

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: P367763

Luminaire Tested: **MSA-SA3A-760-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367763
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-SA3A-760-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 8843 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

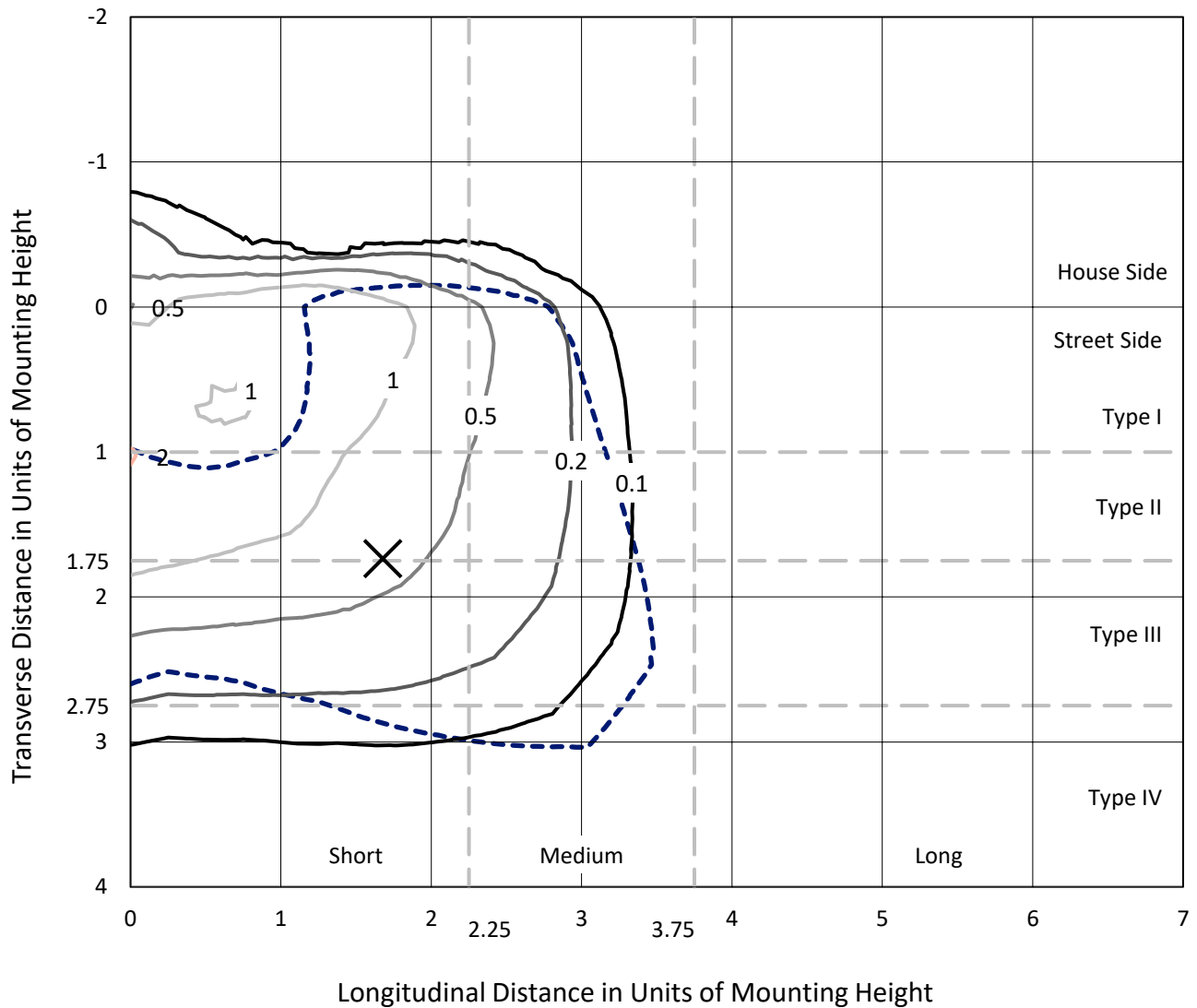
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

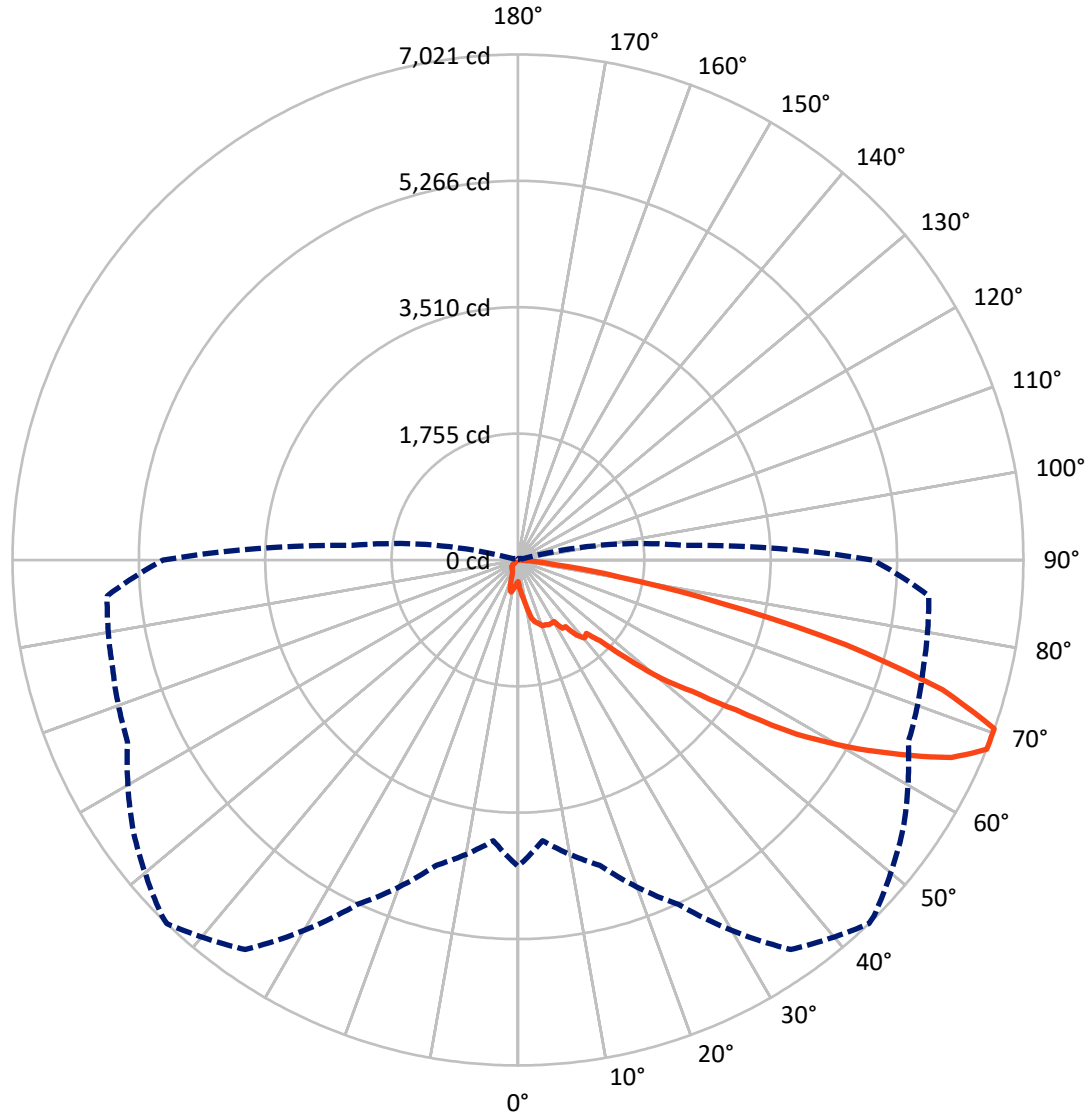
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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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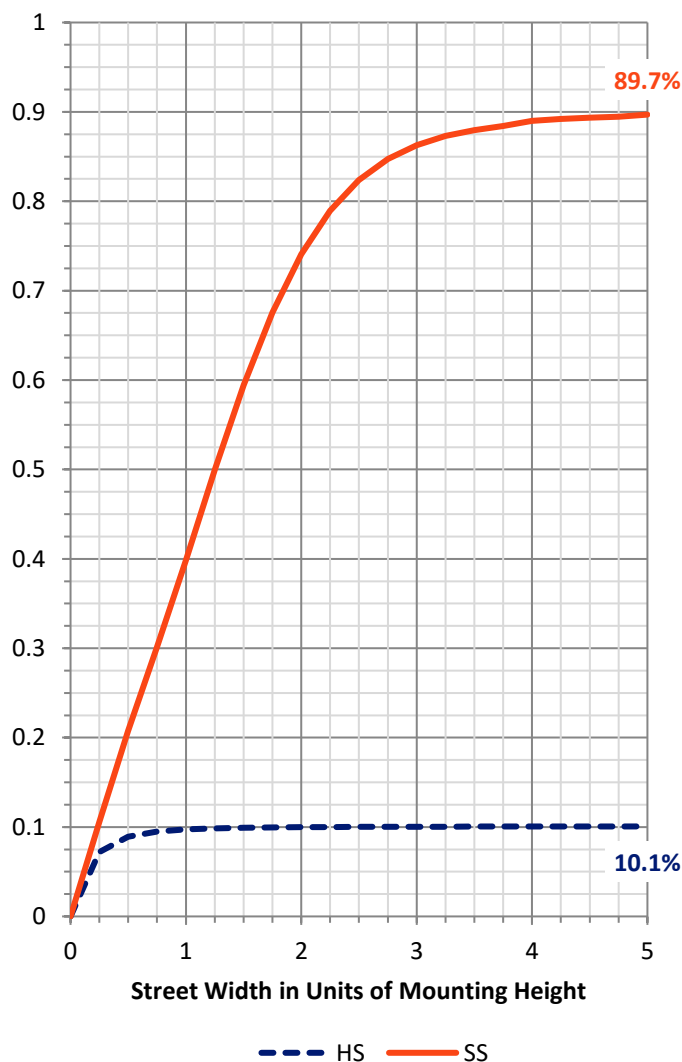
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	898.3	0.0	898.3
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	7944.7	0.0	7944.7
	% Fixture	89.8	0.0	89.8
Total	Lumens	8843.0	0.0	8843.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	0.5
10°-20°	184.9	2.1
20°-30°	327.5	3.7
30°-40°	532.3	6.0
40°-50°	1065.3	12.0
50°-60°	2185.4	24.7
60°-70°	3002.1	33.9
70°-80°	1411.0	16.0
80°-90°	90.4	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°	8843.0	100.0
