

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: P366981

Luminaire Tested: **MSA-SA1C-830-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366981
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-SA1C-830-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: 4122 lumens
Efficiency: N/A
Efficacy: 69.9 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

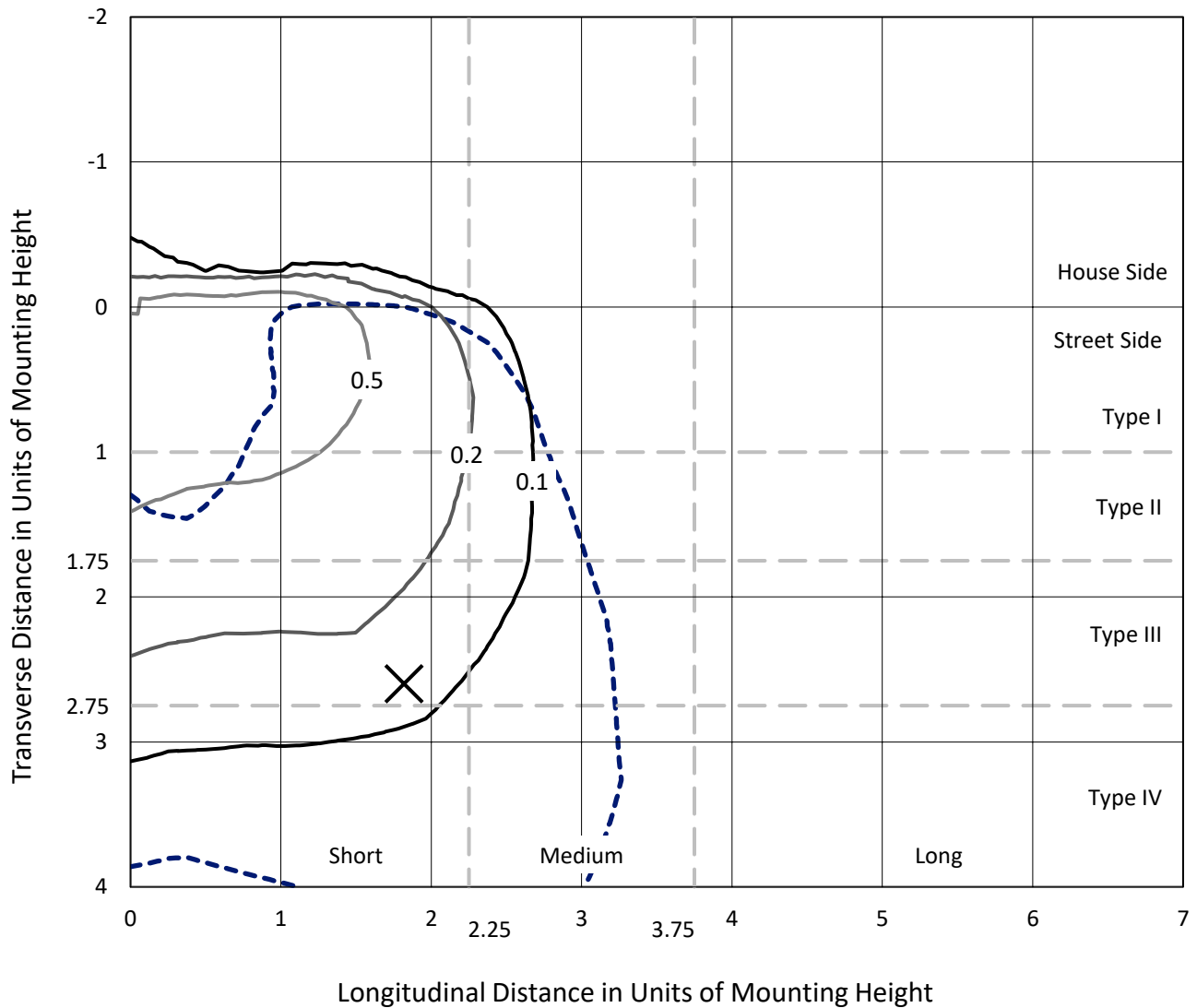
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

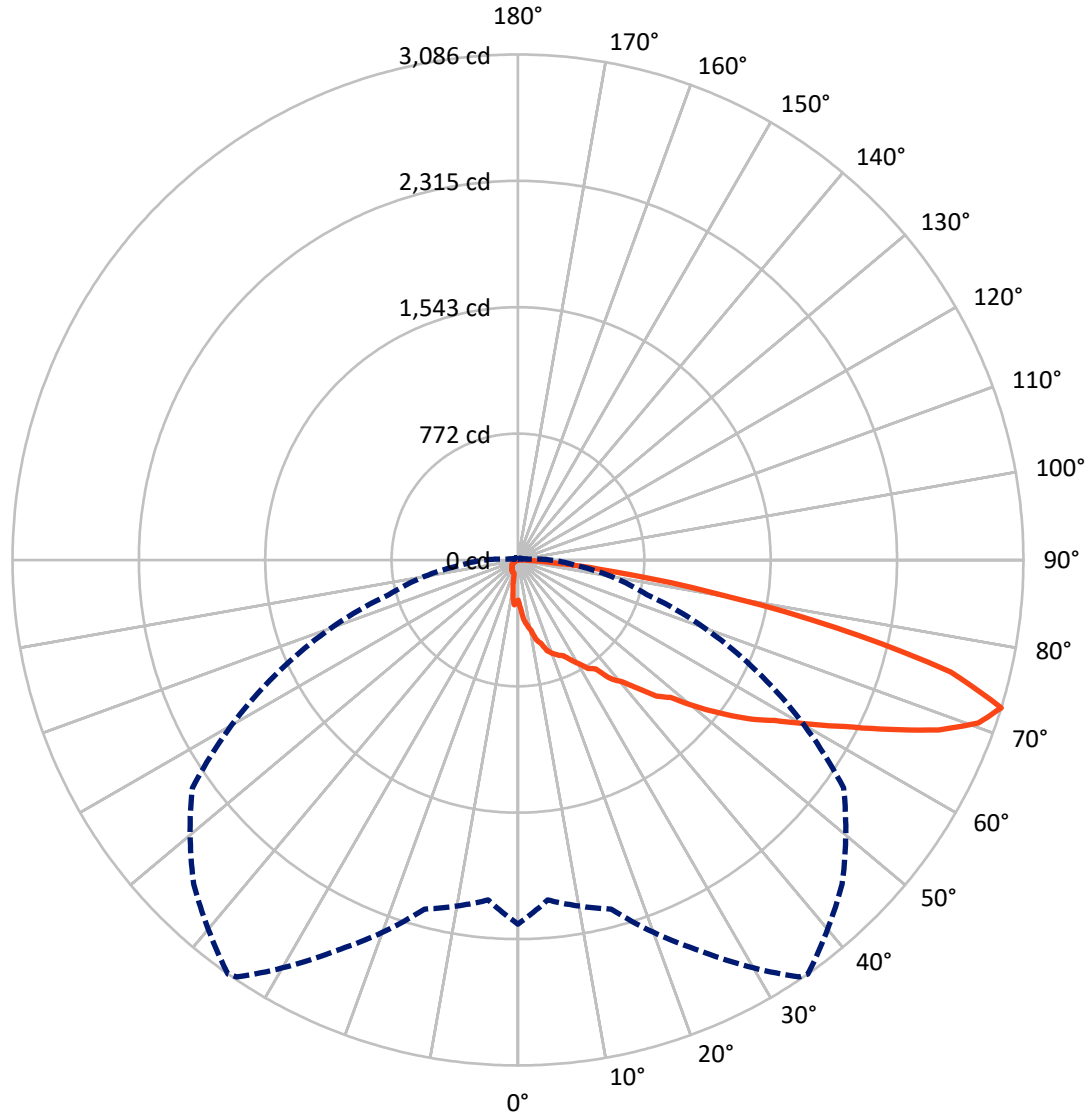
× Max cd
 - - - 1/2 Max cd



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



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

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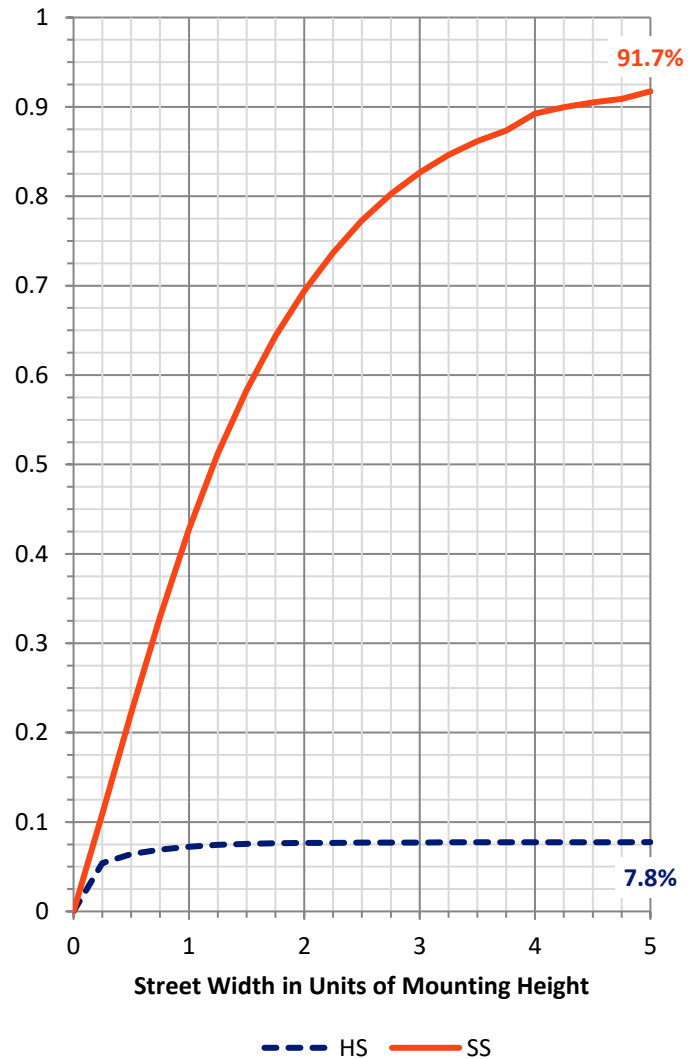
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	321.5	0.0	321.5
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	3800.5	0.0	3800.5
	% Fixture	92.2	0.0	92.2
Total	Lumens	4122.0	0.0	4122.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.3	0.8
10°-20°	105.5	2.6
20°-30°	192.1	4.7
30°-40°	331.4	8.0
40°-50°	589.0	14.3
50°-60°	879.0	21.3
60°-70°	1123.0	27.2
