

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: P366833

Luminaire Tested: **MSA-SA1B-760-U-T2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366833  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-760-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3820 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B0 - U0 - G1

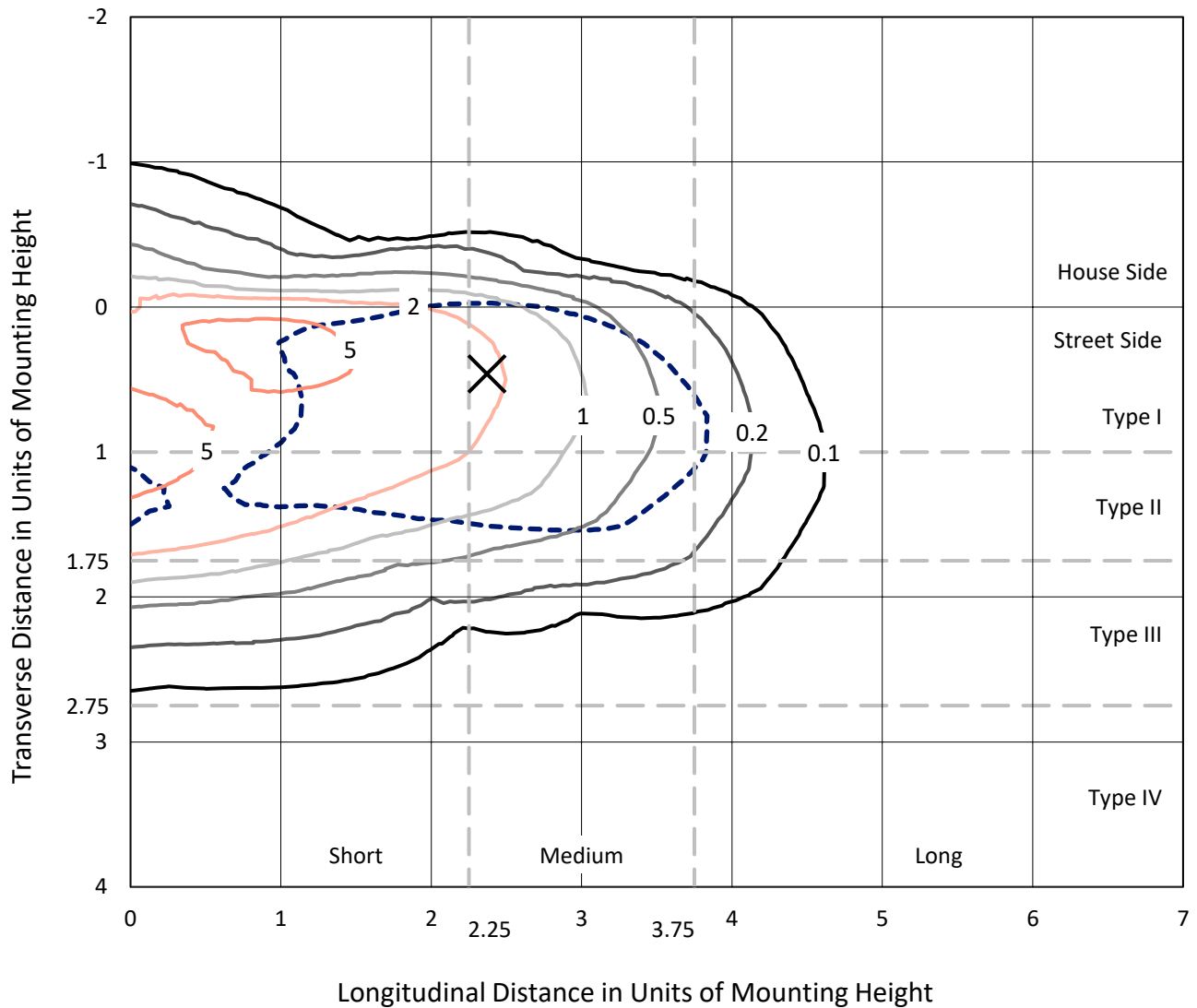
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

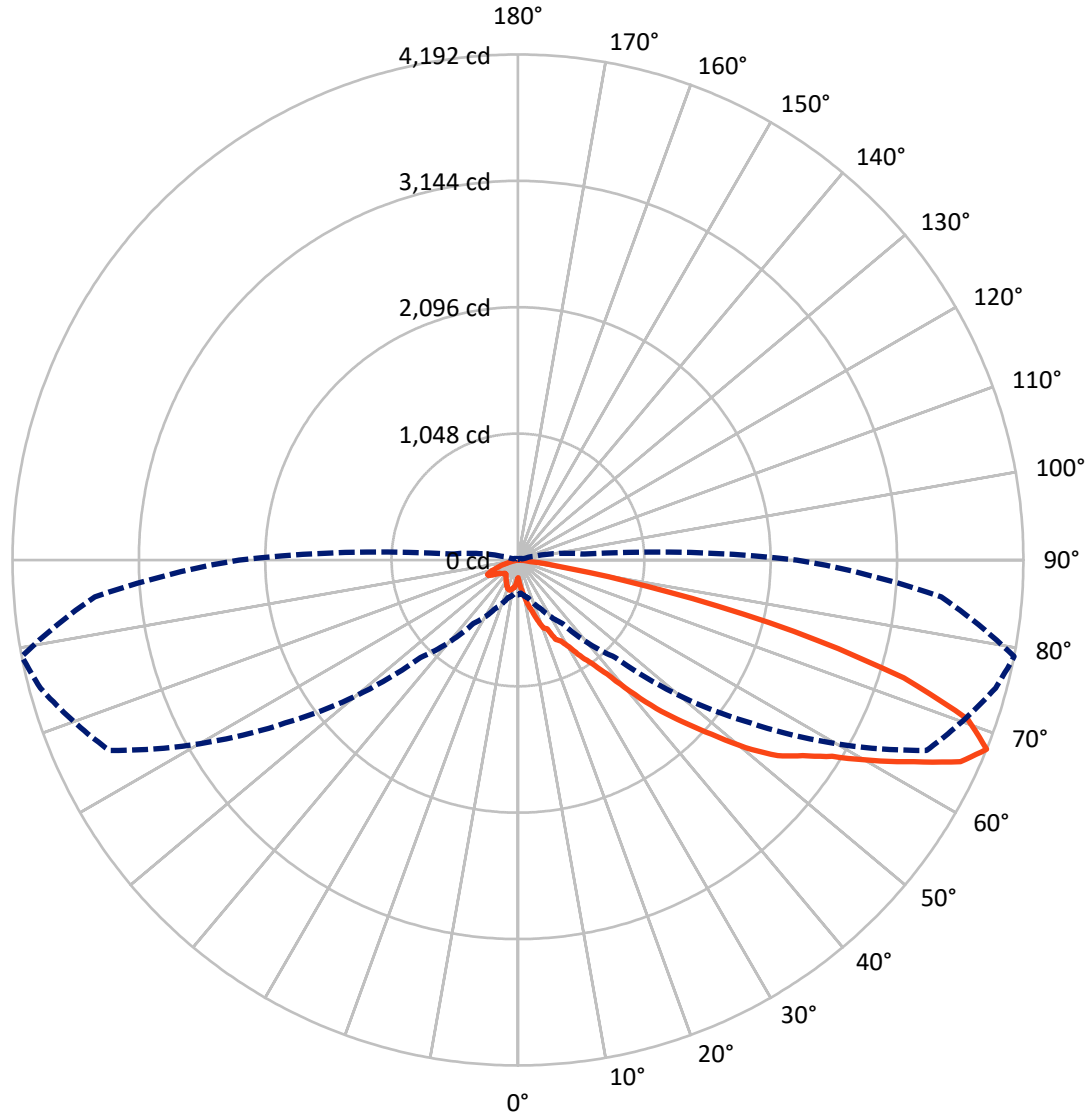
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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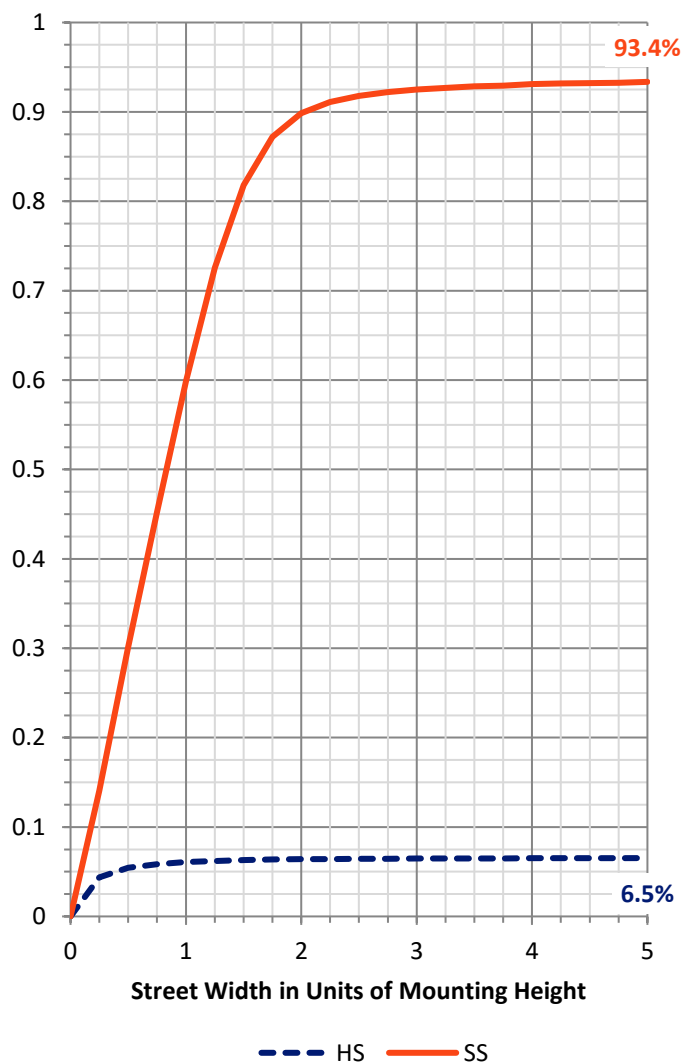
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	251.0	0.0	251.0
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	3569.0	0.0	3569.0
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	3820.0	0.0	3820.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.4	0.6
10°-20°	85.4	2.2
20°-30°	164.7	4.3
30°-40°	323.5	8.5
40°-50°	648.0	17.0
50°-60°	1035.7	27.1
60°-70°	1042.1	27.3
70°-80°	470.1	12.3
80°-90°	29.1	0.8
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°	3820.0	100.0
