

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: INVUE

Report Number: P596115

Luminaire Tested: **MSA-SA4A-AMB-U-T2-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596115
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-AMB-U-T2-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2177 lumens
Efficiency: N/A
Efficacy: 27.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B0 - U0 - G1

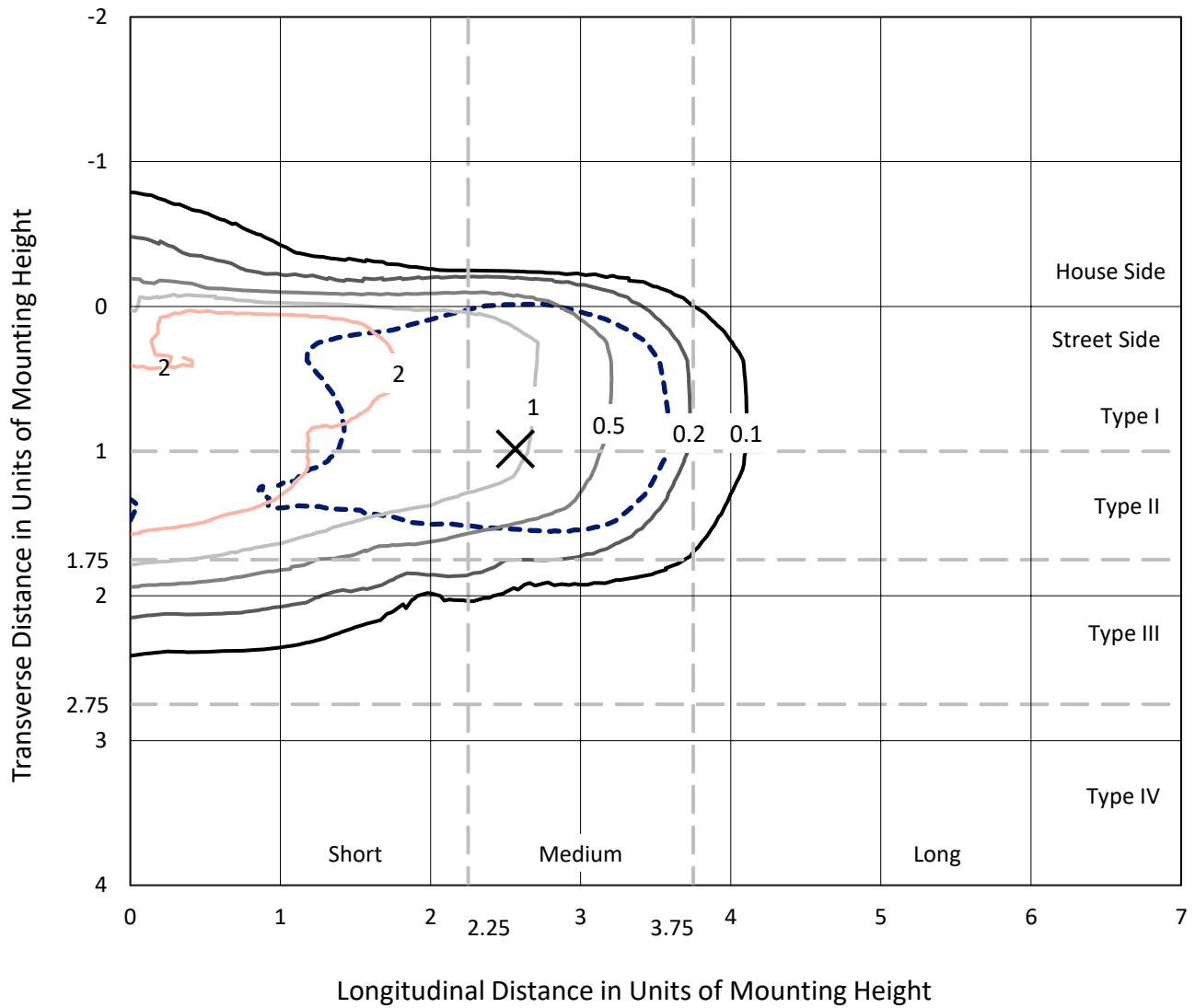
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

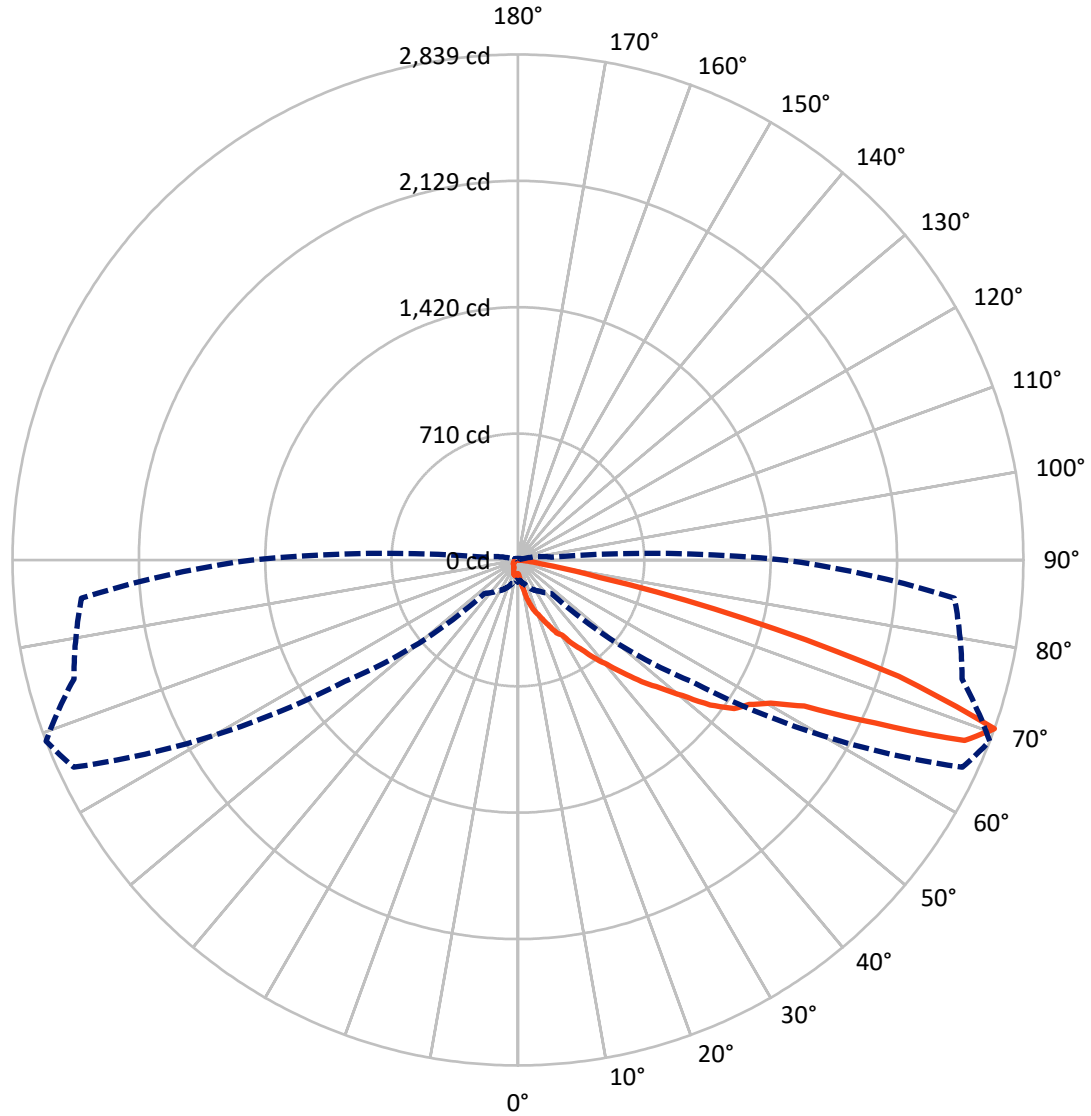
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.9 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 69-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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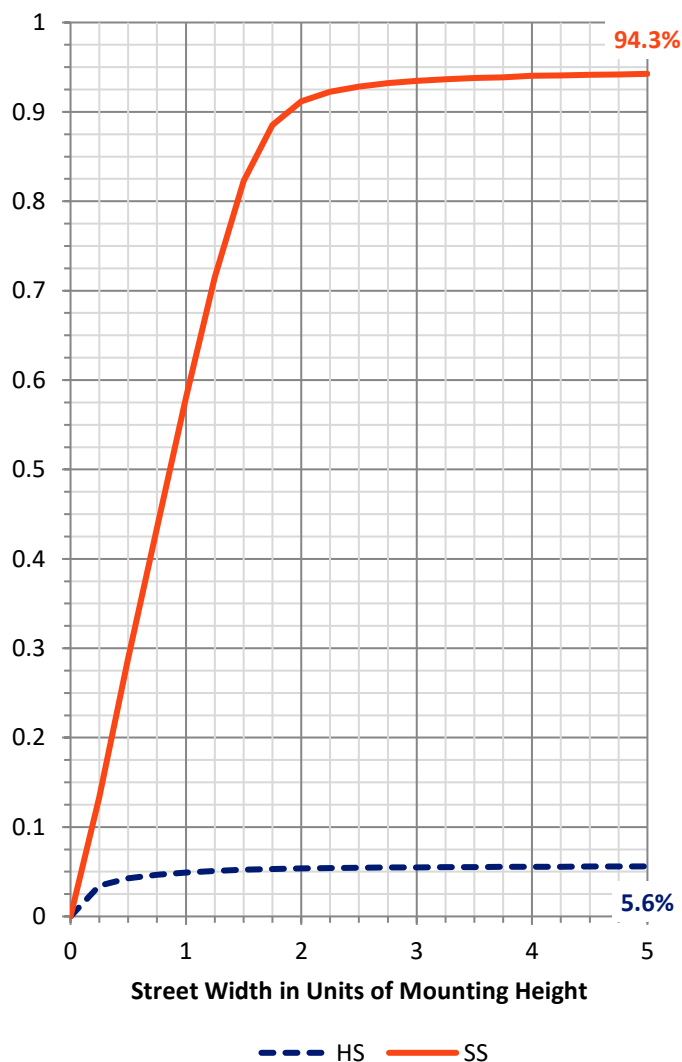
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	123.6	0.0	123.6
	% Fixture	5.7	0.0	5.7
Street Side	Lumens	2053.4	0.0	2053.4
	% Fixture	94.3	0.0	94.3
Total	Lumens	2177.0	0.0	2177.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.8	0.5
10°-20°	42.0	1.9
20°-30°	86.6	4.0
