

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: P366695

Luminaire Tested: **MSA-SA1A-760-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366695
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-760-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3342 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

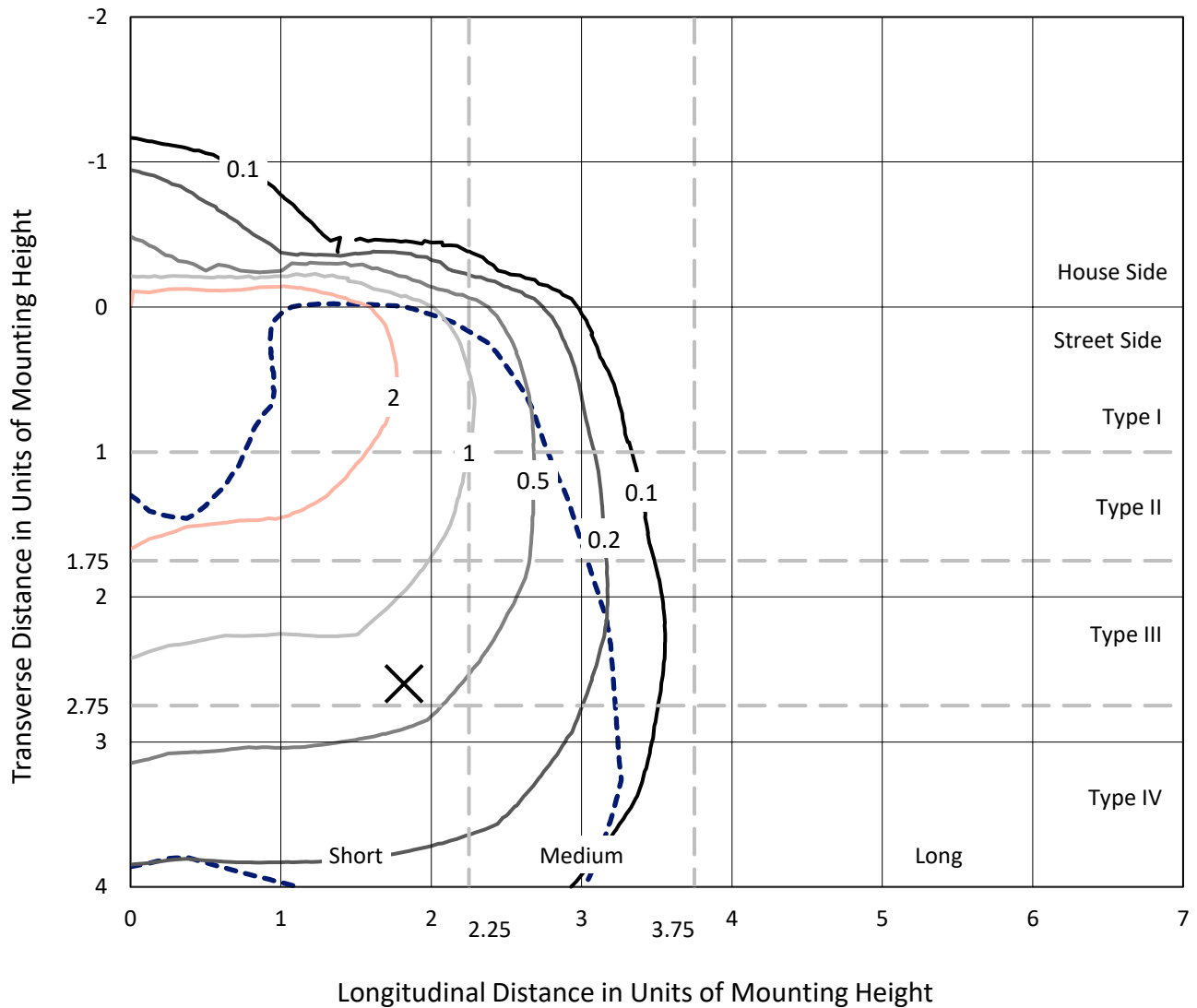
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

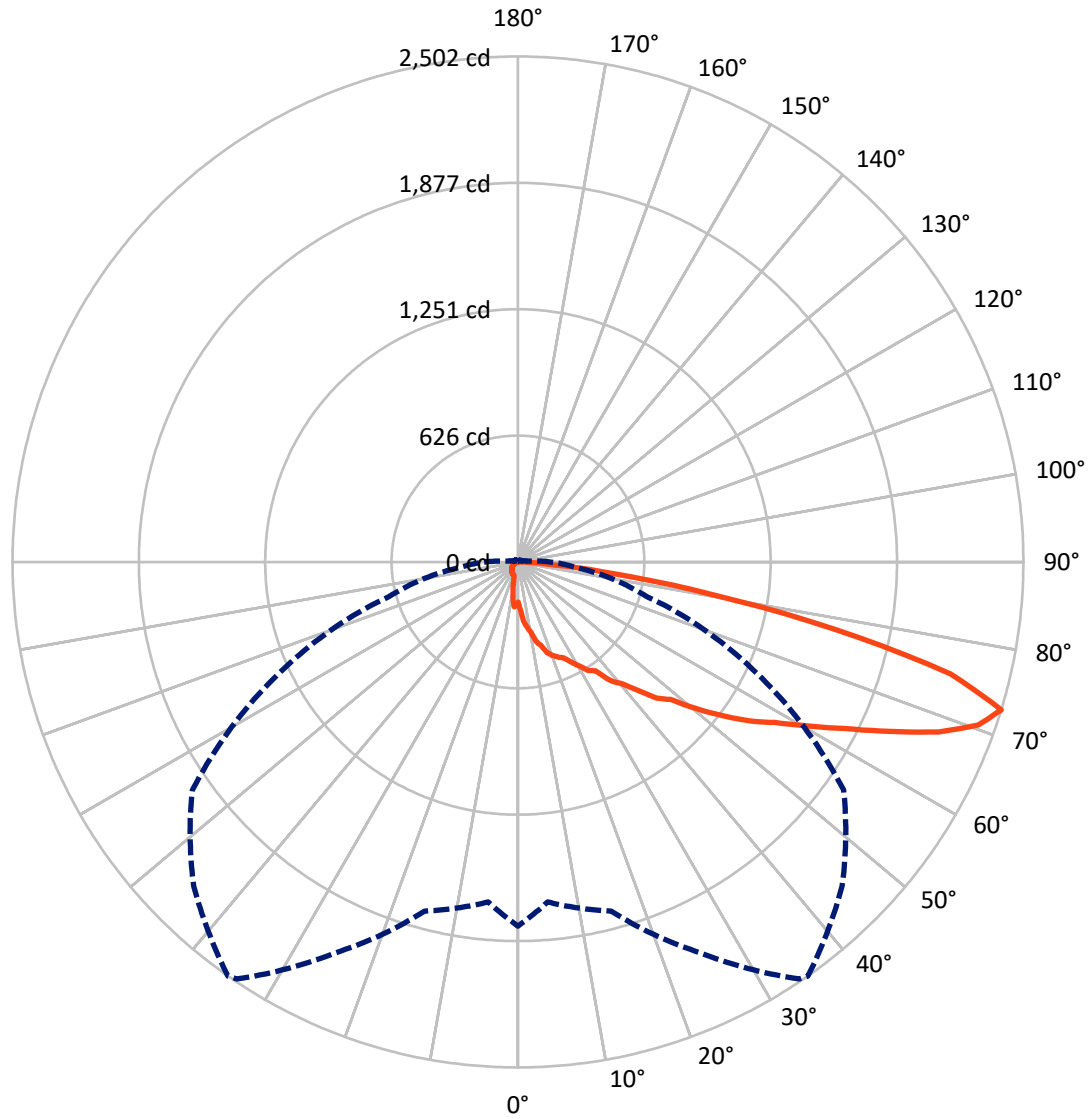
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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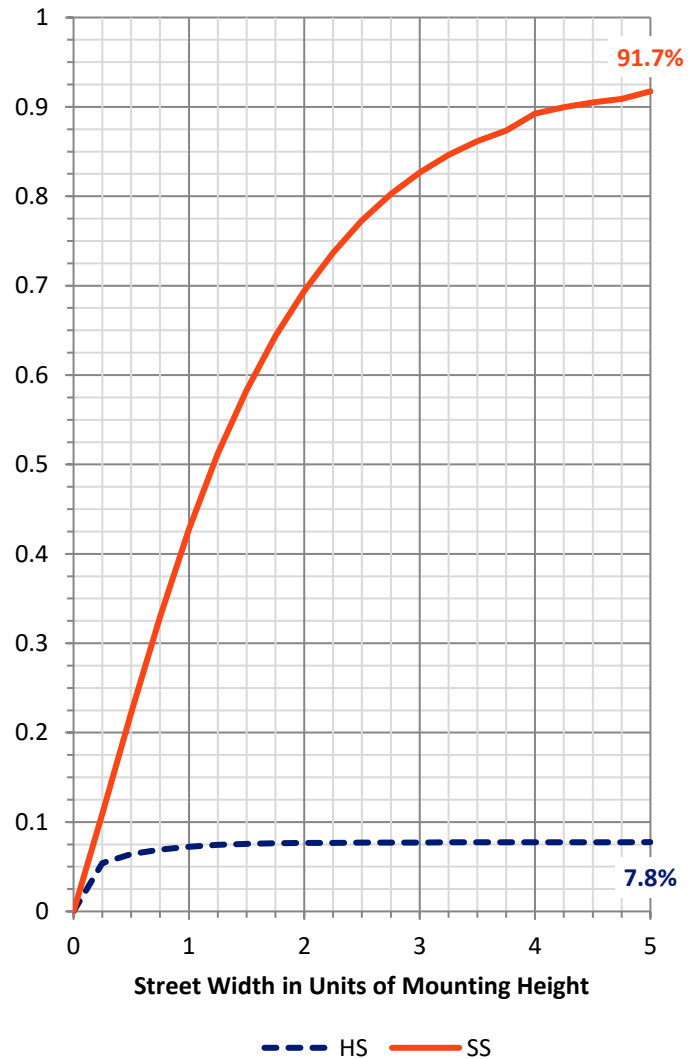
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	260.7	0.0	260.7
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	3081.3	0.0	3081.3
	% Fixture	92.2	0.0	92.2
Total	Lumens	3342.0	0.0	3342.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.4	0.8
10°-20°	85.5	2.6
20°-30°	155.8	4.7
30°-40°	268.7	8.0
40°-50°	477.6	14.3
50°-60°	712.7	21.3
60°-70°	910.5	27.2
70°-80°	633.5	19.0
80°-90°	72.5	2.2
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°	3342.0	100.0
