

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: P366837

Luminaire Tested: **MSA-SA1B-760-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-760-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3792 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G2

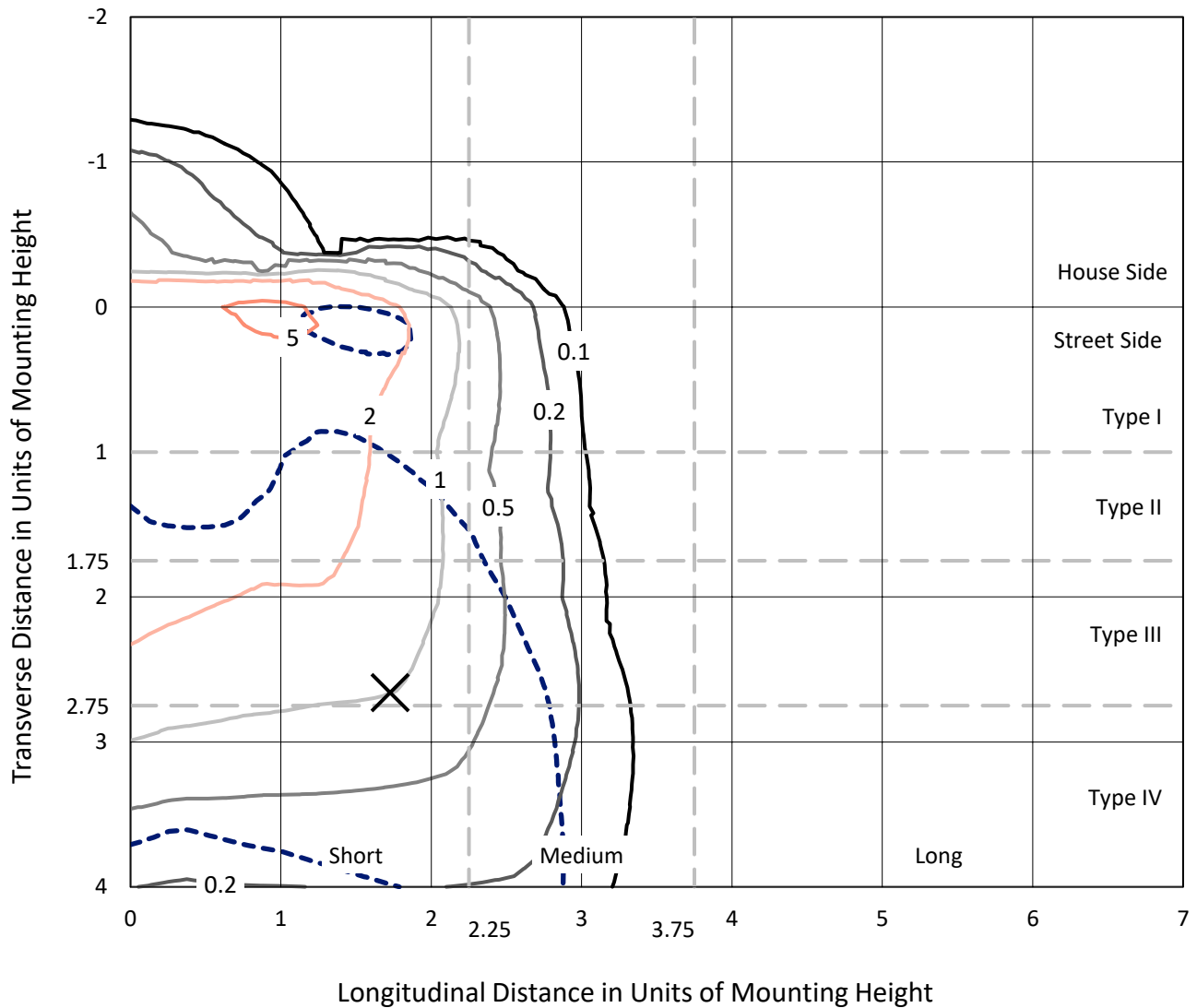
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

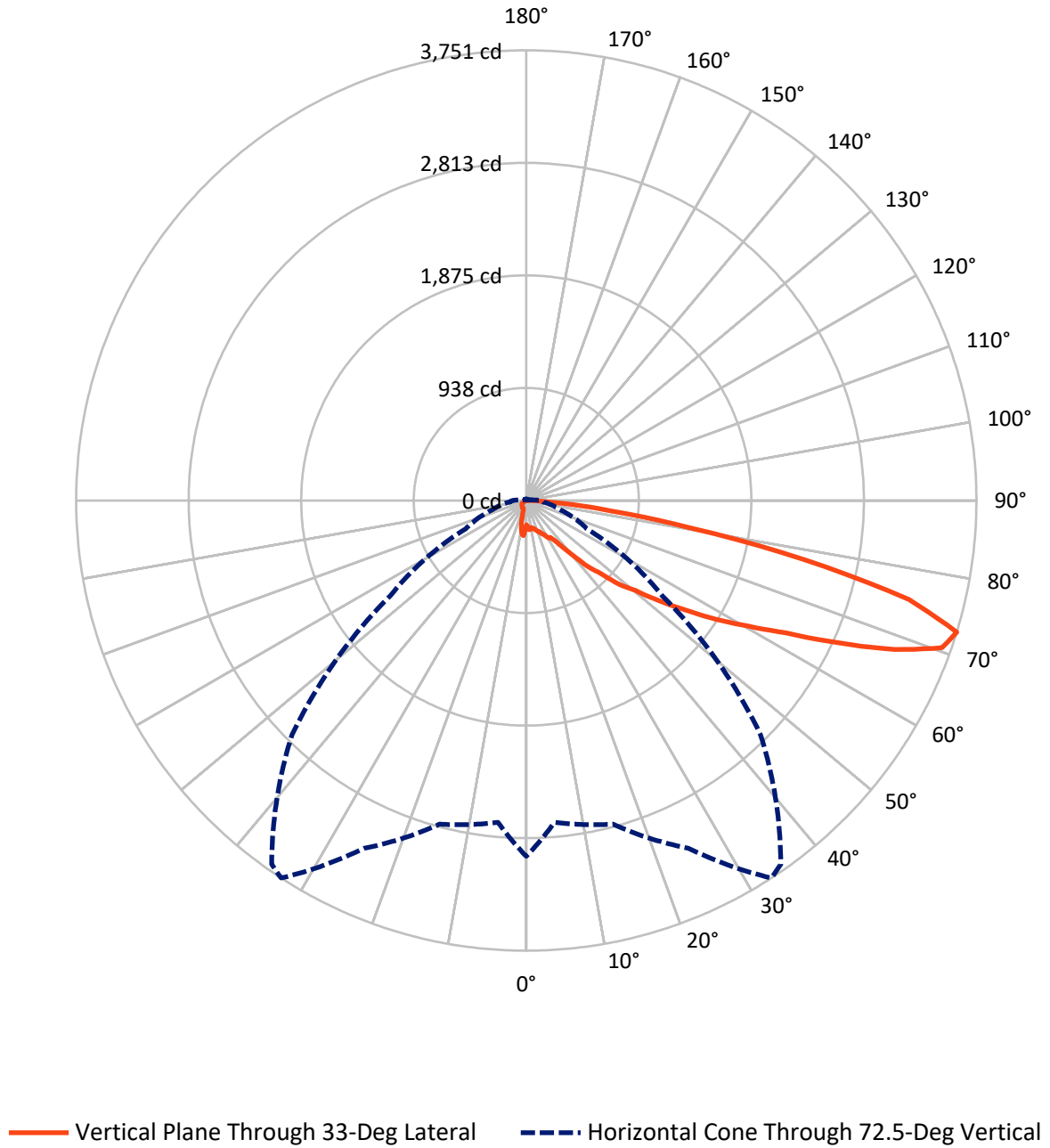
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	350.6	0.0	350.6
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3441.4	0.0	3441.4
	% Fixture	90.8	0.0	90.8
Total	Lumens	3792.0	0.0	3792.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.1	0.7
10°-20°	77.8	2.1
20°-30°	131.9	3.5
30°-40°	241.4	6.4
40°-50°	509.6	13.4
50°-60°	852.5	22.5
60°-70°	1141.2	30.1
70°-80°	745.4	19.7
80°-90°	66.1	1.7
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°	3792.0	100.0
0°-180°	3792.0	100.0

Coefficient of Utilization

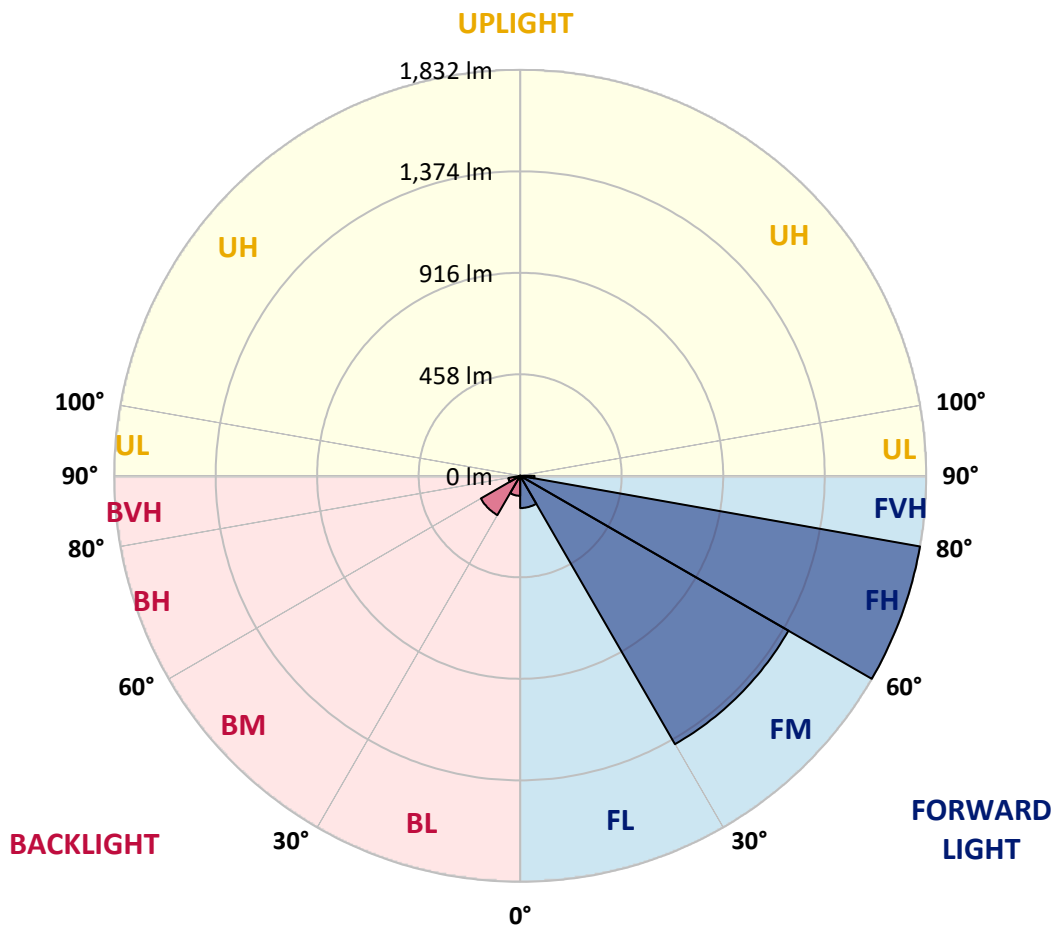


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	145.6	3.8			
FM (30°-60°)	1398.5	36.9			
FH (60°-80°)	1832.5	48.3			G2/5000
FVH (80°-90°)	64.8	1.7			G1/100
BL (0°-30°)	90.2	2.4	B0/110		
BM (30°-60°)	205.0	5.4	B0/220		
BH (60°-80°)	54.1	1.4	B0/110		G0/110