30°-40°	174.3	8.0
40°-50°	345.5	15.9
50°-60°	587.7	27.0
60°-70°	634.1	29.1
70°-80°	282.9	13.0
80°-90°	14.1	0.6
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°	2177.0	100.0
0°-180°	2177.0	100.0

Coefficient of Utilization



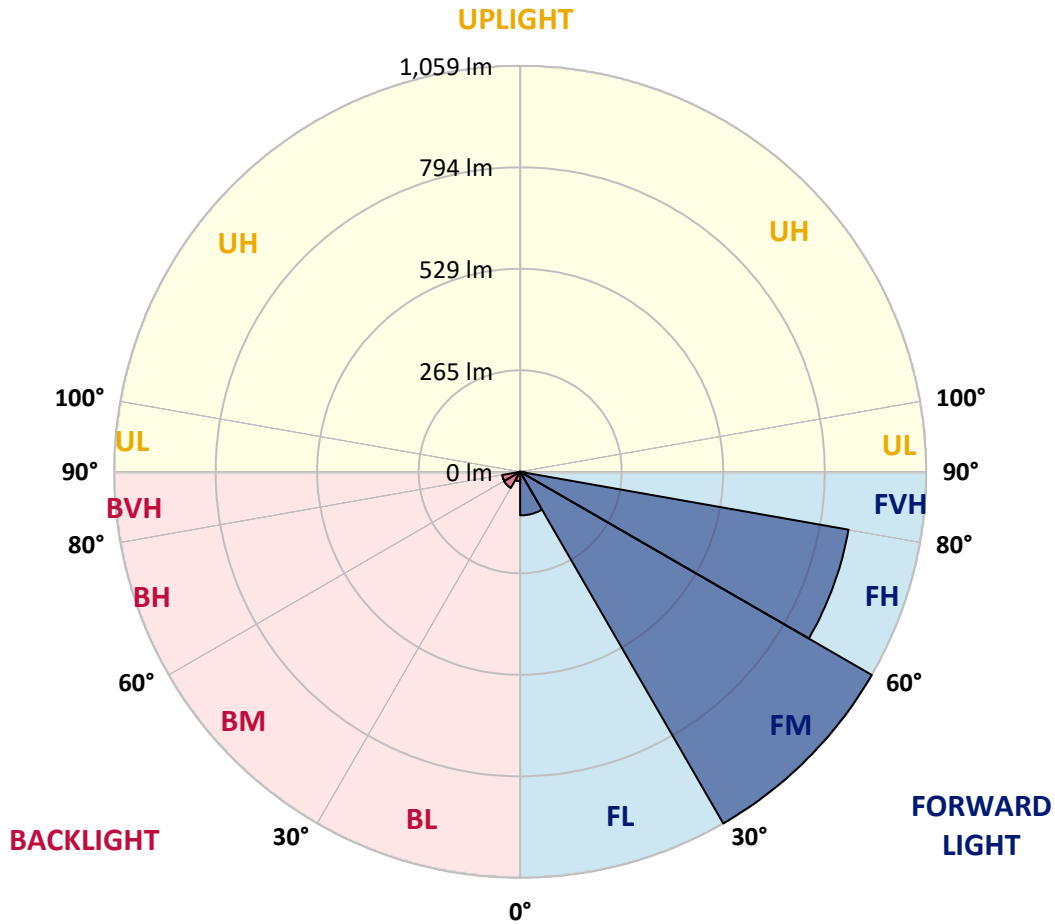
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	113.7	5.2			
FM (30°-60°)	1058.9	48.6			
FH (60°-80°)	869.5	39.9			G1/1800
FVH (80°-90°)	11.2	0.5			G1/100
BL (0°-30°)	24.6	1.1	B0/110		
BM (30°-60°)	48.6	2.2	B0/220		
BH (60°-80°)	47.6	2.2	B0/110		G0/110
BVH (80°-90°)	2.9	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	69°	75°	85°
0°	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
2.5°	109.0	97.0	93.0	88.0	87.0	90.0	86.0	82.0	83.0	83.0	90.0
5°	152.0	130.0	128.0	116.0	99.0	95.0	93.0	100.0	101.0	117.0	115.0
7.5°	182.0	168.0	171.0	149.0	127.0	116.0	126.0	137.0	137.0	141.0	133.0
10°	186.0	181.0	177.0	165.0	167.0	169.0	167.0	165.0	163.0	170.0	151.0
12.5°	179.0	179.0	194.0	193.0	210.0	226.0	220.0	216.0	216.0	202.0	172.0
15°	190.0	190.0	199.0	211.0	231.0	261.0	267.0	259.0	260.0	251.0	201.0