0°-180°	3342.0	100.0

Coefficient of Utilization



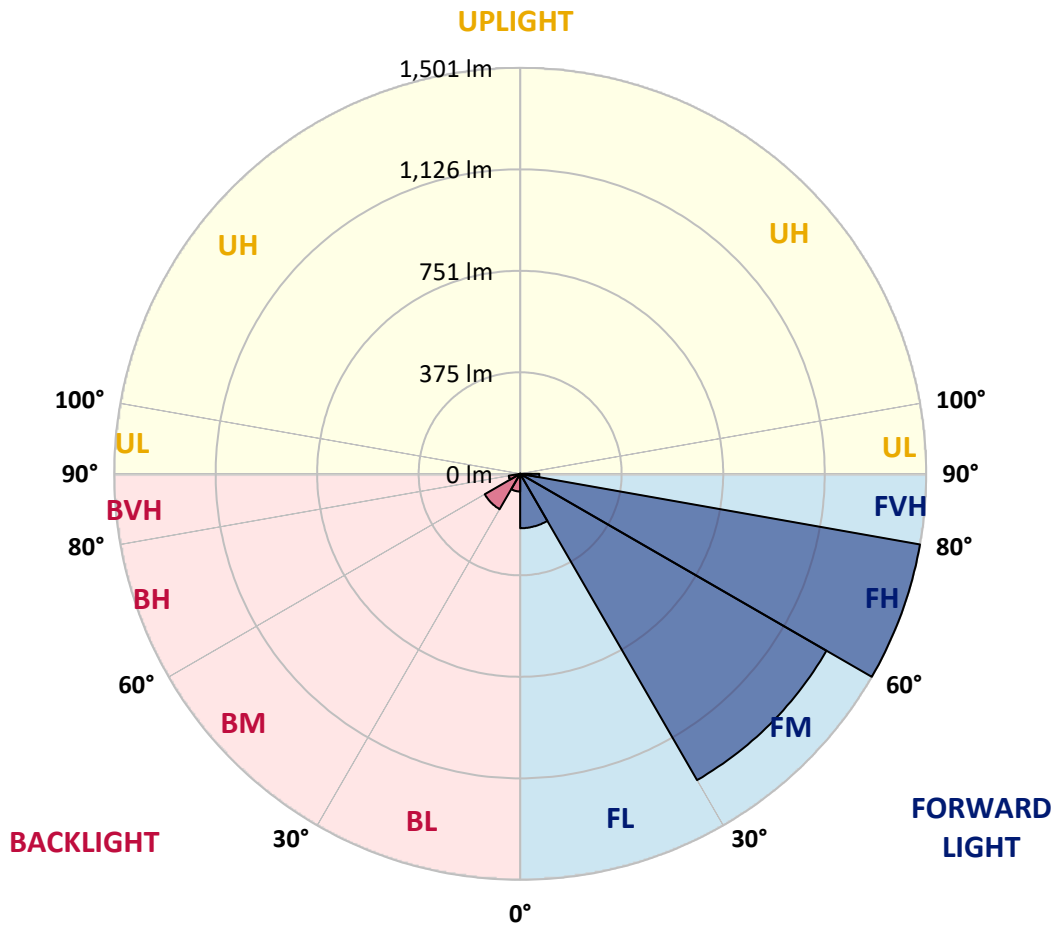
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	201.1	6.0			
FM (30°-60°)	1307.7	39.1			
FH (60°-80°)	1501.2	44.9			G1/1800
FVH (80°-90°)	71.2	2.1			G1/100
BL (0°-30°)	65.6	2.0	B0/110		
BM (30°-60°)	151.2	4.5	B0/220		
BH (60°-80°)	42.7	1.3	B0/110		G0/110
BVH (80°-90°)	1.2	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1
2.5°	253.3	243.4	227.3	228.5	235.7	237.2	239.4	233.7	228.7	219.7	237.1
5°	324.6	310.3	301.2	298.4	294.2	294.5	284.3	288.0	286.9	293.5	301.4
7.5°	364.7	356.8	345.4	342.2	326.8	325.1	312.5	329.5	331.1	328.8	341.7
10°	380.7	370.3	371.6	359.7	352.0	354.0	356.0	357.3	359.5	361.7	345.9
12.5°	390.1	391.9	410.3	397.8	405.6	405.6	419.2	404.7	405.2	389.4	392.1
15°	432.4	442.7	434.5	434.3	425.9	428.1	443.9	432.4	438.3	433.6	415.5
17.5°	485.5	487.5	471.9	465.0	472.6	472.8	466.0	465.5	445.0	479.6	457.6
20°	502.5	513.9	491.7	464.9	496.3	494.8	494.3	486.4	452.3	500.3	482.2
22.5°	548.7	532.4	517.3	499.6	511.9	511.9	510.1	492.8	479.5	498.5	506.2
