

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: P596119

Luminaire Tested: **MSA-SA4A-AMB-U-T4FT-HSS**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596119  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-AMB-U-T4FT-HSS  
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (64) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2202 lumens  
Efficiency: N/A  
Efficacy: 27.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

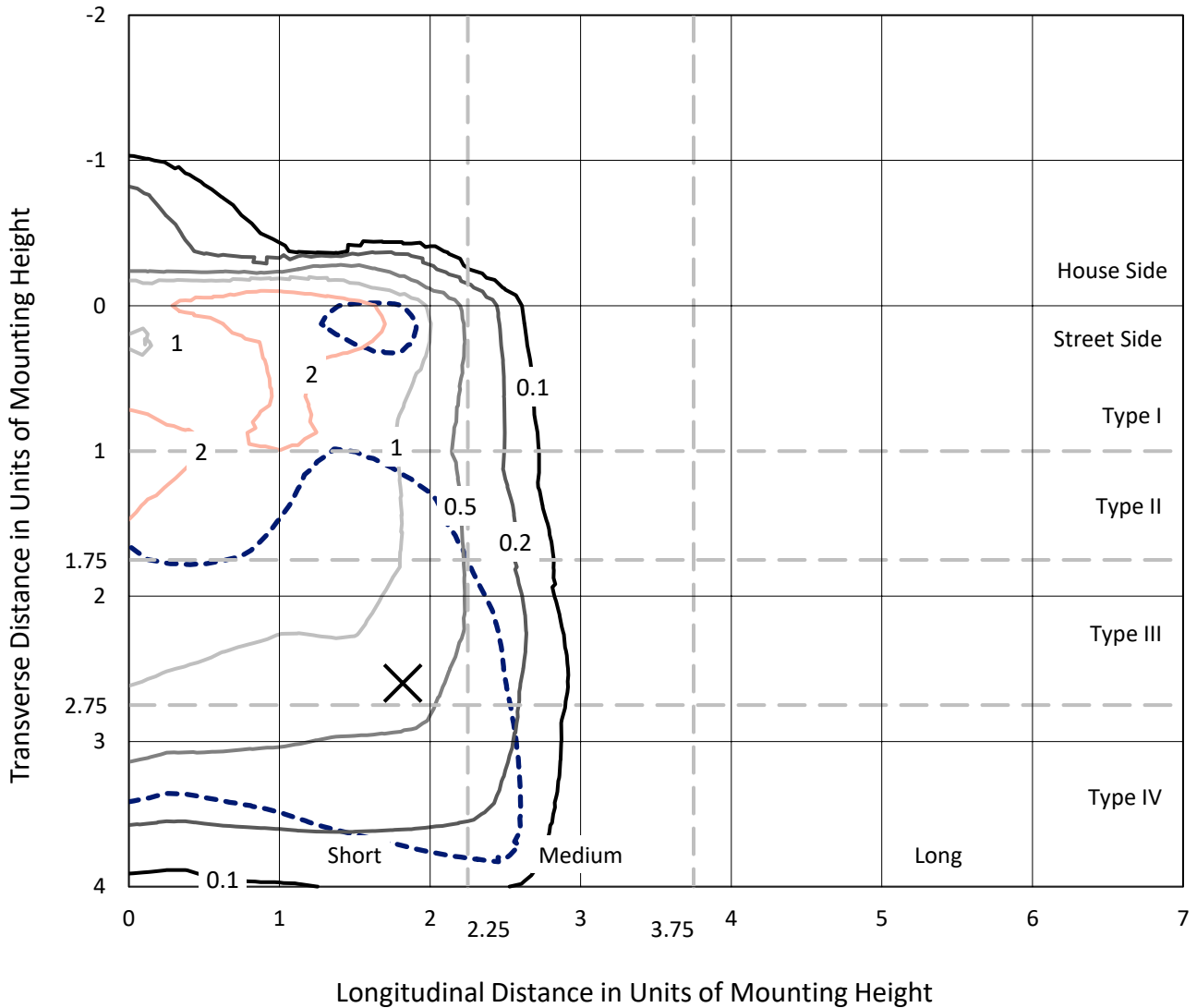
Input Watts (W): 79  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

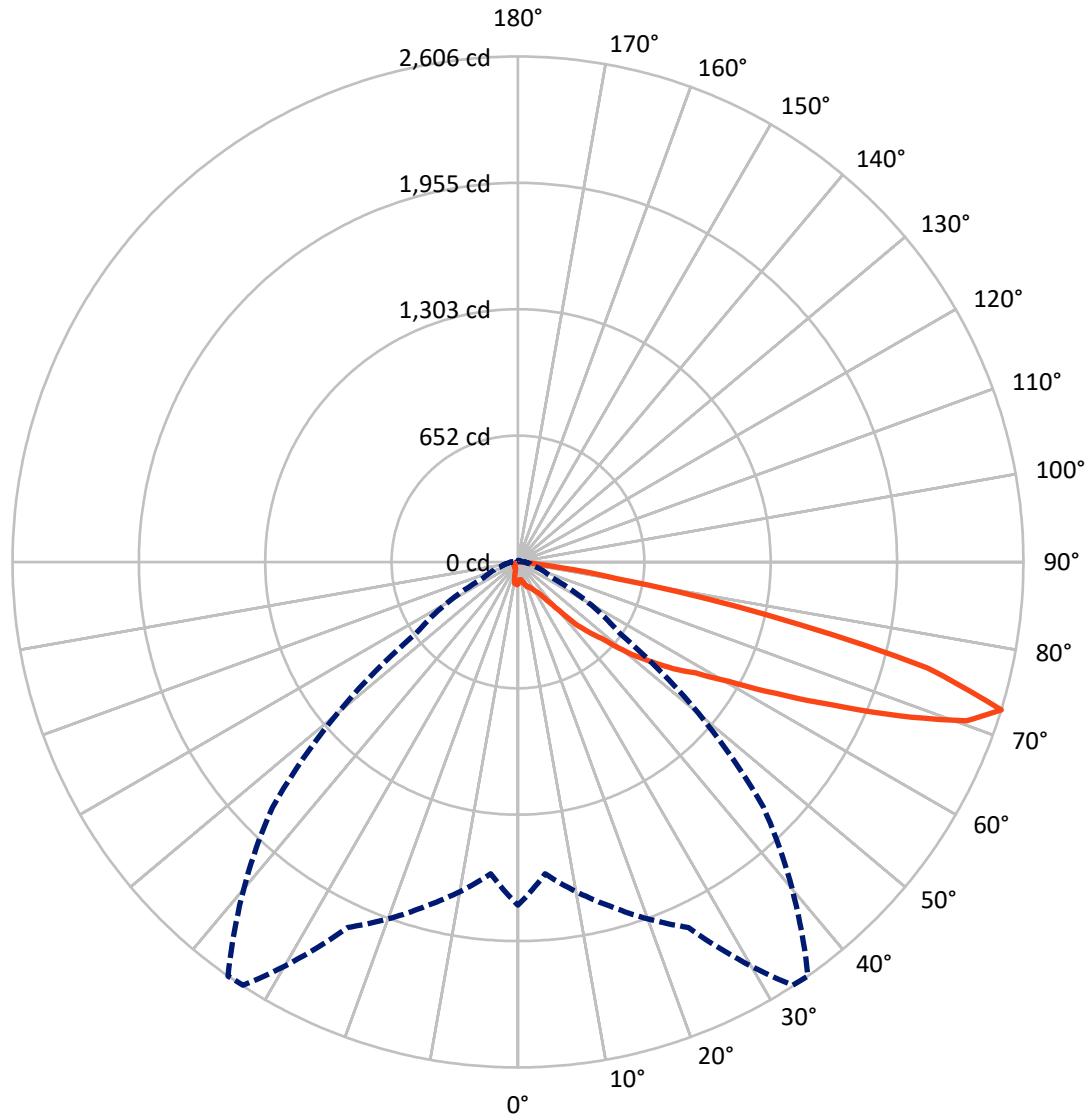
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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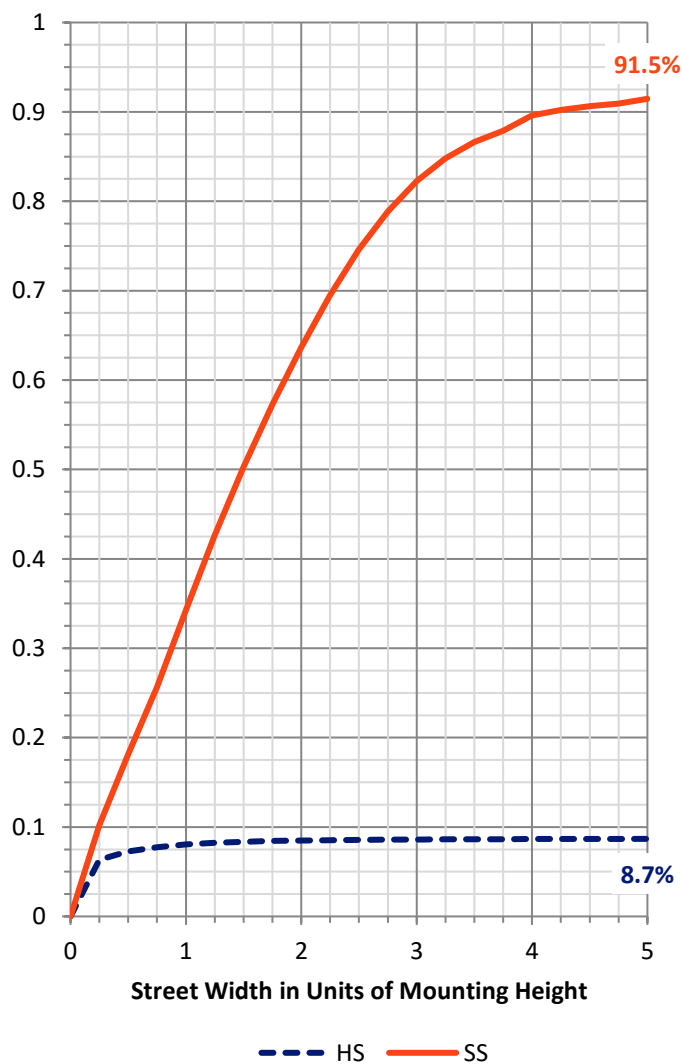
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	192.8	0.0	192.8
	% Fixture	8.8	0.0	8.8
<b>Street Side</b>	Lumens	2009.2	0.0	2009.2
	% Fixture	91.2	0.0	91.2
<b>Total</b>	Lumens	2202.0	0.0	2202.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	11.7	0.5
10°-20°	35.6	1.6
20°-30°	64.5	2.9
30°-40°	125.8	5.7
40°-50°	282.8	12.8
