

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: P367013

Luminaire Tested: **MSA-SA1D-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367013
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-SA1D-727-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: 4295 lumens
Efficiency: N/A
Efficacy: 64.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

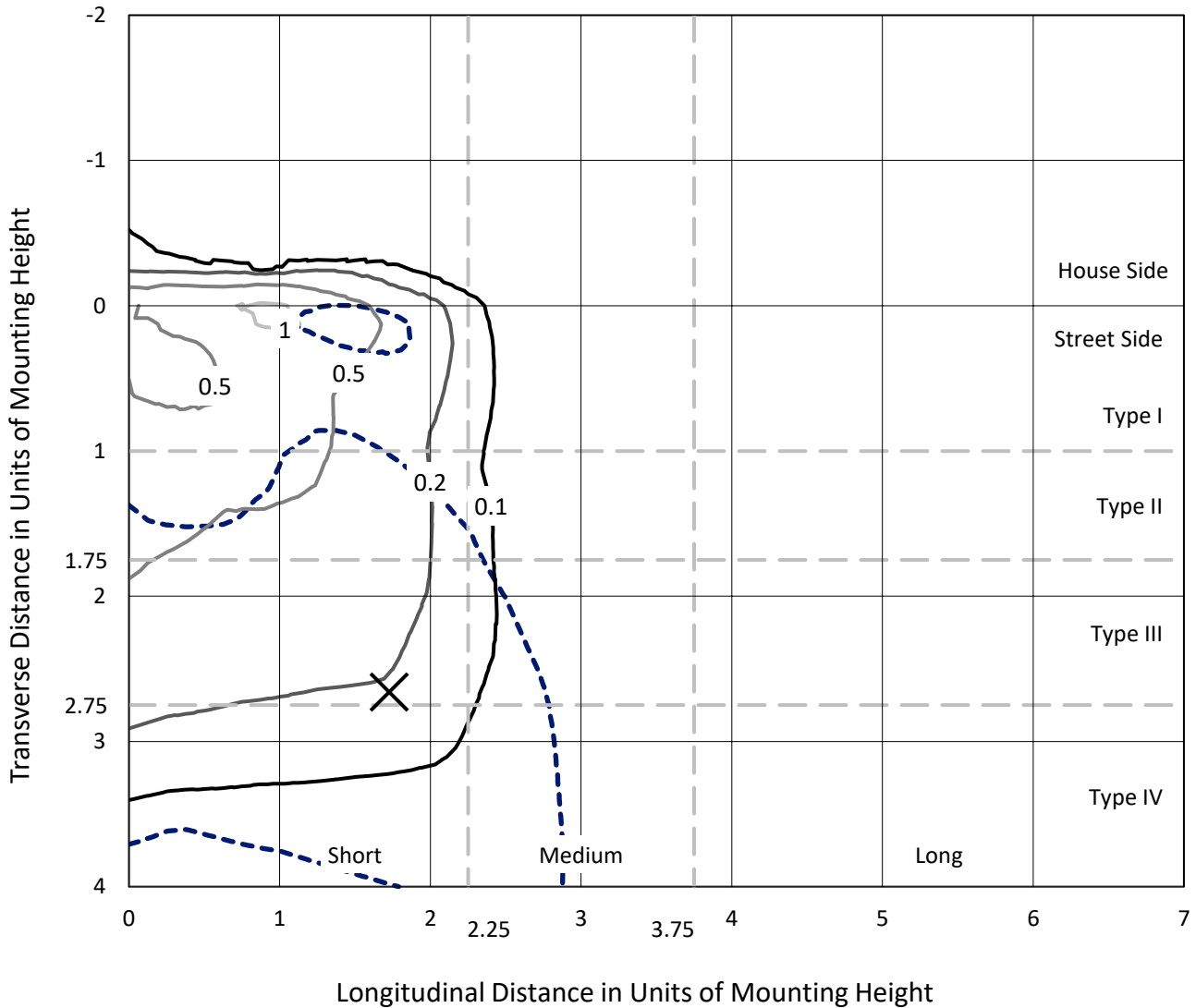
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367013
 CATALOG NUMBER: MSA-SA1D-727-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

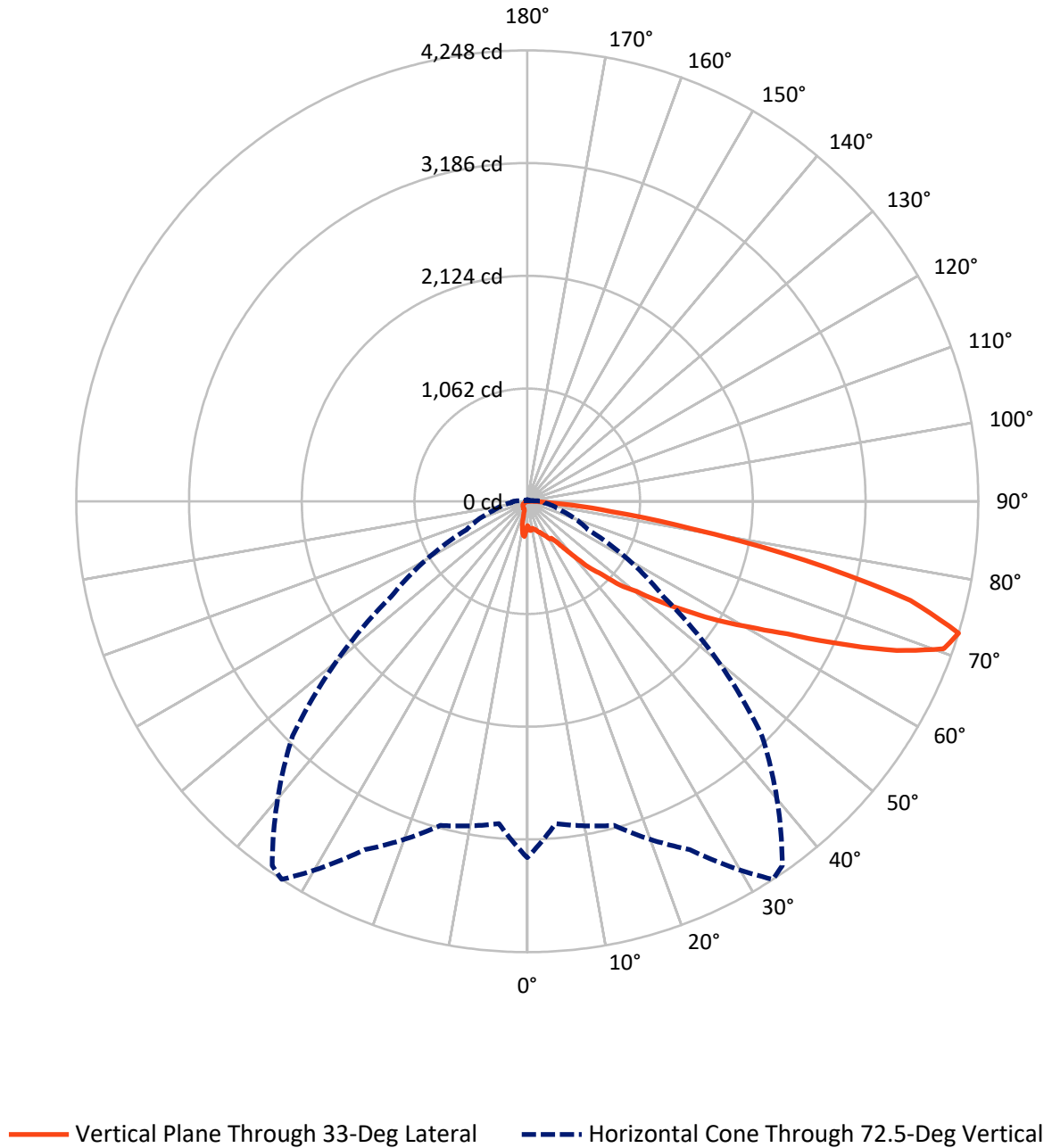
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P367013
CATALOG NUMBER: MSA-SA1D-727-U-T4FT-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P367013
 CATALOG NUMBER: MSA-SA1D-727-U-T4FT-HSS

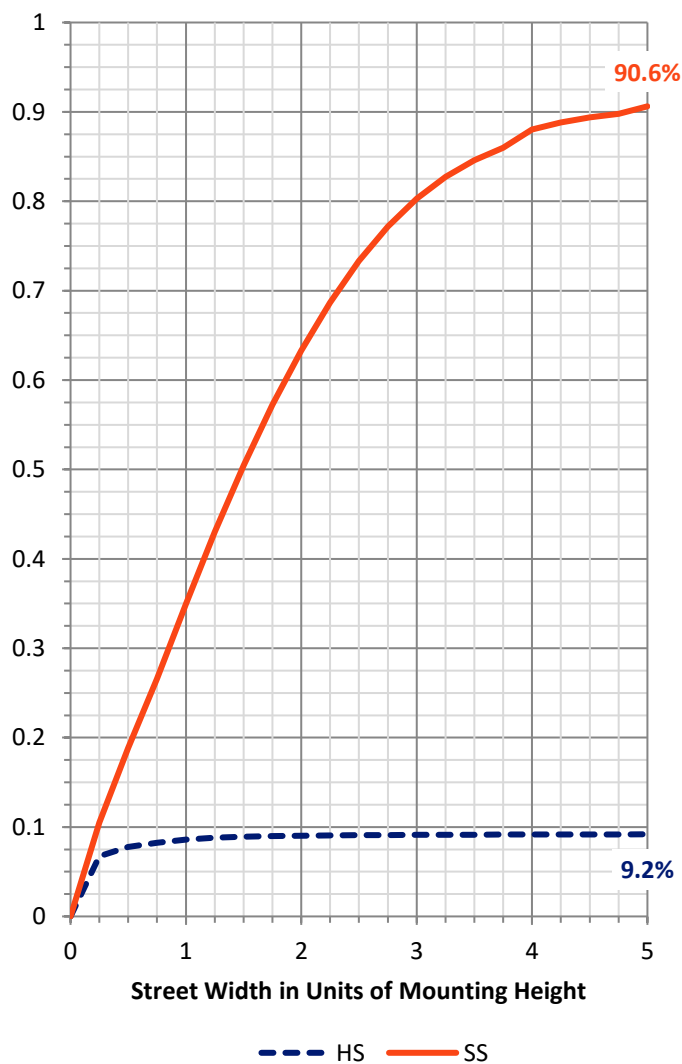
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	397.1	0.0	397.1
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3897.9	0.0	3897.9
	% Fixture	90.8	0.0	90.8
Total	Lumens	4295.0	0.0	4295.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.6	0.7
10°-20°	88.1	2.1
20°-30°	149.4	3.5
30°-40°	273.5	6.4