25°	563.1	565.2	545.5	539.8	540.1	525.0	523.7	516.3	503.5	535.9	520.5
27.5°	612.9	612.0	564.8	580.8	560.5	560.6	523.5	540.1	542.3	537.8	555.1
30°	661.8	675.4	604.1	624.3	603.0	596.6	560.3	575.1	578.9	573.7	595.6
32.5°	724.1	744.1	674.9	655.0	622.4	640.6	615.6	580.6	599.8	646.3	658.6
35°	790.1	799.9	726.1	698.4	661.6	661.4	660.6	663.4	684.6	737.0	747.4
37.5°	908.7	885.7	819.0	755.5	763.7	745.4	732.7	746.1	768.1	854.5	899.0
40°	974.9	958.3	864.4	826.7	785.9	792.6	827.2	825.7	884.4	974.7	1041.4
42.5°	1039.3	1023.5	931.1	900.7	848.2	866.6	881.7	900.8	1020.9	1166.8	1203.4
45°	1096.5	1050.2	985.0	986.2	959.0	961.1	987.9	1005.5	1179.2	1328.7	1354.4
47.5°	1131.2	1093.0	1030.5	1029.3	1027.7	1017.4	1143.3	1159.4	1305.4	1483.0	1485.3
50°	1179.9	1132.2	1077.4	1078.4	1117.2	1138.9	1289.1	1287.4	1427.2	1611.6	1557.4
52.5°	1240.5	1182.2	1121.9	1166.8	1226.8	1262.0	1384.0	1433.7	1558.1	1692.5	1585.6
55°	1318.1	1245.2	1187.1	1244.6	1375.4	1389.0	1476.9	1581.9	1700.7	1774.9	1594.7
57.5°	1409.2	1322.2	1275.1	1367.7	1498.2	1498.6	1612.1	1739.8	1788.2	1808.5	1584.4