0°-180°	3820.0	100.0

**Coefficient of Utilization**



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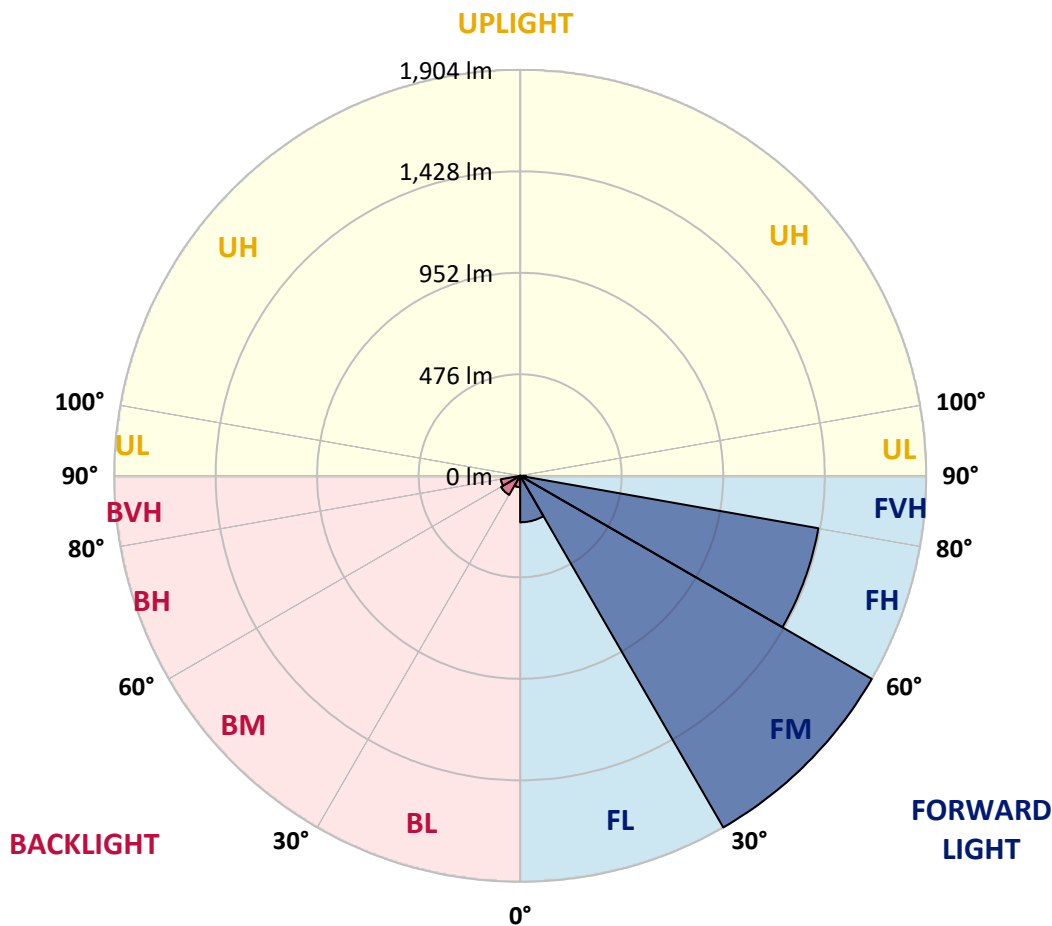
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	218.1	5.7			
FM (30°-60°)	1903.9	49.8			
FH (60°-80°)	1419.7	37.2			G1/1800
FVH (80°-90°)	27.2	0.7			G1/100
BL (0°-30°)	53.4	1.4	B0/110		
BM (30°-60°)	103.3	2.7	B0/220		
BH (60°-80°)	92.5	2.4	B0/110		G0/110
BVH (80°-90°)	1.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2
2.5°	198.8	191.6	180.0	186.6	186.2	189.5	183.2	176.3	165.1	176.3	177.1
5°	286.2	272.9	264.5	262.8	253.5	244.9	243.0	235.8	230.4	220.5	229.3
7.5°	356.5	350.4	335.5	333.8	311.0	298.4	302.4	299.2	278.4	268.1	276.7
10°	386.4	375.9	378.0	375.9	366.2	369.8	361.6	352.1	335.5	318.4	296.9
12.5°	398.0	396.3	413.8	411.7	434.4	461.8	443.5	427.7	389.1	384.9	355.7
15°	422.8	433.4	430.8	439.7	454.2	500.8	500.3	504.1	463.3	441.4	399.0
17.5°	445.0	452.7	440.1	450.2	489.8	518.0	555.7	541.0	545.6	523.3	457.8
20°	435.5	444.3	431.7	425.6	495.3	548.8	599.1	588.4	616.2	602.3	511.9