0°-180°	8843.0	100.0

Coefficient of Utilization

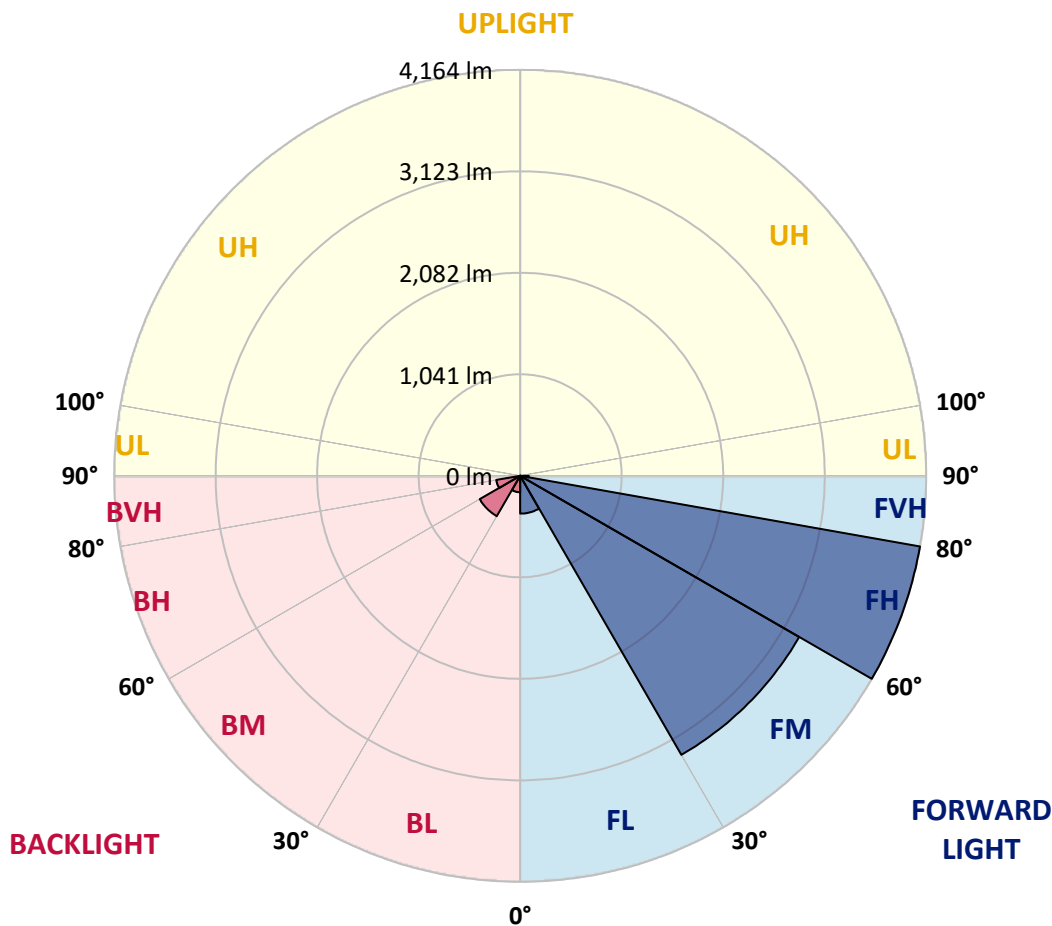


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	387.9	4.4			
FM (30°-60°)	3304.5	37.4			
FH (60°-80°)	4163.8	47.1			G2/5000
FVH (80°-90°)	88.5	1.0			G1/100
BL (0°-30°)	168.7	1.9	B1/500		
BM (30°-60°)	478.5	5.4	B1/1000		
BH (60°-80°)	249.3	2.8	B1/500		G1/500
BVH (80°-90°)	1.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9
2.5°	378.9	366.7	349.1	353.0	355.0	360.4	360.8	354.0	334.5	329.1	353.0
5°	531.0	501.3	495.9	484.7	462.3	450.1	447.2	459.3	443.7	438.9	445.2
7.5°	678.3	652.9	625.1	610.0	563.2	534.4	533.0	537.8	540.8	523.7	532.5
10°	776.3	748.5	742.7	707.1	666.6	659.8	656.8	638.3	623.2	610.5	568.1
12.5°	865.0	864.6	875.3	824.1	817.7	824.6	822.1	755.8	740.7	687.5	675.4
15°	983.0	1012.3	966.0	923.1	868.5	891.9	885.5	843.1	832.9	796.8	744.6
17.5°	1105.4	1113.2	1035.7	969.9	955.7	925.0	931.4	916.2	864.6	893.3	841.6
20°	1108.4	1125.4	1042.5	933.8	977.2	975.7	976.2	961.6	893.3	960.6	913.3
22.5°	1149.3	1107.4	1030.3	961.1	968.9	976.2	984.0	966.0	951.4	967.9	976.7
