

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: P596907

Luminaire Tested: **MSA-SA1D-835-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596907
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-835-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: 4264 lumens
Efficiency: N/A
Efficacy: 63.6 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

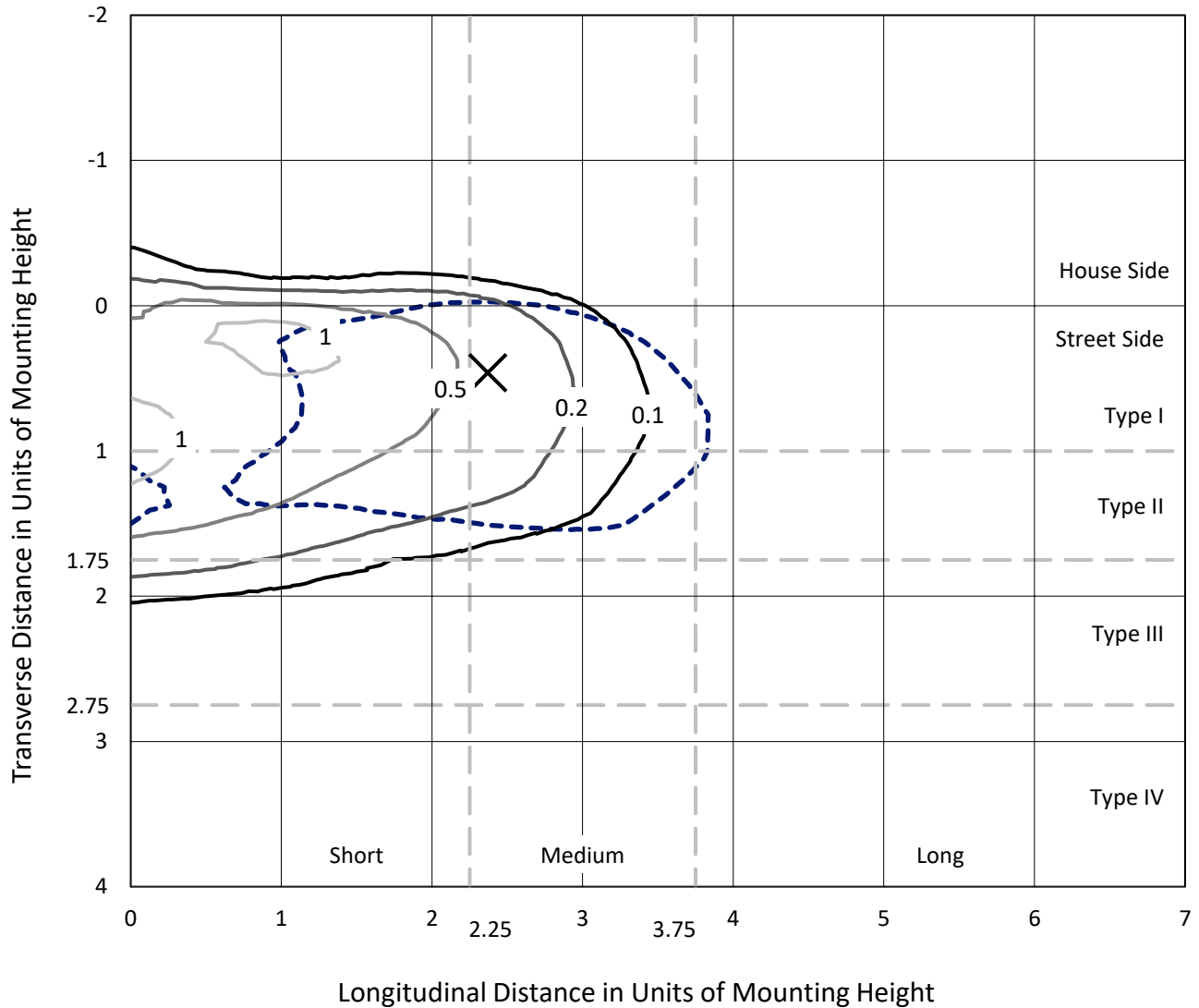
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

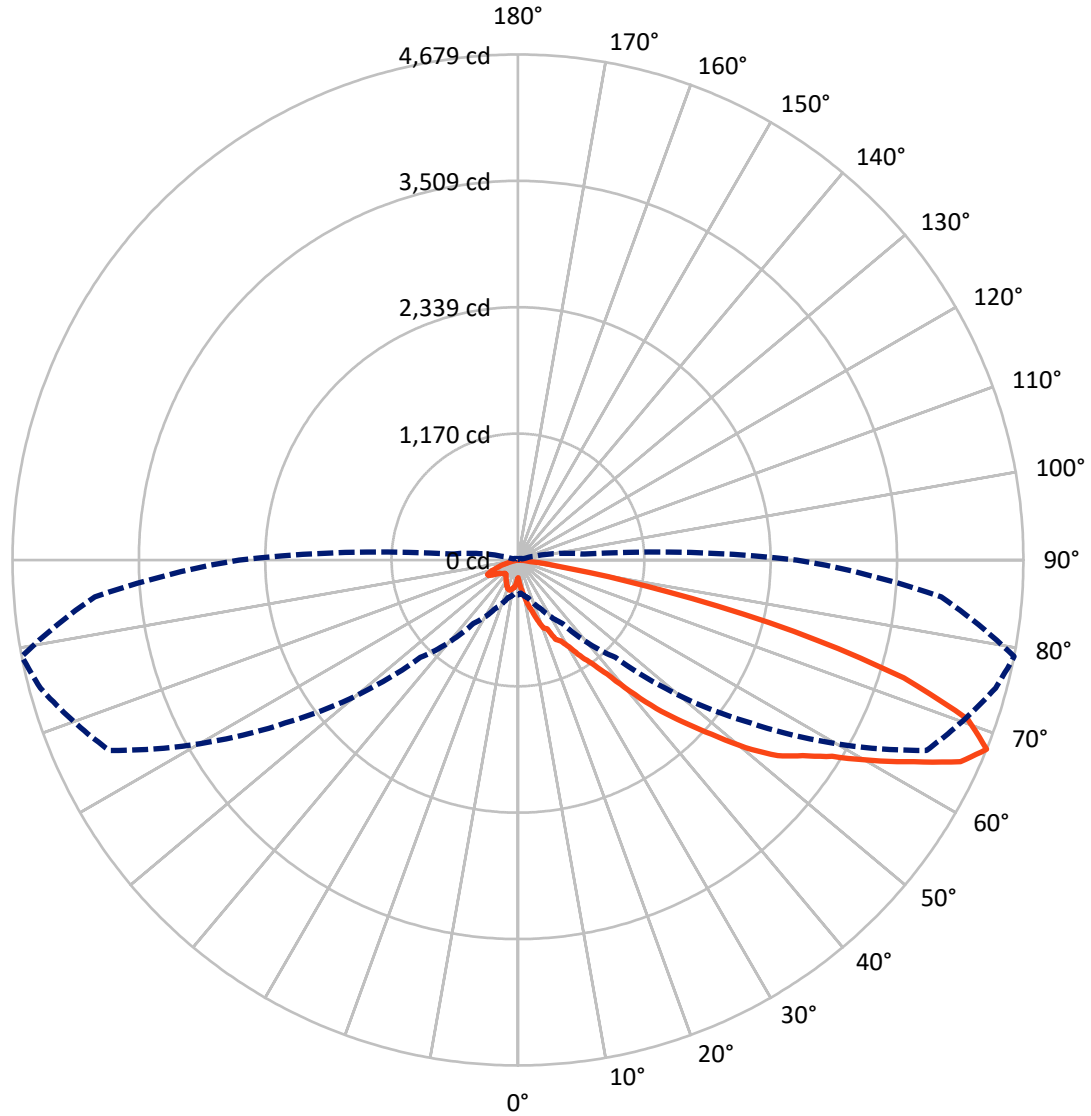
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 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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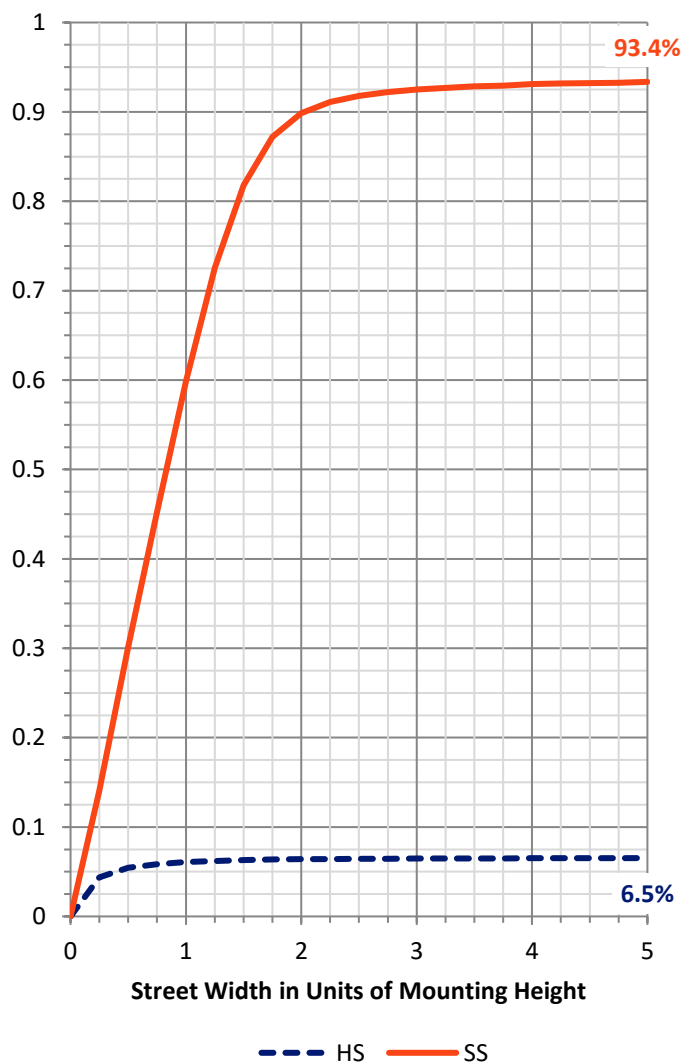
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	280.2	0.0	280.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	3983.8	0.0	3983.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	4264.0	0.0	4264.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.9	0.6
10°-20°	95.3	2.2
20°-30°	183.8	4.3
30°-40°	361.1	8.5
40°-50°	723.3	17.0
50°-60°	1156.1	27.1
60°-70°	1163.3	27.3
70°-80°	524.8	12.3