40°-50°	577.2	13.4
50°-60°	965.6	22.5
60°-70°	1292.5	30.1
70°-80°	844.3	19.7
80°-90°	74.9	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°	4295.0	100.0
0°-180°	4295.0	100.0

Coefficient of Utilization

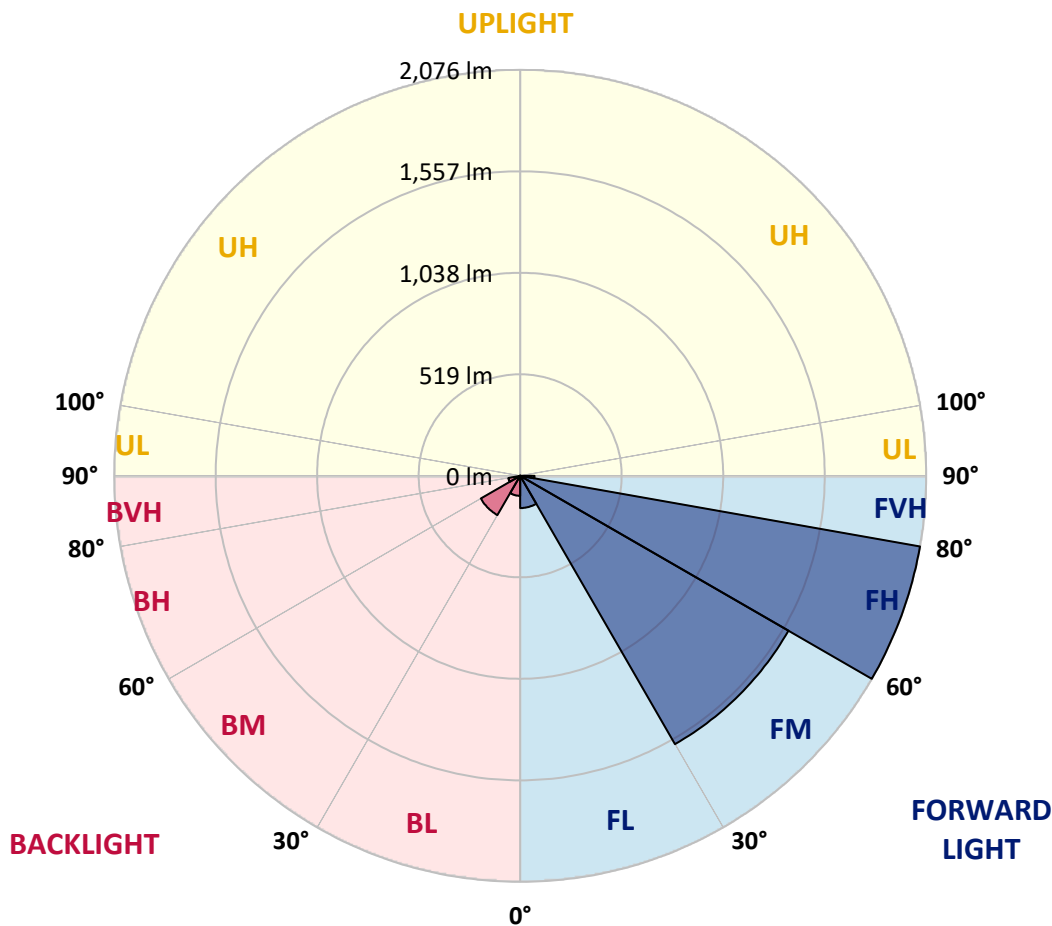


REPORT NUMBER: P367013
 CATALOG NUMBER: MSA-SA1D-727-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	164.9	3.8			
FM (30°-60°)	1584.1	36.9			
FH (60°-80°)	2075.5	48.3			G2/5000
FVH (80°-90°)	73.4	1.7			G1/100
BL (0°-30°)	102.2	2.4	B0/110		
BM (30°-60°)	232.2	5.4	B1/1000		
BH (60°-80°)	61.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2
 Type IV Short





REPORT NUMBER: P367013

CATALOG NUMBER: MSA-SA1D-727-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4
2.5°	272.3	261.8	246.6	247.5	250.1	252.3	258.0	255.6	251.1	250.9	272.3
5°	288.5	276.9	275.9	277.3	276.6	280.4	275.7	291.2	304.3	320.0	345.3
7.5°	280.7	275.2	268.3	275.4	275.2	273.3	276.4	307.9	339.6	359.6	401.3
10°	258.0	251.8	257.1	259.4	257.8	266.1	286.9	312.6	350.5	392.5	412.8
12.5°	251.6	255.4	257.3	257.3	273.3	277.6	309.3	333.6	378.7	411.8	470.7
15°	276.6	284.0	270.9	268.0	273.0	275.4	310.7	340.0	397.8	458.3	507.7