70°-80°	781.3	19.0
80°-90°	89.4	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°	4122.0	100.0
0°-180°	4122.0	100.0

Coefficient of Utilization



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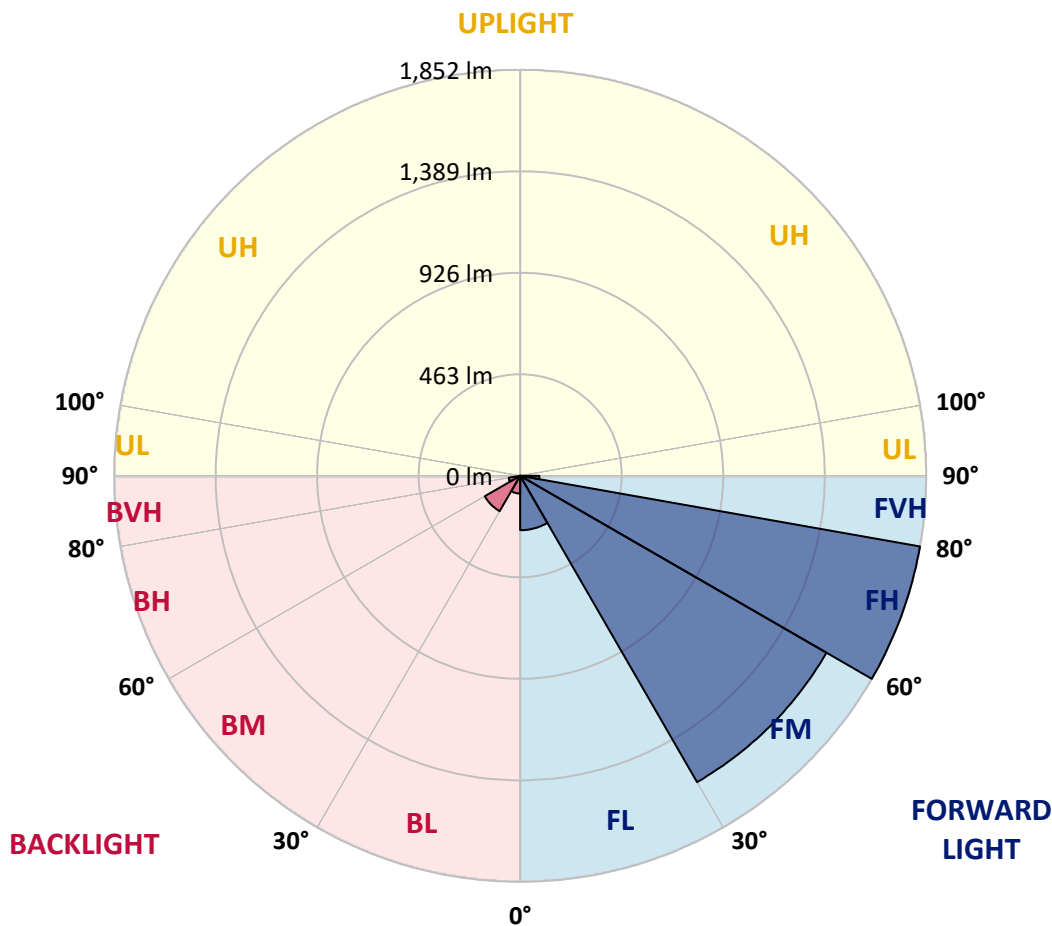
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	248.0	6.0			
FM (30°-60°)	1613.0	39.1			
FH (60°-80°)	1851.6	44.9			G2/5000
FVH (80°-90°)	87.9	2.1			G1/100
BL (0°-30°)	80.9	2.0	B0/110		
BM (30°-60°)	186.4	4.5	B0/220		
BH (60°-80°)	52.7	1.3	B0/110		G0/110
BVH (80°-90°)	1.5	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°	34°	35°	45°	55°	65°	75°	85°
0°	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5
2.5°	312.5	300.3	280.4	281.8	290.7	292.6	295.3	288.2	282.0	271.0	292.4
5°	400.3	382.7	371.5	368.0	362.8	363.2	350.6	355.2	353.9	362.0	371.7
7.5°	449.9	440.1	426.0	422.1	403.0	401.0	385.4	406.3	408.4	405.5	421.5
10°	469.5	456.7	458.4	443.6	434.1	436.6	439.1	440.7	443.4	446.1	426.7
12.5°	481.1	483.4	506.0	490.7	500.2	500.2	517.0	499.2	499.8	480.3	483.6
15°	533.4	546.0	535.9	535.6	525.3	528.0	547.5	533.4	540.6	534.8	512.4
17.5°	598.8	601.3	582.1	573.6	582.9	583.1	574.8	574.2	548.9	591.6	564.4