80°-90°	32.5	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°	4264.0	100.0
0°-180°	4264.0	100.0

Coefficient of Utilization



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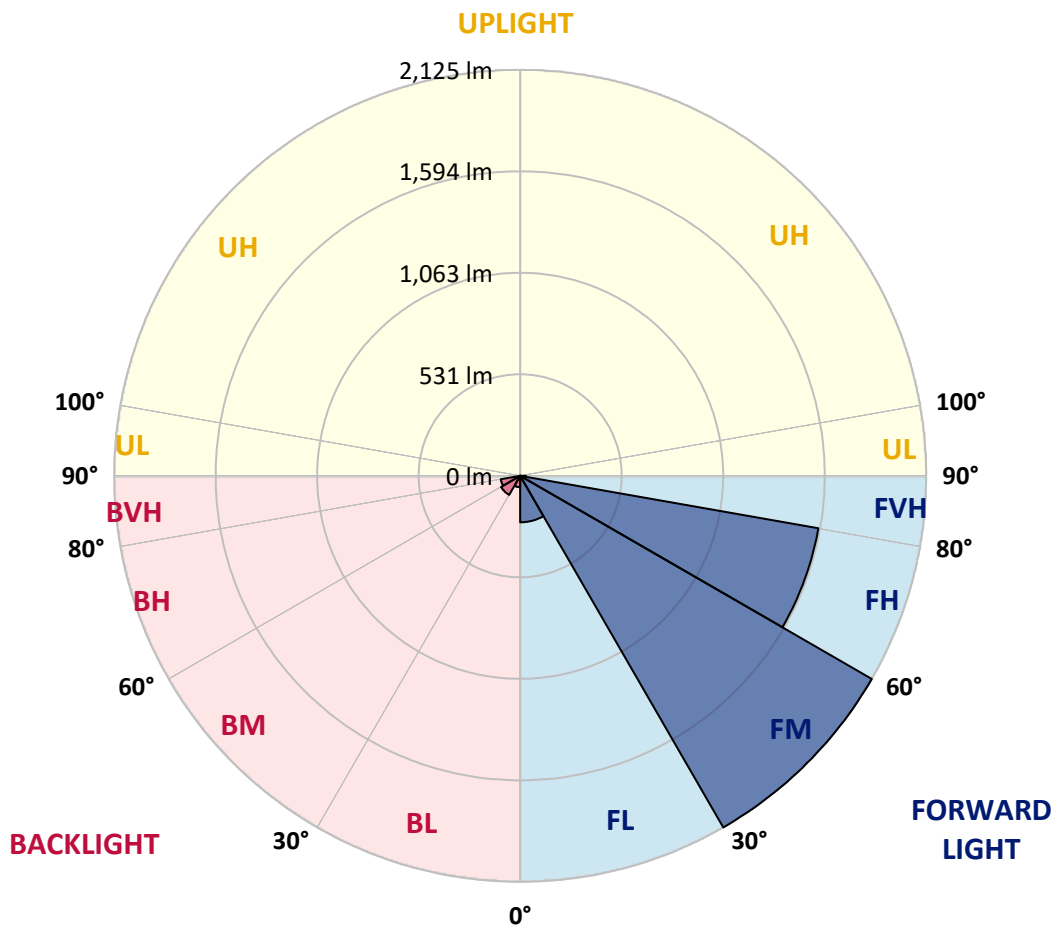
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	243.4	5.7			
FM (30°-60°)	2125.2	49.8			
FH (60°-80°)	1584.8	37.2			G1/1800
FVH (80°-90°)	30.4	0.7			G1/100
BL (0°-30°)	59.6	1.4	B0/110		
BM (30°-60°)	115.3	2.7	B0/220		
BH (60°-80°)	103.3	2.4	B0/110		G0/110
BVH (80°-90°)	2.1	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°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	221.9	213.9	201.0	208.3	207.8	211.5	204.5	196.7	184.3	196.7	197.7
5°	319.4	304.6	295.2	293.3	283.0	273.4	271.3	263.3	257.1	246.1	256.0
7.5°	397.9	391.1	374.4	372.6	347.2	333.1	337.5	334.0	310.7	299.2	308.9
10°	431.3	419.6	421.9	419.6	408.8	412.8	403.6	393.0	374.4	355.4	331.4
12.5°	444.3	442.4	461.9	459.5	484.9	515.5	495.0	477.4	434.4	429.7	397.0
15°	472.0	483.7	480.9	490.8	507.0	559.0	558.5	562.7	517.1	492.7	445.4
17.5°	496.7	505.4	491.3	502.5	546.7	578.2	620.3	603.9	609.0	584.1	511.0