50°-60°	517.6	23.5
60°-70°	715.7	32.5
70°-80°	426.5	19.4
80°-90°	21.7	1.0
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°	2202.0	100.0
0°-180°	2202.0	100.0

**Coefficient of Utilization**

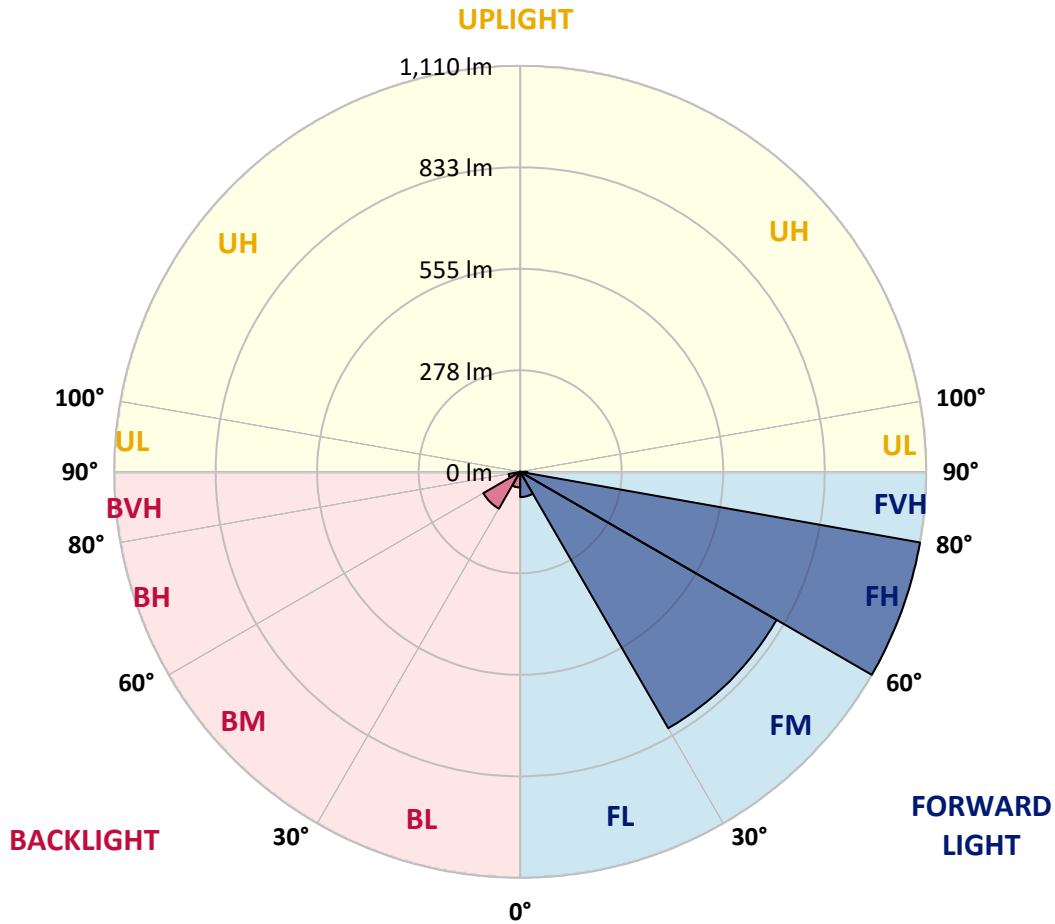


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	69.0	3.1			
FM (30°-60°)	809.8	36.8			
FH (60°-80°)	1110.4	50.4			G1/1800
FVH (80°-90°)	20.0	0.9			G1/100
BL (0°-30°)	42.9	1.9	B0/110		
BM (30°-60°)	116.4	5.3	B0/220		
BH (60°-80°)	31.9	1.4	B0/110		G0/110
BVH (80°-90°)	1.6	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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0
2.5°	125.0	113.0	106.0	94.0	93.0	94.0	96.0	101.0	104.0	116.0	129.0
5°	125.0	114.0	115.0	105.0	94.0	91.0	90.0	95.0	117.0	144.0	152.0
7.5°	114.0	108.0	108.0	101.0	95.0	92.0	96.0	105.0	129.0	153.0	170.0
10°	98.0	97.0	95.0	92.0	94.0	97.0	108.0	114.0	130.0	156.0	172.0
12.5°	93.0	93.0	97.0	96.0	104.0	105.0	119.0	130.0	148.0	167.0	188.0
15°	103.0	104.0	103.0	105.0	110.0	112.0	129.0	142.0	161.0	184.0	206.0
17.5°	119.0	120.0	114.0	118.0	122.0	126.0	138.0	152.0	167.0	201.0	234.0
