

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: P596559

Luminaire Tested: **MSA-SA1D-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-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: 3775 lumens
Efficiency: N/A
Efficacy: 56.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G2

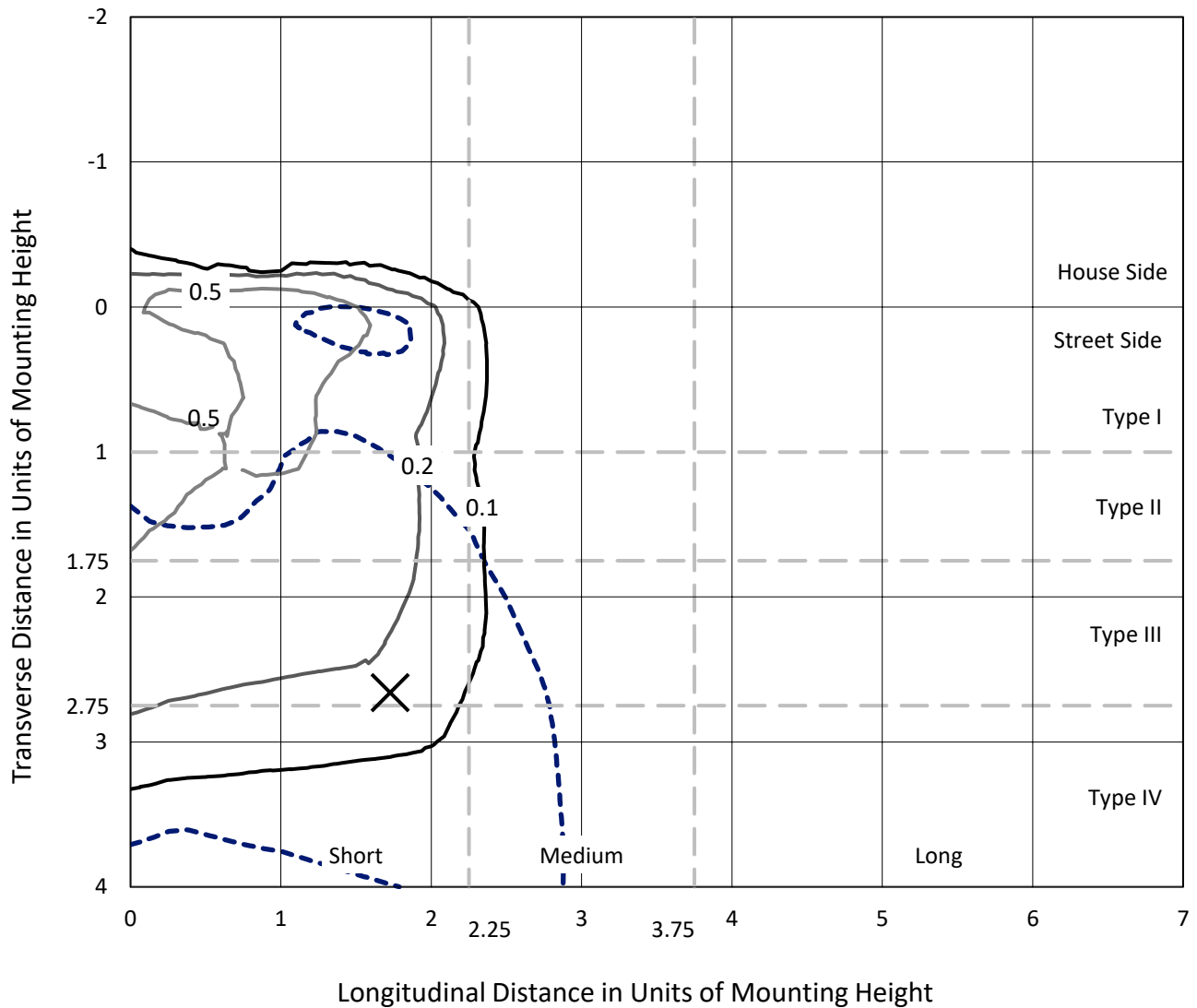
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

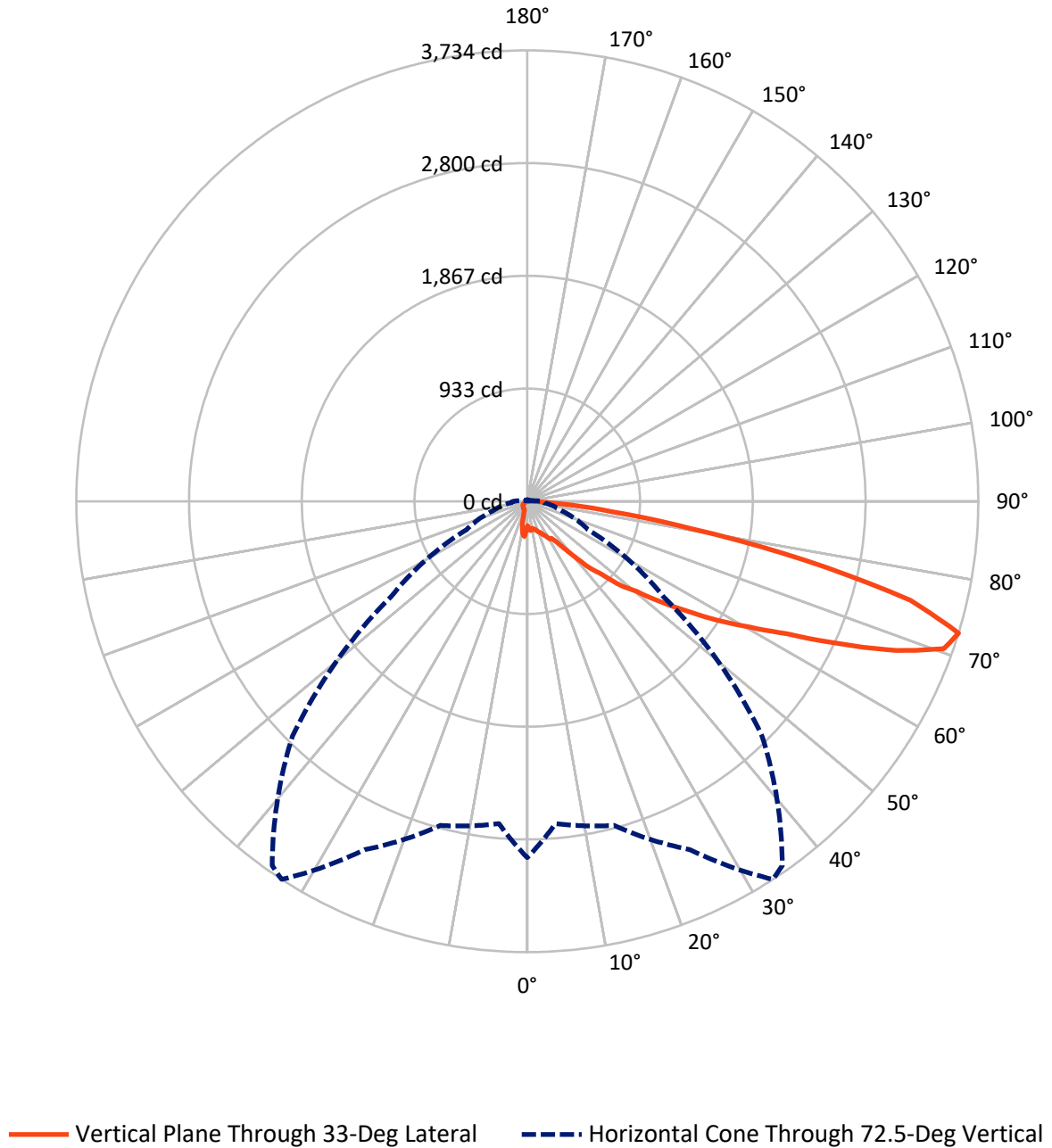
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 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	349.1	0.0	349.1
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3426.0	0.0	3426.0
	% Fixture	90.8	0.0	90.8
Total	Lumens	3775.0	0.0	3775.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.0	0.7
10°-20°	77.4	2.1
20°-30°	131.3	3.5
30°-40°	240.4	6.4
40°-50°	507.3	13.4
50°-60°	848.7	22.5
60°-70°	1136.0	30.1
70°-80°	742.1	19.7
80°-90°	65.8	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°	3775.0	100.0
0°-180°	3775.0	100.0

Coefficient of Utilization

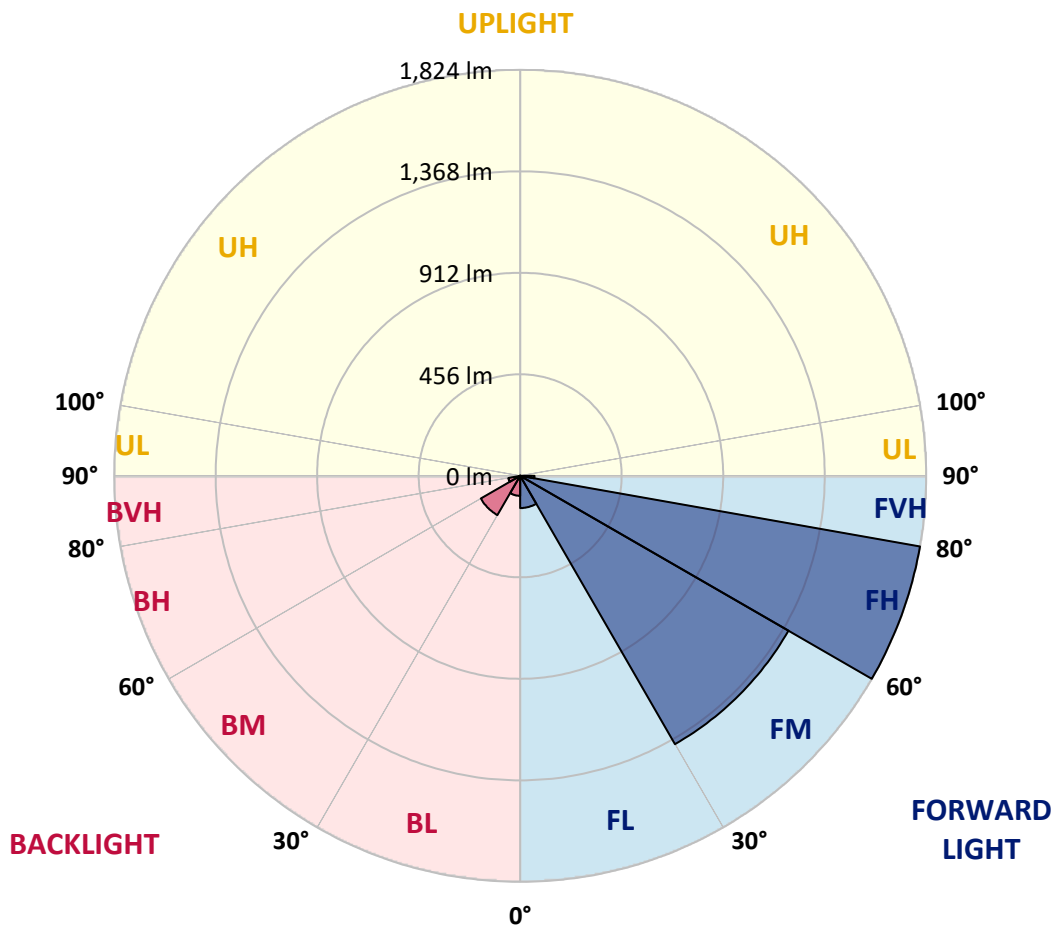


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	144.9	3.8			
FM (30°-60°)	1392.3	36.9			
FH (60°-80°)	1824.2	48.3			G2/5000
FVH (80°-90°)	64.5	1.7			G1/100
BL (0°-30°)	89.8	2.4	B0/110		
BM (30°-60°)	204.1	5.4	B0/220		
