

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: P366857

Luminaire Tested: **MSA-SA1B-830-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-830-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2972 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

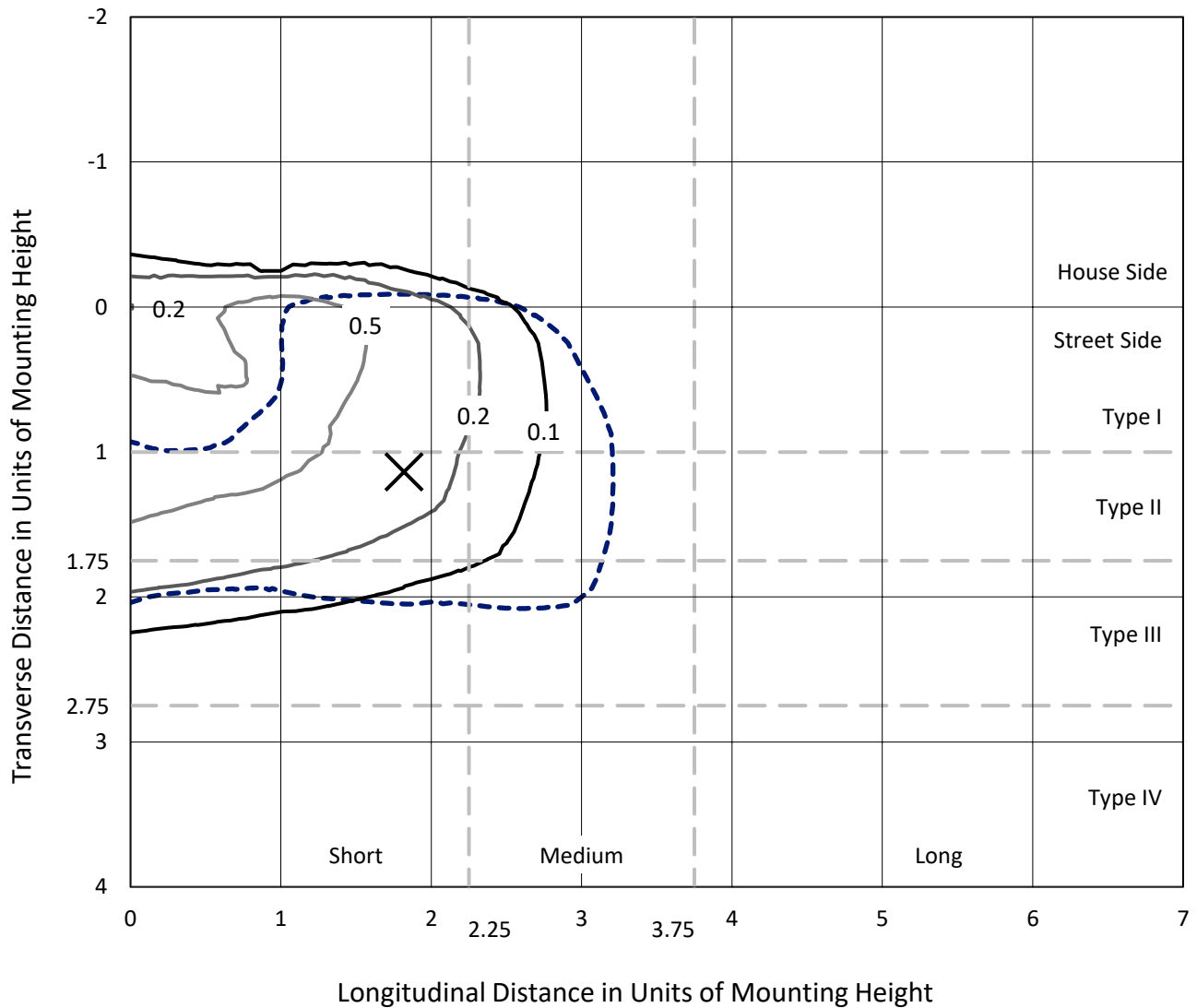
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

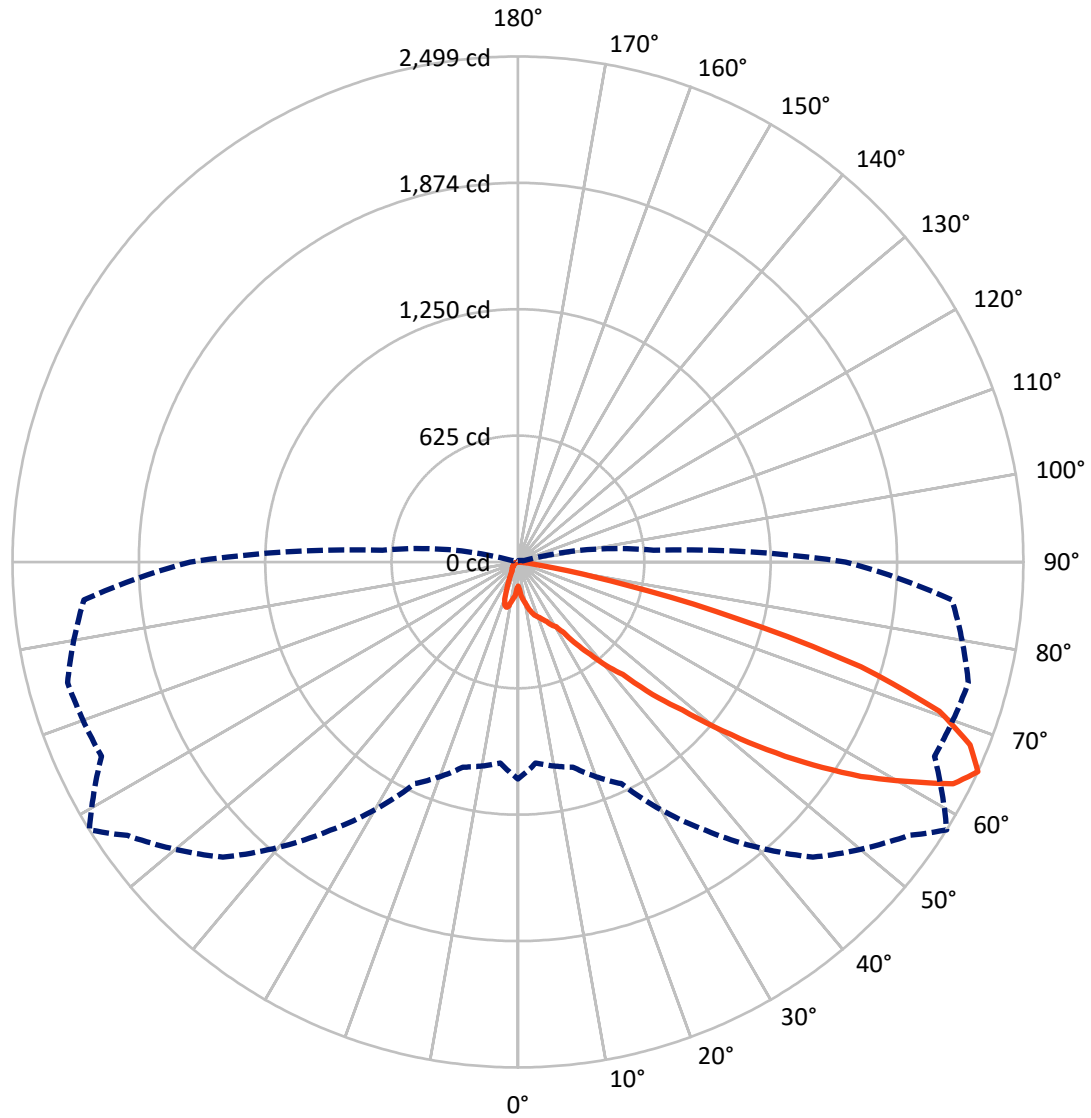
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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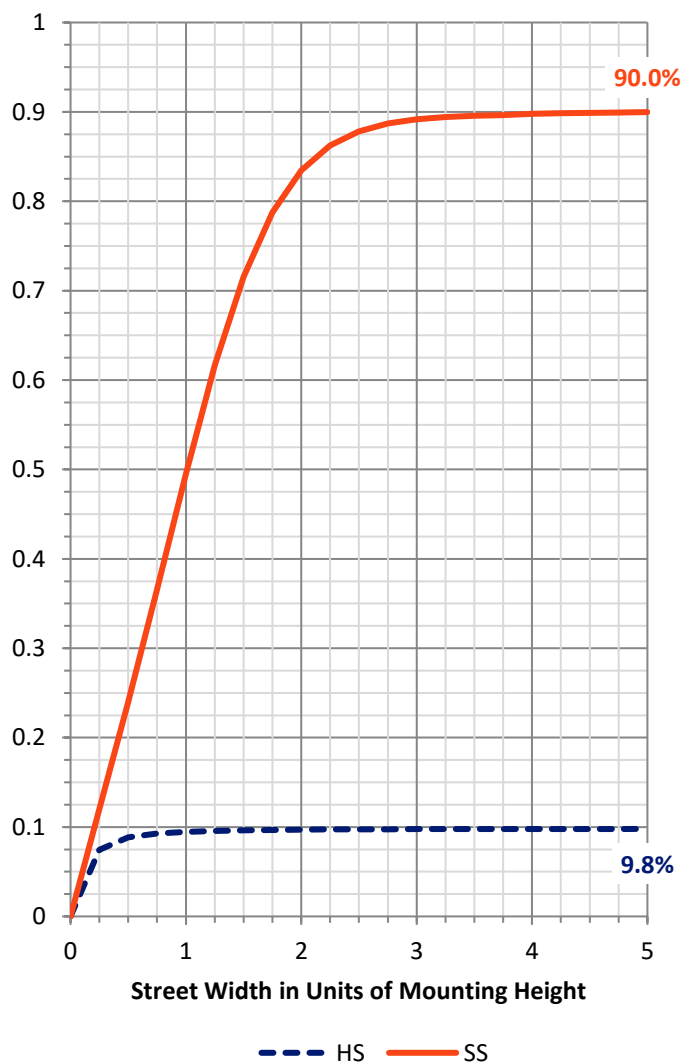
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	293.2	0.0	293.2
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	2678.7	0.0	2678.7
	% Fixture	90.1	0.0	90.1
Total	Lumens	2972.0	0.0	2972.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.7	0.6
10°-20°	61.0	2.1
20°-30°	118.1	4.0
30°-40°	235.6	7.9
40°-50°	481.6	16.2
50°-60°	854.3	28.7
60°-70°	900.7	30.3
70°-80°	292.0	9.8
80°-90°	11.9	0.4
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°	2972.0	100.0
0°-180°	2972.0	100.0

