

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: P367449

Luminaire Tested: **MSA-SA2C-740-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367449
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-SA2C-740-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 9304 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

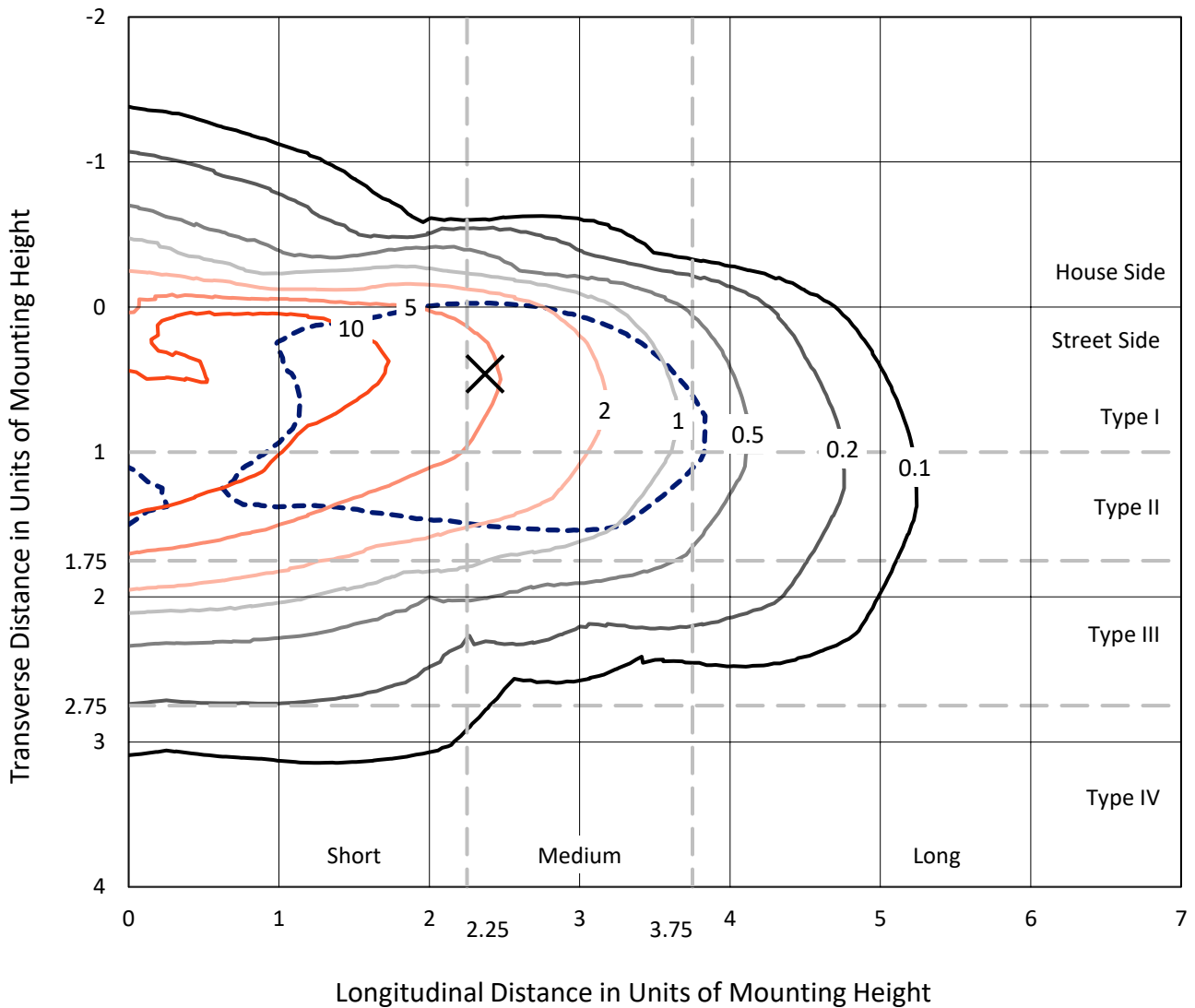
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

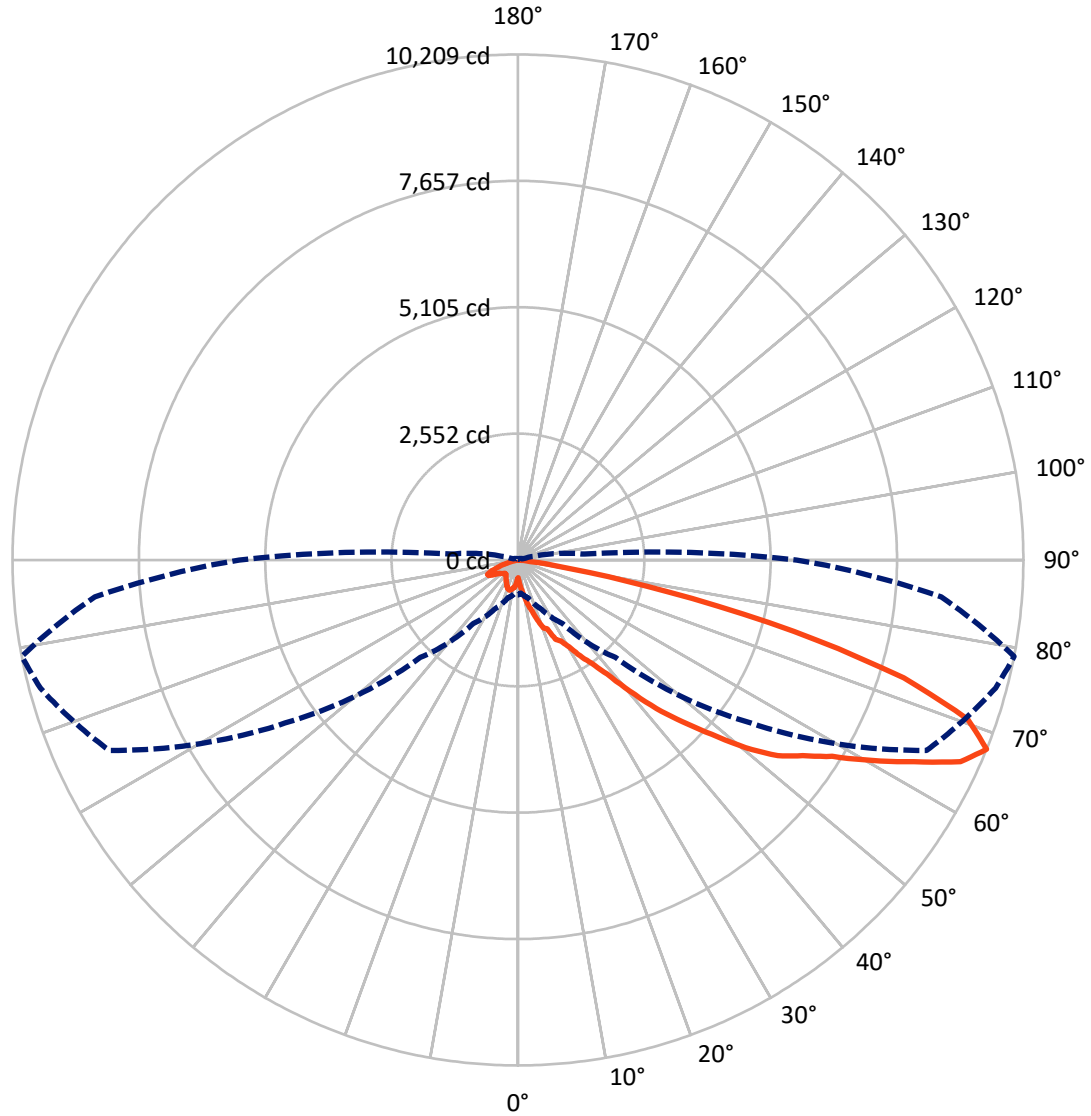
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.5 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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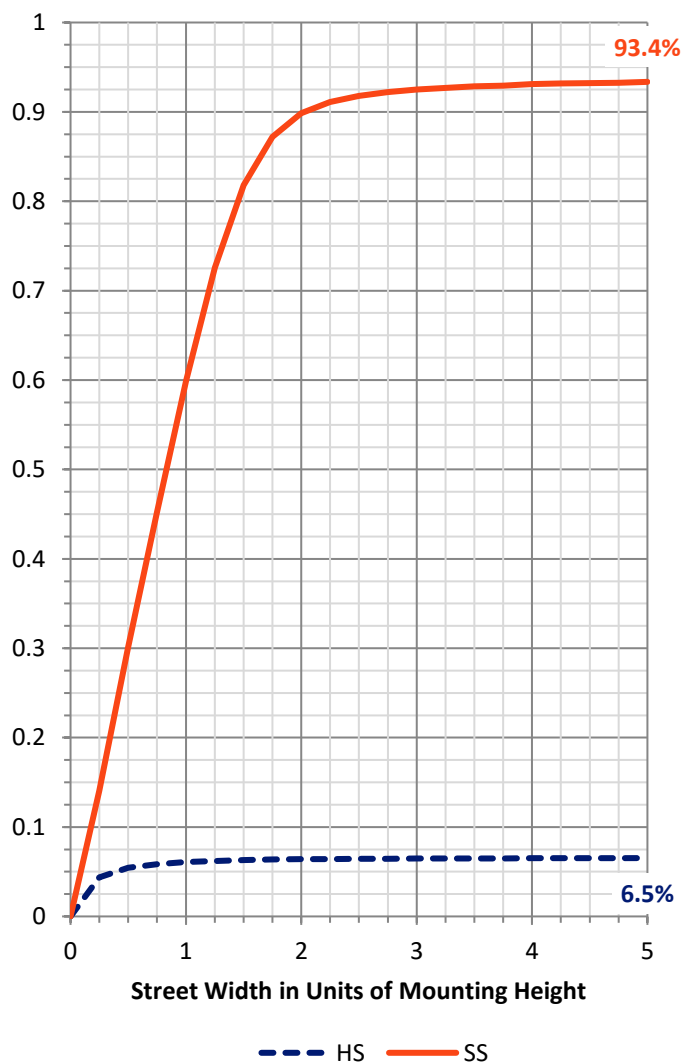
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	611.3	0.0	611.3
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	8692.7	0.0	8692.7
	% Fixture	93.4	0.0	93.4
Total	Lumens	9304.0	0.0	9304.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	0.6
10°-20°	207.9	2.2
20°-30°	401.1	4.3
30°-40°	787.9	8.5
40°-50°	1578.3	17.0
50°-60°	2522.6	27.1
60°-70°	2538.2	27.3
70°-80°	1145.1	12.3
80°-90°	70.8	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°	9304.0	100.0