BH (60°-80°)	53.9	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°	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8
2.5°	239.4	230.1	216.7	217.6	219.9	221.7	226.8	224.7	220.7	220.5	239.4
5°	253.6	243.3	242.5	243.8	243.1	246.5	242.3	255.9	267.4	281.3	303.5
7.5°	246.7	241.9	235.8	242.1	241.9	240.2	242.9	270.6	298.5	316.1	352.7
10°	226.8	221.3	225.9	228.0	226.6	233.9	252.1	274.8	308.1	345.0	362.8
12.5°	221.1	224.5	226.1	226.1	240.2	244.0	271.8	293.2	332.8	362.0	413.7
15°	243.1	249.6	238.1	235.6	240.0	242.1	273.1	298.9	349.6	402.8	446.2
17.5°	278.1	277.7	259.9	250.0	257.0	262.0	279.2	309.4	339.1	434.9	497.8
20°	302.2	302.6	270.6	250.0	272.9	275.8	294.9	319.0	342.5	451.0	531.5
22.5°	333.2	322.1	286.7	266.8	282.3	285.0	306.0	325.1	359.7	449.1	574.7
25°	358.6	351.5	306.8	293.0	306.8	303.1	322.1	350.9	378.1	479.1	600.1
27.5°	398.0	385.9	321.1	323.6	322.8	325.5	329.9	373.9	410.6	480.6	658.7
30°	434.7	427.6	352.9	352.9	361.1	355.9	359.0	412.3	442.0	514.5	724.8
32.5°	472.6	473.0	390.5	370.6	364.1	385.6	406.8	430.9	480.0	572.8	825.8
35°	573.0	564.6	462.4	412.7	407.4	406.2	440.1	505.3	547.2	648.7	961.8
37.5°	775.3	746.1	617.0	508.3	488.6	481.8	520.4	587.3	629.0	760.2	1186.7
40°	982.8	929.3	786.0	663.3	599.4	570.5	615.4	672.2	746.3	883.4	1394.8