Coefficient of Utilization



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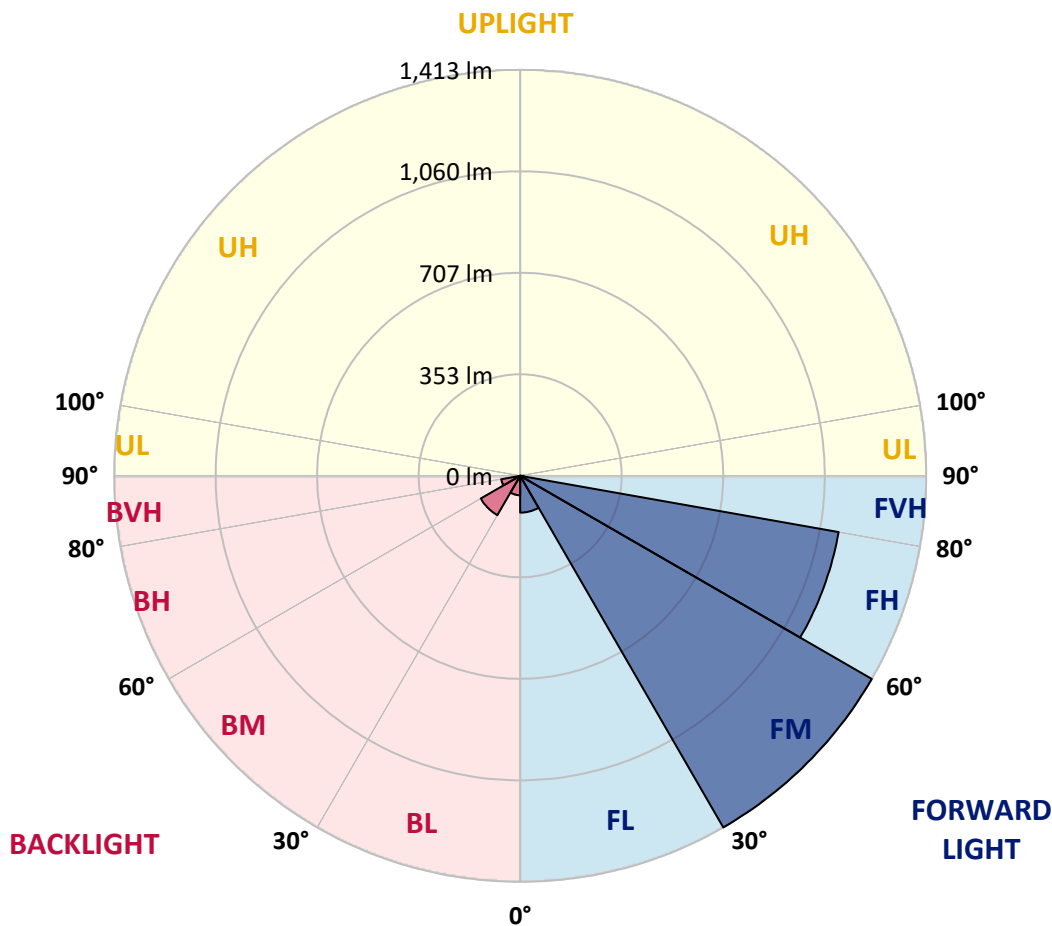
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	128.2	4.3			
FM (30°-60°)	1413.3	47.6			
FH (60°-80°)	1125.8	37.9			G1/1800
FVH (80°-90°)	11.4	0.4			G1/100
BL (0°-30°)	67.6	2.3	B0/110		
BM (30°-60°)	158.2	5.3	B0/220		
BH (60°-80°)	66.9	2.3	B0/110		G0/110
BVH (80°-90°)	0.5	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0
2.5°	145.2	140.9	134.0	135.2	136.5	139.2	137.0	135.0	132.9	130.0	140.9
5°	175.4	168.2	167.5	166.0	164.8	164.7	167.3	166.5	167.7	173.0	178.5
7.5°	186.4	183.4	177.7	180.1	176.4	173.5	185.4	189.3	196.6	199.1	213.5
10°	185.2	180.9	183.2	184.4	186.9	197.3	204.8	209.0	215.4	229.1	226.2
12.5°	190.6	194.4	197.0	197.1	210.0	229.1	234.4	237.9	249.3	254.7	268.7
15°	208.5	214.9	210.8	212.5	216.7	240.0	252.5	260.2	276.3	293.7	297.2
17.5°	234.1	238.1	229.7	223.7	235.3	248.0	270.7	278.8	289.0	329.6	337.2
20°	266.4	273.3	255.2	231.3	246.5	261.5	286.3	290.2	301.0	354.1	366.0
22.5°	341.9	331.7	304.0	266.7	262.2	268.9	292.5	307.6	326.0	367.8	395.4