0°-180°	9304.0	100.0

Coefficient of Utilization



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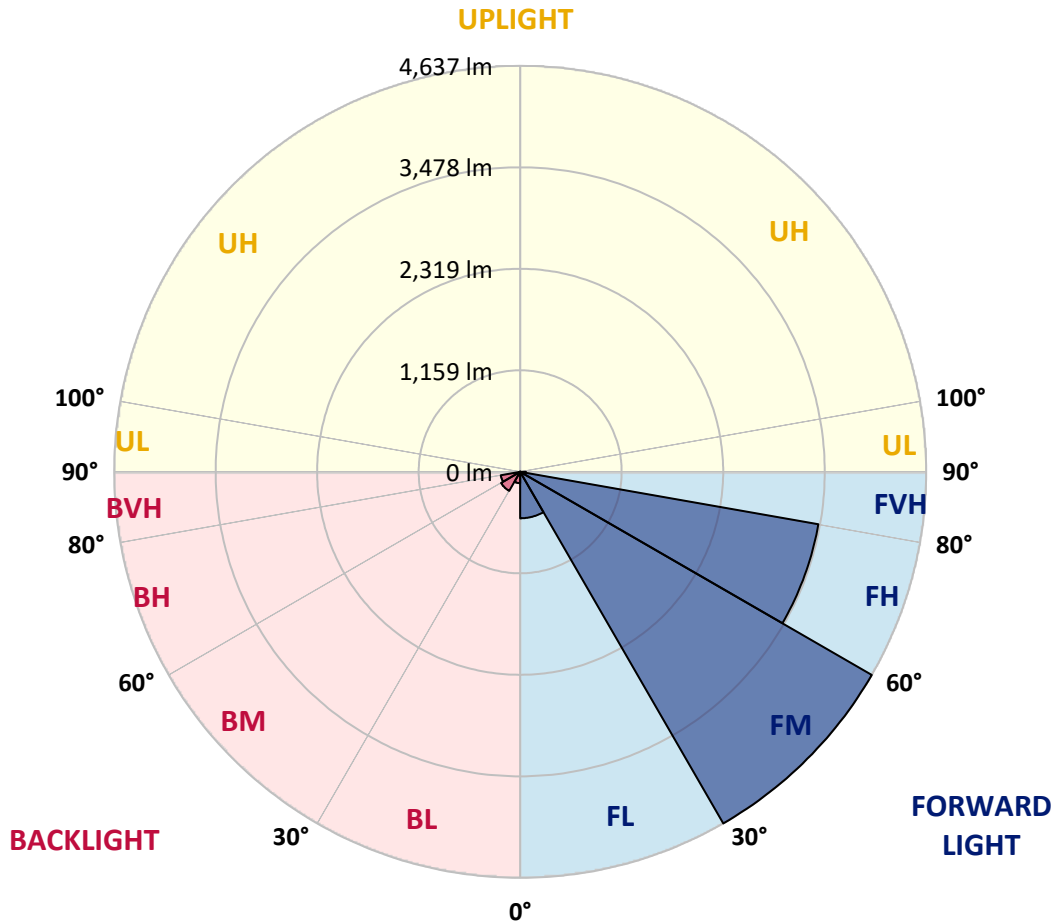
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	531.2	5.7			
FM (30°-60°)	4637.3	49.8			
FH (60°-80°)	3457.9	37.2			G2/5000
FVH (80°-90°)	66.3	0.7			G1/100
BL (0°-30°)	129.9	1.4	B1/500		
BM (30°-60°)	251.5	2.7	B1/1000		
BH (60°-80°)	225.4	2.4	B1/500		G1/500
BVH (80°-90°)	4.5	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5
2.5°	484.2	466.7	438.5	454.4	453.4	461.6	446.2	429.3	402.1	429.3	431.3
5°	697.0	664.7	644.2	640.1	617.5	596.5	591.9	574.4	561.1	537.0	558.5
7.5°	868.3	853.4	817.0	812.9	757.5	726.8	736.5	728.8	678.0	652.9	673.9
10°	941.1	915.5	920.6	915.5	891.9	900.6	880.6	857.5	817.0	775.5	723.2
12.5°	969.4	965.3	1007.8	1002.7	1058.1	1124.8	1080.1	1041.7	947.8	937.6	866.3
15°	1029.9	1055.5	1049.4	1070.9	1106.3	1219.6	1218.6	1227.8	1128.3	1075.0	971.9
17.5°	1083.7	1102.7	1071.9	1096.6	1193.0	1261.7	1353.5	1317.6	1328.9	1274.5	1115.0
20°	1060.6	1082.2	1051.4	1036.5	1206.3	1336.6	1459.2	1433.0	1500.7	1466.9	1246.8
