

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: P596415

Luminaire Tested: **MSA-SA4B-722-U-SL3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596415  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-722-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11728 lumens  
Efficiency: N/A  
Efficacy: 68.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

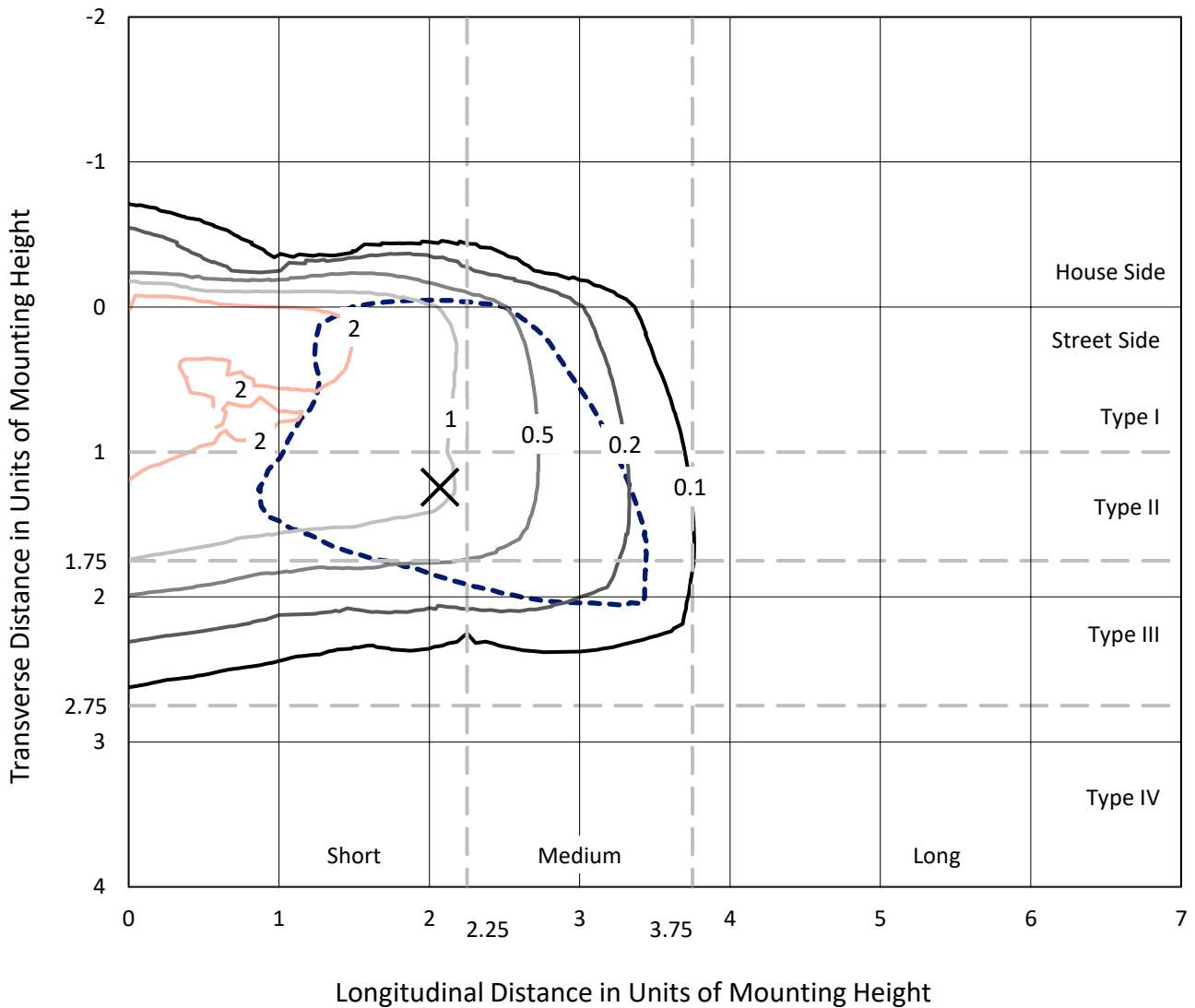
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

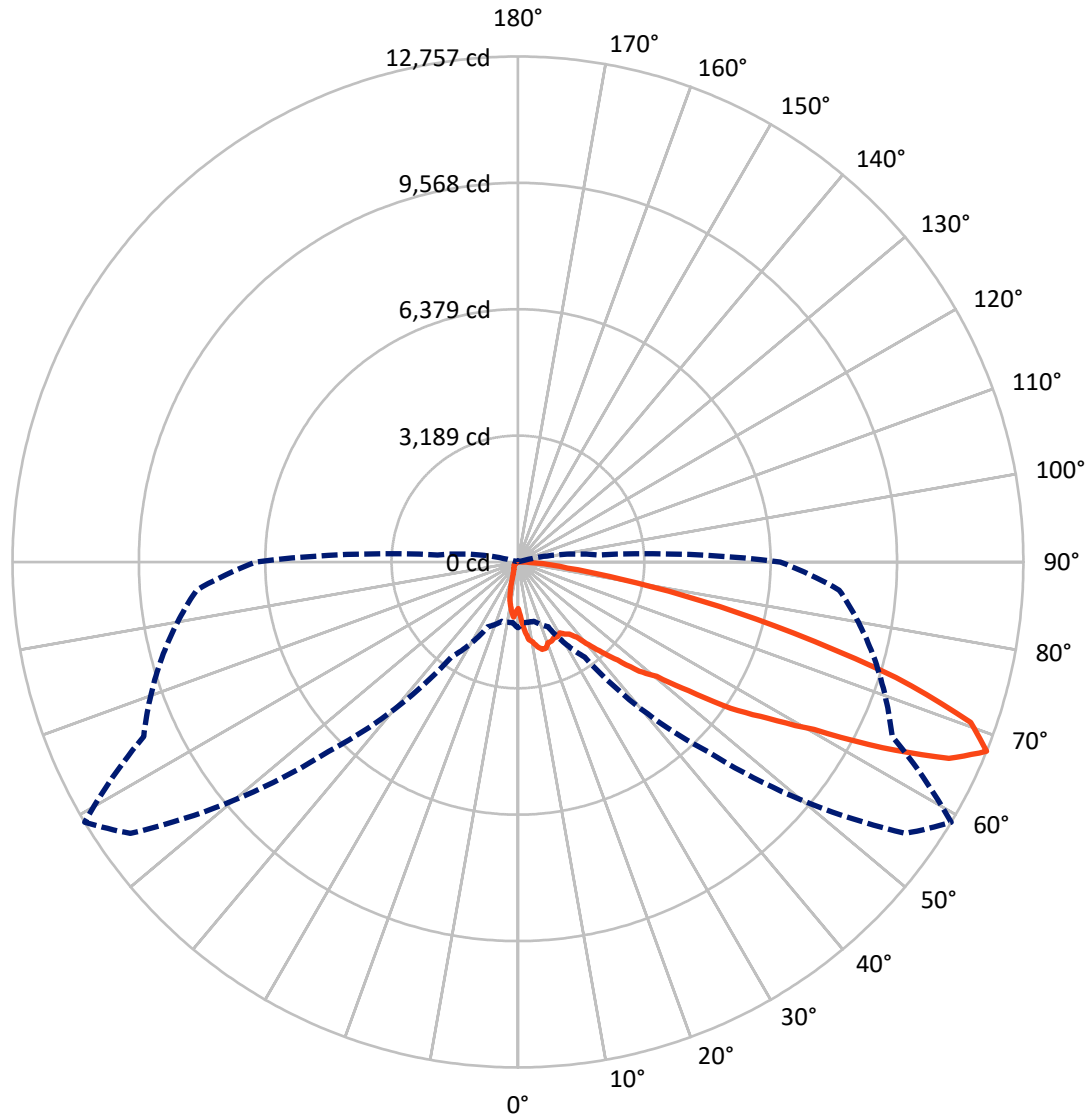
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	997.4	0.0	997.4
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	10730.6	0.0	10730.6
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	11728.0	0.0	11728.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.7	1.2
10°-20°	401.7	3.4
20°-30°	597.5	5.1
30°-40°	921.9	7.9
40°-50°	1645.3	14.0
50°-60°	2927.8	25.0
60°-70°	3409.9	29.1
70°-80°	1516.4	12.9
80°-90°	164.7	1.4
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°	11728.0	100.0
0°-180°	11728.0	100.0

**Coefficient of Utilization**

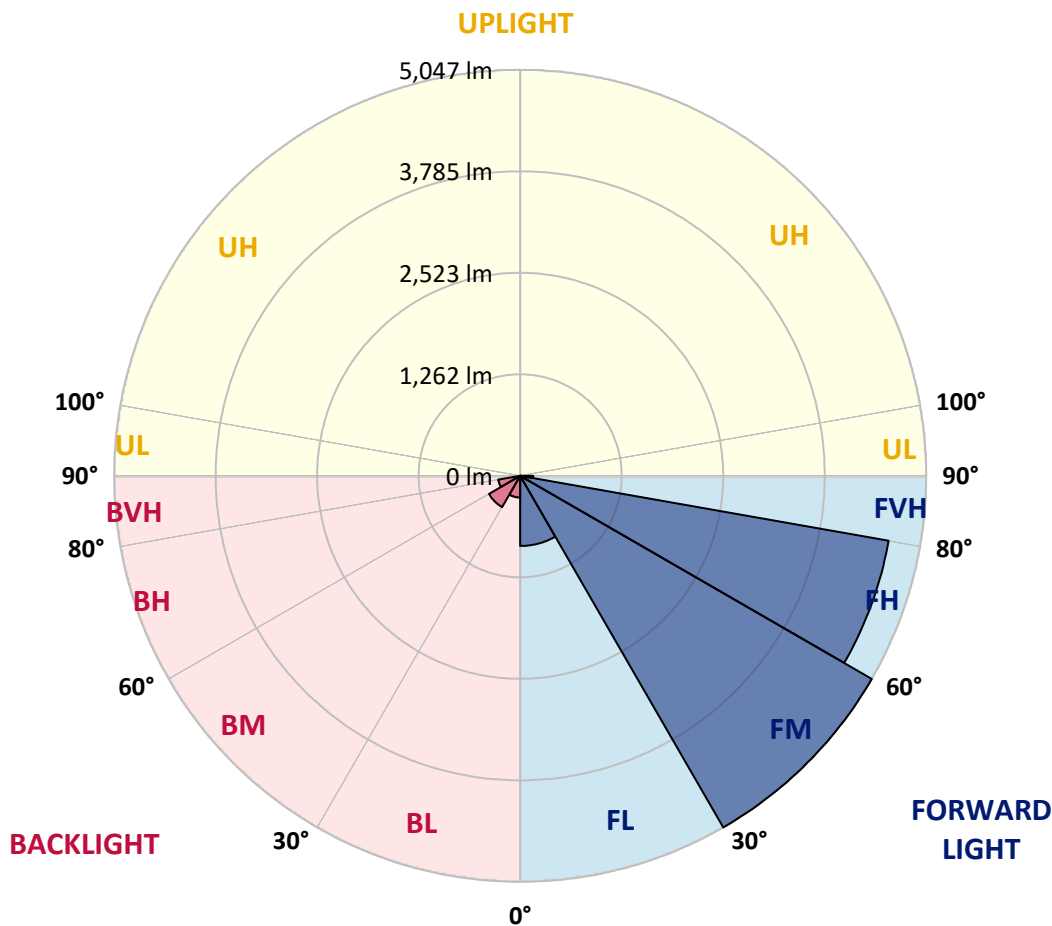


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	872.2	7.4			
FM (30°-60°)	5046.6	43.0			
FH (60°-80°)	4650.1	39.6			G2/5000
FVH (80°-90°)	161.8	1.4			G2/225
BL (0°-30°)	269.7	2.3	B1/500		
BM (30°-60°)	448.5	3.8	B1/1000		
