

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: P367209

Luminaire Tested: **MSA-SA2A-750-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367209
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-SA2A-750-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5870 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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: 24 FT

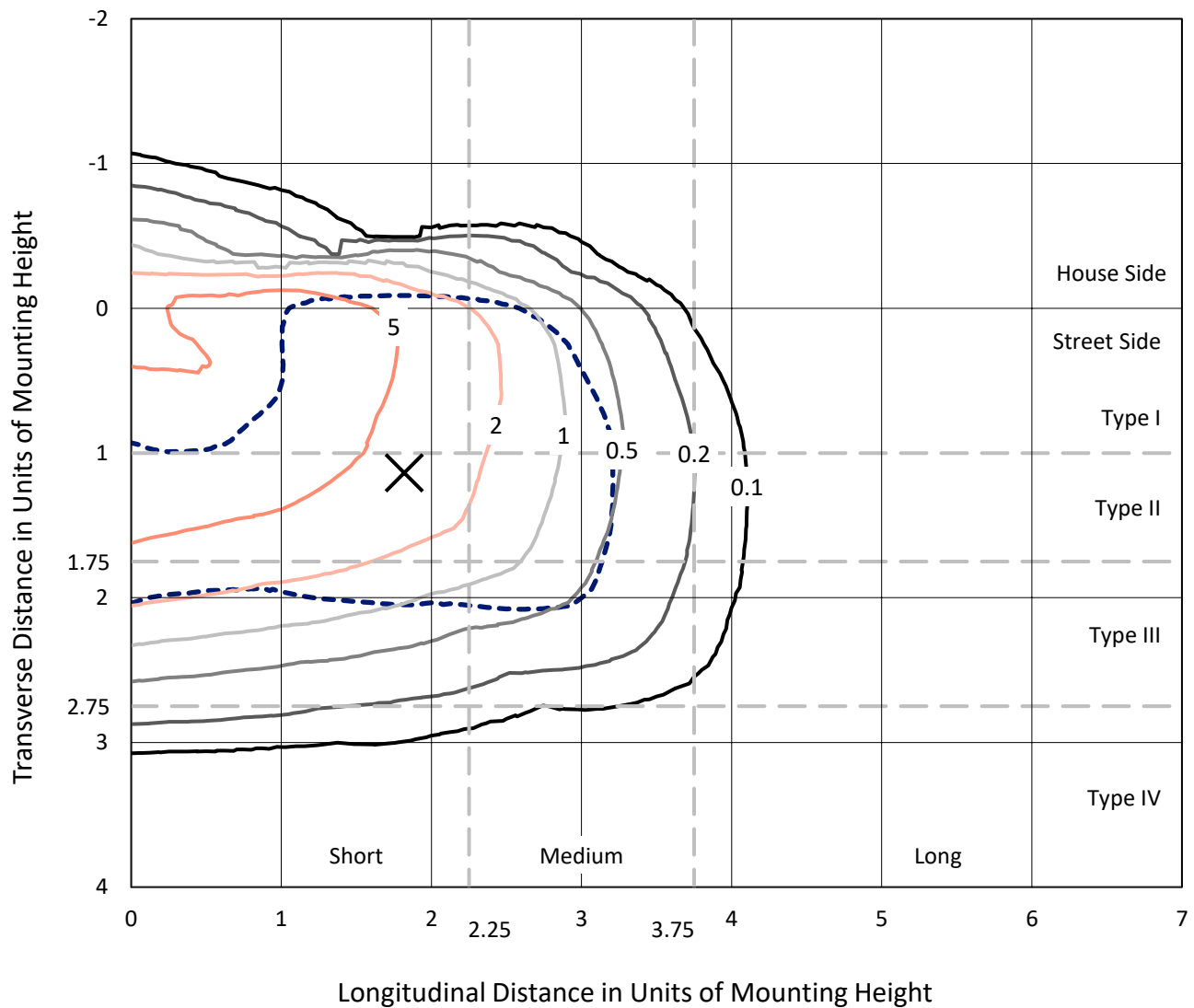


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
--- 1/2 Max cd

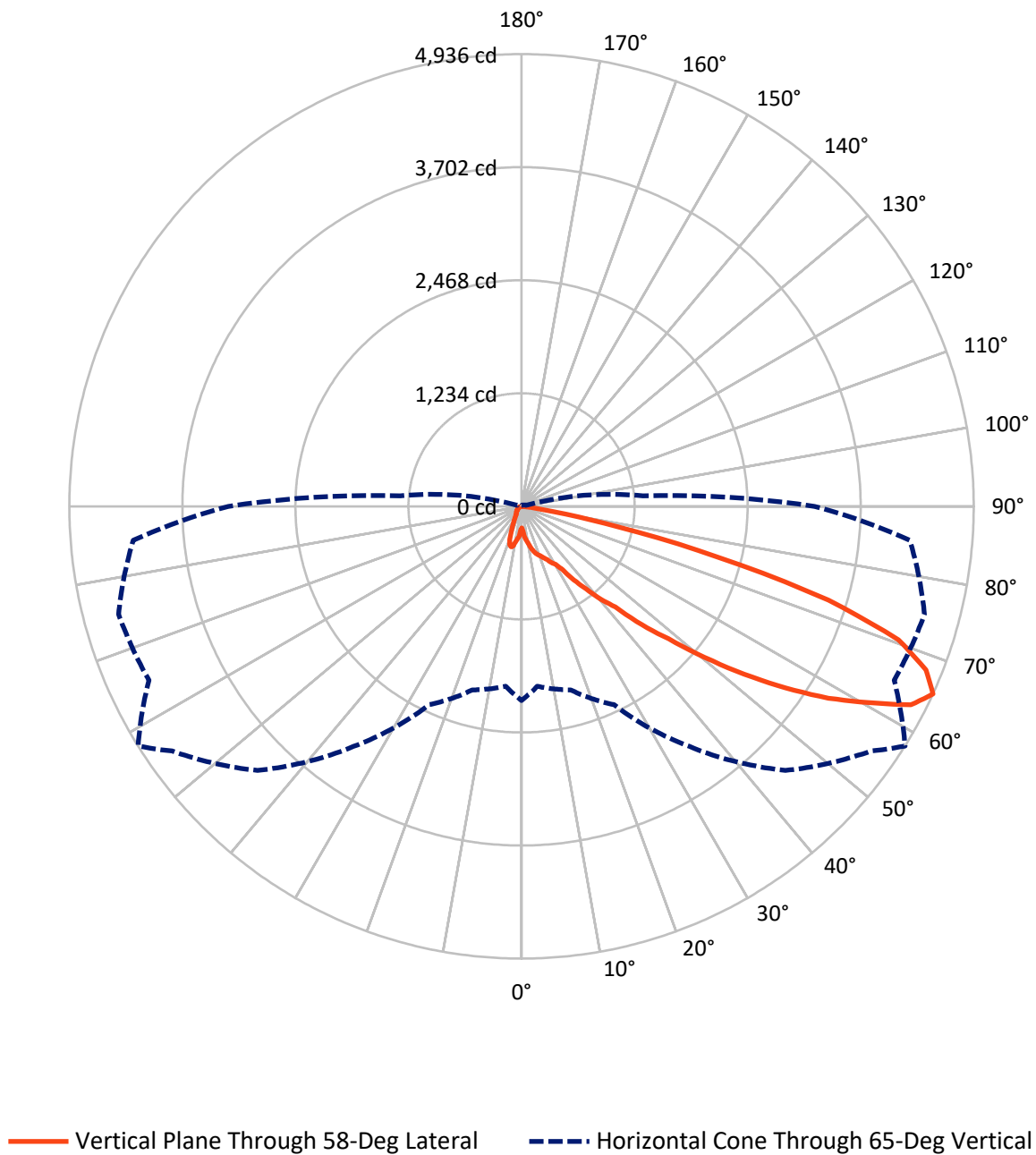


Based on 10 foot mounting height. Maximum calculated value = 9.5 fc
Type III - Short - N/A

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Luminous Intensity Polar Plot



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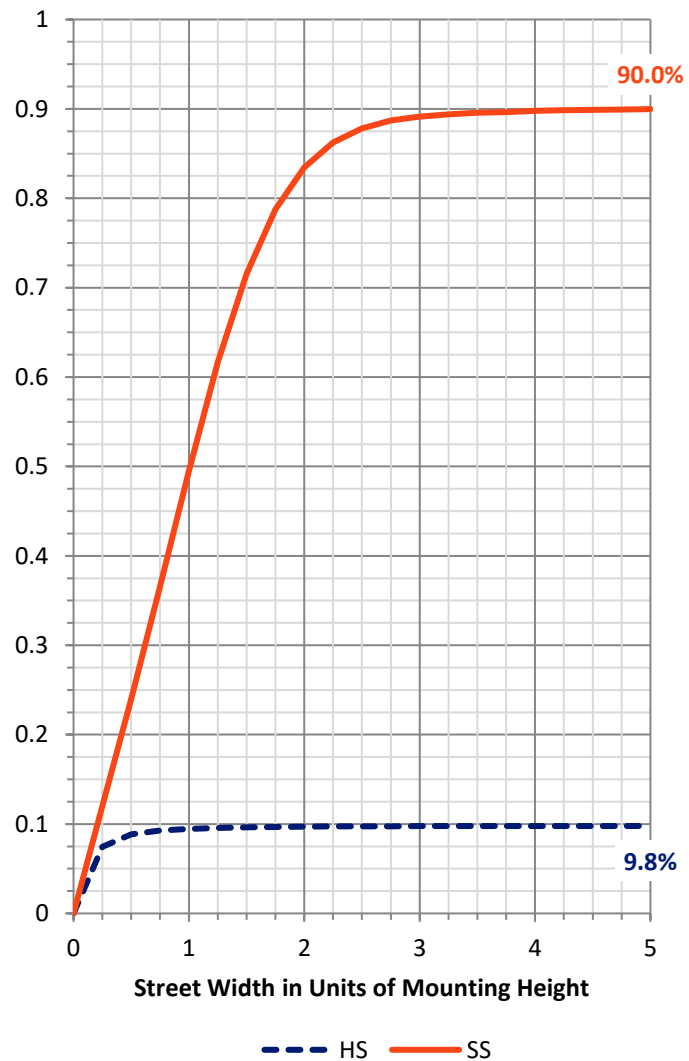
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	579.2	0.0	579.2
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	5290.8	0.0	5290.8
	% Fixture	90.1	0.0	90.1
Total	Lumens	5870.0	0.0	5870.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.0	0.6
10°-20°	120.5	2.1
20°-30°	233.2	4.0
30°-40°	465.3	7.9