20°	619.8	633.9	606.5	573.4	612.1	610.2	609.6	599.9	557.8	617.1	594.7
22.5°	676.8	656.7	638.0	616.3	631.4	631.4	629.1	607.8	591.4	614.8	624.3
25°	694.6	697.1	672.8	665.8	666.2	647.5	645.9	636.8	621.0	661.0	641.9
27.5°	755.9	754.9	696.6	716.3	691.3	691.5	645.7	666.2	668.9	663.3	684.6
30°	816.2	833.0	745.1	770.0	743.7	735.8	691.1	709.3	714.1	707.6	734.6
32.5°	893.1	917.7	832.4	807.9	767.7	790.1	759.2	716.1	739.7	797.1	812.3
35°	974.5	986.5	895.6	861.4	816.0	815.8	814.8	818.3	844.4	909.0	921.9
37.5°	1120.8	1092.4	1010.2	931.8	942.0	919.4	903.7	920.2	947.4	1053.9	1108.8
40°	1202.5	1181.9	1066.1	1019.7	969.3	977.6	1020.3	1018.5	1090.8	1202.2	1284.5
42.5°	1281.8	1262.3	1148.4	1110.9	1046.2	1068.8	1087.5	1111.1	1259.2	1439.1	1484.3
45°	1352.5	1295.3	1214.9	1216.3	1182.8	1185.5	1218.4	1240.2	1454.4	1638.8	1670.5
47.5°	1395.2	1348.1	1271.0	1269.6	1267.5	1254.9	1410.1	1430.0	1610.0	1829.1	1832.0
50°	1455.3	1396.4	1328.9	1330.1	1378.0	1404.7	1589.9	1587.9	1760.3	1987.8	1920.9
52.5°	1530.1	1458.2	1383.8	1439.1	1513.1	1556.6	1707.0	1768.4	1921.7	2087.5	1955.7
