

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: P367933

Luminaire Tested: **MSA-SA3C-727-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367933
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-727-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11483 lumens
Efficiency: N/A
Efficacy: 69.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

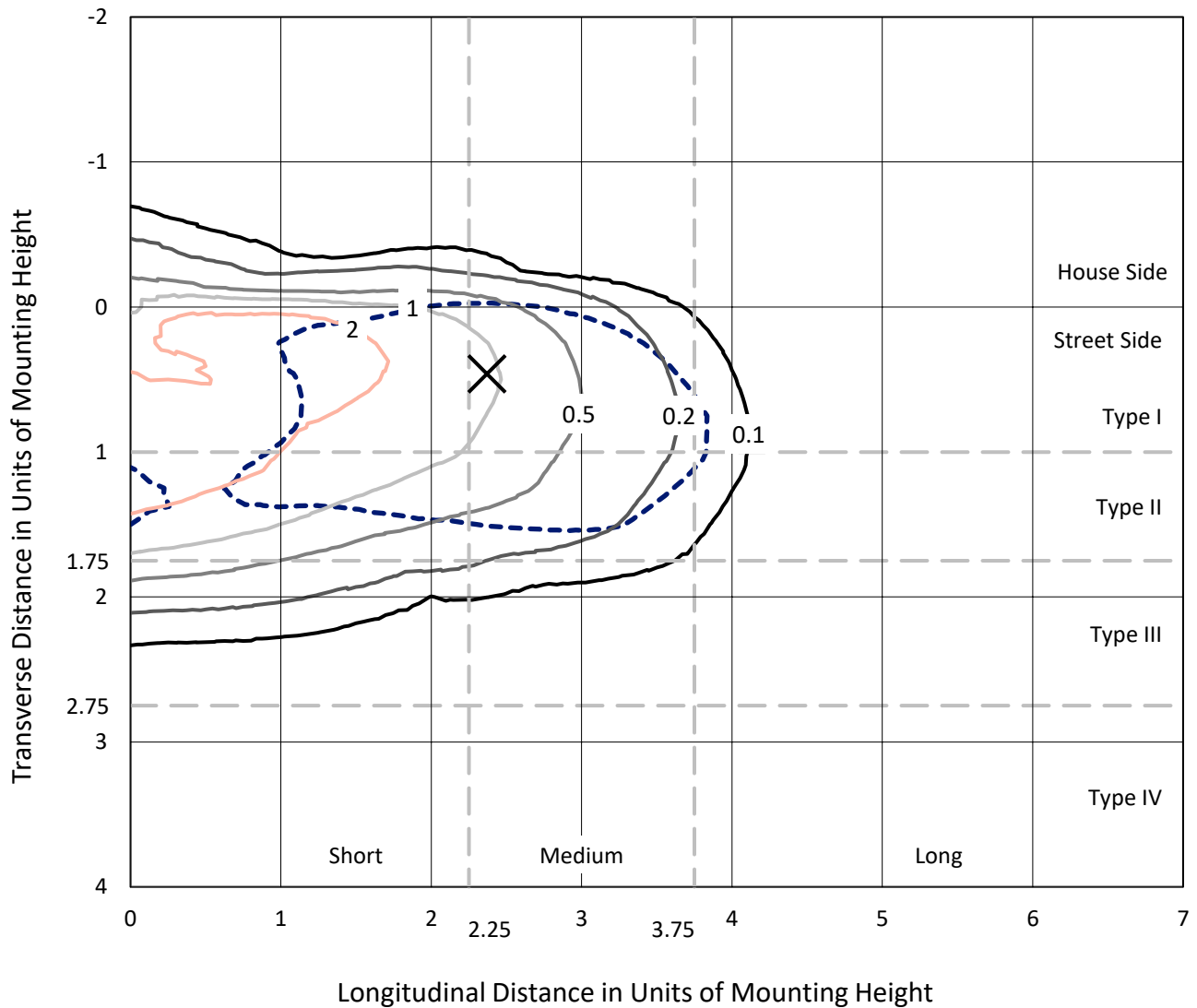
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

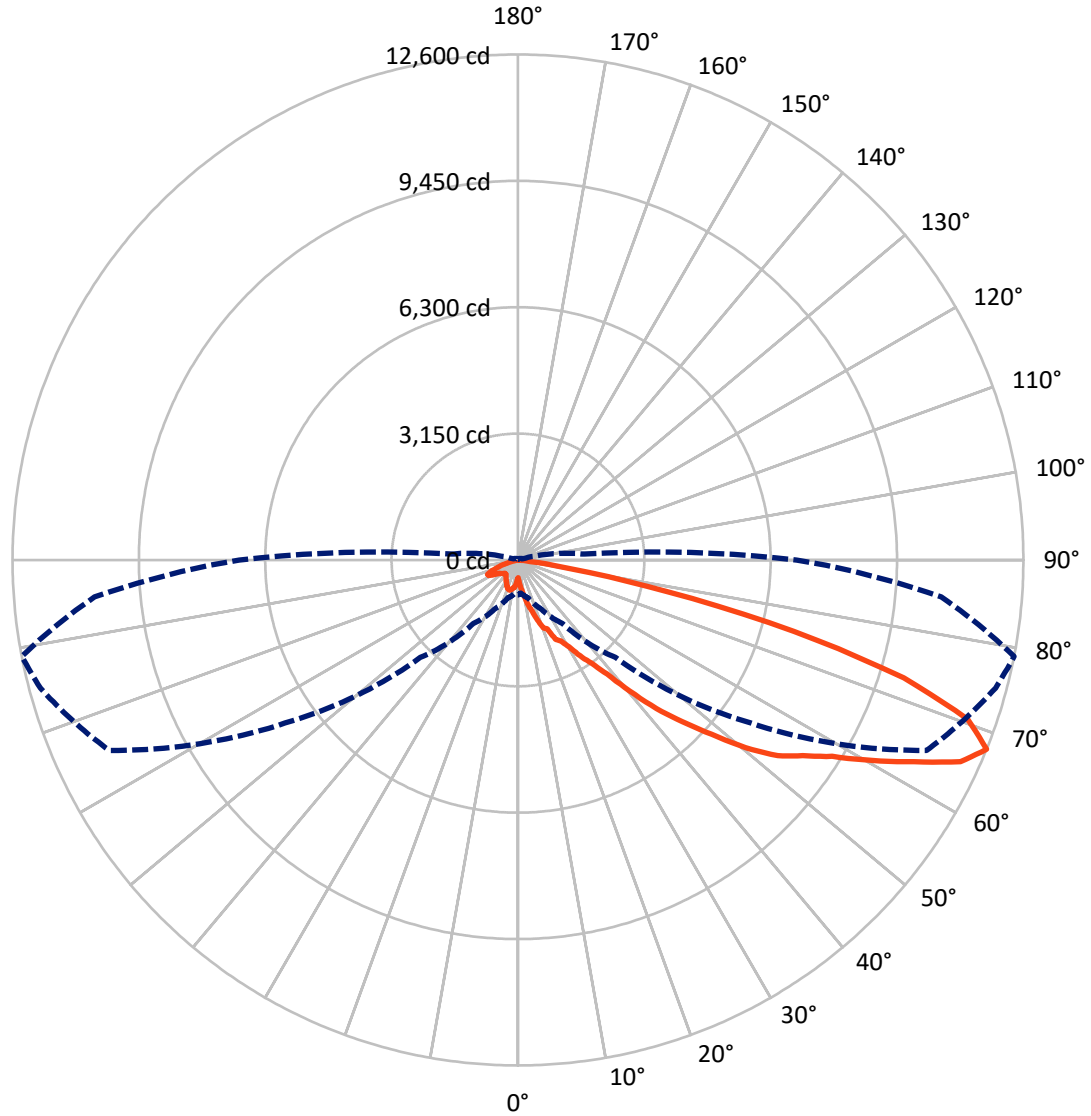
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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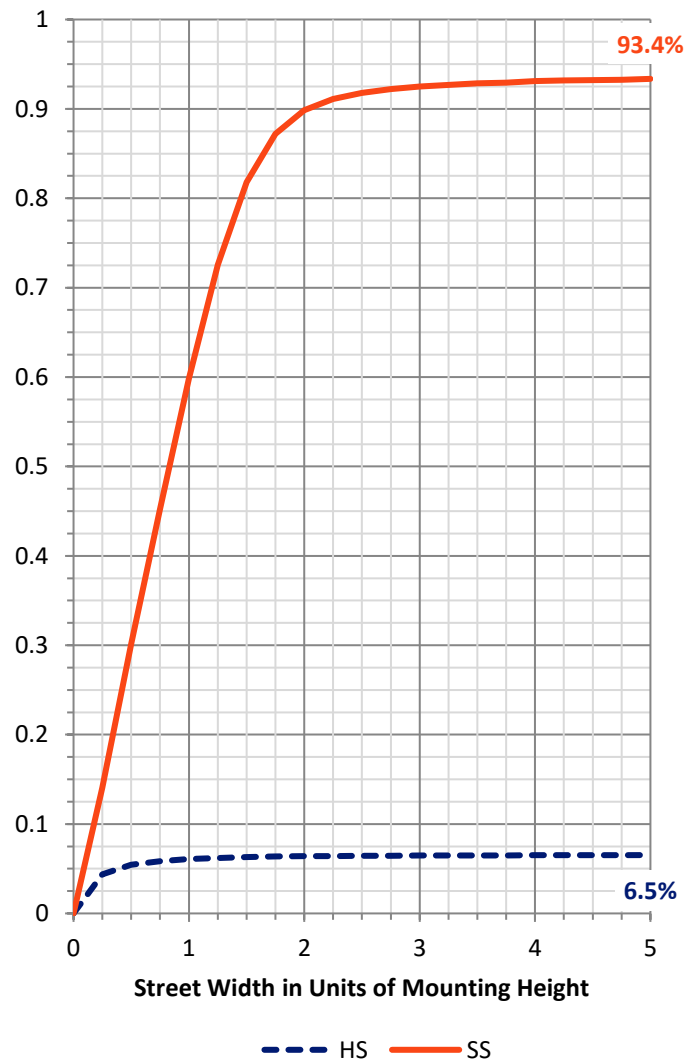
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	754.5	0.0	754.5
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	10728.5	0.0	10728.5
	% Fixture	93.4	0.0	93.4
Total	Lumens	11483.0	0.0	11483.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.3	0.6
10°-20°	256.6	2.2
20°-30°	495.0	4.3
30°-40°	972.4	8.5
40°-50°	1947.9	17.0
50°-60°	3113.5	27.1
60°-70°	3132.7	27.3
70°-80°	1413.2	12.3
80°-90°	87.4	0.8
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°	11483.0	100.0
