

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: P368291

Luminaire Tested: **MSA-SA4A-760-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368291
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-760-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11688 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

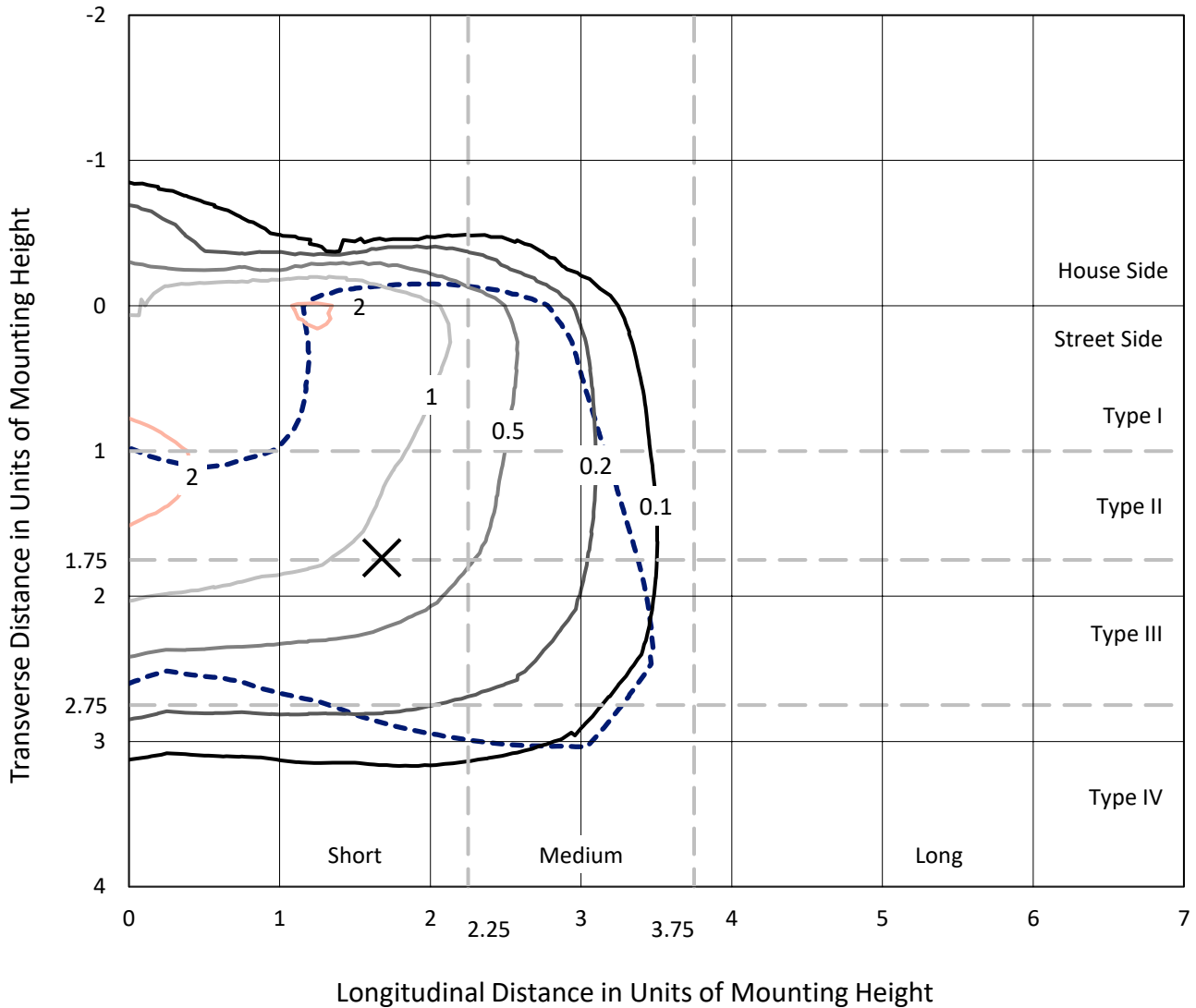
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

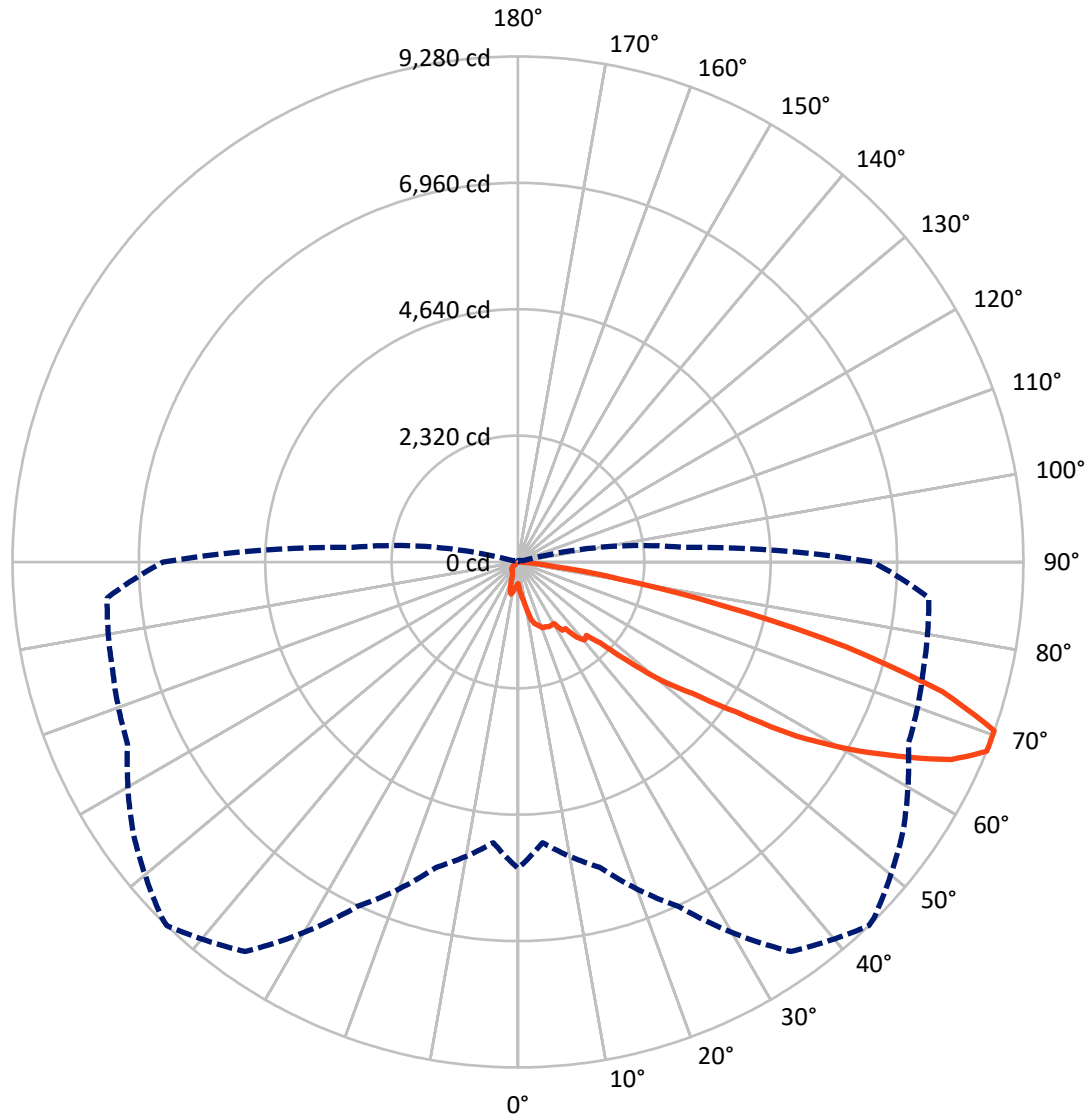
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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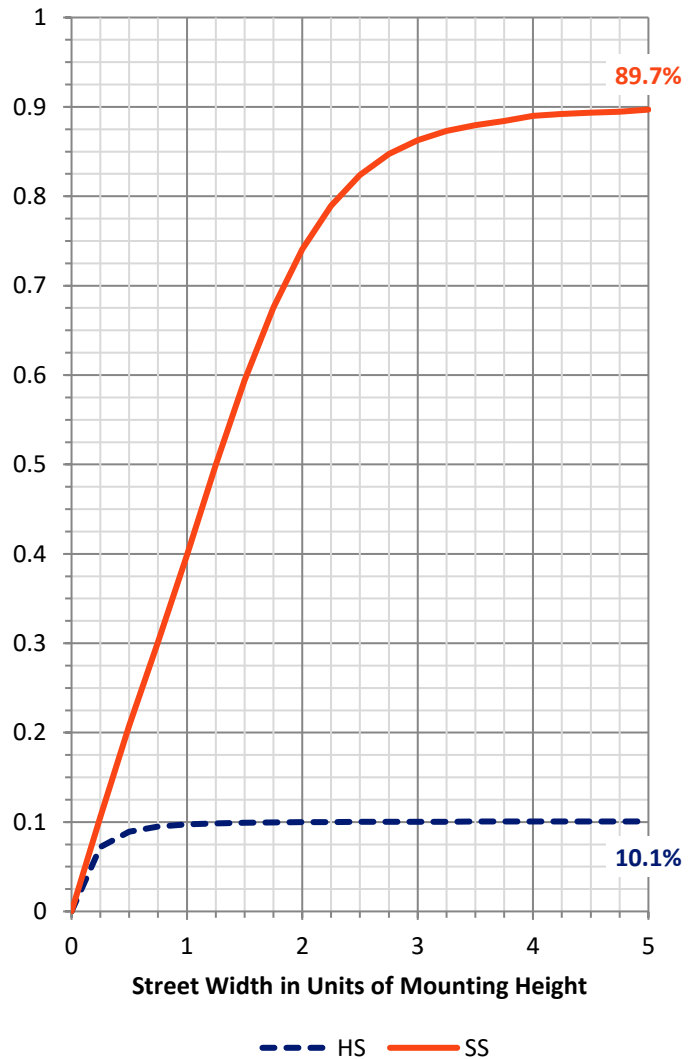
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1187.3	0.0	1187.3
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	10500.7	0.0	10500.7
	% Fixture	89.8	0.0	89.8
Total	Lumens	11688.0	0.0	11688.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.4	0.5
10°-20°	244.3	2.1
20°-30°	432.9	3.7
30°-40°	703.6	6.0
40°-50°	1408.0	12.0
50°-60°	2888.5	24.7
60°-70°	3967.9	33.9
70°-80°	1865.0	16.0
80°-90°	119.5	1.0
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°	11688.0	100.0
0°-180°	11688.0	100.0

Coefficient of Utilization