55°	1625.8	1535.9	1464.2	1535.0	1696.4	1713.2	1821.6	1951.1	2097.6	2189.2	1966.9
57.5°	1738.1	1630.8	1572.7	1686.9	1847.9	1848.3	1988.4	2145.9	2205.6	2230.6	1954.2
60°	1859.1	1734.0	1675.5	1778.3	2014.9	2031.9	2173.9	2253.4	2315.2	2251.6	1931.6
62.5°	1965.6	1827.4	1782.0	1902.8	2198.1	2238.3	2335.5	2324.1	2394.3	2277.9	1874.2
65°	2092.4	1948.4	1918.6	2097.0	2437.2	2492.6	2517.0	2449.5	2420.9	2257.6	1724.8
67.5°	2218.0	2083.3	2082.5	2312.3	2750.7	2769.8	2744.1	2626.2	2390.0	2078.5	1451.1
70°	2306.5	2161.8	2216.3	2548.1	3035.7	2982.2	2874.0	2709.7	2167.0	1593.1	948.0
72.5°	2223.4	2083.9	2206.8	2632.0	3070.9	3086.2	2798.8	2427.3	1610.0	814.8	343.1
75°	1689.6	1604.2	1916.1	2335.1	2726.5	2730.0	2336.1	1712.0	792.8	221.3	94.9
77.5°	851.0	823.9	1212.8	1657.7	1989.2	1983.4	1605.1	917.1	255.1	73.6	47.9
80°	430.8	409.0	516.2	894.3	1181.3	1190.0	916.5	410.7	128.7	40.0	33.2
82.5°	264.6	251.1	282.4	404.7	573.4	587.2	347.7	260.1	79.8	23.6	30.3
85°	51.2	53.9	162.2	202.7	229.0	223.6	103.0	214.1	24.0	14.1	22.0
87.5°	0.0	0.8	37.5	66.1	66.3	58.8	23.4	47.5	3.3	3.9	2.7
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°	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5	245.5
