

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: P366791

Luminaire Tested: **MSA-SA1B-740-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366791  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-740-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

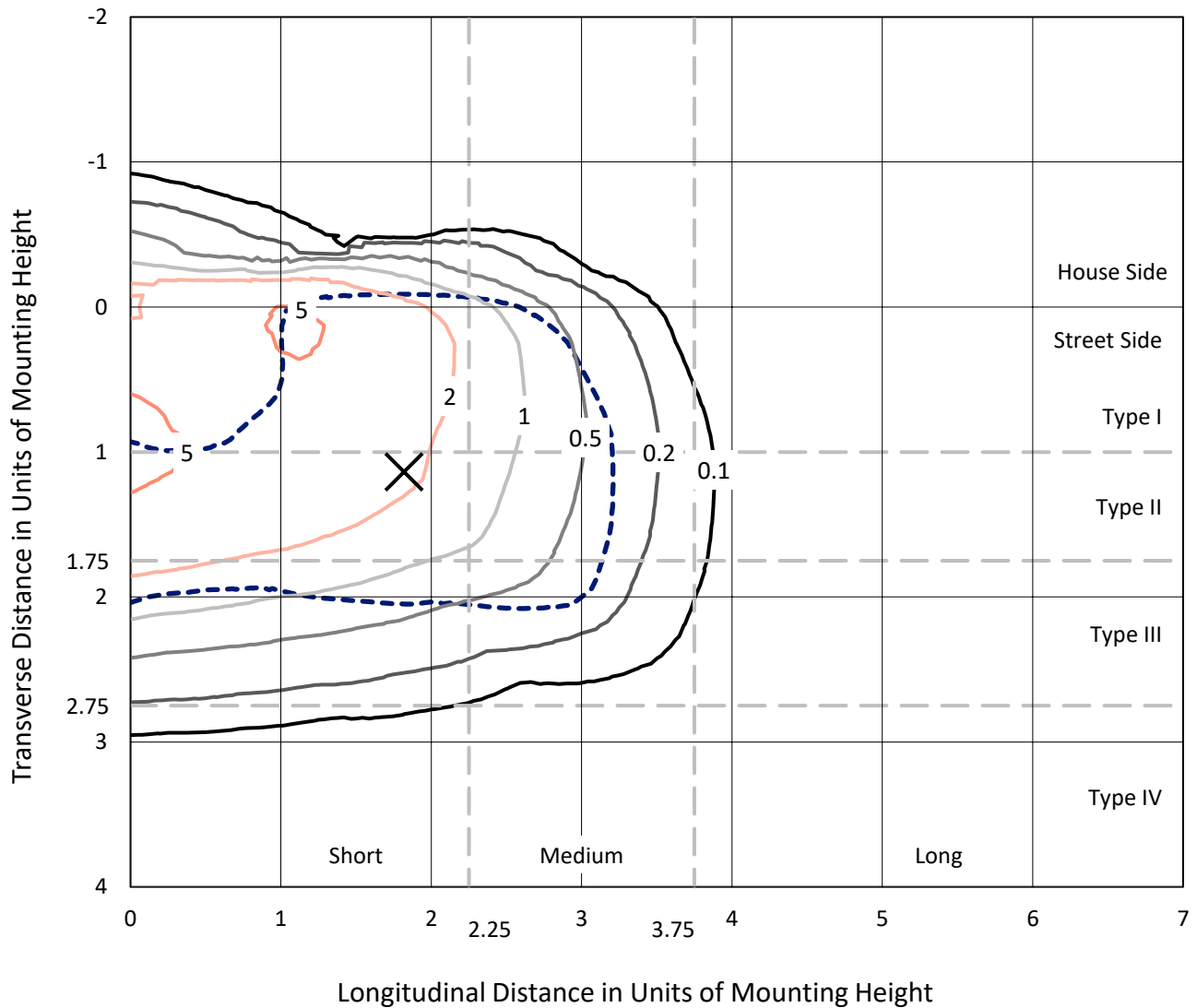
Lumens per Lamp: N/A  
Luminaire Lumens: 3740 lumens  
Efficiency: N/A  
Efficacy: 85.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

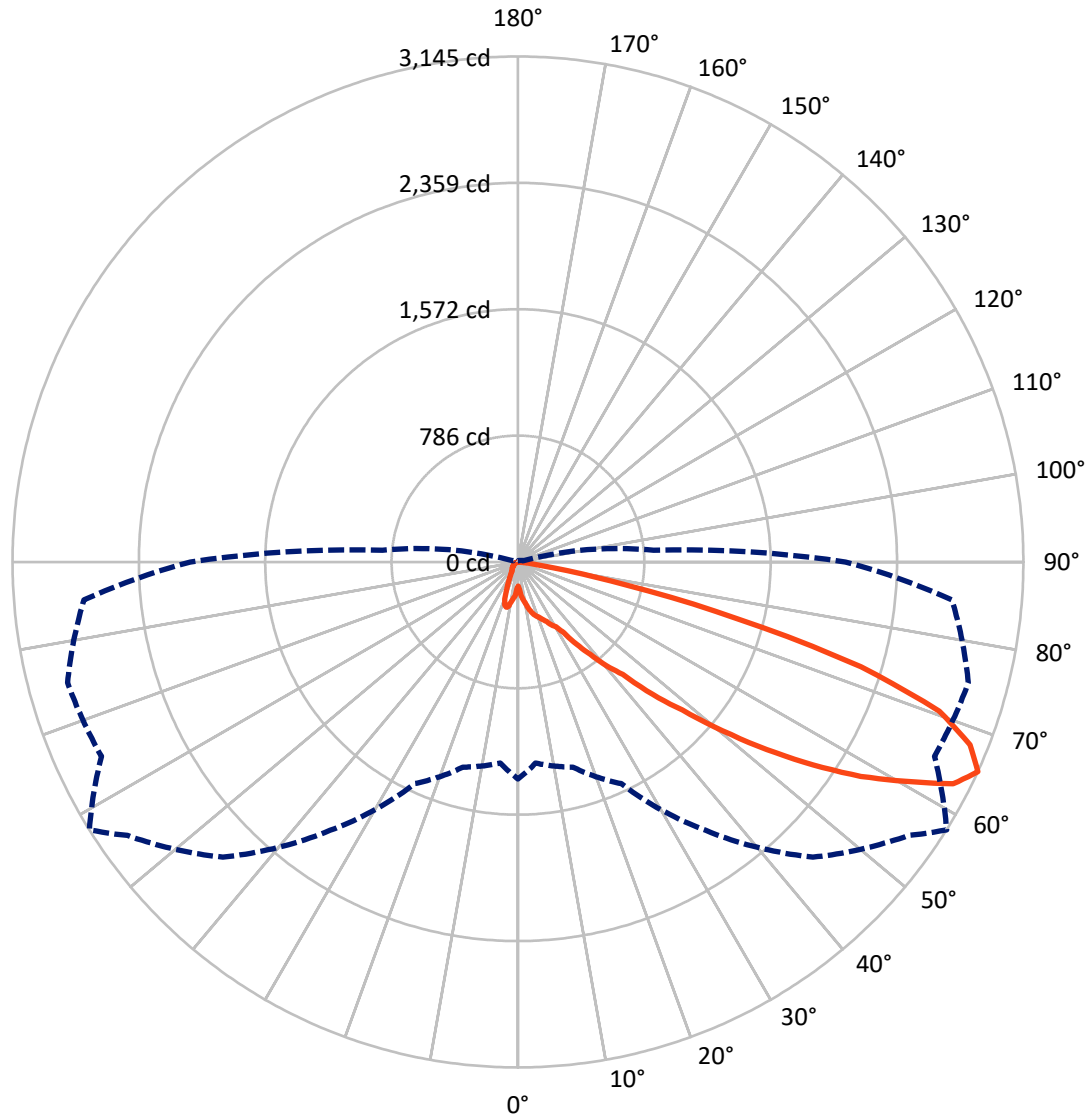
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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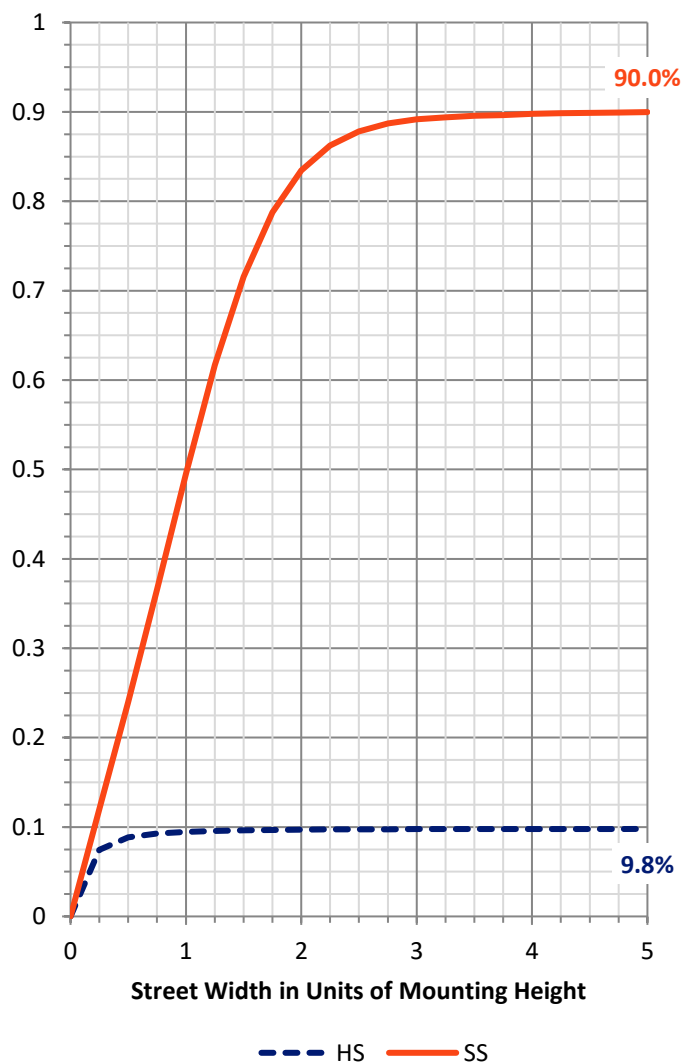
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	369.0	0.0	369.0
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	3371.0	0.0	3371.0
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	3740.0	0.0	3740.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.0	0.6
10°-20°	76.8	2.1
20°-30°	148.6	4.0
30°-40°	296.5	7.9
40°-50°	606.1	16.2
50°-60°	1075.1	28.7
60°-70°	1133.4	30.3
70°-80°	367.5	9.8
80°-90°	15.0	0.4