BH (60°-80°)	276.3	2.4	B1/500		G1/500
BVH (80°-90°)	2.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4
2.5°	1529.7	1472.1	1390.2	1414.5	1436.5	1457.3	1422.8	1403.2	1393.7	1309.4	1415.1
5°	1878.3	1806.5	1769.0	1759.5	1735.8	1682.9	1770.8	1731.6	1744.7	1761.3	1795.8
7.5°	1984.6	1951.9	1897.9	1918.1	1827.8	1820.1	1941.9	1975.7	2020.2	1990.0	2031.5
10°	1930.0	1873.6	1899.1	1892.0	1888.4	1968.0	2053.5	2055.3	2121.8	2153.9	2013.1
12.5°	1821.9	1828.4	1919.9	1912.8	2031.5	2190.7	2210.3	2189.5	2298.2	2242.3	2221.0
15°	1893.7	1947.2	1896.7	1913.9	1956.1	2155.0	2224.5	2288.7	2391.4	2424.6	2280.3
17.5°	1980.4	1985.8	1893.7	1872.4	1978.7	2071.3	2235.2	2288.1	2298.2	2589.7	2414.0
20°	1933.5	1979.3	1869.4	1734.6	1899.7	2025.6	2191.9	2175.2	2242.9	2638.4	2444.2
22.5°	2058.2	1992.9	1852.2	1750.6	1806.5	1921.1	2061.8	2170.5	2272.0	2522.0	2483.4
25°	2070.1	2046.4	1921.1	1830.8	1821.3	1850.4	2046.4	2116.4	2275.6	2626.5	2450.2
27.5°	2203.7	2176.4	1919.9	1928.8	1839.7	1750.0	1971.5	2136.0	2340.3	2563.0	2520.8
30°	2375.9	2378.3	2047.6	2075.5	1948.4	1804.1	2032.7	2077.8	2384.3	2664.6	2573.1
32.5°	2550.5	2622.4	2299.9	2152.1	2112.3	2009.0	1956.7	2165.1	2336.2	2838.0	2703.7
35°	2816.0	2864.7	2507.8	2375.4	2219.2	2101.6	2163.4	2238.2	2509.0	3067.8	2875.4
37.5°	3265.5	3177.6	2880.7	2650.3	2612.9	2439.5	2470.4	2403.3	2685.3	3338.6	3215.0
