

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: P367109

Luminaire Tested: **MSA-SA1D-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367109
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-830-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4466 lumens
Efficiency: N/A
Efficacy: 66.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

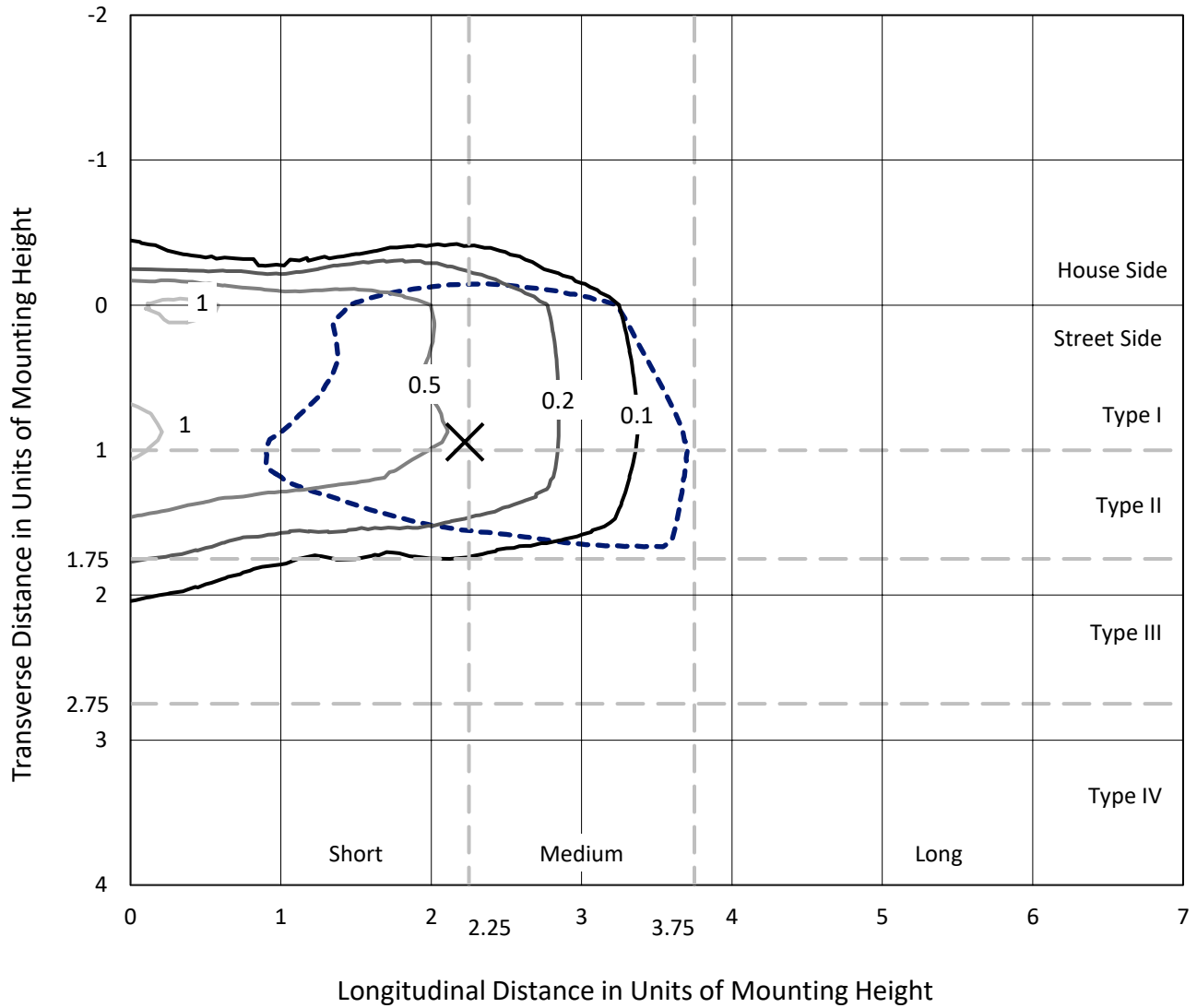
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

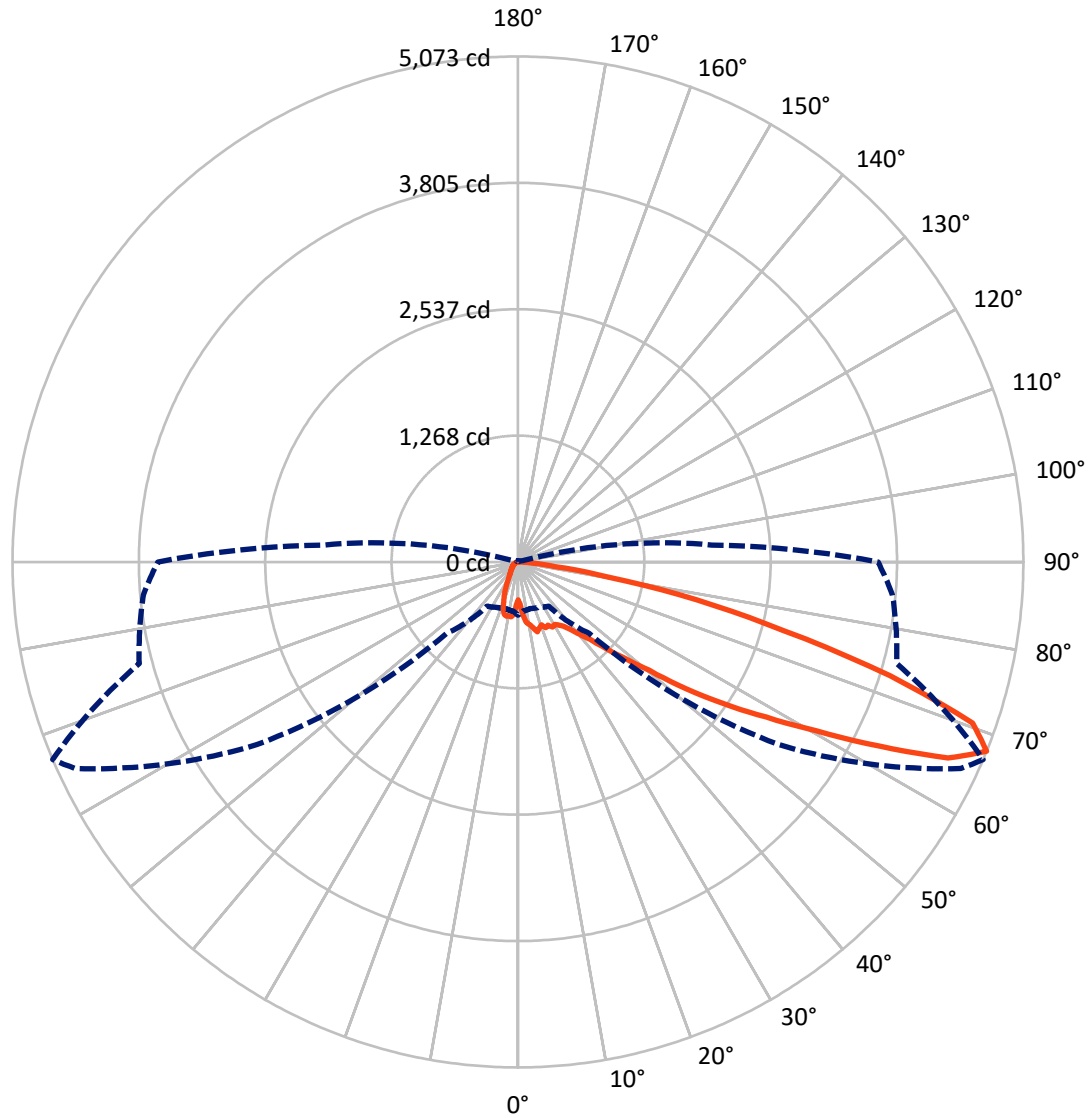
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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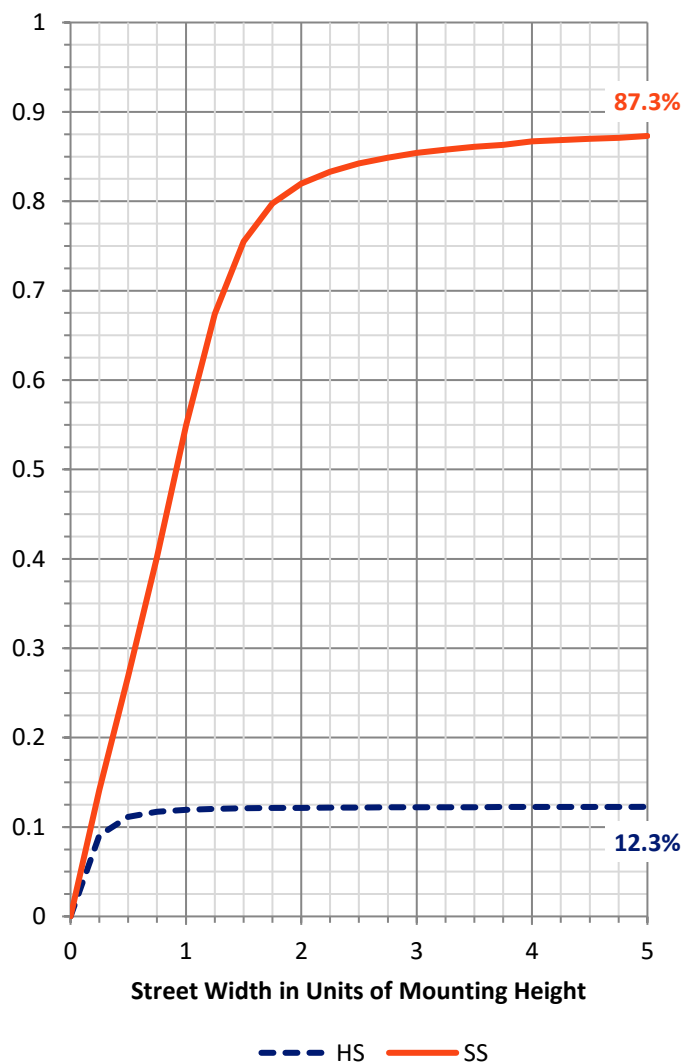
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	552.3	0.0	552.3
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	3913.7	0.0	3913.7
	% Fixture	87.6	0.0	87.6
Total	Lumens	4466.0	0.0	4466.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	1.1
10°-20°	141.3	3.2
20°-30°	221.4	5.0
30°-40°	357.0	8.0
40°-50°	656.0	14.7
50°-60°	1107.9	24.8
60°-70°	1224.8	27.4
70°-80°	641.1	14.4
80°-90°	68.8	1.5
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°	4466.0	100.0