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°	3740.0	100.0
0°-180°	3740.0	100.0

**Coefficient of Utilization**

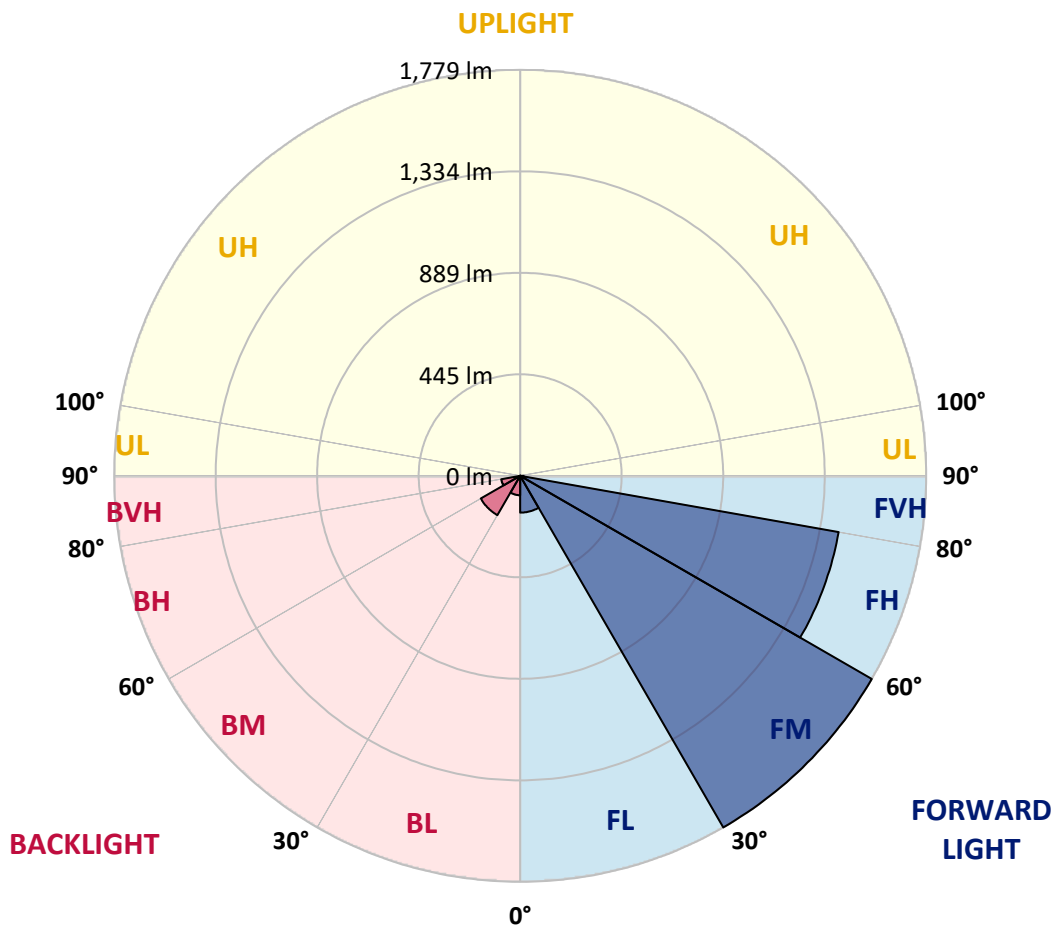


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	161.3	4.3			
FM (30°-60°)	1778.6	47.6			
FH (60°-80°)	1416.7	37.9			G1/1800
FVH (80°-90°)	14.4	0.4			G1/100
BL (0°-30°)	85.1	2.3	B0/110		
BM (30°-60°)	199.1	5.3	B0/220		
BH (60°-80°)	84.2	2.3	B0/110		G0/110
BVH (80°-90°)	0.6	0.0			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7
2.5°	182.8	177.3	168.7	170.1	171.8	175.2	172.5	169.9	167.2	163.6	177.3
5°	220.7	211.6	210.8	208.9	207.4	207.2	210.6	209.5	211.0	217.7	224.7
7.5°	234.6	230.8	223.6	226.6	221.9	218.4	233.3	238.2	247.4	250.6	268.7
10°	233.1	227.6	230.6	232.1	235.2	248.3	257.7	263.0	271.0	288.3	284.7
12.5°	239.8	244.7	247.8	248.1	264.3	288.3	295.0	299.4	313.8	320.5	338.2
15°	262.4	270.4	265.3	267.4	272.7	302.0	317.8	327.4	347.7	369.6	374.0
17.5°	294.6	299.6	289.1	281.5	296.1	312.1	340.7	350.8	363.7	414.8	424.3
20°	335.2	343.9	321.1	291.0	310.2	329.1	360.3	365.1	378.8	445.6	460.5