20°	137.0	138.0	125.0	121.0	135.0	135.0	147.0	159.0	171.0	208.0	257.0
22.5°	154.0	152.0	133.0	130.0	139.0	138.0	151.0	165.0	175.0	212.0	284.0
25°	168.0	166.0	147.0	140.0	149.0	147.0	161.0	175.0	190.0	229.0	301.0
27.5°	183.0	181.0	152.0	155.0	156.0	157.0	165.0	187.0	208.0	232.0	327.0
30°	201.0	200.0	168.0	168.0	174.0	172.0	175.0	210.0	227.0	250.0	370.0
32.5°	244.0	234.0	197.0	181.0	183.0	188.0	207.0	223.0	251.0	283.0	418.0
35°	327.0	314.0	252.0	213.0	210.0	214.0	234.0	272.0	288.0	314.0	470.0
37.5°	468.0	452.0	361.0	275.0	266.0	264.0	282.0	321.0	336.0	360.0	582.0
40°	583.0	545.0	463.0	387.0	341.0	330.0	351.0	360.0	390.0	429.0	724.1
42.5°	691.1	649.1	553.0	499.0	454.0	440.0	389.0	406.0	461.0	508.0	829.1
45°	781.1	718.1	609.1	576.0	520.0	518.0	471.0	508.0	570.0	603.1	949.1
47.5°	848.1	781.1	691.1	655.1	620.1	599.1	612.1	627.1	683.1	713.1	1081.1
50°	914.1	852.1	760.1	730.1	714.1	735.1	779.1	774.1	781.1	807.1	1204.1
52.5°	1011.1	915.1	830.1	818.1	823.1	847.1	900.1	939.1	879.1	896.1	1353.1
55°	1081.1	984.1	926.1	903.1	946.1	970.1	1053.1	1109.1	983.1	994.1	1493.1