40°	3518.5	3438.9	3130.1	3017.9	2779.2	2805.9	2708.5	2747.7	2941.3	3620.6	3524.4
42.5°	3782.2	3706.1	3435.4	3355.8	3128.3	3017.9	2973.9	3114.7	3333.8	4090.4	3968.0
45°	4047.0	3854.0	3739.4	3779.2	3677.0	3458.5	3407.4	3532.7	3762.6	4667.6	4436.0
47.5°	4270.3	4107.6	4021.5	4003.1	3963.3	4266.7	4058.9	4114.1	4215.7	5178.3	5019.1
50°	4672.9	4512.6	4377.8	4340.4	4534.0	4964.5	4643.8	4536.9	4740.0	5795.3	5694.9
52.5°	5254.3	5050.0	4835.6	4836.2	5201.4	5437.8	5589.8	5402.1	5440.2	6474.0	6429.5
55°	5721.6	5462.1	5284.6	5424.7	5969.3	6101.7	6681.9	6517.4	6468.1	7103.5	7048.9
57.5°	5785.8	5474.6	5390.3	5636.1	6381.4	7227.0	7851.1	7440.2	7364.8	7630.2	7738.9
60°	5187.2	4857.0	4920.5	5316.0	6515.6	7912.9	8924.8	8589.3	8110.0	8247.2	8322.0
62.5°	3868.9	3605.2	3783.3	4307.1	5998.4	8372.5	10167.7	10323.3	8974.7	8710.4	8694.4
65°	2510.2	2345.1	2462.1	2891.4	4539.3	8320.3	11278.2	11952.8	9655.8	9088.1	8811.4
67.5°	1660.4	1535.1	1551.7	1805.9	2935.3	6766.8	11942.1	12757.4	10421.9	9302.5	8140.9
70°	1237.6	1139.0	1144.9	1282.7	1742.3	4462.7	11016.3	12122.6	10701.6	8559.6	6570.8
72.5°	892.5	826.6	881.8	1035.1	1388.4	2359.9	8211.0	9983.6	9331.6	6751.3	4427.1
75°	618.2	574.8	665.1	865.8	1267.3	1465.0	5425.9	7186.6	6540.5	4235.8	2001.2
77.5°	342.6	329.6	459.6	705.5	1150.3	1200.7	3323.7	4722.2	3627.8	1518.4	476.3
80°	149.6	144.9	222.7	529.7	966.8	1084.9	1871.2	2618.2	1427.0	270.8	153.8