22.5°	430.2	417.4	382.6	335.7	330.0	338.4	368.1	387.0	410.2	462.8	497.6
25°	523.9	519.5	468.3	415.9	378.0	359.0	398.4	408.9	446.8	503.9	523.1
27.5°	628.1	637.0	551.5	519.7	445.4	383.5	417.4	443.7	488.5	518.9	565.0
30°	765.6	751.5	651.3	619.5	534.6	450.6	466.4	468.1	534.0	568.1	611.9
32.5°	873.5	882.5	756.6	707.7	639.9	554.0	503.3	525.2	572.3	648.4	689.8
35°	990.1	989.3	866.5	800.8	712.2	638.5	612.6	628.6	687.7	773.9	784.8
37.5°	1164.5	1149.5	1004.6	908.4	833.0	770.1	750.3	729.0	790.1	872.2	913.3
40°	1328.9	1277.3	1143.4	1029.3	932.8	907.2	835.6	848.6	866.7	975.2	1088.7
42.5°	1495.1	1463.1	1284.1	1188.5	1069.9	1008.9	962.1	956.0	1042.1	1170.6	1287.9
45°	1714.3	1616.4	1473.2	1389.2	1251.9	1190.6	1152.9	1175.4	1252.9	1440.5	1518.7
47.5°	1898.3	1808.2	1685.2	1557.6	1413.6	1482.4	1411.7	1376.1	1482.4	1676.4	1780.2
50°	2056.5	1956.0	1831.6	1737.0	1713.6	1779.8	1636.6	1649.6	1718.7	1946.5	2005.1
52.5°	2171.4	2065.7	1957.1	1911.4	2007.2	2040.5	1968.7	1939.8	2002.6	2176.9	2205.3
55°	2258.0	2149.7	2064.9	2127.8	2313.2	2302.2	2327.5	2228.9	2288.9	2417.2	2403.7