25°	416.3	412.8	372.1	330.5	300.4	285.3	316.6	325.0	355.1	400.4	415.7
27.5°	499.2	506.2	438.2	413.0	353.9	304.7	331.7	352.6	388.2	412.3	449.0
30°	608.4	597.2	517.6	492.3	424.9	358.1	370.6	372.0	424.4	451.5	486.3
32.5°	694.1	701.3	601.2	562.4	508.5	440.3	399.9	417.3	454.8	515.2	548.2
35°	786.8	786.1	688.6	636.4	565.9	507.4	486.8	499.5	546.5	614.9	623.7
37.5°	925.4	913.5	798.3	721.9	662.0	611.9	596.2	579.3	627.8	693.1	725.7
40°	1056.0	1015.0	908.6	817.9	741.3	720.9	664.0	674.4	688.7	774.9	865.1
42.5°	1188.1	1162.6	1020.4	944.4	850.2	801.7	764.5	759.7	828.1	930.2	1023.4
45°	1362.3	1284.4	1170.7	1103.9	994.8	946.1	916.1	934.1	995.6	1144.7	1206.8
47.5°	1508.5	1436.9	1339.2	1237.8	1123.3	1178.0	1121.8	1093.5	1178.0	1332.1	1414.6
50°	1634.2	1554.4	1455.5	1380.3	1361.8	1414.3	1300.5	1310.9	1365.8	1546.8	1593.3
52.5°	1725.5	1641.5	1555.2	1518.9	1595.0	1621.5	1564.4	1541.5	1591.3	1729.9	1752.5
55°	1794.3	1708.3	1640.9	1690.9	1838.2	1829.5	1849.5	1771.2	1818.9	1920.8	1910.1
57.5°	1798.5	1696.6	1657.1	1737.6	1939.7	2074.4	2133.2	2000.0	2027.1	2070.1	2046.0