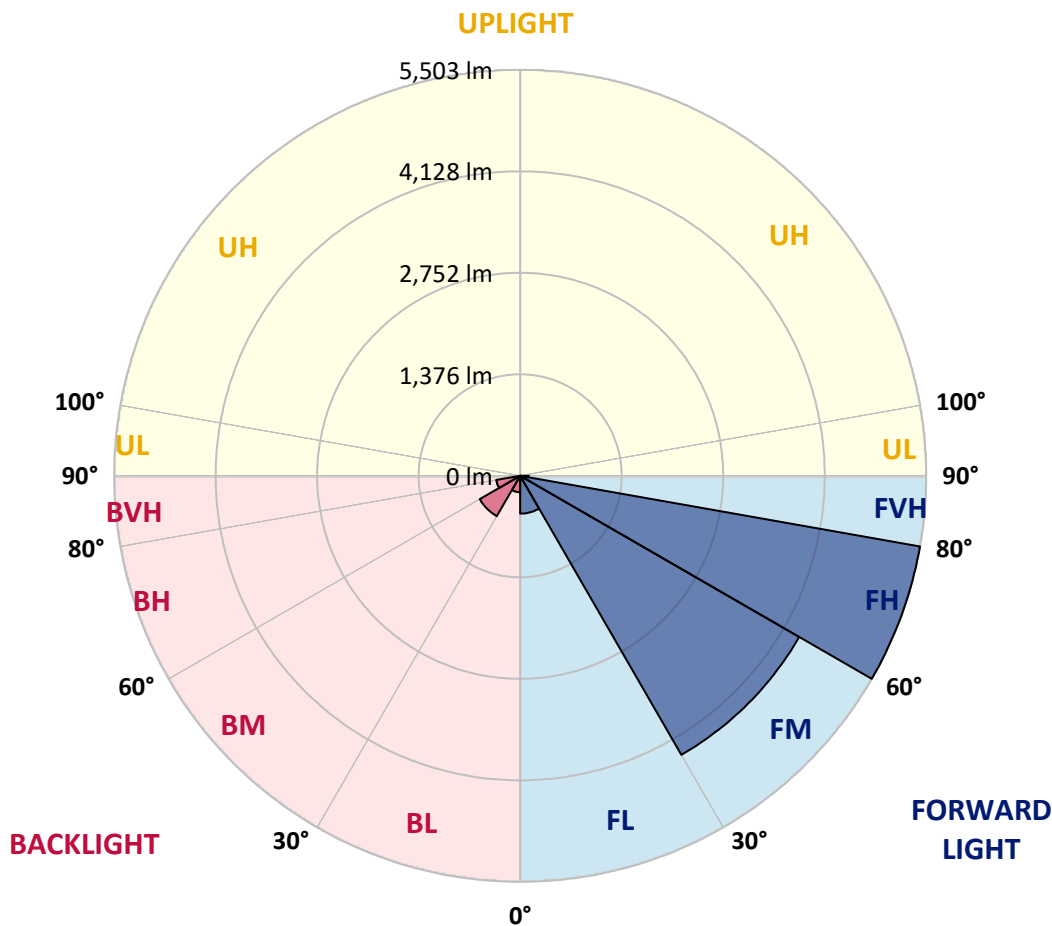


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	512.7	4.4			
FM (30°-60°)	4367.6	37.4			
FH (60°-80°)	5503.4	47.1			G3/7500
FVH (80°-90°)	117.0	1.0			G2/225
BL (0°-30°)	222.9	1.9	B1/500		
BM (30°-60°)	632.4	5.4	B1/1000		
BH (60°-80°)	329.5	2.8	B1/500		G1/500
BVH (80°-90°)	2.4	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-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8
2.5°	500.8	484.7	461.5	466.6	469.2	476.3	476.9	467.9	442.1	435.0	466.6
5°	701.9	662.5	655.5	640.6	611.0	594.9	591.0	607.1	586.5	580.1	588.4
7.5°	896.5	863.0	826.3	806.3	744.4	706.4	704.4	710.9	714.8	692.2	703.8
10°	1026.0	989.3	981.6	934.5	881.0	872.0	868.1	843.7	823.7	806.9	750.8
12.5°	1143.3	1142.7	1156.9	1089.2	1080.8	1089.9	1086.6	999.0	979.0	908.8	892.6
15°	1299.3	1338.0	1276.8	1220.0	1147.9	1178.8	1170.4	1114.3	1100.8	1053.1	984.2
17.5°	1461.1	1471.4	1368.9	1281.9	1263.2	1222.6	1231.0	1211.0	1142.7	1180.7	1112.4
20°	1465.0	1487.5	1377.9	1234.2	1291.6	1289.7	1290.3	1271.0	1180.7	1269.7	1207.2
22.5°	1519.1	1463.7	1361.8	1270.3	1280.6	1290.3	1300.6	1276.8	1257.4	1279.3	1290.9