BVH (80°-90°)	1.3	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7
2.5°	240.4	231.2	217.7	218.5	220.8	222.7	227.8	225.7	221.7	221.5	240.4
5°	254.7	244.4	243.6	244.8	244.2	247.6	243.4	257.1	268.6	282.5	304.9
7.5°	247.8	243.0	236.8	243.2	243.0	241.3	244.0	271.8	299.8	317.5	354.3
10°	227.8	222.3	227.0	229.1	227.6	235.0	253.3	276.0	309.5	346.5	364.4
12.5°	222.1	225.5	227.2	227.2	241.3	245.1	273.1	294.5	334.3	363.6	415.6
15°	244.2	250.7	239.2	236.6	241.1	243.2	274.3	300.2	351.2	404.6	448.2
17.5°	279.4	279.0	261.1	251.2	258.1	263.2	280.4	310.7	340.6	436.9	500.0
20°	303.6	304.0	271.8	251.2	274.1	277.1	296.2	320.4	344.0	453.1	533.9
22.5°	334.7	323.6	288.0	268.0	283.6	286.3	307.4	326.5	361.3	451.2	577.3
25°	360.2	353.1	308.2	294.3	308.2	304.4	323.6	352.4	379.8	481.3	602.8
27.5°	399.8	387.6	322.5	325.1	324.2	327.0	331.4	375.6	412.4	482.8	661.7
30°	436.6	429.5	354.5	354.5	362.7	357.5	360.6	414.1	444.0	516.9	728.0
32.5°	474.8	475.2	392.2	372.2	365.7	387.4	408.6	432.9	482.1	575.4	829.5
35°	575.6	567.2	464.4	414.5	409.3	408.0	442.1	507.6	549.7	651.6	966.1
37.5°	778.8	749.5	619.8	510.5	490.8	484.0	522.8	589.9	631.8	763.6	1192.0
40°	987.2	933.5	789.5	666.3	602.1	573.1	618.1	675.2	749.7	887.4	1401.1
42.5°	1170.1	1103.8	917.3	834.3	750.8	738.1	695.8	788.7	918.1	1067.6	1605.9