60°	1667.0	1565.6	1562.4	1676.7	1969.2	2137.8	2266.4	2201.4	2165.1	2197.1	2151.4
62.5°	1404.9	1334.0	1367.1	1493.4	1859.6	2102.9	2337.3	2415.5	2274.1	2281.3	2216.3
65°	1072.8	998.3	1050.2	1209.3	1620.0	2063.7	2357.4	2499.1	2272.0	2305.2	2154.1
67.5°	710.5	667.3	726.1	901.4	1288.0	1821.8	2347.0	2411.3	2199.9	2211.6	1923.0
70°	366.8	356.3	403.8	542.2	865.9	1399.6	2245.1	2210.0	2053.5	1905.3	1483.2
72.5°	117.5	118.0	163.7	247.7	466.9	852.1	1725.7	1773.9	1643.2	1393.7	905.6
75°	52.0	51.2	68.4	103.9	194.6	382.0	1072.1	1124.1	1023.1	766.7	380.7
77.5°	37.5	36.3	43.8	60.7	96.4	129.5	502.7	542.5	463.8	265.7	87.2
80°	26.4	26.3	31.8	42.7	60.2	57.6	158.8	178.0	142.6	64.4	25.6
82.5°	14.9	15.4	22.1	30.1	36.6	28.8	44.7	49.2	48.0	34.3	11.2
85°	7.2	8.0	14.4	21.8	19.2	11.2	15.9	17.2	20.1	19.9	5.7
87.5°	0.0	0.0	5.9	9.9	5.2	1.7	4.9	5.5	5.4	6.4	1.3
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°	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0	119.0
2.5°	143.1	142.1	129.3	130.4	133.2	132.0	133.0	130.7	128.0	138.9	138.7