17.5°	316.4	316.0	295.7	284.5	292.4	298.1	317.6	352.0	385.8	494.8	566.3
20°	343.9	344.3	307.9	284.5	310.5	313.8	335.5	362.9	389.6	513.2	604.7
22.5°	379.2	366.5	326.2	303.6	321.2	324.3	348.2	369.9	409.2	511.0	653.9
25°	408.0	399.9	349.1	333.4	349.1	344.8	366.5	399.2	430.2	545.1	682.7
27.5°	452.8	439.0	365.3	368.2	367.2	370.3	375.3	425.4	467.1	546.8	749.5
30°	494.6	486.5	401.6	401.6	410.9	404.9	408.5	469.0	502.9	585.4	824.6
32.5°	537.7	538.2	444.2	421.6	414.2	438.8	462.8	490.3	546.1	651.7	939.5
35°	651.9	642.4	526.0	469.5	463.6	462.1	500.8	574.9	622.6	738.0	1094.3
37.5°	882.1	848.9	702.0	578.3	555.8	548.2	592.1	668.2	715.6	864.9	1350.2
40°	1118.1	1057.3	894.2	754.7	682.0	649.1	700.1	764.7	849.2	1005.1	1586.9
42.5°	1325.4	1250.2	1039.0	945.0	850.3	836.0	788.1	893.3	1039.9	1209.2	1819.0
45°	1527.3	1379.5	1167.7	1093.3	978.4	986.5	970.3	1061.4	1238.1	1432.9	2024.8
47.5°	1666.4	1533.5	1325.6	1229.0	1183.0	1135.5	1264.3	1359.0	1414.5	1575.0	2202.6
50°	1816.1	1681.6	1461.3	1393.8	1333.2	1381.2	1548.3	1561.0	1556.4	1707.6	2323.8
52.5°	2009.5	1850.9	1617.0	1540.7	1575.0	1622.7	1815.6	1818.0	1682.6	1819.2	2411.1