57.5°	1213.1	1087.1	1059.1	1022.1	1090.1	1079.1	1221.1	1256.1	1042.1	1059.1	1590.1
60°	1377.1	1251.1	1197.1	1161.1	1234.1	1250.1	1385.1	1315.1	1056.1	1122.1	1587.1
62.5°	1628.1	1467.1	1361.1	1332.1	1425.1	1492.1	1553.1	1361.1	1053.1	1094.1	1355.1
65°	1929.2	1752.1	1591.1	1558.1	1717.1	1770.1	1774.1	1407.1	988.1	914.1	921.1
67.5°	2193.2	2001.2	1858.2	1856.2	2103.2	2115.2	1998.2	1440.1	813.1	589.0	427.0
70°	2202.2	2049.2	1971.2	2088.2	2493.2	2453.2	2086.2	1140.1	482.0	264.0	148.0
72.5°	1770.1	1614.1	1837.2	2079.2	2602.2	2606.2	1791.2	640.1	198.0	93.0	45.0
75°	767.1	754.1	1138.1	1656.1	2187.2	2181.2	1036.1	256.0	92.0	59.0	26.0
77.5°	336.0	288.0	411.0	917.1	1346.1	1312.1	377.0	88.0	63.0	49.0	16.0
80°	70.0	60.0	115.0	311.0	568.0	518.0	104.0	50.0	48.0	41.0	10.0
82.5°	18.0	19.0	36.0	88.0	184.0	158.0	35.0	32.0	36.0	31.0	6.0
85°	4.0	5.0	15.0	34.0	43.0	40.0	14.0	16.0	23.0	21.0	4.0
87.5°	2.0	2.0	4.0	7.0	6.0	5.0	3.0	5.0	6.0	7.0	2.0
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°	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0