45°	1348.5	1217.9	1031.0	965.3	863.8	871.0	856.7	937.1	1093.1	1265.1	1787.6
47.5°	1471.2	1353.9	1170.4	1085.1	1044.5	1002.6	1116.2	1199.8	1248.9	1390.6	1944.7
50°	1603.4	1484.7	1290.1	1230.6	1177.1	1219.4	1367.0	1378.1	1374.1	1507.6	2051.6
52.5°	1774.2	1634.2	1427.6	1360.3	1390.6	1432.7	1603.0	1605.1	1485.5	1606.2	2128.7
55°	1932.1	1776.9	1610.8	1547.2	1610.6	1646.2	1835.0	1765.7	1550.4	1673.1	2166.6
57.5°	2154.6	1975.0	1854.4	1742.4	1870.8	1836.7	2039.0	1936.1	1623.2	1717.5	2152.7
60°	2435.9	2224.5	2103.6	1985.1	2122.8	2146.0	2238.2	2021.1	1651.4	1732.1	2069.1
62.5°	2722.0	2509.3	2350.4	2270.0	2426.2	2502.4	2422.6	2063.4	1617.5	1703.6	1879.8
65°	3076.9	2804.7	2619.0	2571.9	2861.4	2973.4	2640.7	2073.7	1552.0	1547.2	1511.4
67.5°	3320.1	3055.0	2884.7	2963.7	3313.4	3322.4	2836.5	2076.9	1331.6	1211.4	992.0
70°	3377.8	3094.0	3017.8	3250.2	3674.0	3560.1	2899.7	1916.9	987.6	719.0	453.5
72.5°	2965.1	2691.9	2791.0	3196.1	3750.6	3698.4	2760.1	1383.0	556.0	287.6	139.2
75°	1818.8	1653.5	2093.7	2709.8	3292.3	3258.6	2153.3	714.5	224.0	115.0	52.0
77.5°	791.0	734.5	1092.7	1797.9	2365.8	2335.7	1261.7	263.2	115.8	80.8	26.3
80°	261.7	253.9	413.9	851.4	1385.7	1359.2	531.6	109.5	82.5	64.8	14.7
82.5°	62.1	61.7	144.4	391.8	705.9	683.8	163.2	60.4	59.8	51.2	7.8