55°	2188.3	2012.6	1824.5	1752.4	1824.2	1864.5	2078.4	2000.0	1756.0	1895.0	2454.0
57.5°	2440.4	2237.0	2100.4	1973.5	2119.0	2080.3	2309.5	2192.9	1838.5	1945.4	2438.2
60°	2759.0	2519.6	2382.7	2248.4	2404.4	2430.6	2535.1	2289.2	1870.5	1961.8	2343.6
62.5°	3083.0	2842.2	2662.2	2571.1	2748.0	2834.3	2744.0	2337.1	1832.1	1929.6	2129.2
65°	3485.1	3176.8	2966.4	2913.0	3240.9	3367.8	2991.0	2348.8	1757.9	1752.4	1711.9
67.5°	3760.5	3460.3	3267.4	3356.8	3752.9	3763.1	3212.8	2352.4	1508.3	1372.1	1123.6
70°	3825.8	3504.4	3418.1	3681.3	4161.4	4032.3	3284.3	2171.2	1118.6	814.3	513.6
72.5°	3358.5	3048.9	3161.3	3620.1	4248.2	4189.0	3126.2	1566.4	629.8	325.7	157.6
75°	2060.1	1872.9	2371.5	3069.2	3729.0	3690.9	2439.0	809.3	253.7	130.2	58.9
77.5°	895.9	832.0	1237.6	2036.4	2679.6	2645.5	1429.1	298.1	131.2	91.6	29.8
80°	296.4	287.6	468.8	964.3	1569.5	1539.5	602.1	124.0	93.5	73.4	16.7
82.5°	70.3	69.9	163.6	443.8	799.6	774.5	184.8	68.4	67.7	57.9	8.8
85°	17.6	18.1	45.3	181.5	324.8	286.4	48.2	34.1	47.7	39.3	4.5
87.5°	0.0	0.0	11.7	26.0	49.1	30.8	5.2	9.1	13.4	14.1	2.4
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: P367013
 CATALOG NUMBER: MSA-SA1D-727-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4	228.4