2.5°	135.0	118.0	126.0	112.0	112.0	120.0	117.0	115.0	121.0	120.0	136.0
5°	167.0	152.0	150.0	134.0	117.0	110.0	111.0	127.0	139.0	143.0	155.0
7.5°	183.0	173.0	174.0	149.0	116.0	107.0	114.0	122.0	129.0	131.0	137.0
10°	184.0	180.0	177.0	145.0	133.0	124.0	105.0	95.0	95.0	91.0	93.0
12.5°	197.0	196.0	189.0	156.0	136.0	109.0	84.0	72.0	65.0	63.0	60.0
15°	214.0	216.0	206.0	165.0	123.0	82.0	61.0	46.0	42.0	41.0	40.0
17.5°	240.0	253.0	210.0	156.0	97.0	60.0	42.0	37.0	36.0	37.0	37.0
20°	266.0	270.0	215.0	135.0	73.0	43.0	36.0	35.0	36.0	38.0	38.0
22.5°	299.0	296.0	207.0	107.0	51.0	36.0	35.0	35.0	37.0	39.0	40.0
25°	324.0	317.0	201.0	84.0	38.0	33.0	34.0	36.0	37.0	40.0	40.0
27.5°	360.0	332.0	183.0	64.0	33.0	32.0	34.0	37.0	38.0	41.0	41.0
30°	382.0	374.0	164.0	47.0	31.0	30.0	33.0	36.0	38.0	42.0	42.0
32.5°	444.0	386.0	143.0	36.0	29.0	29.0	31.0	34.0	39.0	44.0	44.0
35°	494.0	439.0	120.0	32.0	29.0	28.0	29.0	32.0	38.0	44.0	45.0
37.5°	617.1	485.0	96.0	31.0	29.0	28.0	29.0	30.0	36.0	45.0	47.0
40°	730.1	531.0	77.0	31.0	29.0	28.0	28.0	29.0	33.0	41.0	43.0
42.5°	824.1	581.0	61.0	30.0	28.0	27.0	27.0	28.0	32.0	37.0	37.0