5°	180.9	173.4	169.3	165.7	166.3	158.8	163.1	165.2	164.8	171.0	172.7
7.5°	214.0	204.0	195.9	188.2	176.5	166.0	172.5	176.7	179.5	190.3	194.4
10°	229.6	221.4	218.2	203.1	194.8	188.2	180.4	174.7	177.0	174.2	177.0
12.5°	263.7	258.2	246.0	230.8	220.7	207.3	178.0	153.6	138.6	138.7	137.7
15°	294.8	294.5	276.3	251.0	221.9	183.7	138.0	107.3	93.0	89.0	87.7
17.5°	335.5	330.5	297.2	259.9	207.5	142.2	94.0	73.5	72.1	74.5	73.5
20°	361.4	354.1	307.6	247.0	171.0	96.2	70.9	65.1	69.1	72.5	71.6
22.5°	387.4	376.3	315.4	231.3	121.7	70.4	64.1	63.1	65.6	69.8	70.4
25°	401.6	399.4	330.8	201.8	83.3	61.7	61.7	61.4	62.2	65.3	64.8
27.5°	442.9	413.5	319.3	157.5	64.4	56.7	57.6	57.2	54.2	57.2	57.4
30°	468.7	455.1	320.1	112.1	56.7	50.2	52.4	49.7	45.2	47.7	47.2
32.5°	520.6	486.8	317.6	75.6	51.7	47.9	44.5	40.7	37.3	38.3	37.5
35°	581.0	555.2	283.6	60.7	48.2	42.3	37.0	33.1	29.6	30.5	30.3
37.5°	701.1	619.3	255.5	54.7	45.8	38.8	32.6	27.3	25.4	25.9	26.4
40°	812.4	726.2	203.1	52.0	41.8	34.6	26.9	23.1	21.9	22.3	22.8
42.5°	978.7	811.2	153.4	49.4	37.8	29.3	22.4	19.9	18.7	19.4	19.7