2.5°	295.9	292.8	266.9	264.0	264.6	260.3	258.8	249.7	247.4	261.5	264.0
5°	367.6	346.9	322.8	314.1	300.7	277.9	274.6	268.8	262.3	264.8	263.0
7.5°	411.5	384.0	358.3	312.5	274.6	241.4	236.0	226.1	216.1	216.3	222.8
10°	418.6	395.4	359.9	304.2	260.9	219.4	183.4	157.3	145.5	134.9	138.0
12.5°	459.4	437.8	372.6	301.7	241.0	176.3	129.1	103.6	92.4	88.7	88.3
15°	492.1	475.1	394.1	294.0	196.9	124.1	92.4	85.0	82.9	86.4	85.4
17.5°	540.8	510.2	391.8	262.3	150.0	94.3	85.2	84.1	86.6	88.7	89.3
20°	562.2	518.0	376.3	212.6	112.3	86.4	83.1	81.0	85.6	91.8	90.6
22.5°	583.7	531.5	358.1	174.1	90.3	82.7	80.8	79.2	82.7	88.7	90.1
25°	593.5	553.1	337.8	135.9	83.9	78.3	77.1	77.7	80.6	86.0	85.4
27.5°	642.6	555.5	299.0	107.3	81.2	75.2	75.2	76.7	76.7	83.9	83.3
30°	673.2	597.6	267.5	90.3	78.1	70.9	73.4	74.0	72.9	80.8	81.4
32.5°	727.1	609.2	236.8	82.9	73.1	70.2	69.8	70.2	71.1	78.7	78.9
35°	810.0	666.4	195.0	80.0	70.7	67.1	64.2	66.5	68.6	74.2	75.2
37.5°	972.0	725.0	158.9	77.7	69.4	64.2	63.2	62.8	66.5	72.9	75.0
40°	1103.2	828.9	129.3	75.8	66.9	62.6	59.9	60.1	63.4	68.2	71.3
42.5°	1288.9	903.9	109.6	72.9	63.4	59.1	55.9	57.8	59.3	64.2	66.3