25°	1132.7	1116.2	1042.1	996.2	988.9	994.8	996.7	1019.6	1010.4	1050.3	1028.4
27.5°	1175.7	1151.8	1019.1	1027.4	1001.6	994.8	983.0	1059.6	1086.9	1055.2	1113.7
30°	1249.3	1245.9	1058.6	1070.8	1050.8	990.9	1022.1	1122.0	1156.2	1136.7	1207.8
32.5°	1364.4	1376.1	1174.2	1095.2	1105.4	1132.3	1120.6	1122.0	1208.3	1251.7	1308.3
35°	1527.7	1521.4	1286.8	1187.9	1134.2	1138.6	1155.2	1234.7	1346.3	1343.4	1403.4
37.5°	1848.6	1779.3	1486.3	1282.5	1298.5	1320.5	1308.3	1415.1	1425.8	1429.7	1573.1
40°	2321.6	2229.4	1800.8	1481.9	1326.8	1423.9	1418.0	1444.3	1516.0	1542.8	1752.0
42.5°	2944.8	2820.9	2354.2	1848.6	1463.4	1396.6	1432.6	1482.4	1723.3	1799.8	2029.0
45°	3633.3	3382.6	2906.2	2371.3	1805.7	1598.4	1625.7	1718.4	2052.4	2179.2	2432.3
47.5°	4079.5	3859.1	3452.9	2834.6	2162.6	2053.9	2056.3	2076.3	2439.1	2674.1	3013.5
50°	4467.1	4232.6	3855.6	3318.8	2794.1	2588.3	2541.5	2449.3	2931.6	3252.9	3629.4
52.5°	5014.2	4740.2	4258.4	3886.8	3514.3	3029.6	3013.0	3044.2	3512.4	3850.3	4260.9
55°	5507.7	5174.7	4714.8	4480.8	4335.5	3678.1	3692.3	3744.5	4257.9	4436.9	4822.6
57.5°	5725.7	5364.8	5128.3	5023.0	4945.5	4564.2	4516.4	4485.2	4846.0	4914.3	5411.2