17.5°	202.0	204.0	207.0	222.0	248.0	285.0	305.0	303.0	300.0	296.0	237.0
20°	216.0	218.0	212.0	212.0	250.0	290.0	330.0	332.0	327.0	331.0	265.0
22.5°	262.0	255.0	232.0	220.0	236.0	281.0	340.0	360.0	367.0	360.0	299.0
25°	306.0	305.0	279.0	259.0	245.0	280.0	350.0	411.0	410.0	416.0	316.0
27.5°	364.0	365.0	322.0	316.0	281.0	274.0	355.0	455.0	464.0	435.0	349.0
30°	429.0	426.0	376.0	369.0	334.0	293.0	370.0	491.0	490.0	485.0	383.0
32.5°	510.0	505.0	437.0	418.0	389.0	353.0	365.0	514.0	560.0	558.0	420.0
35°	603.0	595.0	527.0	487.0	436.0	396.0	405.0	551.0	619.0	627.0	467.0
37.5°	749.0	717.0	636.0	565.0	516.0	480.0	466.0	613.0	699.0	735.0	534.0
40°	861.1	821.0	740.0	650.0	585.0	566.0	520.0	656.0	772.0	846.1	611.0
42.5°	959.1	929.1	838.1	762.0	671.0	626.0	592.0	732.0	865.1	966.1	695.0
45°	1032.1	985.1	901.1	851.1	756.0	748.0	708.0	834.1	974.1	1109.1	772.0
47.5°	1121.1	1059.1	985.1	923.1	838.1	878.1	805.0	936.1	1072.1	1289.1	878.1
50°	1242.1	1170.1	1089.1	991.1	951.1	969.1	901.1	1035.1	1196.1	1469.1	1003.1
52.5°	1419.1	1333.1	1249.1	1163.1	1085.1	1023.1	990.1	1156.1	1353.1	1617.1	1123.1