45°	1443.9	962.1	96.6	71.1	59.9	55.7	53.3	55.3	53.9	56.4	59.3
47.5°	1567.1	1012.9	86.8	66.5	57.6	53.9	50.8	50.1	47.7	48.3	51.0
50°	1634.9	1004.4	78.7	62.0	54.7	52.0	47.7	43.3	40.0	39.8	41.4
52.5°	1658.9	959.0	72.1	58.0	51.2	47.9	42.9	36.9	33.6	32.5	34.0
55°	1665.6	893.7	66.1	53.7	47.9	42.7	37.5	31.1	27.6	25.9	27.4
57.5°	1644.0	793.2	60.3	49.5	43.9	37.7	32.1	25.5	22.2	20.1	21.3
60°	1590.8	665.6	55.1	44.3	39.8	33.4	27.1	20.5	17.0	15.1	15.7
62.5°	1472.9	521.8	49.5	39.6	35.4	29.2	22.8	16.2	12.8	11.2	11.4
65°	1293.4	388.9	43.1	35.0	31.5	25.3	18.2	12.4	9.7	8.3	8.1
67.5°	1030.5	263.6	36.7	30.3	28.0	21.3	14.5	9.7	7.7	6.6	6.2
70°	605.7	132.8	30.5	26.1	24.0	17.8	11.4	7.9	7.0	6.2	5.8
72.5°	199.8	57.4	23.8	21.6	19.9	14.3	8.9	7.3	6.8	6.0	5.6
75°	69.6	33.2	17.6	16.6	15.7	10.8	7.5	6.6	6.6	5.8	5.2
77.5°	45.6	25.7	13.1	12.0	11.8	7.9	6.4	6.2	5.8	4.8	3.9
80°	37.9	14.5	9.1	8.5	8.3	5.0	5.2	4.6	3.5	2.1	0.8
82.5°	35.0	8.7	4.8	5.2	4.8	1.9	2.9	2.5	1.9	0.8	0.0
85°	20.5	3.9	2.7	2.7	2.1	0.4	1.5	1.5	0.8	0.2	0.0
87.5°	2.3	1.9	1.5	1.5	1.0	0.0	0.6	0.4	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)