60°	5868.6	5525.3	5418.0	5442.4	5677.4	5272.7	5229.3	5047.9	5332.7	5388.7	5938.8
62.5°	5778.3	5465.3	5488.2	5691.5	6213.3	5947.1	5821.7	5518.4	5730.6	5775.9	6317.7
65°	5210.3	4884.0	5178.6	5670.6	6621.9	6615.6	6557.6	5952.9	5951.0	6009.0	6346.9
67.5°	4256.0	3913.7	4390.1	5277.6	6604.9	7020.8	6993.5	6529.3	5982.7	5827.6	5727.6
70°	2958.9	2661.9	3202.2	4358.4	6016.3	7017.9	6974.0	6916.5	5732.0	5016.2	4440.8
72.5°	1537.5	1374.1	1877.4	3003.3	4795.8	6166.0	6310.8	6216.2	4894.3	3644.5	2615.1
75°	522.2	468.6	774.3	1594.0	3188.1	4708.5	4878.2	4782.1	3324.1	1955.4	1034.2
77.5°	202.4	188.2	277.5	647.1	1599.4	2869.2	3053.5	2955.5	1782.8	716.3	243.3
80°	115.1	111.2	153.1	291.6	705.1	1427.3	1557.0	1412.2	642.7	241.4	63.4
82.5°	48.8	50.2	85.3	157.5	354.5	503.7	561.7	512.5	269.2	165.3	23.4
85°	10.7	13.2	40.5	87.8	148.7	143.8	150.7	167.3	165.3	121.4	10.2
87.5°	0.0	0.0	12.7	23.9	35.6	23.4	18.5	32.7	50.7	48.8	4.4
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°	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9	297.9
2.5°	357.4	352.6	321.8	319.9	321.8	316.5	316.0	304.8	305.7	331.1	333.0
5°	445.2	420.8	394.5	386.2	378.4	360.8	370.6	370.6	370.6	386.7	391.6