42.5°	1164.9	1098.9	913.2	830.6	747.4	734.8	692.7	785.1	914.0	1062.8	1598.7
45°	1342.4	1212.5	1026.4	961.0	859.9	867.1	852.8	932.9	1088.2	1259.4	1779.6
47.5°	1464.6	1347.9	1165.1	1080.2	1039.8	998.1	1111.2	1194.4	1243.3	1384.3	1936.0
50°	1596.2	1478.0	1284.4	1225.0	1171.8	1213.9	1360.9	1372.0	1368.0	1500.9	2042.4
52.5°	1766.2	1626.8	1421.2	1354.2	1384.3	1426.3	1595.8	1597.9	1478.9	1599.0	2119.2
55°	1923.4	1768.9	1603.6	1540.3	1603.4	1638.8	1826.8	1757.8	1543.4	1665.6	2156.9
57.5°	2144.9	1966.2	1846.1	1734.6	1862.4	1828.5	2029.9	1927.4	1615.9	1709.8	2143.0
60°	2424.9	2214.5	2094.2	1976.2	2113.3	2136.3	2228.1	2012.1	1644.0	1724.3	2059.8
62.5°	2709.8	2498.1	2339.9	2259.8	2415.3	2491.2	2411.7	2054.2	1610.3	1696.0	1871.4
65°	3063.1	2792.1	2607.3	2560.3	2848.5	2960.0	2628.9	2064.5	1545.1	1540.3	1504.6
67.5°	3305.2	3041.3	2871.8	2950.4	3298.5	3307.5	2823.8	2067.6	1325.6	1206.0	987.6
70°	3362.6	3080.1	3004.2	3235.6	3657.5	3544.1	2886.7	1908.3	983.2	715.7	451.5
72.5°	2951.8	2679.8	2778.5	3181.8	3733.8	3681.8	2747.7	1376.8	553.5	286.3	138.5
75°	1810.6	1646.1	2084.4	2697.6	3277.6	3244.0	2143.7	711.3	223.0	114.4	51.8
77.5°	787.4	731.3	1087.8	1789.9	2355.2	2325.2	1256.1	262.0	115.3	80.5	26.2
80°	260.5	252.8	412.1	847.6	1379.5	1353.1	529.2	109.0	82.2	64.6	14.7