0°-180°	11483.0	100.0

Coefficient of Utilization



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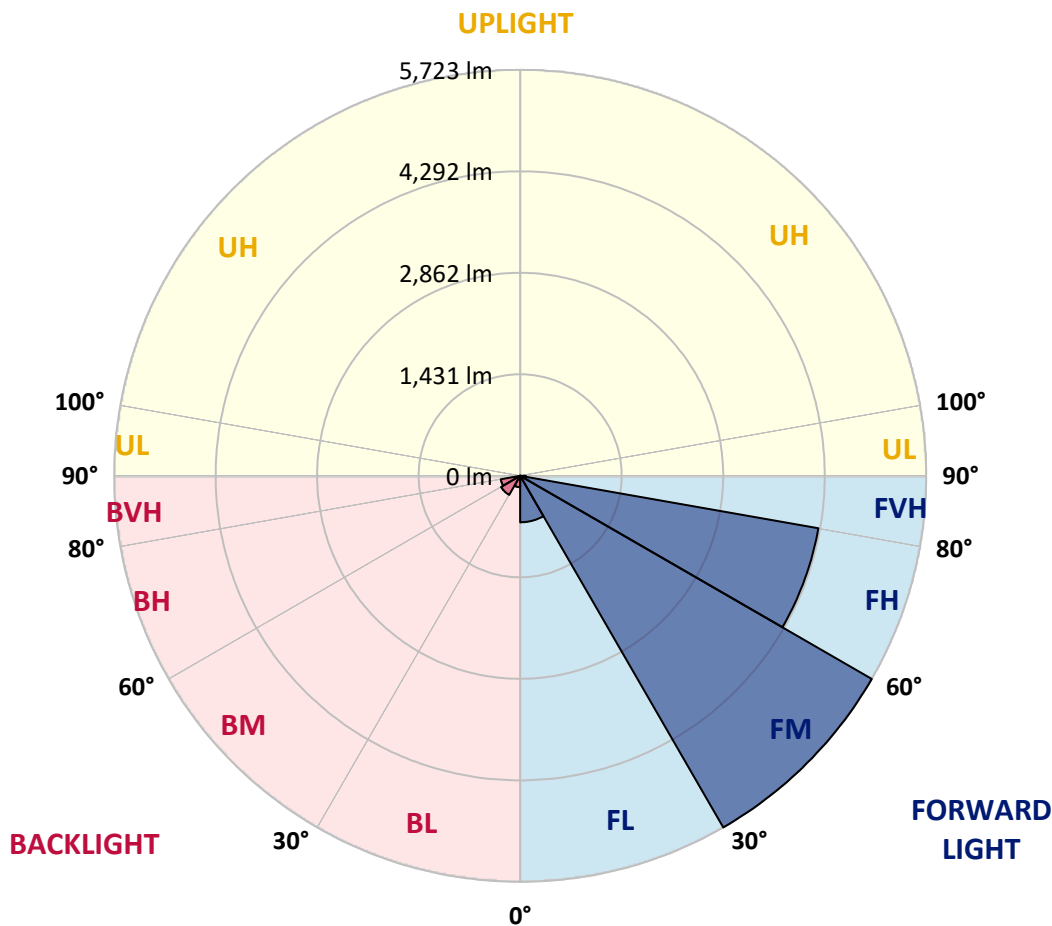
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	655.6	5.7			
FM (30°-60°)	5723.3	49.8			
FH (60°-80°)	4267.8	37.2			G2/5000
FVH (80°-90°)	81.9	0.7			G1/100
BL (0°-30°)	160.4	1.4	B1/500		
BM (30°-60°)	310.4	2.7	B1/1000		
BH (60°-80°)	278.1	2.4	B1/500		G1/500
BVH (80°-90°)	5.6	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5
2.5°	597.6	576.0	541.2	560.8	559.6	569.7	550.7	529.8	496.3	529.8	532.4
5°	860.3	820.4	795.1	790.0	762.1	736.2	730.5	709.0	692.5	662.8	689.3
7.5°	1071.7	1053.3	1008.4	1003.3	934.9	897.0	909.0	899.5	836.8	805.8	831.8
10°	1161.6	1129.9	1136.2	1129.9	1100.8	1111.6	1086.9	1058.4	1008.4	957.1	892.5
12.5°	1196.4	1191.3	1243.9	1237.5	1305.9	1388.2	1333.1	1285.6	1169.8	1157.1	1069.1
15°	1271.1	1302.7	1295.1	1321.7	1365.4	1505.3	1504.0	1515.4	1392.6	1326.8	1199.5
17.5°	1337.5	1361.0	1323.0	1353.4	1472.4	1557.2	1670.5	1626.2	1640.1	1573.0	1376.2
20°	1309.1	1335.6	1297.7	1279.3	1488.8	1649.6	1800.9	1768.6	1852.2	1810.4	1538.8