22.5°	494.6	478.0	446.2	426.4	478.4	548.1	614.5	659.3	654.5	620.4	562.2
25°	567.7	557.6	519.5	484.5	489.2	544.3	662.9	728.8	743.1	728.6	610.0
27.5°	666.3	664.0	586.0	570.9	525.8	527.7	670.5	816.4	783.8	761.0	665.8
30°	794.9	776.6	684.2	664.4	597.8	565.2	716.8	892.0	868.0	837.1	718.3
32.5°	933.3	936.0	818.1	752.8	699.3	660.6	698.5	927.4	972.2	947.2	783.8
35°	1090.4	1102.6	958.3	881.7	777.7	720.6	777.2	1036.0	1116.5	1050.6	871.6
37.5°	1332.3	1331.9	1163.4	1010.8	935.2	873.3	908.4	1134.8	1293.8	1201.1	1029.1
40°	1545.2	1498.9	1342.2	1166.8	1048.9	1032.0	1006.6	1270.0	1483.1	1427.3	1169.1
42.5°	1704.2	1671.6	1482.3	1345.8	1199.7	1146.2	1137.1	1468.2	1762.5	1684.4	1369.0
45°	1894.4	1787.4	1648.0	1525.0	1376.1	1360.5	1339.3	1669.3	2087.7	1911.6	1542.7
47.5°	2064.7	1964.1	1832.2	1674.3	1503.3	1631.8	1550.1	1845.9	2324.2	2158.9	1734.3
50°	2208.1	2101.2	1953.5	1833.3	1760.0	1847.2	1711.0	1991.4	2579.6	2445.7	1913.5
52.5°	2281.2	2160.1	2046.0	1971.6	2016.5	1996.9	1929.1	2167.7	2797.3	2697.1	2072.3
55°	2221.2	2102.8	2055.0	2091.9	2228.1	2171.5	2177.0	2440.8	3002.9	2864.7	2210.4
