

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: P366859

Luminaire Tested: **MSA-SA1B-830-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366859
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-830-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: 3014 lumens
Efficiency: N/A
Efficacy: 68.5 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

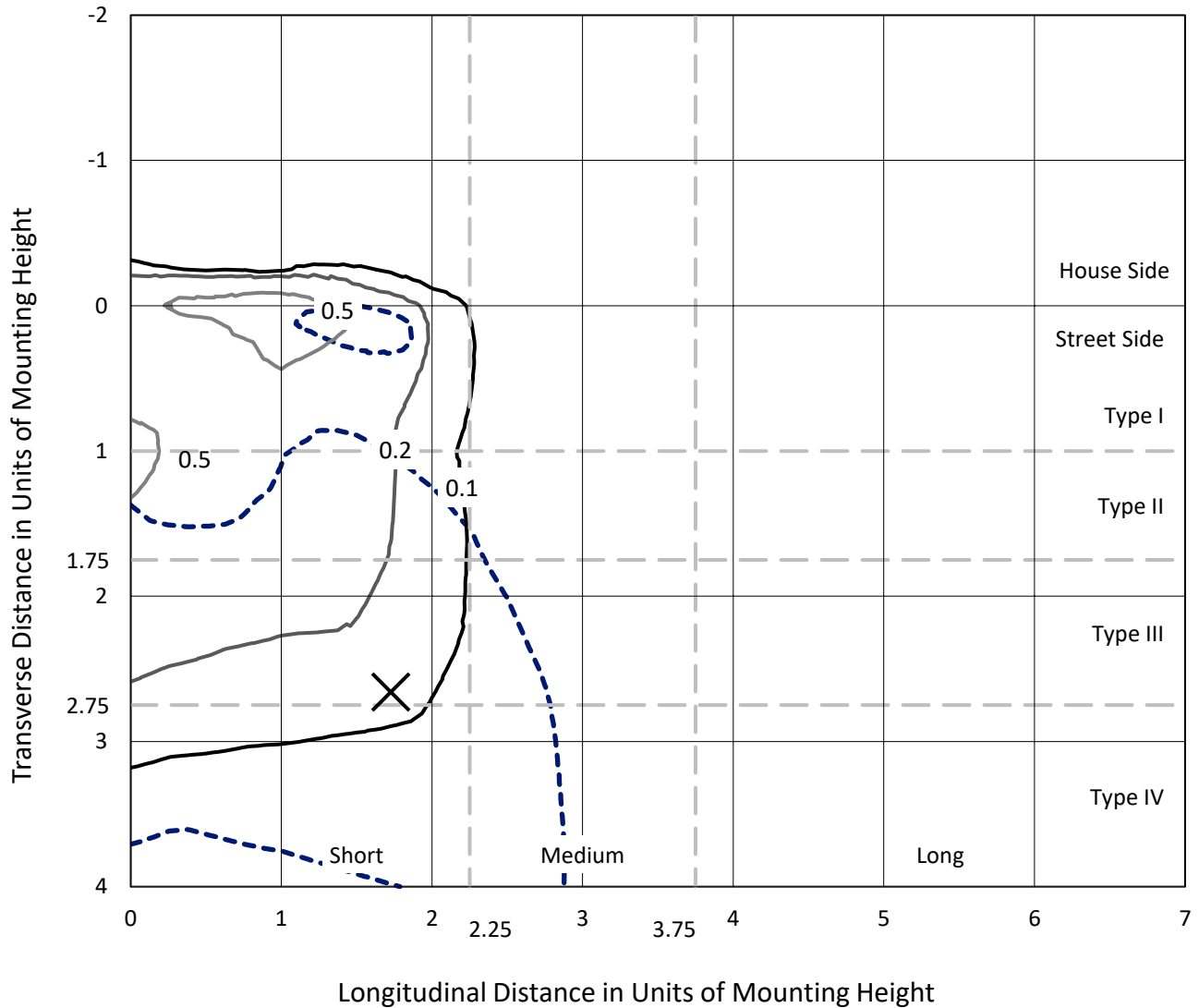
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366859
 CATALOG NUMBER: MSA-SA1B-830-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

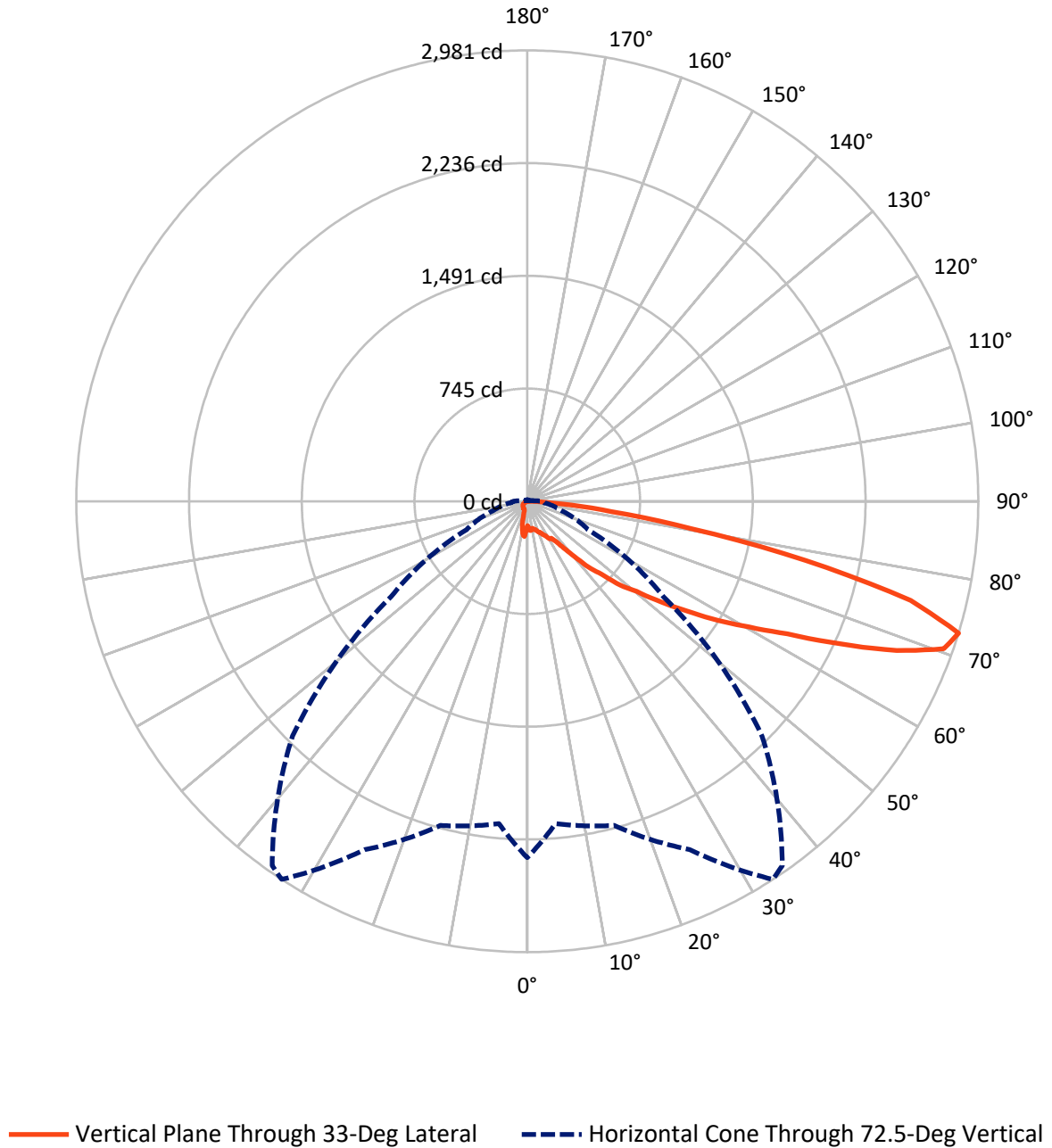
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P366859
CATALOG NUMBER: MSA-SA1B-830-U-T4FT-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P366859
 CATALOG NUMBER: MSA-SA1B-830-U-T4FT-HSS

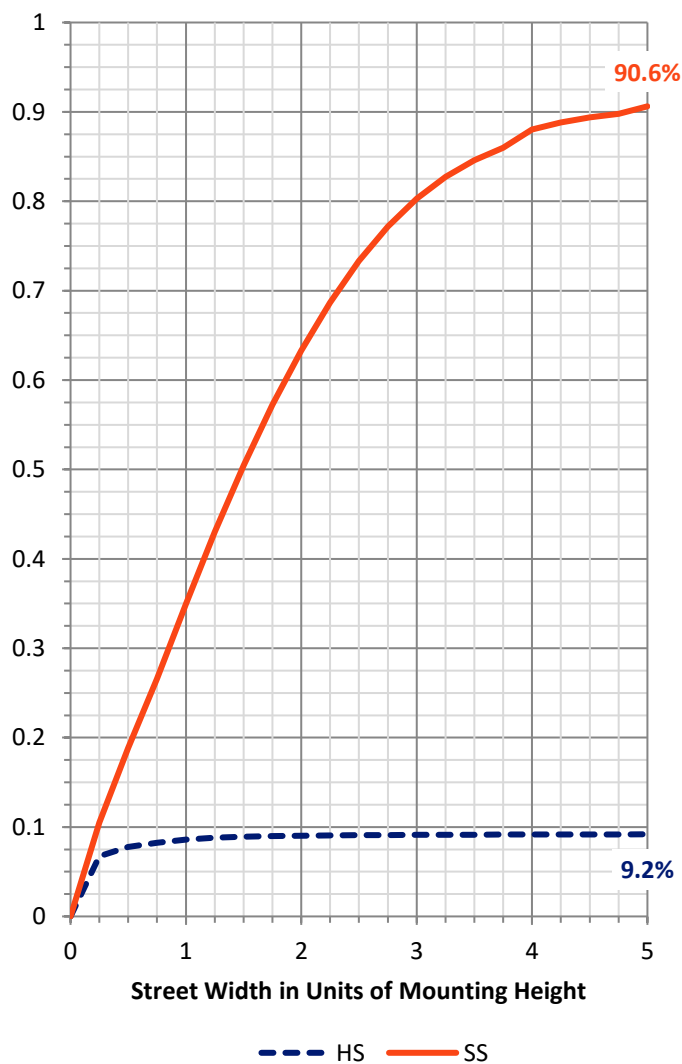
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	278.7	0.0	278.7
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2735.3	0.0	2735.3
	% Fixture	90.8	0.0	90.8
Total	Lumens	3014.0	0.0	3014.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.7	0.7
10°-20°	61.8	2.1
20°-30°	104.9	3.5