22.5°	1486.9	1436.9	1341.3	1281.8	1438.2	1647.7	1847.1	1981.9	1967.4	1864.8	1690.1
25°	1706.6	1676.2	1561.6	1456.5	1470.5	1636.3	1992.7	2190.8	2233.9	2190.2	1833.8
27.5°	2002.8	1995.9	1761.7	1716.1	1580.6	1586.3	2015.5	2454.2	2356.0	2287.7	2001.6
30°	2389.6	2334.5	2056.6	1997.1	1797.1	1699.0	2154.7	2681.4	2609.2	2516.2	2159.2
32.5°	2805.5	2813.7	2459.2	2263.0	2102.2	1985.7	2099.7	2787.8	2922.6	2847.3	2356.0
35°	3277.7	3314.4	2880.8	2650.4	2337.7	2166.1	2336.4	3114.4	3356.2	3158.1	2620.0
37.5°	4005.0	4003.8	3497.3	3038.4	2811.2	2625.1	2730.8	3411.3	3889.2	3610.7	3093.5
40°	4645.0	4505.7	4034.8	3507.5	3153.0	3102.4	3025.8	3817.6	4458.2	4290.5	3514.4
42.5°	5122.9	5024.8	4455.7	4045.5	3606.2	3445.4	3418.2	4413.3	5298.2	5063.4	4115.2
45°	5694.5	5372.9	4953.9	4584.2	4136.7	4089.8	4025.9	5017.8	6275.6	5746.4	4637.4
47.5°	6206.6	5904.0	5507.8	5033.0	4519.0	4905.1	4659.5	5548.9	6986.5	6489.6	5213.4
50°	6637.7	6316.1	5872.4	5510.9	5290.6	5552.7	5143.2	5986.3	7754.3	7351.7	5752.1
52.5°	6857.3	6493.4	6150.3	5926.8	6061.6	6002.8	5799.0	6516.1	8408.8	8107.5	6229.4
55°	6676.9	6321.2	6177.5	6288.3	6697.8	6527.5	6544.0	7337.2	9026.6	8611.4	6644.6