57.5°	1955.0	1847.0	1868.3	1969.1	2230.2	2378.5	2459.6	2706.1	3167.7	3073.6	2423.6
60°	1478.9	1391.9	1470.7	1649.7	2020.5	2337.2	2660.0	2971.5	3403.4	3373.9	2746.2
62.5°	903.2	856.0	967.6	1190.8	1610.1	2134.8	2776.9	3325.2	3655.4	3686.8	3088.3
65°	460.7	439.5	532.6	728.8	1087.8	1753.7	2692.5	3545.1	3915.9	4031.7	3414.5
67.5°	290.2	276.5	326.2	444.5	641.8	1143.9	2357.4	3737.4	4100.0	4191.6	3523.4
70°	201.1	192.5	235.4	305.1	404.9	616.2	1750.3	3557.9	3954.0	3958.2	3260.0
72.5°	127.6	120.9	162.8	226.0	298.8	318.2	1003.4	2791.9	3384.6	3345.7	2640.0
75°	82.8	79.4	103.4	165.5	229.5	196.3	495.9	1883.8	2426.9	2365.9	1753.5
77.5°	59.4	57.3	69.3	110.6	163.4	137.3	222.4	1122.8	1391.5	1258.0	851.2
80°	35.8	35.6	50.1	69.3	116.2	96.9	102.8	509.8	539.5	439.9	260.1
82.5°	17.9	18.5	28.0	44.6	74.8	63.4	47.0	169.7	144.9	106.8	52.6
85°	4.2	5.3	14.7	30.7	37.5	25.3	22.3	44.4	39.8	30.1	15.4
87.5°	0.0	0.0	4.6	7.4	10.1	4.2	7.6	8.4	10.7	8.4	3.2
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°	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2	147.2
2.5°	177.3	174.8	159.4	155.4	155.0	150.6	151.6	147.4	147.6	157.1	157.1