30°-40°	191.9	6.4
40°-50°	405.0	13.4
50°-60°	677.6	22.5
60°-70°	907.0	30.1
70°-80°	592.5	19.7
80°-90°	52.5	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°	3014.0	100.0
0°-180°	3014.0	100.0

Coefficient of Utilization



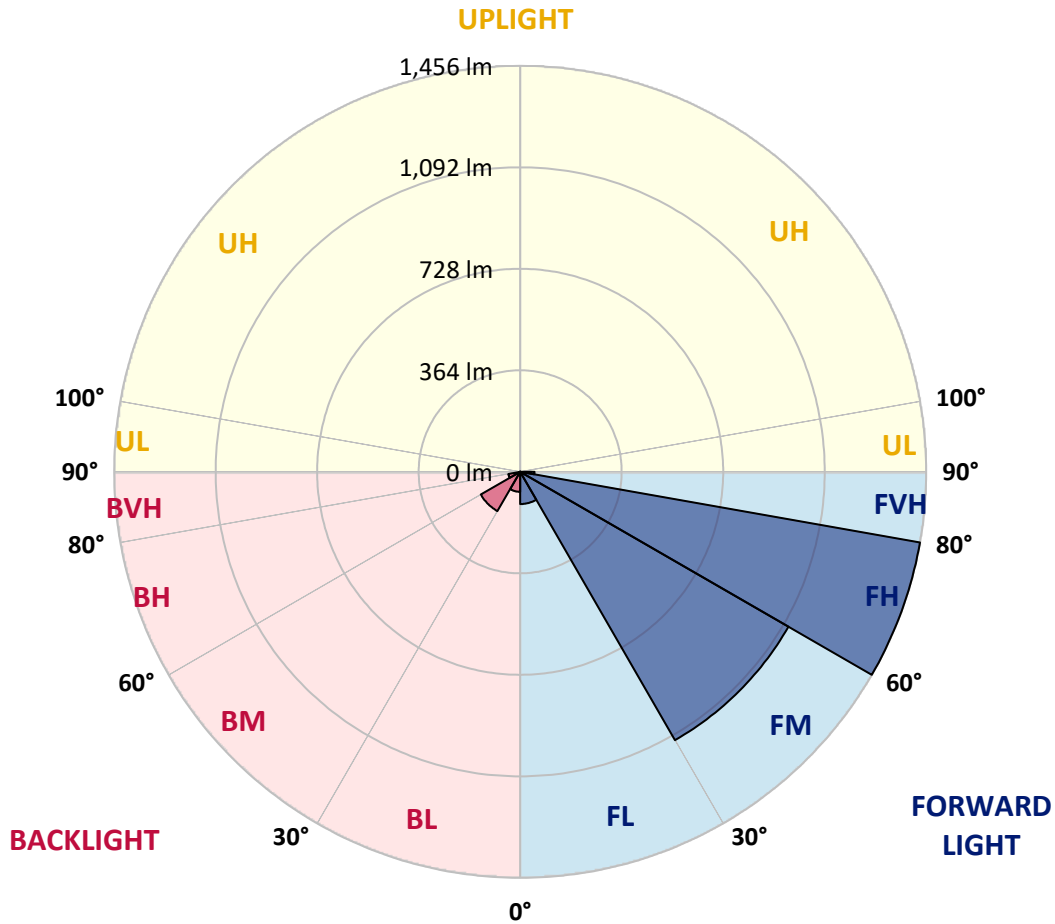
REPORT NUMBER: P366859
 CATALOG NUMBER: MSA-SA1B-830-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	115.7	3.8			
FM (30°-60°)	1111.6	36.9			
FH (60°-80°)	1456.5	48.3			G1/1800
FVH (80°-90°)	51.5	1.7			G1/100
BL (0°-30°)	71.7	2.4	B0/110		
BM (30°-60°)	162.9	5.4	B0/220		
BH (60°-80°)	43.0	1.4	B0/110		G0/110
BVH (80°-90°)	1.0	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





REPORT NUMBER: P366859

CATALOG NUMBER: MSA-SA1B-830-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3
2.5°	191.1	183.7	173.0	173.7	175.5	177.0	181.1	179.4	176.2	176.0	191.1
5°	202.5	194.3	193.6	194.6	194.1	196.8	193.4	204.3	213.5	224.6	242.3
7.5°	197.0	193.1	188.3	193.3	193.1	191.8	193.9	216.0	238.3	252.3	281.6
10°	181.1	176.7	180.4	182.1	180.9	186.7	201.3	219.4	246.0	275.4	289.7
12.5°	176.5	179.2	180.6	180.6	191.8	194.8	217.0	234.1	265.7	289.0	330.3