22.5°	1204.8	1164.3	1086.8	1038.6	1165.3	1335.0	1496.6	1605.8	1594.0	1511.0	1369.4
25°	1382.7	1358.1	1265.3	1180.2	1191.4	1325.8	1614.6	1775.1	1810.0	1774.6	1485.8
27.5°	1622.8	1617.1	1427.4	1390.4	1280.7	1285.3	1633.0	1988.5	1909.0	1853.6	1621.7
30°	1936.1	1891.5	1666.4	1618.2	1456.1	1376.6	1745.9	2172.6	2114.1	2038.7	1749.5
32.5°	2273.1	2279.8	1992.6	1833.6	1703.3	1608.9	1701.2	2258.8	2368.0	2307.0	1909.0
35°	2655.7	2685.5	2334.1	2147.5	1894.1	1755.1	1893.1	2523.4	2719.3	2558.8	2122.8
37.5°	3245.0	3244.0	2833.7	2461.9	2277.7	2126.9	2212.6	2763.9	3151.2	2925.5	2506.5
40°	3763.6	3650.7	3269.1	2841.9	2554.7	2513.7	2451.6	3093.2	3612.3	3476.3	2847.5
42.5°	4150.8	4071.3	3610.2	3277.9	2921.9	2791.6	2769.6	3575.8	4292.9	4102.6	3334.3
45°	4613.9	4353.4	4013.8	3714.3	3351.7	3313.8	3262.0	4065.6	5084.8	4656.0	3757.4
47.5°	5028.8	4783.7	4462.6	4078.0	3661.5	3974.4	3775.4	4496.0	5660.7	5258.1	4224.1
50°	5378.1	5117.6	4758.0	4465.2	4286.7	4499.0	4167.2	4850.4	6282.9	5956.7	4660.6
52.5°	5556.1	5261.2	4983.2	4802.2	4911.4	4863.7	4698.5	5279.6	6813.2	6569.0	5047.3
55°	5409.9	5121.7	5005.3	5095.0	5426.8	5288.9	5302.2	5944.9	7313.8	6977.3	5383.8