40°-50°	951.3	16.2
50°-60°	1687.3	28.7
60°-70°	1778.9	30.3
70°-80°	576.7	9.8
80°-90°	23.6	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°	5870.0	100.0
0°-180°	5870.0	100.0

Coefficient of Utilization



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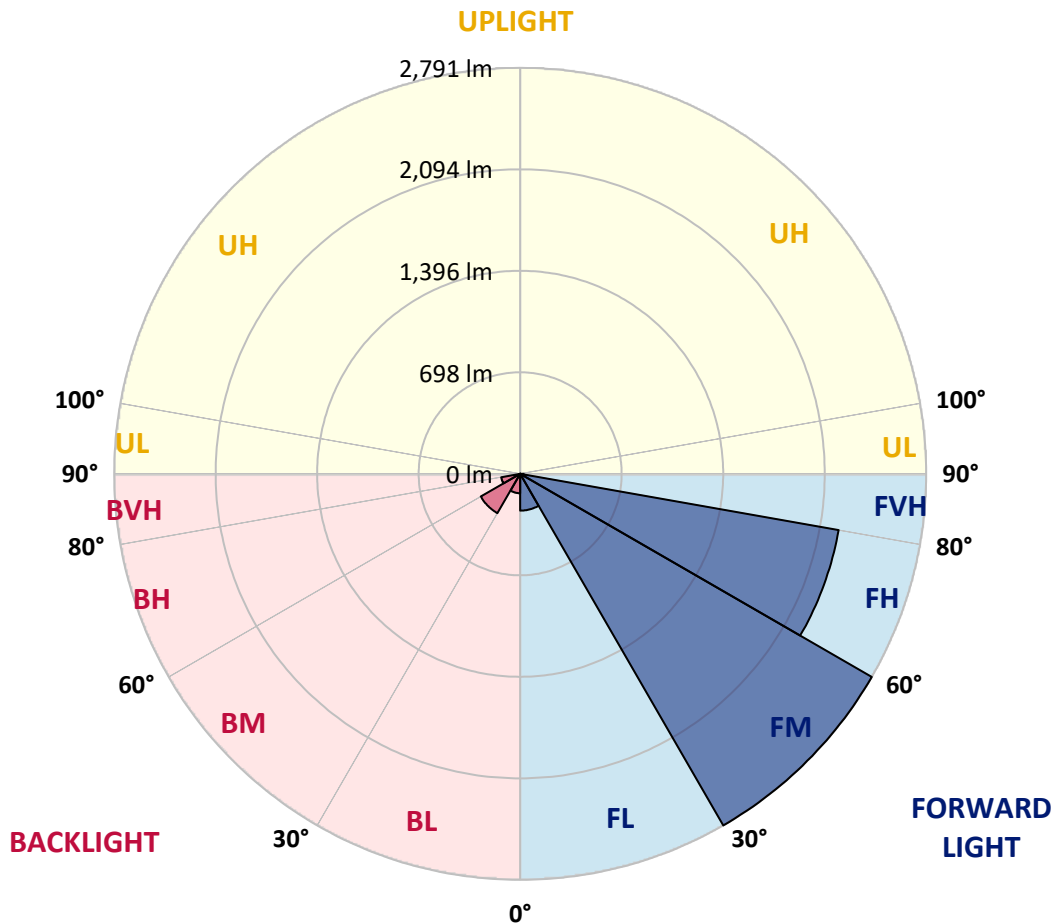
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	253.2	4.3			
FM	(30°-60°)	2791.5	47.6			
FH	(60°-80°)	2223.5	37.9			G2/5000
FVH	(80°-90°)	22.6	0.4			G1/100
BL	(0°-30°)	133.5	2.3	B1/500		
BM	(30°-60°)	312.5	5.3	B1/1000		
BH	(60°-80°)	132.2	2.3	B1/500		G1/500
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: B1-U0-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0
2.5°	286.9	278.3	264.7	267.0	269.7	275.0	270.7	266.7	262.4	256.8	278.3
5°	346.4	332.2	330.8	327.9	325.5	325.2	330.5	328.8	331.2	341.7	352.6
7.5°	368.2	362.2	351.0	355.6	348.3	342.7	366.2	373.8	388.3	393.3	421.7
10°	365.9	357.3	361.9	364.2	369.2	389.7	404.5	412.8	425.4	452.5	446.8
12.5°	376.4	384.0	389.0	389.3	414.8	452.5	463.0	470.0	492.4	503.0	530.8
15°	411.8	424.4	416.4	419.7	428.0	473.9	498.7	513.9	545.7	580.0	587.0
17.5°	462.4	470.3	453.8	441.9	464.7	489.8	534.7	550.6	570.8	651.1	666.0