57.5°	5876.8	5552.1	5616.0	5919.2	6704.1	7149.8	7393.5	8134.7	9522.3	9239.3	7285.2
60°	4445.6	4184.2	4420.9	4959.0	6073.7	7025.7	7996.1	8932.3	10230.6	10142.0	8255.0
62.5°	2715.0	2573.2	2908.7	3579.6	4839.9	6417.4	8347.4	9995.8	10988.3	11082.6	9283.6
65°	1385.0	1321.1	1600.9	2190.8	3270.1	5271.7	8093.6	10656.6	11771.3	12119.5	10264.2
67.5°	872.3	831.1	980.5	1336.3	1929.4	3438.5	7086.5	11234.6	12324.6	12599.9	10591.4
70°	604.5	578.6	707.7	917.2	1217.3	1852.2	5261.5	10695.2	11885.9	11898.6	9799.5
72.5°	383.6	363.3	489.3	679.2	898.2	956.5	3016.3	8392.4	10174.3	10057.2	7936.0
75°	248.8	238.6	310.8	497.5	690.0	590.0	1490.7	5662.9	7295.4	7111.8	5271.0
77.5°	178.5	172.2	208.3	332.3	491.2	412.7	668.5	3375.2	4182.9	3781.6	2558.6
80°	107.6	107.0	150.7	208.3	349.4	291.2	308.9	1532.5	1621.8	1322.3	781.8
82.5°	53.8	55.7	84.2	134.2	224.7	190.5	141.2	510.2	435.5	320.9	158.3
85°	12.7	15.8	44.3	92.4	112.7	76.0	67.1	133.6	119.6	90.5	46.2
87.5°	0.0	0.0	13.9	22.2	30.4	12.7	22.8	25.3	32.3	25.3	9.5
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°	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5	442.5
2.5°	533.0	525.4	479.2	467.2	465.9	452.6	455.8	443.1	443.7	472.2	472.2