55°	1453.1	1362.1	1337.1	1327.1	1318.1	1138.1	1078.1	1330.1	1473.1	1736.1	1234.1
57.5°	1345.1	1258.1	1282.1	1333.1	1448.1	1362.1	1196.1	1456.1	1532.1	1836.1	1330.1
60°	981.1	933.1	1031.1	1163.1	1415.1	1484.1	1429.1	1568.1	1632.1	1871.1	1420.1
62.5°	505.0	480.0	593.0	765.0	1148.1	1481.1	1739.1	1765.1	1806.1	1930.1	1619.1
65°	256.0	248.0	304.0	385.0	635.0	1215.1	1891.1	2228.1	2207.1	2130.1	1998.1
67.5°	174.0	166.0	197.0	247.0	315.0	665.0	1782.1	2803.2	2706.2	2415.1	2395.1
70°	124.0	115.0	140.0	180.0	215.0	265.0	1188.1	2754.2	2839.2	2582.2	2461.1
72.5°	77.0	73.0	98.0	132.0	168.0	132.0	487.0	2097.1	2236.1	2250.1	1963.1
75°	50.0	48.0	60.0	93.0	130.0	95.0	138.0	1103.1	1308.1	1398.1	1115.1
77.5°	37.0	35.0	42.0	63.0	85.0	68.0	73.0	429.0	466.0	557.0	398.0
80°	19.0	19.0	29.0	37.0	56.0	45.0	49.0	127.0	133.0	161.0	79.0
82.5°	10.0	10.0	16.0	27.0	34.0	28.0	25.0	52.0	54.0	55.0	28.0
85°	2.0	3.0	10.0	16.0	18.0	12.0	14.0	20.0	22.0	24.0	13.0
87.5°	1.0	2.0	4.0	5.0	5.0	4.0	7.0	8.0	8.0	8.0	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°	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