0°-180°	4466.0	100.0

Coefficient of Utilization

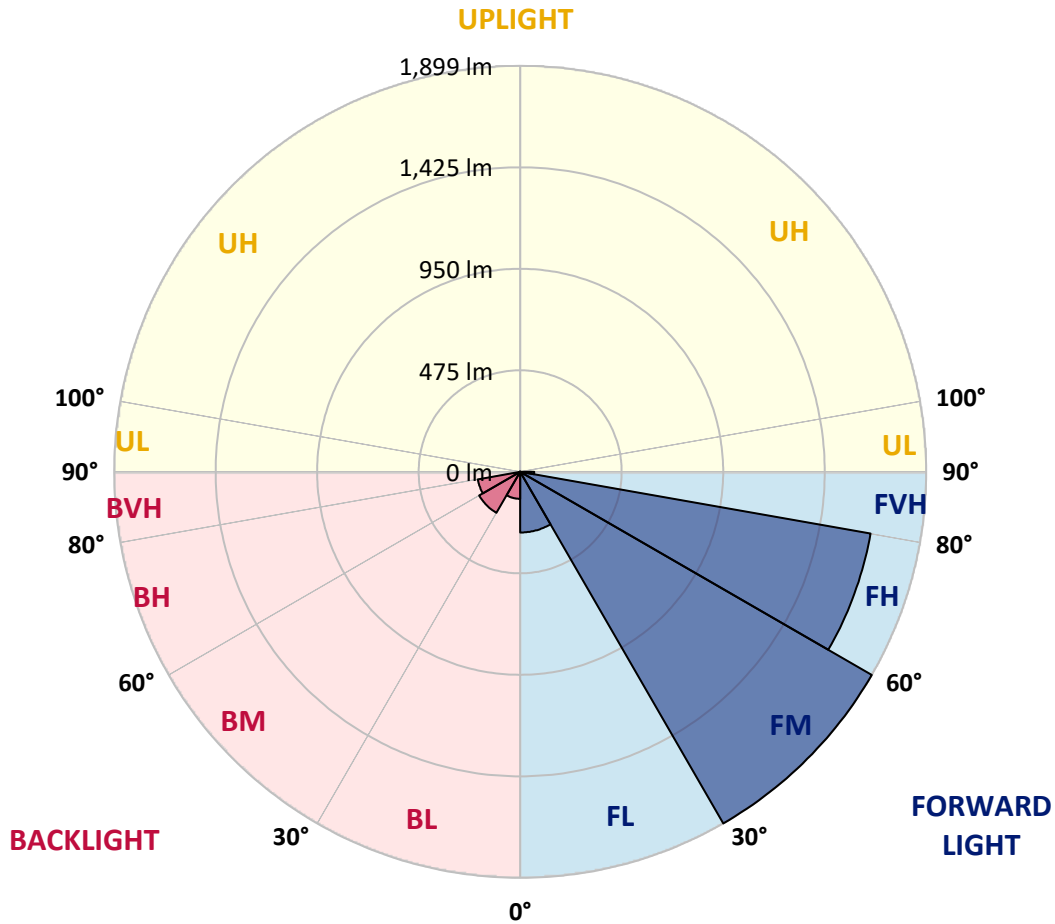


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	284.0	6.4			
FM (30°-60°)	1899.4	42.5			
FH (60°-80°)	1664.4	37.3			G1/1800
FVH (80°-90°)	65.9	1.5			G1/100
BL (0°-30°)	126.5	2.8	B1/500		
BM (30°-60°)	221.5	5.0	B1/1000		
BH (60°-80°)	201.5	4.5	B1/500		G1/500
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: B1-U0-G1
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4
2.5°	449.0	433.8	408.0	415.5	430.4	442.9	437.0	425.5	425.7	413.9	456.3
5°	522.4	502.0	487.1	492.3	491.6	491.2	519.0	529.7	534.2	553.7	582.5
7.5°	543.5	536.2	520.6	525.4	509.7	510.9	559.8	606.0	613.3	625.3	676.5
10°	535.3	521.3	527.0	527.0	527.2	552.6	585.4	629.6	638.4	684.6	690.1
12.5°	526.5	527.2	549.6	545.5	576.3	621.9	633.0	682.6	678.3	718.4	778.0
15°	559.4	576.6	562.1	567.7	570.7	624.1	642.0	708.0	727.0	777.7	816.5
17.5°	615.8	618.0	587.9	579.7	601.0	616.2	652.2	684.0	696.6	829.9	884.7
20°	626.0	640.5	609.9	562.8	607.8	628.7	653.8	669.0	674.4	845.9	923.2