57.5°	4761.6	4498.5	4550.3	4796.0	5432.0	5793.0	5990.5	6591.1	7715.3	7486.1	5902.8
60°	3602.0	3390.2	3582.0	4017.9	4921.1	5692.5	6478.8	7237.3	8289.3	8217.5	6688.5
62.5°	2199.8	2084.9	2356.7	2900.4	3921.5	5199.6	6763.4	8099.0	8903.2	8979.6	7522.0
65°	1122.2	1070.4	1297.1	1775.1	2649.6	4271.3	6557.8	8634.4	9537.6	9819.7	8316.4
67.5°	706.8	673.4	794.5	1082.7	1563.3	2786.0	5741.8	9102.7	9985.9	10209.0	8581.6
70°	489.8	468.8	573.4	743.2	986.3	1500.7	4263.1	8665.7	9630.5	9640.7	7940.0
72.5°	310.8	294.4	396.5	550.3	727.8	775.0	2443.9	6799.8	8243.6	8148.7	6430.1
75°	201.6	193.4	251.8	403.1	559.0	478.0	1207.8	4588.3	5911.0	5762.3	4270.8
77.5°	144.6	139.5	168.7	269.3	398.0	334.4	541.6	2734.7	3389.2	3064.0	2073.1
80°	87.2	86.7	122.1	168.7	283.1	235.9	250.3	1241.7	1314.0	1071.4	633.4
82.5°	43.6	45.1	68.2	108.7	182.1	154.4	114.4	413.4	352.9	260.0	128.2
85°	10.3	12.8	35.9	74.9	91.3	61.5	54.4	108.2	96.9	73.3	37.4
87.5°	0.0	0.0	11.3	18.0	24.6	10.3	18.5	20.5	26.2	20.5	7.7
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°	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5	358.5
2.5°	431.9	425.7	388.3	378.5	377.5	366.7	369.3	359.0	359.5	382.6	382.6