25°	1497.2	1475.3	1377.3	1316.7	1307.1	1314.8	1317.4	1347.7	1335.4	1388.3	1359.3
27.5°	1553.9	1522.3	1347.0	1358.0	1323.8	1314.8	1299.3	1400.5	1436.6	1394.7	1472.0
30°	1651.2	1646.7	1399.2	1415.3	1388.9	1309.6	1350.9	1483.0	1528.1	1502.3	1596.4
32.5°	1803.3	1818.8	1552.0	1447.6	1461.1	1496.5	1481.1	1483.0	1597.1	1654.4	1729.2
35°	2019.2	2010.9	1700.8	1570.0	1499.1	1504.9	1526.8	1631.9	1779.5	1775.6	1854.9
37.5°	2443.3	2351.8	1964.4	1695.0	1716.3	1745.3	1729.2	1870.3	1884.5	1889.7	2079.2
40°	3068.5	2946.7	2380.2	1958.6	1753.7	1882.0	1874.2	1909.0	2003.8	2039.2	2315.7
42.5°	3892.2	3728.5	3111.7	2443.3	1934.2	1845.9	1893.6	1959.3	2277.7	2378.9	2681.8
45°	4802.2	4470.9	3841.2	3134.2	2386.6	2112.7	2148.8	2271.2	2712.7	2880.3	3214.8
47.5°	5391.9	5100.6	4563.7	3746.5	2858.4	2714.6	2717.9	2744.3	3223.8	3534.5	3983.0
50°	5904.3	5594.3	5096.1	4386.5	3693.0	3421.0	3359.2	3237.3	3874.8	4299.5	4797.0
52.5°	6627.4	6265.2	5628.5	5137.3	4644.9	4004.3	3982.4	4023.6	4642.4	5089.0	5631.7
55°	7279.7	6839.5	6231.7	5922.3	5730.3	4861.5	4880.2	4949.1	5627.8	5864.3	6374.1
57.5°	7567.8	7090.8	6778.2	6639.0	6536.6	6032.6	5969.4	5928.1	6405.1	6495.3	7152.1