60°	1507.3	1405.8	1358.5	1441.8	1633.7	1647.4	1762.5	1827.0	1877.1	1825.5	1566.1
62.5°	1593.7	1481.6	1444.8	1542.8	1782.2	1814.8	1893.6	1884.3	1941.3	1846.8	1519.6
65°	1696.5	1579.7	1555.5	1700.2	1976.0	2020.9	2040.7	1986.0	1962.8	1830.4	1398.4
67.5°	1798.3	1689.1	1688.4	1874.7	2230.2	2245.7	2224.9	2129.3	1937.7	1685.2	1176.5
70°	1870.0	1752.8	1797.0	2065.9	2461.2	2417.9	2330.2	2197.0	1757.0	1291.6	768.6
72.5°	1802.7	1689.6	1789.2	2134.0	2489.8	2502.2	2269.2	1968.0	1305.4	660.6	278.2
75°	1369.9	1300.7	1553.5	1893.2	2210.6	2213.4	1894.1	1388.0	642.8	179.4	76.9
77.5°	690.0	668.0	983.3	1344.0	1612.8	1608.1	1301.3	743.6	206.8	59.6	38.8
80°	349.3	331.6	418.5	725.1	957.8	964.8	743.1	333.0	104.3	32.4	26.9
82.5°	214.5	203.6	229.0	328.1	464.9	476.1	281.9	210.8	64.7	19.2	24.5
85°	41.5	43.7	131.5	164.3	185.6	181.3	83.5	173.5	19.5	11.4	17.8
87.5°	0.0	0.7	30.4	53.6	53.8	47.7	19.0	38.5	2.7	3.2	2.2
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°	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1
2.5°	239.9	237.4	216.4	214.0	214.5	211.0	209.8	202.4	200.6	212.0	214.0