2.5°	277.1	274.5	253.0	258.3	266.4	265.6	270.9	266.8	263.3	280.9	279.2
5°	352.4	338.1	331.5	340.8	335.8	324.1	333.8	332.2	329.3	335.3	339.8
7.5°	409.0	395.8	389.9	370.3	342.0	319.5	323.1	314.8	306.9	316.2	325.7
10°	427.6	420.4	419.7	381.5	354.8	322.4	284.0	250.9	242.0	230.4	235.6
12.5°	478.1	482.4	455.5	410.9	359.4	297.1	228.9	181.9	162.9	150.5	151.2
15°	519.6	534.6	495.5	415.4	316.2	226.5	152.4	110.2	98.2	95.1	94.2
17.5°	581.4	595.9	507.9	383.2	254.9	153.6	98.0	85.8	86.6	88.7	88.2
20°	627.1	625.0	497.2	326.2	187.9	100.6	82.0	80.4	84.2	90.4	88.9
22.5°	671.3	656.5	490.5	273.5	121.6	80.8	79.2	78.9	82.5	88.5	90.1
25°	702.7	705.1	479.3	214.1	88.5	75.1	76.5	78.7	82.3	88.7	87.8
27.5°	792.9	726.1	432.6	155.5	74.6	72.0	75.6	79.9	81.1	89.2	89.4
30°	851.3	805.3	402.0	104.7	68.9	66.5	73.7	79.4	80.8	91.3	92.0
32.5°	953.1	839.4	366.8	77.7	64.1	64.9	69.4	77.0	83.7	94.9	95.4
35°	1079.7	948.8	302.8	69.9	62.5	61.3	63.4	72.3	83.2	95.4	97.8
37.5°	1320.8	1014.4	240.1	67.7	62.5	60.3	62.5	67.7	81.8	100.2	105.2
40°	1482.3	1147.9	173.1	67.2	61.3	59.4	60.1	65.3	77.7	97.3	104.7
42.5°	1681.1	1204.2	127.6	66.1	60.1	57.2	57.7	64.4	73.7	91.3	96.8