20°	486.1	496.0	481.9	475.0	552.8	612.6	668.7	656.7	687.8	672.3	571.4
22.5°	552.1	533.6	498.1	476.0	534.0	611.8	685.9	736.0	730.5	692.5	627.6
25°	633.7	622.4	579.9	540.9	546.0	607.6	740.0	813.5	829.5	813.3	681.0
27.5°	743.7	741.1	654.2	637.2	586.9	589.0	748.4	911.3	874.9	849.5	743.2
30°	887.3	866.9	763.7	741.6	667.3	630.9	800.1	995.7	968.9	934.3	801.8
32.5°	1041.8	1044.8	913.2	840.3	780.6	737.4	779.7	1035.2	1085.2	1057.3	874.9
35°	1217.1	1230.7	1069.7	984.2	868.1	804.4	867.6	1156.5	1246.3	1172.7	972.9
37.5°	1487.2	1486.7	1298.7	1128.3	1043.9	974.8	1014.0	1266.7	1444.2	1340.8	1148.7
40°	1724.8	1673.1	1498.2	1302.4	1170.8	1152.0	1123.6	1417.6	1655.5	1593.2	1305.0
42.5°	1902.3	1865.9	1654.5	1502.2	1339.1	1279.4	1269.3	1638.8	1967.4	1880.2	1528.1
45°	2114.5	1995.1	1839.5	1702.3	1536.1	1518.7	1494.9	1863.3	2330.3	2133.8	1722.0
47.5°	2304.7	2192.4	2045.2	1868.9	1678.1	1821.4	1730.2	2060.5	2594.3	2409.8	1935.9
50°	2464.8	2345.4	2180.6	2046.4	1964.6	2061.9	1909.8	2222.9	2879.4	2729.9	2135.9
52.5°	2546.3	2411.2	2283.8	2200.8	2250.9	2229.0	2153.3	2419.6	3122.5	3010.6	2313.2