45°	1139.7	883.5	114.6	47.0	34.5	25.3	18.9	17.2	15.9	16.4	17.1
47.5°	1300.5	963.8	85.5	43.3	30.8	21.8	16.2	15.1	14.2	14.4	15.2
50°	1444.4	1001.3	67.3	38.8	27.8	18.9	14.7	13.6	13.2	13.4	14.1
52.5°	1550.2	1001.7	56.7	34.8	24.9	16.7	13.9	12.5	12.4	12.7	13.4
55°	1645.7	974.9	49.2	31.3	22.4	15.2	13.2	12.0	12.0	12.4	13.1
57.5°	1709.1	925.7	42.7	27.6	20.2	14.4	12.7	11.5	11.4	11.2	11.7
60°	1740.1	858.6	36.1	24.3	18.2	13.9	12.4	10.2	10.0	9.7	10.0
62.5°	1720.5	774.6	30.3	20.9	16.2	13.2	10.9	8.9	8.5	7.9	8.4
65°	1620.5	672.5	25.6	17.9	14.1	11.2	9.2	7.5	6.7	5.9	5.7
67.5°	1415.8	546.3	21.4	15.4	12.0	9.2	7.5	6.7	5.2	4.5	4.4
70°	1061.1	373.0	17.7	13.2	10.0	7.9	6.4	6.0	4.9	4.4	4.0
72.5°	622.5	201.3	14.9	11.5	8.5	6.5	5.2	5.5	4.9	4.0	3.7
75°	248.7	66.9	11.9	9.2	6.9	4.7	4.4	4.5	4.4	3.7	3.0
77.5°	56.7	21.1	9.2	7.2	5.4	3.0	3.5	3.8	3.8	3.0	2.2
80°	17.7	8.4	5.4	4.5	3.8	1.7	2.5	2.7	1.8	0.8	0.0
82.5°	5.7	2.3	1.8	1.8	1.7	0.3	0.5	0.3	0.0	0.0	0.0
85°	2.2	1.5	1.2	1.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.8	0.7	0.5	0.7	0.3	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)