57.5°	2263.2	2135.0	2085.3	2186.6	2441.0	2610.5	2684.4	2516.8	2550.9	2605.0	2574.7
60°	2097.7	1970.1	1966.1	2109.9	2478.0	2690.3	2852.0	2770.3	2724.6	2764.8	2707.3
62.5°	1768.0	1678.7	1720.4	1879.4	2340.1	2646.3	2941.3	3039.6	2861.7	2870.8	2789.1
65°	1350.0	1256.3	1321.6	1521.8	2038.6	2597.0	2966.6	3144.9	2859.2	2900.9	2710.7
67.5°	894.1	839.8	913.7	1134.4	1620.8	2292.5	2953.5	3034.4	2768.4	2783.2	2419.9
70°	461.6	448.3	508.1	682.3	1089.7	1761.2	2825.3	2781.0	2584.2	2397.6	1866.5
72.5°	147.8	148.5	205.9	311.6	587.5	1072.2	2171.6	2232.3	2067.8	1753.9	1139.6
75°	65.5	64.4	86.1	130.8	244.9	480.7	1349.1	1414.6	1287.4	964.8	479.1
77.5°	47.2	45.7	55.2	76.4	121.3	163.0	632.6	682.7	583.7	334.4	109.7
80°	33.3	33.1	40.0	53.7	75.8	72.4	199.8	224.1	179.4	81.1	32.2
82.5°	18.7	19.4	27.8	37.9	46.1	36.2	56.2	61.9	60.4	43.2	14.1
85°	9.1	10.1	18.1	27.4	24.2	14.1	20.0	21.7	25.3	25.1	7.2
87.5°	0.0	0.0	7.4	12.4	6.5	2.1	6.1	6.9	6.7	8.0	1.7
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°	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7
2.5°	180.0	178.8	162.8	164.0	167.6	166.1	167.4	164.5	161.1	174.8	174.6