5°	298.0	281.2	261.7	254.7	243.8	225.3	222.6	217.9	212.7	214.7	213.2
7.5°	333.7	311.3	290.5	253.3	222.6	195.7	191.4	183.3	175.2	175.4	180.6
10°	339.4	320.5	291.8	246.6	211.5	177.9	148.7	127.5	117.9	109.4	111.9
12.5°	372.5	355.0	302.1	244.6	195.4	143.0	104.7	84.0	74.9	71.9	71.6
15°	399.0	385.2	319.5	238.4	159.6	100.6	74.9	68.9	67.2	70.1	69.2
17.5°	438.5	413.6	317.7	212.7	121.6	76.4	69.0	68.2	70.2	71.9	72.4
20°	455.8	420.0	305.1	172.4	91.1	70.1	67.4	65.7	69.4	74.4	73.4
22.5°	473.3	430.9	290.3	141.1	73.2	67.0	65.5	64.2	67.0	71.9	73.1
25°	481.2	448.4	273.8	110.2	68.0	63.5	62.5	63.0	65.4	69.7	69.2
27.5°	521.0	450.4	242.4	87.0	65.9	61.0	61.0	62.2	62.2	68.0	67.5
30°	545.8	484.5	216.9	73.2	63.3	57.5	59.5	60.0	59.1	65.5	66.0
32.5°	589.5	493.9	192.0	67.2	59.3	57.0	56.6	57.0	57.6	63.8	64.0
35°	656.7	540.3	158.1	64.8	57.3	54.4	52.1	53.9	55.6	60.1	61.0
37.5°	788.1	587.8	128.9	63.0	56.3	52.1	51.2	50.9	53.9	59.1	60.8
40°	894.4	672.0	104.8	61.5	54.3	50.7	48.6	48.7	51.4	55.3	57.8
42.5°	1045.0	732.8	88.9	59.1	51.4	47.9	45.4	46.9	48.0	52.1	53.8