22.5°	687.4	671.3	622.3	586.5	599.5	622.1	637.7	683.5	716.1	815.6	960.1
25°	718.8	714.5	667.9	637.3	624.1	622.3	658.1	692.8	703.2	847.1	969.2
27.5°	794.3	784.5	694.2	690.3	647.0	609.0	658.8	721.1	740.6	817.4	1003.2
30°	896.9	893.3	773.0	770.5	701.6	633.2	695.5	738.6	726.8	832.6	1025.8
32.5°	1000.2	1029.7	906.7	836.4	784.8	722.2	685.1	733.1	754.2	869.5	1067.5
35°	1125.0	1146.3	1021.1	970.1	855.2	763.9	754.2	785.0	794.1	913.5	1114.9
37.5°	1343.4	1311.3	1204.6	1117.8	1057.5	912.8	864.7	840.3	861.3	973.0	1211.6
40°	1504.7	1484.4	1353.0	1301.1	1162.4	1077.7	952.2	929.3	952.9	1034.2	1278.9
42.5°	1699.4	1657.0	1533.3	1498.2	1355.5	1192.1	1064.8	1072.7	1058.0	1155.0	1396.9
45°	1875.4	1779.8	1710.9	1718.8	1642.7	1422.1	1252.6	1248.7	1236.5	1329.9	1521.1
47.5°	1993.9	1910.3	1843.2	1821.2	1812.2	1826.4	1524.0	1455.6	1446.5	1513.6	1716.6
50°	2057.5	1966.0	1883.1	1887.6	2071.6	2210.0	1804.0	1706.8	1710.2	1780.2	1983.9
52.5°	2014.7	1911.2	1823.7	1908.7	2272.8	2465.8	2267.5	2035.1	2113.9	2096.0	2342.5
55°	1816.9	1727.0	1664.9	1816.9	2294.7	2741.0	2838.2	2529.2	2511.5	2470.8	2708.2