60°	7756.6	7302.9	7161.1	7193.3	7504.0	6969.0	6911.7	6671.9	7048.3	7122.4	7849.4
62.5°	7637.4	7223.6	7253.9	7522.6	8212.3	7860.4	7694.7	7293.8	7574.2	7634.1	8350.2
65°	6886.5	6455.3	6844.6	7494.9	8752.4	8744.0	8667.3	7868.1	7865.5	7942.2	8388.9
67.5°	5625.2	5172.8	5802.5	6975.5	8729.8	9279.6	9243.5	8629.9	7907.4	7702.5	7570.3
70°	3910.8	3518.3	4232.5	5760.6	7951.9	9275.7	9217.7	9141.6	7576.1	6630.0	5869.5
72.5°	2032.1	1816.2	2481.3	3969.5	6338.7	8149.7	8341.2	8216.1	6468.9	4817.0	3456.5
75°	690.3	619.4	1023.5	2106.9	4213.8	6223.3	6447.6	6320.6	4393.6	2584.5	1367.0
77.5°	267.5	248.8	366.7	855.3	2114.0	3792.3	4035.9	3906.3	2356.3	946.8	321.6
80°	152.1	146.9	202.4	385.4	932.0	1886.5	2057.9	1866.5	849.5	319.0	83.8
82.5°	64.5	66.4	112.8	208.2	468.6	665.8	742.5	677.4	355.8	218.5	30.9
85°	14.2	17.4	53.5	116.0	196.6	190.1	199.2	221.1	218.5	160.5	13.5
87.5°	0.0	0.0	16.8	31.6	47.0	30.9	24.5	43.2	67.0	64.5	5.8
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°	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8	393.8
2.5°	472.4	466.0	425.4	422.8	425.4	418.3	417.6	402.8	404.1	437.6	440.2
5°	588.4	556.2	521.4	510.4	500.1	476.9	489.8	489.8	489.8	511.1	517.5