45°	1170.6	780.0	78.3	57.6	48.6	45.2	43.2	44.9	43.7	45.7	48.0
47.5°	1270.6	821.2	70.4	53.9	46.7	43.7	41.2	40.7	38.6	39.1	41.3
50°	1325.5	814.3	63.8	50.2	44.4	42.2	38.6	35.1	32.4	32.3	33.6
52.5°	1345.0	777.5	58.5	47.0	41.5	38.8	34.8	29.9	27.2	26.4	27.6
55°	1350.4	724.6	53.6	43.5	38.8	34.6	30.4	25.2	22.3	21.0	22.2
57.5°	1332.9	643.1	48.9	40.2	35.6	30.6	26.0	20.7	18.0	16.3	17.3
60°	1289.8	539.6	44.7	36.0	32.3	27.0	22.0	16.6	13.8	12.3	12.8
62.5°	1194.2	423.0	40.2	32.1	28.7	23.7	18.5	13.1	10.4	9.1	9.2
65°	1048.7	315.3	34.9	28.4	25.5	20.5	14.8	10.1	7.9	6.7	6.6
67.5°	835.5	213.7	29.7	24.5	22.7	17.3	11.8	7.9	6.2	5.4	5.0
70°	491.1	107.7	24.7	21.2	19.5	14.4	9.2	6.4	5.7	5.0	4.7
72.5°	162.0	46.5	19.3	17.5	16.1	11.6	7.2	5.9	5.5	4.9	4.5
75°	56.4	26.9	14.3	13.4	12.8	8.7	6.0	5.4	5.4	4.7	4.2
77.5°	37.0	20.8	10.6	9.7	9.6	6.4	5.2	5.0	4.7	3.9	3.2
80°	30.7	11.8	7.4	6.9	6.7	4.0	4.2	3.7	2.9	1.7	0.7
82.5°	28.4	7.1	3.9	4.2	3.9	1.5	2.4	2.0	1.5	0.7	0.0
85°	16.6	3.2	2.2	2.2	1.7	0.3	1.2	1.2	0.7	0.2	0.0
87.5°	1.8	1.5	1.2	1.2	0.8	0.0	0.5	0.3	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)