57.5°	1484.1	1406.7	1368.4	1528.8	2054.4	2962.8	3411.4	3087.7	2937.0	2766.2	3011.8
60°	1105.8	1048.7	1008.8	1093.6	1618.7	2747.4	3786.8	3613.9	3439.5	3051.0	3284.5
62.5°	819.0	772.5	730.2	737.9	1114.6	2362.9	3930.9	4171.5	4071.3	3351.6	3541.9
65°	653.6	611.2	581.6	564.6	690.3	1777.7	3730.4	4628.4	4744.0	3634.8	3727.7
67.5°	533.8	498.0	483.2	502.7	541.5	1013.4	3194.8	4905.7	5073.4	3935.2	3773.4
70°	434.3	404.8	403.3	455.8	498.6	617.8	2350.0	4714.3	4840.5	3986.4	3499.1
72.5°	302.7	289.8	310.4	384.9	494.1	514.5	1349.6	3901.2	3905.7	3520.8	2878.1
75°	171.3	169.2	201.9	307.0	481.2	509.3	752.4	2756.9	2758.9	2662.9	1993.9
77.5°	94.2	88.1	117.6	207.5	413.2	497.5	485.3	1882.4	1834.2	1481.9	910.7
80°	43.5	41.0	63.7	133.0	302.2	470.5	389.0	1034.7	932.9	482.8	222.2
82.5°	17.9	17.0	29.2	85.4	191.0	379.0	327.8	459.0	368.4	91.8	68.6
85°	3.2	3.4	12.0	51.7	106.9	174.7	265.7	217.9	160.2	25.4	37.6
87.5°	0.0	0.0	2.5	12.5	25.8	47.8	107.8	60.9	41.9	7.5	11.1
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°	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4	380.4
2.5°	464.7	460.8	421.8	423.6	426.4	423.9	423.4	412.5	402.6	435.4	435.0