5°	550.3	514.4	478.5	446.7	425.2	394.4	383.1	378.5	374.4	383.6	389.3
7.5°	646.2	593.4	528.8	459.5	395.4	351.3	345.2	333.9	329.8	339.0	346.2
10°	688.8	623.2	534.4	433.4	373.4	337.5	307.7	291.8	288.8	288.2	290.8
12.5°	779.1	697.5	540.6	423.6	358.5	319.0	285.2	258.5	233.9	236.4	233.9
15°	851.4	755.0	540.6	400.1	322.6	283.1	223.6	210.3	206.7	212.3	207.7
17.5°	960.6	811.9	513.4	358.0	291.8	220.0	197.5	196.4	203.6	211.8	206.7
20°	1026.3	819.6	467.8	309.8	239.5	190.8	182.6	174.4	184.6	191.3	188.7
22.5°	1094.5	820.1	422.1	284.1	192.8	173.9	160.5	153.9	155.4	161.6	162.6
25°	1123.7	800.1	379.5	250.3	174.9	155.4	141.6	134.4	131.8	134.9	133.9
27.5°	1203.2	761.6	333.4	213.4	166.2	138.0	125.1	116.4	108.7	113.9	114.9
30°	1214.5	749.3	308.2	189.8	154.9	122.1	110.8	101.6	95.9	103.1	103.1
32.5°	1250.4	681.6	295.4	180.0	143.1	112.8	97.4	90.8	89.8	94.4	94.9
35°	1305.8	651.9	276.4	172.3	132.3	102.1	87.7	84.6	83.6	87.2	87.2
37.5°	1493.5	615.0	255.4	165.7	123.1	96.4	85.1	80.0	80.5	83.6	85.7
40°	1618.2	619.6	224.1	157.5	112.3	91.3	80.0	76.4	75.9	77.4	79.0
42.5°	1849.5	623.2	210.3	148.7	104.1	85.1	74.9	72.3	70.3	71.8	73.3