20°	526.2	539.7	504.0	456.8	486.8	516.6	565.5	573.1	594.6	699.3	722.8
22.5°	675.2	655.1	600.5	526.8	517.9	531.1	577.7	607.5	643.8	726.4	781.0
25°	822.3	815.3	735.0	652.7	593.2	563.5	625.3	641.8	701.3	790.9	821.0
27.5°	985.9	999.8	865.6	815.7	699.0	601.8	655.1	696.4	766.8	814.4	886.7
30°	1201.7	1179.6	1022.2	972.3	839.1	707.3	732.1	734.7	838.1	891.7	960.4
32.5°	1370.9	1385.1	1187.5	1110.8	1004.4	869.5	789.9	824.3	898.3	1017.6	1082.7
35°	1554.0	1552.7	1360.0	1256.9	1117.7	1002.1	961.4	986.5	1079.4	1214.6	1231.8
37.5°	1827.7	1804.2	1576.8	1425.8	1307.5	1208.6	1177.6	1144.2	1240.0	1368.9	1433.4
40°	2085.8	2004.8	1794.6	1615.5	1464.1	1423.8	1311.4	1331.9	1360.3	1530.5	1708.7
42.5°	2346.5	2296.3	2015.4	1865.3	1679.3	1583.4	1510.1	1500.5	1635.6	1837.2	2021.3
45°	2690.6	2536.9	2312.2	2180.3	1964.8	1868.6	1809.5	1844.8	1966.5	2260.9	2383.6
47.5°	2979.5	2838.0	2645.0	2444.7	2218.6	2326.7	2215.7	2159.8	2326.7	2631.1	2794.0
50°	3227.7	3070.0	2874.7	2726.3	2689.6	2793.4	2568.6	2589.1	2697.5	3055.1	3147.0
52.5°	3408.1	3242.2	3071.7	2999.9	3150.3	3202.5	3089.8	3044.6	3143.1	3416.7	3461.3