82.5°	61.8	61.4	143.8	390.0	702.8	680.7	162.4	60.2	59.5	50.9	7.8
85°	15.5	15.9	39.8	159.5	285.5	251.7	42.3	30.0	41.9	34.6	4.0
87.5°	0.0	0.0	10.3	22.8	43.2	27.0	4.6	8.0	11.7	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°	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8
2.5°	243.5	241.2	222.4	227.0	234.1	233.5	238.1	234.5	231.4	246.9	245.4
5°	309.8	297.2	291.3	299.5	295.1	284.8	293.4	292.0	289.4	294.7	298.7
7.5°	359.4	347.9	342.7	325.5	300.6	280.8	284.0	276.7	269.7	277.9	286.3
10°	375.8	369.5	368.9	335.3	311.9	283.4	249.6	220.5	212.7	202.5	207.1
12.5°	420.2	424.0	400.3	361.1	315.9	261.1	201.2	159.9	143.1	132.3	132.9
15°	456.7	469.9	435.5	365.1	277.9	199.1	133.9	96.8	86.4	83.6	82.8
17.5°	511.0	523.8	446.4	336.8	224.1	135.0	86.1	75.5	76.1	78.0	77.5
20°	551.2	549.3	437.0	286.7	165.2	88.4	72.1	70.6	74.0	79.4	78.2
22.5°	590.0	577.0	431.1	240.4	106.9	71.1	69.6	69.4	72.5	77.8	79.2
25°	617.7	619.8	421.3	188.2	77.8	66.0	67.3	69.2	72.3	78.0	77.1
27.5°	696.9	638.2	380.2	136.7	65.6	63.3	66.4	70.2	71.3	78.4	78.6
30°	748.2	707.8	353.4	92.0	60.6	58.5	64.8	69.8	71.1	80.3	80.9
32.5°	837.7	737.8	322.3	68.3	56.4	57.0	61.0	67.7	73.6	83.4	83.8
35°	949.0	834.0	266.2	61.4	54.9	53.9	55.8	63.5	73.1	83.8	85.9