5°	227.6	218.2	213.1	208.5	209.3	199.8	205.3	207.8	207.4	215.2	217.3
7.5°	269.3	256.7	246.6	236.9	222.2	208.9	217.1	222.4	225.9	239.4	244.7
10°	288.9	278.6	274.6	255.6	245.1	236.9	227.0	219.8	222.8	219.2	222.8
12.5°	331.9	324.9	309.5	290.4	277.7	260.9	224.1	193.3	174.4	174.6	173.3
15°	371.0	370.6	347.7	315.9	279.2	231.2	173.7	135.0	117.1	112.0	110.3
17.5°	422.2	415.9	374.0	327.0	261.1	179.0	118.3	92.4	90.8	93.7	92.4
20°	454.8	445.6	387.0	310.8	215.2	121.1	89.3	81.9	87.0	91.2	90.1
22.5°	487.5	473.6	396.9	291.0	153.1	88.7	80.6	79.4	82.5	87.8	88.7
25°	505.4	502.6	416.3	254.0	104.9	77.7	77.7	77.3	78.3	82.1	81.5
27.5°	557.4	520.3	401.8	198.1	81.1	71.4	72.4	72.0	68.2	72.0	72.2
30°	589.8	572.8	402.8	141.1	71.4	63.2	65.9	62.5	56.9	60.0	59.4
32.5°	655.1	612.6	399.7	95.2	65.1	60.2	56.0	51.2	47.0	48.2	47.2
35°	731.1	698.7	356.9	76.4	60.6	53.3	46.5	41.7	37.3	38.3	38.1
37.5°	882.3	779.3	321.5	68.9	57.7	48.9	41.1	34.3	32.0	32.6	33.3
40°	1022.3	913.9	255.6	65.5	52.6	43.6	33.9	29.1	27.6	28.0	28.6
42.5°	1231.6	1020.9	193.1	62.1	47.6	36.9	28.2	25.1	23.6	24.4	24.8