55°	3543.9	3374.1	3240.9	3339.7	3630.5	3613.4	3653.0	3498.3	3592.5	3793.8	3772.7
57.5°	3552.2	3350.9	3272.9	3431.9	3831.2	4097.2	4213.2	3950.1	4003.7	4088.6	4041.0
60°	3292.4	3092.2	3085.9	3311.6	3889.3	4222.5	4476.3	4348.1	4276.3	4339.5	4249.2
62.5°	2774.9	2634.7	2700.2	2949.7	3672.8	4153.4	4616.4	4770.8	4491.5	4505.7	4377.5
65°	2118.8	1971.8	2074.2	2388.5	3199.6	4076.1	4656.1	4936.0	4487.5	4553.0	4254.5
67.5°	1403.3	1318.0	1434.0	1780.4	2543.9	3598.1	4635.6	4762.5	4345.1	4368.2	3798.1
70°	724.5	703.6	797.5	1070.8	1710.3	2764.3	4434.3	4364.9	4055.9	3763.1	2929.5
72.5°	232.0	233.0	323.2	489.1	922.1	1682.9	3408.4	3503.6	3245.5	2752.7	1788.7
75°	102.8	101.1	135.2	205.2	384.4	754.5	2117.5	2220.3	2020.7	1514.3	751.9
77.5°	74.0	71.7	86.6	120.0	190.4	255.8	992.8	1071.5	916.1	524.8	172.2
80°	52.2	51.9	62.8	84.3	119.0	113.7	313.6	351.7	281.6	127.2	50.6
82.5°	29.4	30.4	43.6	59.5	72.4	56.8	88.2	97.2	94.9	67.8	22.1
85°	14.2	15.9	28.4	43.0	38.0	22.1	31.4	34.0	39.7	39.3	11.2
87.5°	0.0	0.0	11.6	19.5	10.2	3.3	9.6	10.9	10.6	12.6	2.6
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°	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0	235.0