55°	2479.4	2347.3	2293.9	2335.0	2487.1	2423.9	2430.0	2724.5	3351.9	3197.7	2467.4
57.5°	2182.2	2061.7	2085.4	2198.0	2489.5	2654.9	2745.4	3020.7	3535.9	3430.9	2705.2
60°	1650.8	1553.7	1641.6	1841.4	2255.3	2608.9	2969.2	3316.9	3798.9	3766.0	3065.3
62.5°	1008.1	955.5	1080.1	1329.2	1797.2	2383.0	3099.7	3711.7	4080.3	4115.3	3447.3
65°	514.3	490.6	594.5	813.5	1214.3	1957.5	3005.4	3957.1	4371.1	4500.4	3811.4
67.5°	323.9	308.6	364.1	496.2	716.4	1276.8	2631.4	4171.7	4576.5	4678.8	3932.9
70°	224.5	214.8	262.8	340.6	452.0	687.8	1953.8	3971.5	4413.6	4418.3	3638.9
72.5°	142.4	134.9	181.7	252.2	333.5	355.2	1120.0	3116.4	3778.0	3734.5	2946.9
75°	92.4	88.6	115.4	184.8	256.2	219.1	553.6	2102.8	2709.0	2640.8	1957.3
77.5°	66.3	63.9	77.3	123.4	182.4	153.3	248.2	1253.3	1553.2	1404.2	950.1
80°	40.0	39.7	55.9	77.3	129.8	108.1	114.7	569.1	602.2	491.0	290.3
82.5°	20.0	20.7	31.3	49.8	83.4	70.8	52.4	189.5	161.7	119.2	58.8
85°	4.7	5.9	16.5	34.3	41.8	28.2	24.9	49.6	44.4	33.6	17.2
87.5°	0.0	0.0	5.2	8.2	11.3	4.7	8.5	9.4	12.0	9.4	3.5
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°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	197.9	195.1	177.9	173.5	173.0	168.1	169.2	164.5	164.8	175.4	175.4