5°	587.7	560.3	533.3	522.9	500.4	471.0	471.2	461.9	452.4	465.8	465.8
7.5°	675.3	637.5	603.3	542.4	483.0	429.3	424.6	411.9	397.4	414.8	418.2
10°	695.7	662.9	618.7	529.2	473.0	420.7	363.2	315.8	293.8	283.6	281.8
12.5°	758.5	734.0	635.2	536.2	455.4	366.8	272.5	216.4	178.1	175.1	171.0
15°	800.4	783.2	651.6	518.8	380.6	263.7	171.3	131.4	116.0	114.6	112.6
17.5°	865.4	835.5	635.9	463.3	297.7	174.0	115.1	103.8	105.6	109.7	106.5
20°	891.9	833.5	601.9	382.9	209.1	116.7	99.9	93.8	98.5	102.4	100.6
22.5°	919.1	839.4	571.8	315.6	136.6	96.5	89.0	85.9	86.3	90.2	90.4
25°	918.9	855.7	536.9	245.8	101.7	85.9	80.4	76.3	74.8	77.5	76.8
27.5°	963.5	836.9	473.3	182.4	89.5	76.8	71.6	66.6	60.9	63.7	63.7
30°	963.7	867.5	428.9	130.9	82.0	68.4	63.9	56.2	49.6	51.9	52.1
32.5°	989.3	841.0	387.9	100.1	76.1	63.4	53.5	46.4	42.6	44.0	44.0
35°	1018.6	863.6	324.9	88.4	70.2	56.4	45.8	40.1	37.2	38.3	38.3
37.5°	1115.1	858.9	281.1	82.2	66.4	51.0	41.7	35.3	34.0	34.7	35.6
40°	1150.0	892.6	221.8	78.6	60.0	46.0	36.7	31.9	30.1	30.6	30.8
42.5°	1238.8	900.1	177.2	75.7	54.4	39.9	32.6	29.2	27.0	27.0	27.6