2.5°	282.6	280.6	255.5	257.5	263.1	260.8	262.7	258.1	252.8	274.3	274.0
5°	357.3	342.4	334.5	327.2	328.5	313.6	322.2	326.2	325.5	337.8	341.1
7.5°	422.7	402.9	387.0	371.8	348.7	327.9	340.7	349.0	354.6	375.8	384.0
10°	453.4	437.3	431.0	401.2	384.7	371.8	356.3	345.0	349.7	344.1	349.7
12.5°	520.9	510.0	485.8	455.8	435.9	409.5	351.7	303.4	273.7	274.0	272.0
15°	582.3	581.7	545.7	495.7	438.2	362.9	272.7	211.9	183.8	175.8	173.2
17.5°	662.7	652.7	587.0	513.3	409.8	280.9	185.7	145.1	142.4	147.1	145.1
20°	713.9	699.3	607.5	487.8	337.8	190.0	140.1	128.6	136.5	143.1	141.5
22.5°	765.1	743.3	623.0	456.8	240.3	139.1	126.6	124.6	129.6	137.8	139.1
25°	793.2	788.9	653.4	398.6	164.6	122.0	122.0	121.3	122.9	128.9	127.9
27.5°	874.8	816.7	630.6	311.0	127.2	112.0	113.7	113.0	107.1	113.0	113.4
30°	925.7	899.0	632.2	221.4	112.0	99.1	103.4	98.2	89.2	94.2	93.2
32.5°	1028.2	961.4	627.3	149.4	102.1	94.5	87.9	80.3	73.7	75.7	74.0
35°	1147.5	1096.6	560.2	120.0	95.2	83.6	73.0	65.4	58.5	60.2	59.8
37.5°	1384.8	1223.2	504.7	108.1	90.6	76.7	64.4	53.9	50.2	51.2	52.2
40°	1604.6	1434.4	401.2	102.8	82.6	68.4	53.2	45.6	43.3	44.0	44.9
42.5°	1933.1	1602.3	303.1	97.5	74.7	57.8	44.3	39.3	37.0	38.3	39.0