85°	15.6	16.0	40.0	160.2	286.7	252.8	42.5	30.1	42.1	34.7	4.0
87.5°	0.0	0.0	10.3	22.9	43.4	27.2	4.6	8.0	11.8	12.4	2.1
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°	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7
2.5°	244.6	242.3	223.4	228.0	235.2	234.5	239.2	235.6	232.4	248.0	246.5
5°	311.2	298.5	292.6	300.9	296.4	286.1	294.7	293.3	290.7	296.0	300.0
7.5°	361.1	349.5	344.2	327.0	301.9	282.1	285.3	277.9	271.0	279.2	287.6
10°	377.5	371.2	370.5	336.9	313.3	284.6	250.7	221.5	213.7	203.4	208.0
12.5°	422.1	425.9	402.1	362.7	317.3	262.3	202.1	160.6	143.8	132.8	133.5
15°	458.8	472.0	437.5	366.7	279.2	200.0	134.5	97.3	86.7	84.0	83.2
17.5°	513.3	526.1	448.4	338.3	225.1	135.6	86.5	75.8	76.4	78.3	77.9
20°	553.7	551.8	439.0	288.0	165.9	88.8	72.4	70.9	74.3	79.8	78.5
22.5°	592.6	579.6	433.1	241.5	107.4	71.4	69.9	69.7	72.8	78.1	79.6
25°	620.4	622.5	423.2	189.1	78.1	66.3	67.6	69.5	72.6	78.3	77.5
27.5°	700.0	641.1	381.9	137.3	65.9	63.6	66.7	70.5	71.6	78.7	78.9
30°	751.6	711.0	355.0	92.4	60.8	58.7	65.1	70.1	71.4	80.6	81.3
32.5°	841.5	741.1	323.8	68.6	56.6	57.3	61.3	68.0	73.9	83.8	84.2
35°	953.3	837.7	267.4	61.7	55.2	54.1	56.0	63.8	73.5	84.2	86.3
37.5°	1166.1	895.6	212.0	59.8	55.2	53.3	55.2	59.8	72.2	88.4	92.8