45°	925.1	596.1	51.0	30.0	27.0	27.0	27.0	27.0	29.0	30.0	31.0
47.5°	1013.1	604.1	42.0	29.0	27.0	27.0	26.0	26.0	26.0	26.0	26.0
50°	1111.1	622.1	34.0	27.0	27.0	27.0	25.0	24.0	23.0	22.0	22.0
52.5°	1213.1	641.1	29.0	24.0	25.0	26.0	24.0	21.0	20.0	19.0	19.0
55°	1332.1	647.1	26.0	22.0	24.0	24.0	21.0	19.0	18.0	17.0	17.0
57.5°	1422.1	623.1	24.0	20.0	21.0	22.0	19.0	17.0	16.0	15.0	14.0
60°	1398.1	532.0	22.0	18.0	19.0	19.0	17.0	15.0	14.0	13.0	12.0
62.5°	1177.1	391.0	19.0	16.0	17.0	17.0	15.0	14.0	12.0	11.0	10.0
65°	785.1	236.0	16.0	14.0	15.0	15.0	13.0	12.0	10.0	9.0	8.0
67.5°	379.0	110.0	14.0	13.0	13.0	13.0	11.0	11.0	9.0	8.0	7.0
70°	115.0	42.0	13.0	12.0	12.0	12.0	10.0	10.0	9.0	8.0	6.0
72.5°	36.0	20.0	12.0	11.0	11.0	9.0	9.0	9.0	8.0	7.0	5.0
75°	22.0	13.0	10.0	10.0	9.0	8.0	8.0	9.0	8.0	7.0	4.0
77.5°	13.0	10.0	9.0	9.0	8.0	6.0	7.0	6.0	5.0	4.0	2.0
80°	8.0	7.0	7.0	7.0	6.0	3.0	5.0	5.0	5.0	3.0	1.0
82.5°	5.0	4.0	4.0	5.0	3.0	1.0	4.0	5.0	4.0	3.0	1.0
85°	2.0	3.0	3.0	3.0	2.0	1.0	3.0	4.0	4.0	3.0	1.0
87.5°	2.0	2.0	3.0	3.0	2.0	1.0	4.0	4.0	4.0	3.0	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

(END OF REPORT)