45°	2251.0	1745.0	226.4	92.9	68.1	49.9	37.3	34.0	31.4	32.4	33.7
47.5°	2568.6	1903.7	168.9	85.6	60.8	43.0	32.1	29.7	28.1	28.4	30.1
50°	2852.9	1977.7	132.9	76.7	54.9	37.3	29.1	26.8	26.1	26.4	27.8
52.5°	3061.7	1978.4	112.0	68.7	49.2	33.0	27.4	24.8	24.5	25.1	26.4
55°	3250.5	1925.5	97.2	61.8	44.3	30.1	26.1	23.8	23.8	24.5	25.8
57.5°	3375.7	1828.3	84.3	54.5	40.0	28.4	25.1	22.8	22.5	22.1	23.1
60°	3436.9	1695.8	71.4	47.9	36.0	27.4	24.5	20.2	19.8	19.2	19.8
62.5°	3398.2	1529.9	59.8	41.3	32.1	26.1	21.5	17.5	16.9	15.5	16.5
65°	3200.6	1328.3	50.6	35.4	27.8	22.1	18.2	14.9	13.2	11.6	11.2
67.5°	2796.4	1079.1	42.3	30.4	23.8	18.2	14.9	13.2	10.2	8.9	8.6
70°	2095.7	736.7	35.0	26.1	19.8	15.5	12.6	11.9	9.6	8.6	7.9
72.5°	1229.5	397.6	29.4	22.8	16.9	12.9	10.2	10.9	9.6	7.9	7.3
75°	491.1	132.2	23.5	18.2	13.6	9.3	8.6	8.9	8.6	7.3	5.9
77.5°	112.0	41.6	18.2	14.2	10.6	5.9	6.9	7.6	7.6	5.9	4.3
80°	35.0	16.5	10.6	8.9	7.6	3.3	5.0	5.3	3.6	1.7	0.0
82.5°	11.2	4.6	3.6	3.6	3.3	0.7	1.0	0.7	0.0	0.0	0.0
85°	4.3	3.0	2.3	2.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.7	1.3	1.0	1.3	0.7	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)