2.5°	92.0	80.0	83.0	71.0	68.0	67.0	66.0	66.0	74.0	75.0	80.0
5°	120.0	105.0	97.0	83.0	68.0	60.0	62.0	69.0	74.0	76.0	79.0
7.5°	139.0	121.0	106.0	82.0	63.0	56.0	60.0	62.0	64.0	64.0	67.0
10°	142.0	125.0	100.0	75.0	66.0	60.0	53.0	49.0	50.0	50.0	51.0
12.5°	158.0	133.0	101.0	76.0	66.0	55.0	47.0	43.0	40.0	39.0	40.0
15°	171.0	143.0	100.0	74.0	59.0	47.0	39.0	37.0	38.0	38.0	38.0
17.5°	190.0	156.0	96.0	70.0	51.0	40.0	37.0	38.0	38.0	40.0	39.0
20°	206.0	156.0	90.0	60.0	42.0	36.0	36.0	35.0	36.0	36.0	36.0
22.5°	224.0	156.0	80.0	51.0	37.0	34.0	32.0	31.0	31.0	31.0	32.0
25°	226.0	146.0	73.0	45.0	35.0	31.0	29.0	27.0	27.0	28.0	28.0
27.5°	233.0	136.0	65.0	40.0	34.0	28.0	26.0	25.0	24.0	25.0	25.0
30°	233.0	131.0	60.0	38.0	32.0	26.0	24.0	23.0	22.0	23.0	23.0
32.5°	233.0	118.0	55.0	37.0	30.0	24.0	22.0	21.0	21.0	22.0	22.0
35°	233.0	109.0	51.0	35.0	28.0	23.0	21.0	20.0	20.0	21.0	21.0
37.5°	258.0	105.0	48.0	35.0	27.0	23.0	21.0	20.0	20.0	21.0	21.0
40°	270.0	106.0	44.0	33.0	26.0	23.0	21.0	20.0	19.0	20.0	20.0
42.5°	292.0	105.0	43.0	32.0	25.0	22.0	20.0	19.0	19.0	19.0	19.0