7.5°	693.5	650.3	601.3	560.1	520.1	491.1	511.1	525.3	533.6	561.4	574.3
10°	741.2	698.6	654.8	596.2	565.2	554.3	531.1	518.8	533.6	527.8	534.9
12.5°	843.0	804.3	728.9	668.4	645.1	607.8	539.4	491.8	460.2	455.0	453.7
15°	942.3	918.4	817.2	736.0	655.5	569.1	452.4	389.3	355.8	350.0	350.6
17.5°	1067.9	1033.8	884.9	768.2	631.6	476.3	349.3	295.2	292.6	306.8	308.1
20°	1151.7	1095.7	919.1	741.8	553.0	360.3	273.3	260.4	281.0	306.8	304.2
22.5°	1231.6	1171.1	964.2	718.6	428.6	273.3	251.4	252.6	270.0	297.8	304.9
25°	1284.5	1262.6	1019.6	664.5	326.8	236.5	240.4	250.1	264.9	291.3	291.3
27.5°	1443.7	1341.2	1013.2	559.4	251.4	220.4	229.4	241.7	249.4	281.0	284.2
30°	1540.4	1506.8	1046.7	452.4	220.4	199.8	217.2	228.2	233.3	269.4	270.7
32.5°	1659.0	1584.8	1087.3	333.9	205.0	198.5	194.6	203.0	217.8	249.4	251.4
35°	1803.3	1781.4	1029.3	262.3	199.8	185.6	177.9	182.4	192.1	213.3	217.8
37.5°	2097.9	1967.7	994.5	224.9	199.8	181.1	172.7	161.1	162.4	177.2	185.6
40°	2346.0	2306.0	897.1	218.5	190.8	174.7	154.0	139.9	130.2	134.7	137.9
42.5°	2801.7	2616.7	771.5	215.3	182.4	157.9	130.8	116.0	101.2	102.5	107.6