82.5°	64.1	61.8	95.0	318.9	702.5	907.4	1153.8	1260.1	491.1	83.7	87.3
85°	11.3	12.5	38.0	168.1	427.6	460.8	835.5	745.9	247.0	39.8	62.4
87.5°	0.0	0.0	5.9	32.7	80.2	131.8	362.2	261.3	46.9	13.1	10.7
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°	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4	1173.4
2.5°	1430.0	1396.7	1270.2	1254.2	1237.0	1211.4	1201.9	1147.3	1140.2	1210.2	1210.2
5°	1779.7	1661.0	1540.4	1445.4	1360.5	1242.9	1209.6	1175.2	1147.3	1140.2	1162.1
7.5°	1964.4	1819.5	1630.1	1388.4	1192.4	1022.0	950.7	900.9	845.0	861.7	870.6
10°	1954.3	1800.5	1558.8	1248.2	1030.9	842.7	661.5	555.8	497.0	467.9	464.4
12.5°	2053.5	1908.6	1510.7	1136.6	859.3	599.2	416.3	340.9	297.5	298.1	294.5
15°	2111.1	1953.1	1454.9	995.3	605.1	385.4	288.6	272.0	266.0	272.6	269.0
17.5°	2212.6	2000.0	1328.4	784.5	416.3	291.0	265.4	258.9	266.6	280.3	276.7
20°	2204.9	1918.7	1148.5	552.9	307.6	261.9	251.2	241.1	257.1	271.4	269.0
22.5°	2197.8	1839.1	979.2	408.0	257.1	238.7	229.8	225.7	234.0	250.6	254.2
25°	2134.8	1799.9	807.6	306.4	232.8	216.8	212.6	209.0	212.0	225.7	225.1
27.5°	2212.0	1700.8	623.5	257.1	215.6	196.6	193.0	187.1	181.1	193.0	194.8
30°	2196.0	1714.4	488.7	226.3	198.3	172.8	174.0	161.5	150.8	161.5	161.5
32.5°	2254.2	1614.6	391.3	205.5	181.1	162.7	147.9	134.8	127.1	133.6	134.8
35°	2339.1	1618.8	306.4	192.4	166.3	144.9	127.1	114.0	106.9	109.9	111.6