15°	194.1	199.3	190.1	188.1	191.6	193.3	218.0	238.6	279.1	321.6	356.3
17.5°	222.1	221.7	207.5	199.6	205.2	209.2	222.9	247.0	270.8	347.2	397.4
20°	241.3	241.6	216.0	199.6	217.9	220.2	235.4	254.7	273.4	360.1	424.4
22.5°	266.1	257.2	228.9	213.0	225.4	227.6	244.3	259.5	287.2	358.6	458.8
25°	286.3	280.6	245.0	233.9	245.0	242.0	257.2	280.1	301.9	382.5	479.1
27.5°	317.8	308.1	256.4	258.4	257.7	259.9	263.4	298.5	327.8	383.7	525.9
30°	347.1	341.4	281.8	281.8	288.3	284.1	286.6	329.2	352.9	410.8	578.7
32.5°	377.3	377.7	311.8	295.9	290.7	307.9	324.8	344.0	383.2	457.3	659.3
35°	457.5	450.8	369.1	329.5	325.3	324.3	351.4	403.5	436.9	517.9	767.9
37.5°	619.0	595.7	492.6	405.8	390.1	384.7	415.5	468.9	502.2	606.9	947.5
40°	784.6	742.0	627.5	529.6	478.6	455.5	491.3	536.7	595.9	705.3	1113.6
42.5°	930.1	877.4	729.1	663.2	596.7	586.7	553.1	626.8	729.8	848.6	1276.5
45°	1071.8	968.1	819.5	767.2	686.6	692.3	680.9	744.8	868.8	1005.5	1420.9
47.5°	1169.4	1076.2	930.2	862.5	830.2	796.9	887.2	953.7	992.6	1105.3	1545.7
50°	1274.4	1180.1	1025.4	978.1	935.6	969.2	1086.5	1095.4	1092.2	1198.3	1630.7
52.5°	1410.2	1298.9	1134.7	1081.2	1105.3	1138.7	1274.1	1275.8	1180.7	1276.6	1692.0