45°	3354.6	2955.7	659.3	212.0	176.6	141.1	110.2	92.8	77.3	78.0	83.1
47.5°	4093.2	3450.0	523.3	202.4	166.3	125.7	88.9	70.9	61.9	63.8	68.3
50°	4932.4	3883.8	413.8	187.6	154.0	110.9	72.2	57.4	54.1	56.1	61.2
52.5°	5681.9	4203.5	341.6	174.0	136.6	90.2	60.6	50.9	49.6	50.9	54.8
55°	6348.4	4389.1	285.5	158.5	117.3	72.8	54.8	47.0	46.4	45.8	48.3
57.5°	6973.5	4442.6	223.0	134.1	95.4	63.2	50.9	43.8	42.5	40.6	42.5
60°	7429.2	4351.0	163.7	107.6	78.0	57.4	47.7	39.3	37.4	34.2	35.4
62.5°	7649.0	4100.3	123.7	86.4	66.4	52.2	42.5	34.2	31.6	27.7	28.4
65°	7440.2	3687.2	97.3	72.8	56.7	43.8	36.1	29.0	25.8	21.9	21.9
67.5°	6515.3	3058.8	82.5	63.2	47.7	37.4	29.6	26.4	21.3	18.0	17.4
70°	4782.2	2200.3	70.9	55.4	41.2	32.2	25.1	23.8	20.6	17.4	16.1
72.5°	2699.2	1245.2	60.6	49.0	34.8	27.1	21.3	21.9	20.0	16.1	14.8
75°	1029.9	419.6	50.3	40.6	28.4	20.6	18.0	18.0	18.0	13.5	11.6
77.5°	255.2	107.0	40.0	32.9	22.6	13.5	14.8	15.5	15.5	11.6	8.4
80°	70.3	36.1	23.8	23.8	16.1	7.7	10.3	10.3	8.4	3.9	0.0
82.5°	25.8	13.5	8.4	10.3	7.1	2.6	3.9	2.6	1.9	0.0	0.0
85°	11.0	7.1	5.2	5.8	3.2	0.0	0.6	1.3	0.0	0.0	0.0
87.5°	4.5	3.2	2.6	2.6	1.3	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)