45°	1434.2	1111.8	144.2	59.2	43.4	31.8	23.8	21.7	20.0	20.6	21.5
47.5°	1636.6	1212.9	107.6	54.5	38.7	27.4	20.4	19.0	17.9	18.1	19.2
50°	1817.7	1260.1	84.7	48.9	35.0	23.8	18.5	17.1	16.6	16.8	17.7
52.5°	1950.8	1260.5	71.4	43.8	31.4	21.1	17.5	15.8	15.6	16.0	16.8
55°	2071.0	1226.8	61.9	39.4	28.2	19.2	16.6	15.2	15.2	15.6	16.4
57.5°	2150.8	1164.9	53.7	34.7	25.5	18.1	16.0	14.5	14.3	14.1	14.7
60°	2189.8	1080.5	45.5	30.5	23.0	17.5	15.6	12.8	12.6	12.2	12.6
62.5°	2165.1	974.7	38.1	26.3	20.4	16.6	13.7	11.2	10.7	9.9	10.5
65°	2039.2	846.3	32.2	22.5	17.7	14.1	11.6	9.5	8.4	7.4	7.2
67.5°	1781.7	687.5	27.0	19.4	15.2	11.6	9.5	8.4	6.5	5.7	5.5
70°	1335.2	469.4	22.3	16.6	12.6	9.9	8.0	7.6	6.1	5.5	5.1
72.5°	783.3	253.3	18.7	14.5	10.7	8.2	6.5	6.9	6.1	5.1	4.6
75°	312.9	84.2	15.0	11.6	8.6	5.9	5.5	5.7	5.5	4.6	3.8
77.5°	71.4	26.5	11.6	9.1	6.7	3.8	4.4	4.8	4.8	3.8	2.7
80°	22.3	10.5	6.7	5.7	4.8	2.1	3.2	3.4	2.3	1.1	0.0
82.5°	7.2	2.9	2.3	2.3	2.1	0.4	0.6	0.4	0.0	0.0	0.0
85°	2.7	1.9	1.5	1.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.1	0.8	0.6	0.8	0.4	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)