55°	1535.7	1412.3	1280.3	1229.8	1280.1	1308.4	1458.5	1403.5	1232.3	1329.8	1722.1
57.5°	1712.5	1569.8	1473.9	1384.9	1487.0	1459.9	1620.7	1538.8	1290.2	1365.1	1711.0
60°	1936.1	1768.1	1672.0	1577.8	1687.3	1705.7	1779.0	1606.4	1312.6	1376.7	1644.6
62.5°	2163.5	1994.5	1868.2	1804.2	1928.4	1989.0	1925.6	1640.1	1285.7	1354.1	1494.2
65°	2445.6	2229.3	2081.7	2044.2	2274.3	2363.3	2098.9	1648.3	1233.6	1229.8	1201.3
67.5°	2638.9	2428.2	2292.9	2355.6	2633.6	2640.8	2254.5	1650.8	1058.4	962.9	788.5
70°	2684.8	2459.2	2398.6	2583.4	2920.2	2829.7	2304.7	1523.6	785.0	571.5	360.4
72.5°	2356.8	2139.6	2218.4	2540.4	2981.1	2939.6	2193.8	1099.2	441.9	228.6	110.6
75°	1445.6	1314.3	1664.2	2153.8	2616.8	2590.1	1711.5	567.9	178.0	91.4	41.3
77.5°	628.7	583.8	868.5	1429.1	1880.4	1856.4	1002.9	209.2	92.0	64.3	20.9
80°	208.0	201.8	329.0	676.7	1101.4	1080.3	422.5	87.0	65.6	51.5	11.7
82.5°	49.4	49.0	114.8	311.4	561.1	543.5	129.7	48.0	47.5	40.7	6.2
85°	12.4	12.7	31.8	127.3	227.9	201.0	33.8	23.9	33.5	27.6	3.2
87.5°	0.0	0.0	8.2	18.2	34.5	21.6	3.7	6.4	9.4	9.9	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P366859