5°	226.0	211.2	196.5	183.4	174.6	161.9	157.3	155.4	153.7	157.5	159.8
7.5°	265.3	243.6	217.1	188.7	162.4	144.2	141.7	137.1	135.4	139.2	142.1
10°	282.8	255.9	219.4	177.9	153.3	138.6	126.3	119.8	118.6	118.3	119.4
12.5°	319.9	286.4	221.9	173.9	147.2	131.0	117.1	106.1	96.0	97.1	96.0
15°	349.6	310.0	221.9	164.3	132.5	116.2	91.8	86.3	84.9	87.2	85.3
17.5°	394.4	333.3	210.8	147.0	119.8	90.3	81.1	80.7	83.6	87.0	84.9
20°	421.4	336.5	192.0	127.2	98.3	78.3	75.0	71.6	75.8	78.5	77.5
22.5°	449.4	336.7	173.3	116.7	79.2	71.4	65.9	63.2	63.8	66.3	66.8
25°	461.4	328.5	155.8	102.8	71.8	63.8	58.1	55.2	54.1	55.4	55.0
27.5°	494.0	312.7	136.9	87.6	68.2	56.6	51.4	47.8	44.6	46.7	47.2
30°	498.7	307.7	126.6	77.9	63.6	50.1	45.5	41.7	39.4	42.3	42.3
32.5°	513.4	279.9	121.3	73.9	58.8	46.3	40.0	37.3	36.9	38.7	39.0
35°	536.1	267.6	113.5	70.8	54.3	41.9	36.0	34.7	34.3	35.8	35.8
37.5°	613.2	252.5	104.9	68.0	50.5	39.6	35.0	32.9	33.1	34.3	35.2
40°	664.4	254.4	92.0	64.6	46.1	37.5	32.9	31.4	31.2	31.8	32.4
42.5°	759.3	255.9	86.3	61.1	42.7	35.0	30.7	29.7	28.8	29.5	30.1