5°	252.2	235.8	219.3	204.7	194.9	180.8	175.6	173.5	171.6	175.8	178.4
7.5°	296.2	272.0	242.3	210.6	181.2	161.0	158.2	153.0	151.1	155.4	158.7
10°	315.7	285.6	244.9	198.6	171.1	154.7	141.0	133.7	132.3	132.1	133.3
12.5°	357.0	319.7	247.7	194.2	164.3	146.2	130.7	118.5	107.2	108.4	107.2
15°	390.2	346.0	247.7	183.3	147.8	129.8	102.5	96.4	94.7	97.3	95.2
17.5°	440.3	372.1	235.3	164.1	133.7	100.8	90.5	90.0	93.3	97.1	94.7
20°	470.3	375.6	214.4	142.0	109.8	87.4	83.7	79.9	84.6	87.7	86.5
22.5°	501.6	375.9	193.4	130.2	88.4	79.7	73.6	70.5	71.2	74.0	74.5
25°	515.0	366.7	173.9	114.7	80.2	71.2	64.9	61.6	60.4	61.8	61.3
27.5°	551.4	349.1	152.8	97.8	76.2	63.2	57.4	53.4	49.8	52.2	52.7
30°	556.6	343.4	141.3	87.0	71.0	55.9	50.8	46.5	44.0	47.2	47.2
32.5°	573.1	312.4	135.4	82.5	65.6	51.7	44.7	41.6	41.1	43.3	43.5
35°	598.4	298.8	126.7	79.0	60.6	46.8	40.2	38.8	38.3	40.0	40.0
37.5°	684.5	281.8	117.1	75.9	56.4	44.2	39.0	36.7	36.9	38.3	39.3
40°	741.6	283.9	102.7	72.2	51.5	41.8	36.7	35.0	34.8	35.5	36.2
42.5°	847.6	285.6	96.4	68.2	47.7	39.0	34.3	33.1	32.2	32.9	33.6
