1220.3	1242.3	1163.7	831.2	343.4	106.0	30.1
77.5°	324.3	341.6	591.0	965.5	1108.9	1074.2	795.6	367.2	88.6	23.7	15.5
80°	237.5	245.7	285.0	552.6	627.5	551.7	331.6	139.8	48.4	16.4	11.0
82.5°	70.3	75.8	147.1	178.1	222.0	176.3	99.6	106.9	31.1	11.9	9.1
85°	19.2	20.1	50.2	70.3	63.9	41.1	36.5	92.3	12.8	8.2	7.3
87.5°	9.1	9.1	15.5	31.1	26.5	21.9	30.1	53.9	2.7	2.7	1.8
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°	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9	274.9
2.5°	273.1	271.3	264.0	260.3	256.7	250.3	246.6	243.9	243.0	241.1	242.1
5°	268.5	262.2	250.3	240.2	228.4	215.6	208.3	200.0	191.8	190.0	189.1
7.5°	264.9	255.8	237.5	218.3	198.2	176.3	156.2	143.4	130.6	128.8	127.9
10°	263.1	250.3	223.8	195.5	162.6	132.4	110.5	95.9	86.8	82.2	80.4
12.5°	263.1	247.5	212.8	172.6	130.6	97.7	75.8	61.2	54.8	52.1	51.2
15°	264.9	245.7	200.0	146.1	102.3	69.4	53.0	45.7	42.9	42.0	42.9
17.5°	269.5	245.7	188.2	123.3	77.6	51.2	42.0	41.1	40.2	40.2	40.2
20°	275.9	247.5	175.4	103.2	57.5	42.0	39.3	39.3	39.3	39.3	39.3
22.5°	283.2	248.5	160.8	84.0	46.6	38.4	37.5	37.5	37.5	37.5	37.5
25°	290.5	250.3	145.2	65.8	38.4	36.5	35.6	36.5	36.5	36.5	36.5
27.5°	299.6	252.1	129.7	52.1	35.6	34.7	34.7	34.7	34.7	34.7	34.7
30°	307.8	252.1	115.1	42.9	33.8	32.9	32.9	32.9	32.9	32.9	32.9
32.5°	317.9	251.2	99.6	35.6	32.0	31.1	30.1	31.1	31.1	31.1	30.1
35°	332.5	251.2	82.2	32.9	30.1	29.2	28.3	28.3	28.3	28.3	28.3
37.5°	351.7	254.8	64.9	30.1	27.4	26.5	26.5	26.5	25.6	25.6	25.6
40°	380.0	261.2	52.1	28.3	25.6	24.7	23.7	23.7	22.8	21.9	21.9
42.5°	413.8	268.5	42.9	26.5	23.7	22.8	21.9	21.0	20.1	19.2	19.2
45°	447.6	274.0	33.8	24.7	21.9	21.0	20.1	19.2	17.4	16.4	15.5
47.5°	483.2	274.0	27.4	22.8	21.0	19.2	18.3	16.4	14.6	12.8	12.8
50°	504.2	264.0	24.7	21.0	19.2	17.4	16.4	13.7	11.9	10.0	10.0
52.5°	516.1	250.3	22.8	19.2	18.3	16.4	13.7	11.9	9.1	7.3	7.3
55°	526.1	243.9	21.0	18.3	16.4	14.6	11.9	9.1	6.4	5.5	5.5
57.5°	538.9	233.8	19.2	16.4	14.6	12.8	10.0	7.3	4.6	3.7	3.7
60°	549.9	220.1	17.4	15.5	13.7	11.0	8.2	5.5	2.7	1.8	1.8
62.5°	555.4	199.1	15.5	13.7	11.9	9.1	6.4	3.7	1.8	0.9	0.9
65°	539.8	167.2	14.6	11.9	10.0	7.3	4.6	1.8	0.9	0.0	0.0
67.5°	441.2	107.8	11.9	10.0	8.2	5.5	3.7	1.8	0.9	0.0	0.0
70°	226.5	45.7	10.0	8.2	7.3	4.6	2.7	0.9	0.0	0.0	0.0
72.5°	59.4	16.4	8.2	7.3	6.4	4.6	1.8	0.9	0.0	0.0	0.0
75°	18.3	11.0	6.4	5.5	5.5	3.7	1.8	0.9	0.0	0.0	0.0
77.5°	12.8	8.2	5.5	4.6	4.6	3.7	1.8	0.9	0.0	0.0	0.0
80°	10.0	7.3	4.6	3.7	4.6	4.6	1.8	0.9	0.0	0.0	0.0
82.5°	8.2	6.4	3.7	3.7	4.6	4.6	2.7	0.9	0.0	0.0	0.0
85°	6.4	4.6	3.7	3.7	4.6	3.7	1.8	0.9	0.0	0.0	0.0
87.5°	1.8	1.8	0.9	0.9	0.9	1.8	1.8	0.9	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)