45°	1336.9	918.9	140.9	73.2	49.6	35.8	29.5	26.7	23.3	22.9	23.8
47.5°	1478.9	990.9	114.9	68.2	44.0	33.3	27.2	23.1	20.4	19.5	20.4
50°	1716.6	1113.3	101.5	62.1	39.9	31.3	24.0	19.7	17.7	16.5	17.2
52.5°	2051.9	1324.6	94.5	56.4	36.2	28.1	21.5	17.2	15.2	14.3	14.7
55°	2424.3	1567.0	91.1	50.7	33.1	24.7	18.8	15.2	13.4	12.2	12.5
57.5°	2768.7	1795.0	87.7	45.3	29.9	22.0	16.5	13.4	11.6	10.4	10.6
60°	3108.0	1976.9	79.5	39.0	27.0	19.7	14.5	11.6	10.4	9.1	9.1
62.5°	3408.2	2085.6	67.7	33.8	24.2	17.4	12.9	10.4	9.5	8.2	8.2
65°	3612.6	2090.6	54.6	29.0	21.3	15.0	11.3	9.7	8.8	7.2	7.0
67.5°	3615.5	1954.7	43.7	25.8	18.8	13.1	10.2	9.3	8.2	6.8	6.3
70°	3236.0	1614.9	36.5	22.7	16.3	11.6	8.8	8.8	7.9	6.6	5.9
72.5°	2588.6	1234.0	30.6	19.7	14.5	10.0	8.2	8.4	7.7	6.6	5.9
75°	1739.9	707.7	25.4	16.8	12.7	8.4	7.9	8.2	7.9	6.6	5.7
77.5°	801.3	225.4	19.7	13.8	10.9	7.0	7.7	7.7	7.2	5.9	5.0
80°	180.6	55.5	14.3	10.2	8.8	5.2	7.0	6.3	5.7	4.1	2.9
82.5°	65.7	17.0	8.6	6.3	5.4	2.0	4.5	4.5	4.1	2.9	1.8
85°	37.6	8.8	4.8	4.1	2.9	0.9	2.5	2.7	2.3	2.0	0.9
87.5°	12.2	2.0	2.3	2.5	2.3	0.5	0.9	0.9	0.7	0.5	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)