45°	966.1	294.3	93.1	64.9	45.6	37.4	32.2	31.5	29.4	29.9	30.8
47.5°	1080.3	326.0	89.1	60.2	43.7	36.4	30.1	28.4	27.0	26.8	27.7
50°	1210.1	356.8	84.6	55.0	41.8	35.0	28.0	25.4	24.4	24.4	25.2
52.5°	1326.2	386.2	80.4	51.5	40.4	32.4	26.1	23.5	22.8	22.8	23.7
55°	1448.4	417.0	76.6	48.2	38.5	29.9	24.4	22.1	21.9	21.4	22.1
57.5°	1664.2	484.2	71.9	45.4	36.0	27.7	23.0	20.7	20.2	19.5	20.2
60°	1978.5	587.4	65.8	42.5	32.9	26.3	21.9	19.0	18.3	17.2	17.4
62.5°	2285.7	670.8	58.8	39.0	30.1	24.9	20.0	17.2	16.0	14.6	14.8
65°	2548.9	703.8	51.2	34.8	27.3	21.6	17.4	15.0	13.4	11.5	11.3
67.5°	2580.0	621.5	44.0	30.8	24.4	18.3	14.8	13.4	10.8	9.2	8.7
70°	2321.9	463.1	36.7	27.3	21.2	15.5	12.7	11.8	10.1	8.7	8.0
72.5°	1848.9	341.8	30.8	24.2	18.6	13.2	10.8	11.0	10.1	8.5	7.5
75°	1222.8	195.6	25.2	20.2	15.5	10.6	9.9	9.9	9.6	8.0	7.1
77.5°	588.3	84.4	19.3	16.0	12.5	8.0	8.9	8.9	9.2	7.3	5.9
80°	166.9	25.4	12.0	10.8	9.2	5.4	7.1	6.8	6.1	4.2	2.6
82.5°	29.9	9.9	5.4	5.6	5.2	2.1	4.0	3.8	3.1	1.6	0.2
85°	8.2	3.8	3.1	3.3	2.6	0.7	1.6	2.1	1.6	0.9	0.0
87.5°	2.1	1.6	2.1	2.4	1.9	0.2	0.7	0.2	0.7	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)