7.5°	524.7	492.0	455.0	423.7	393.5	371.6	386.7	397.4	403.8	424.7	434.5
10°	560.8	528.6	495.4	451.1	427.6	419.4	401.8	392.5	403.8	399.4	404.7
12.5°	637.8	608.6	551.5	505.7	488.1	459.8	408.1	372.1	348.2	344.3	343.3
15°	712.9	694.9	618.3	556.9	495.9	430.6	342.3	294.5	269.2	264.8	265.3
17.5°	808.0	782.1	669.5	581.2	477.9	360.4	264.3	223.3	221.4	232.1	233.1
20°	871.4	829.0	695.4	561.3	418.4	272.6	206.8	197.0	212.6	232.1	230.2
22.5°	931.8	886.0	729.5	543.7	324.3	206.8	190.2	191.1	204.3	225.3	230.6
25°	971.8	955.3	771.4	502.7	247.2	179.0	181.9	189.2	200.4	220.4	220.4
27.5°	1092.3	1014.7	766.5	423.3	190.2	166.8	173.6	182.9	188.7	212.6	215.0
30°	1165.4	1140.1	791.9	342.3	166.8	151.2	164.3	172.6	176.5	203.8	204.8
32.5°	1255.1	1199.1	822.6	252.6	155.1	150.2	147.3	153.6	164.8	188.7	190.2
35°	1364.4	1347.8	778.7	198.5	151.2	140.4	134.6	138.0	145.3	161.4	164.8
37.5°	1587.2	1488.7	752.4	170.2	151.2	137.0	130.7	121.9	122.9	134.1	140.4
40°	1775.0	1744.7	678.8	165.3	144.3	132.1	116.5	105.8	98.5	101.9	104.4
42.5°	2119.7	1979.8	583.7	162.9	138.0	119.5	99.0	87.8	76.6	77.5	81.4