45°	2108.0	642.1	203.1	141.6	99.5	81.5	70.3	68.7	64.1	65.1	67.2
47.5°	2357.2	711.4	194.4	131.3	95.4	79.5	65.6	62.1	59.0	58.5	60.5
50°	2640.3	778.6	184.6	120.0	91.3	76.4	61.0	55.4	53.3	53.3	54.9
52.5°	2893.7	842.7	175.4	112.3	88.2	70.8	56.9	51.3	49.7	49.7	51.8
55°	3160.4	909.9	167.2	105.1	84.1	65.1	53.3	48.2	47.7	46.7	48.2
57.5°	3631.2	1056.5	156.9	99.0	78.5	60.5	50.3	45.1	44.1	42.6	44.1
60°	4317.0	1281.7	143.6	92.8	71.8	57.4	47.7	41.5	40.0	37.4	38.0
62.5°	4987.3	1463.8	128.2	85.1	65.6	54.4	43.6	37.4	34.9	31.8	32.3
65°	5561.7	1535.6	111.8	75.9	59.5	47.2	38.0	32.8	29.2	25.1	24.6
67.5°	5629.4	1356.1	95.9	67.2	53.3	40.0	32.3	29.2	23.6	20.0	19.0
70°	5066.3	1010.4	80.0	59.5	46.2	33.9	27.7	25.6	22.1	19.0	17.4
72.5°	4034.4	745.7	67.2	52.8	40.5	28.7	23.6	24.1	22.1	18.5	16.4
75°	2668.0	426.7	54.9	44.1	33.9	23.1	21.5	21.5	21.0	17.4	15.4
77.5°	1283.8	184.1	42.1	34.9	27.2	17.4	19.5	19.5	20.0	15.9	12.8
80°	364.1	55.4	26.2	23.6	20.0	11.8	15.4	14.9	13.3	9.2	5.6
82.5°	65.1	21.5	11.8	12.3	11.3	4.6	8.7	8.2	6.7	3.6	0.5
85°	18.0	8.2	6.7	7.2	5.6	1.5	3.6	4.6	3.6	2.1	0.0
87.5°	4.6	3.6	4.6	5.1	4.1	0.5	1.5	0.5	1.5	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)