37.5°	2623.6	1590.3	255.9	182.3	160.9	134.2	115.8	98.6	93.8	97.4	99.2
40°	2808.9	1666.3	225.7	177.0	147.3	123.5	99.2	86.7	82.5	84.3	87.3
42.5°	3158.0	1708.5	210.8	171.0	134.8	105.7	84.9	77.8	71.9	74.2	76.6
45°	3531.6	1780.3	199.5	164.5	125.3	92.6	74.8	68.9	61.2	61.8	64.1
47.5°	3990.6	1951.4	186.5	153.2	112.2	84.3	66.5	57.6	50.5	49.9	52.9
50°	4607.0	2180.0	174.6	139.0	103.9	77.2	58.2	46.9	41.0	39.2	41.6
52.5°	5265.0	2475.7	162.1	128.9	93.8	67.7	49.9	38.0	32.7	31.5	33.3
55°	5917.0	2759.6	150.2	122.3	83.1	58.2	42.2	31.5	26.7	25.5	26.7
57.5°	6659.9	3066.6	134.8	109.3	73.0	50.5	35.0	26.1	22.0	20.8	21.4
60°	7219.3	3174.7	121.7	95.0	63.5	44.5	29.7	20.8	17.8	16.6	17.2
62.5°	7484.7	2998.3	109.3	82.5	55.8	38.6	24.9	17.2	14.8	13.7	13.7
65°	7415.8	2607.5	96.8	70.7	48.1	32.1	19.6	14.8	13.1	11.3	10.7
67.5°	6620.1	2040.4	82.5	59.4	40.4	26.1	16.6	14.3	11.9	10.7	8.9
70°	5250.1	1477.5	67.1	49.3	33.8	21.4	13.1	13.1	11.3	10.7	8.3
72.5°	3441.3	930.0	54.6	39.8	27.9	16.6	10.1	11.9	10.7	10.7	7.7
75°	1491.1	332.5	43.9	32.1	23.2	11.3	8.9	10.7	11.3	10.7	8.9
77.5°	349.2	103.3	34.4	25.5	19.0	7.7	8.9	10.7	11.3	10.1	7.7
80°	131.2	43.9	22.6	16.6	14.8	4.8	7.7	6.5	5.9	4.2	1.2
82.5°	79.6	18.4	11.9	8.3	7.1	1.2	3.6	2.4	1.2	1.2	0.0
85°	56.4	8.9	6.5	5.9	3.6	0.0	0.6	0.0	0.0	0.6	0.0
87.5°	7.7	2.4	3.0	3.0	2.4	0.0	0.0	0.0	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)