45°	330.0	105.0	42.0	31.0	25.0	22.0	20.0	19.0	18.0	18.0	19.0
47.5°	371.0	111.0	41.0	29.0	24.0	22.0	19.0	18.0	17.0	18.0	18.0
50°	426.0	115.0	40.0	28.0	24.0	22.0	19.0	17.0	17.0	17.0	17.0
52.5°	495.0	119.0	38.0	27.0	24.0	21.0	18.0	17.0	16.0	17.0	17.0
55°	570.0	122.0	37.0	26.0	24.0	20.0	18.0	16.0	16.0	16.0	16.0
57.5°	648.0	123.0	36.0	25.0	22.0	20.0	17.0	16.0	15.0	15.0	15.0
60°	745.0	124.0	33.0	24.0	21.0	18.0	16.0	15.0	14.0	14.0	13.0
62.5°	898.1	133.0	30.0	23.0	19.0	17.0	15.0	13.0	13.0	12.0	11.0
65°	1184.1	150.0	26.0	21.0	18.0	15.0	13.0	12.0	11.0	10.0	9.0
67.5°	1469.1	183.0	23.0	19.0	16.0	14.0	12.0	11.0	9.0	9.0	7.0
70°	1494.1	188.0	20.0	17.0	14.0	13.0	11.0	10.0	9.0	8.0	7.0
72.5°	1145.1	126.0	18.0	16.0	13.0	10.0	10.0	10.0	9.0	8.0	7.0
75°	602.0	57.0	16.0	14.0	11.0	9.0	10.0	9.0	8.0	7.0	5.0
77.5°	178.0	26.0	13.0	12.0	10.0	7.0	8.0	7.0	7.0	5.0	3.0
80°	35.0	14.0	10.0	10.0	8.0	4.0	6.0	7.0	6.0	5.0	3.0
82.5°	13.0	9.0	8.0	7.0	6.0	3.0	6.0	6.0	6.0	6.0	4.0
85°	6.0	6.0	7.0	6.0	5.0	2.0	5.0	6.0	6.0	6.0	4.0
87.5°	4.0	6.0	6.0	6.0	5.0	3.0	5.0	6.0	6.0	6.0	3.0
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)