37.5°	1160.9	891.6	211.1	59.5	54.9	53.0	54.9	59.5	71.9	88.0	92.4
40°	1302.8	1009.0	152.2	59.1	53.9	52.2	52.8	57.4	68.3	85.5	92.0
42.5°	1477.6	1058.4	112.1	58.1	52.8	50.3	50.7	56.6	64.8	80.3	85.1
45°	1620.8	1094.5	88.2	57.6	50.3	49.5	50.3	56.0	61.4	69.0	73.4
47.5°	1729.5	1136.4	70.8	54.9	49.7	49.5	48.4	52.4	55.8	57.6	60.6
50°	1809.2	1127.0	58.7	50.7	47.6	48.8	46.9	47.6	48.4	47.4	50.7
52.5°	1858.0	1093.0	48.8	45.7	45.1	46.1	43.8	41.9	40.5	39.6	41.7
55°	1875.8	1024.9	41.5	39.2	40.7	41.1	39.2	35.8	33.3	32.1	33.7
57.5°	1842.1	921.1	36.0	32.5	35.8	35.8	33.3	29.8	26.8	24.7	26.4
60°	1756.6	806.5	32.1	27.0	30.6	30.8	27.9	24.1	21.8	19.7	20.7
62.5°	1597.3	681.6	28.1	23.5	26.4	26.6	23.1	19.5	17.8	15.5	16.3
65°	1278.7	521.2	23.9	20.7	22.8	22.2	19.1	16.6	14.5	12.4	12.8
67.5°	830.0	321.7	20.7	18.9	19.3	18.7	16.1	14.5	12.2	10.5	10.7
70°	371.6	138.5	18.2	17.0	16.8	15.7	13.6	13.4	11.9	10.5	10.5
72.5°	114.6	52.2	15.7	15.3	14.5	13.2	11.9	12.8	11.7	10.1	9.9
75°	45.3	23.9	13.0	13.0	12.6	10.9	10.7	11.5	10.9	9.2	8.8
77.5°	23.7	15.1	10.7	11.1	10.9	8.4	9.6	10.5	10.1	7.8	6.5
80°	14.0	9.2	8.0	9.0	8.8	5.9	7.3	6.7	4.8	2.3	0.6
82.5°	7.8	4.2	3.6	5.2	5.2	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	1.0	0.0	0.0
87.5°	1.9	1.7	1.3	1.0	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)