40°	1308.7	1013.5	152.8	59.4	54.1	52.4	53.1	57.7	68.6	85.9	92.4
42.5°	1484.3	1063.2	112.6	58.3	53.1	50.5	50.9	56.8	65.1	80.6	85.5
45°	1628.0	1099.4	88.6	57.9	50.5	49.7	50.5	56.2	61.7	69.3	73.7
47.5°	1737.3	1141.5	71.2	55.2	49.9	49.7	48.6	52.6	56.0	57.9	60.8
50°	1817.3	1132.0	58.9	50.9	47.8	49.1	47.2	47.8	48.6	47.6	50.9
52.5°	1866.4	1097.9	49.1	45.9	45.3	46.3	44.0	42.1	40.6	39.8	41.9
55°	1884.3	1029.5	41.7	39.4	40.8	41.3	39.4	36.0	33.5	32.2	33.9
57.5°	1850.4	925.3	36.2	32.6	36.0	36.0	33.5	29.9	26.9	24.8	26.5
60°	1764.5	810.1	32.2	27.2	30.7	30.9	28.0	24.2	21.9	19.8	20.8
62.5°	1604.5	684.7	28.2	23.6	26.5	26.7	23.2	19.6	17.9	15.6	16.4
65°	1284.5	523.6	24.0	20.8	22.9	22.3	19.2	16.6	14.5	12.4	12.8
67.5°	833.7	323.2	20.8	18.9	19.4	18.7	16.2	14.5	12.2	10.5	10.7
70°	373.3	139.2	18.3	17.1	16.8	15.8	13.7	13.5	12.0	10.5	10.5
72.5°	115.2	52.4	15.8	15.4	14.5	13.3	12.0	12.8	11.8	10.1	9.9
75°	45.5	24.0	13.1	13.1	12.6	10.9	10.7	11.6	10.9	9.3	8.8
77.5°	23.8	15.2	10.7	11.2	10.9	8.4	9.7	10.5	10.1	7.8	6.5
80°	14.1	9.3	8.0	9.1	8.8	5.9	7.4	6.7	4.8	2.3	0.6
82.5°	7.8	4.2	3.6	5.3	5.3	2.1	3.8	3.4	1.9	0.0	0.0
85°	3.8	2.9	2.7	2.9	2.1	0.6	1.9	1.9	1.1	0.0	0.0
87.5°	1.9	1.7	1.3	1.1	0.8	0.0	0.6	0.8	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)