45°	1844.0	1245.2	100.4	65.6	57.2	56.3	57.2	63.7	69.9	78.5	83.5
47.5°	1967.8	1292.9	80.6	62.5	56.5	56.3	55.1	59.6	63.4	65.6	68.9
50°	2058.4	1282.2	66.8	57.7	54.1	55.6	53.4	54.1	55.1	53.9	57.7
52.5°	2113.9	1243.6	55.6	52.0	51.3	52.5	49.8	47.7	46.0	45.1	47.5
55°	2134.2	1166.1	47.2	44.6	46.3	46.7	44.6	40.8	37.9	36.5	38.4
57.5°	2095.8	1048.0	41.0	37.0	40.8	40.8	37.9	33.9	30.5	28.1	30.0
60°	1998.5	917.6	36.5	30.8	34.8	35.1	31.7	27.4	24.8	22.4	23.6
62.5°	1817.3	775.5	32.0	26.7	30.0	30.3	26.2	22.2	20.3	17.6	18.6
65°	1454.8	593.0	27.2	23.6	26.0	25.3	21.7	18.8	16.5	14.1	14.5
67.5°	944.3	366.0	23.6	21.5	21.9	21.2	18.4	16.5	13.8	11.9	12.2
70°	422.8	157.6	20.7	19.3	19.1	17.9	15.5	15.3	13.6	11.9	11.9
72.5°	130.4	59.4	17.9	17.4	16.5	15.0	13.6	14.5	13.4	11.4	11.2
75°	51.5	27.2	14.8	14.8	14.3	12.4	12.2	13.1	12.4	10.5	10.0
77.5°	26.9	17.2	12.2	12.6	12.4	9.5	11.0	11.9	11.4	8.8	7.4
80°	16.0	10.5	9.1	10.3	10.0	6.7	8.3	7.6	5.5	2.6	0.7
82.5°	8.8	4.8	4.1	6.0	6.0	2.4	4.3	3.8	2.1	0.0	0.0
85°	4.3	3.3	3.1	3.3	2.4	0.7	2.1	2.1	1.2	0.0	0.0
87.5°	2.1	1.9	1.4	1.2	1.0	0.0	0.7	1.0	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)