CATALOG NUMBER: MSA-SA1B-830-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3
2.5°	194.4	192.6	177.5	181.2	186.9	186.4	190.1	187.3	184.7	197.1	196.0
5°	247.3	237.3	232.6	239.1	235.6	227.4	234.3	233.1	231.1	235.3	238.5
7.5°	287.0	277.8	273.6	259.9	240.0	224.2	226.7	220.9	215.4	221.9	228.6
10°	300.0	295.0	294.5	267.7	249.0	226.2	199.3	176.0	169.8	161.6	165.3
12.5°	335.5	338.5	319.6	288.3	252.2	208.5	160.6	127.7	114.3	105.6	106.1
15°	364.6	375.2	347.7	291.5	221.9	159.0	106.9	77.3	68.9	66.8	66.1
17.5°	408.0	418.2	356.4	268.9	178.9	107.8	68.8	60.2	60.7	62.2	61.9
20°	440.1	438.6	348.9	228.9	131.9	70.6	57.6	56.4	59.1	63.4	62.4
22.5°	471.1	460.7	344.2	191.9	85.3	56.7	55.6	55.4	57.9	62.1	63.3
25°	493.1	494.8	336.3	150.3	62.1	52.7	53.7	55.2	57.7	62.2	61.6
27.5°	556.4	509.5	303.6	109.1	52.4	50.5	53.0	56.1	56.9	62.6	62.8
30°	597.4	565.1	282.1	73.5	48.4	46.7	51.7	55.7	56.7	64.1	64.6
32.5°	668.8	589.0	257.4	54.6	45.0	45.5	48.7	54.1	58.7	66.6	66.9
35°	757.7	665.8	212.5	49.0	43.8	43.0	44.5	50.7	58.4	66.9	68.6
37.5°	926.9	711.9	168.5	47.5	43.8	42.3	43.8	47.5	57.4	70.3	73.8
40°	1040.2	805.6	121.5	47.2	43.0	41.7	42.2	45.9	54.6	68.3	73.5