45°	2538.1	2236.2	498.8	160.4	133.6	106.8	83.4	70.2	58.5	59.0	62.9
47.5°	3096.9	2610.2	396.0	153.1	125.8	95.1	67.3	53.6	46.8	48.3	51.7
50°	3731.8	2938.4	313.1	141.9	116.5	83.9	54.6	43.4	41.0	42.4	46.3
52.5°	4298.9	3180.3	258.4	131.7	103.4	68.3	45.8	38.5	37.5	38.5	41.4
55°	4803.1	3320.7	216.0	120.0	88.7	55.1	41.4	35.6	35.1	34.6	36.6
57.5°	5276.1	3361.2	168.7	101.4	72.2	47.8	38.5	33.2	32.2	30.7	32.2
60°	5620.8	3291.9	123.9	81.4	59.0	43.4	36.1	29.7	28.3	25.8	26.8
62.5°	5787.1	3102.3	93.6	65.3	50.2	39.5	32.2	25.8	23.9	21.0	21.5
65°	5629.1	2789.7	73.6	55.1	42.9	33.2	27.3	21.9	19.5	16.6	16.6
67.5°	4929.4	2314.3	62.4	47.8	36.1	28.3	22.4	20.0	16.1	13.7	13.2
70°	3618.2	1664.7	53.6	41.9	31.2	24.4	19.0	18.0	15.6	13.2	12.2
72.5°	2042.2	942.1	45.8	37.1	26.3	20.5	16.1	16.6	15.1	12.2	11.2
75°	779.2	317.4	38.0	30.7	21.5	15.6	13.7	13.7	13.7	10.2	8.8
77.5°	193.1	80.9	30.2	24.9	17.1	10.2	11.2	11.7	11.7	8.8	6.3
80°	53.2	27.3	18.0	18.0	12.2	5.9	7.8	7.8	6.3	2.9	0.0
82.5°	19.5	10.2	6.3	7.8	5.4	2.0	2.9	2.0	1.5	0.0	0.0
85°	8.3	5.4	3.9	4.4	2.4	0.0	0.5	1.0	0.0	0.0	0.0
87.5°	3.4	2.4	2.0	2.0	1.0	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)