45°	865.5	263.6	83.4	58.1	40.9	33.5	28.8	28.2	26.3	26.7	27.6
47.5°	967.8	292.1	79.8	53.9	39.2	32.6	27.0	25.5	24.2	24.0	24.8
50°	1084.1	319.7	75.8	49.3	37.5	31.4	25.1	22.7	21.9	21.9	22.5
52.5°	1188.1	346.0	72.0	46.1	36.2	29.1	23.4	21.1	20.4	20.4	21.3
55°	1297.6	373.6	68.6	43.2	34.5	26.7	21.9	19.8	19.6	19.2	19.8
57.5°	1490.9	433.8	64.4	40.6	32.2	24.8	20.6	18.5	18.1	17.5	18.1
60°	1772.4	526.2	59.0	38.1	29.5	23.6	19.6	17.1	16.4	15.4	15.6
62.5°	2047.7	601.0	52.6	35.0	27.0	22.3	17.9	15.4	14.3	13.1	13.3
65°	2283.5	630.5	45.9	31.2	24.4	19.4	15.6	13.5	12.0	10.3	10.1
67.5°	2311.3	556.8	39.4	27.6	21.9	16.4	13.3	12.0	9.7	8.2	7.8
70°	2080.1	414.8	32.9	24.4	19.0	13.9	11.4	10.5	9.1	7.8	7.2
72.5°	1656.4	306.2	27.6	21.7	16.6	11.8	9.7	9.9	9.1	7.6	6.7
75°	1095.4	175.2	22.5	18.1	13.9	9.5	8.8	8.8	8.6	7.2	6.3
77.5°	527.1	75.6	17.3	14.3	11.2	7.2	8.0	8.0	8.2	6.5	5.3
80°	149.5	22.7	10.7	9.7	8.2	4.8	6.3	6.1	5.5	3.8	2.3
82.5°	26.7	8.8	4.8	5.1	4.6	1.9	3.6	3.4	2.7	1.5	0.2
85°	7.4	3.4	2.7	2.9	2.3	0.6	1.5	1.9	1.5	0.8	0.0
87.5°	1.9	1.5	1.9	2.1	1.7	0.2	0.6	0.2	0.6	0.2	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)