42.5°	1179.7	845.1	89.5	46.4	42.2	40.2	40.5	45.2	51.7	64.1	67.9
45°	1294.0	873.8	70.4	46.0	40.2	39.5	40.2	44.7	49.0	55.1	58.6
47.5°	1380.9	907.3	56.6	43.8	39.7	39.5	38.7	41.8	44.5	46.0	48.4
50°	1444.5	899.8	46.9	40.5	38.0	39.0	37.5	38.0	38.7	37.8	40.5
52.5°	1483.5	872.7	39.0	36.5	36.0	36.8	35.0	33.5	32.3	31.6	33.3
55°	1497.7	818.3	33.1	31.3	32.5	32.8	31.3	28.6	26.6	25.6	26.9
57.5°	1470.7	735.5	28.8	25.9	28.6	28.6	26.6	23.8	21.4	19.7	21.1
60°	1402.5	643.9	25.6	21.6	24.4	24.6	22.3	19.2	17.4	15.7	16.6
62.5°	1275.3	544.2	22.4	18.7	21.1	21.3	18.4	15.6	14.2	12.4	13.1
65°	1020.9	416.2	19.1	16.6	18.2	17.7	15.2	13.2	11.5	9.9	10.2
67.5°	662.7	256.9	16.6	15.1	15.4	14.9	12.9	11.5	9.7	8.4	8.5
70°	296.7	110.6	14.6	13.6	13.4	12.6	10.9	10.7	9.5	8.4	8.4
72.5°	91.5	41.7	12.6	12.2	11.5	10.5	9.5	10.2	9.4	8.0	7.9
75°	36.1	19.1	10.4	10.4	10.0	8.7	8.5	9.2	8.7	7.4	7.0
77.5°	18.9	12.0	8.5	8.9	8.7	6.7	7.7	8.4	8.0	6.2	5.2
80°	11.2	7.4	6.4	7.2	7.0	4.7	5.9	5.4	3.8	1.8	0.5
82.5°	6.2	3.3	2.8	4.2	4.2	1.7	3.0	2.7	1.5	0.0	0.0
85°	3.0	2.3	2.2	2.3	1.7	0.5	1.5	1.5	0.8	0.0	0.0
87.5°	1.5	1.3	1.0	0.8	0.7	0.0	0.5	0.7	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)