5°	679.2	634.9	590.6	551.3	524.8	486.8	472.9	467.2	462.1	473.5	480.5
7.5°	797.6	732.4	652.6	567.2	488.0	433.6	426.0	412.1	407.0	418.4	427.3
10°	850.1	769.1	659.6	534.9	460.8	416.5	379.8	360.2	356.4	355.7	358.9
12.5°	961.5	860.9	667.2	522.9	442.5	393.7	352.0	319.0	288.6	291.8	288.6
15°	1050.8	931.8	667.2	493.7	398.2	349.4	276.0	259.5	255.1	262.1	256.4
17.5°	1185.6	1002.0	633.6	441.8	360.2	271.6	243.7	242.4	251.3	261.4	255.1
20°	1266.6	1011.5	577.3	382.3	295.6	235.5	225.3	215.2	227.9	236.1	232.9
22.5°	1350.8	1012.2	521.0	350.7	238.0	214.6	198.1	189.9	191.8	199.4	200.7
25°	1386.9	987.5	468.4	308.9	215.9	191.8	174.7	165.8	162.7	166.5	165.2
27.5°	1485.0	940.0	411.5	263.3	205.1	170.3	154.5	143.7	134.2	140.5	141.8
30°	1499.0	924.8	380.4	234.2	191.2	150.7	136.7	125.3	118.4	127.2	127.2
32.5°	1543.3	841.3	364.6	222.2	176.6	139.3	120.3	112.0	110.8	116.5	117.1
35°	1611.6	804.5	341.2	212.7	163.3	126.0	108.2	104.4	103.2	107.6	107.6
37.5°	1843.3	759.0	315.2	204.5	151.9	119.0	105.1	98.7	99.4	103.2	105.7
40°	1997.1	764.7	276.6	194.3	138.6	112.7	98.7	94.3	93.7	95.6	97.5
42.5°	2282.6	769.1	259.5	183.6	128.5	105.1	92.4	89.3	86.7	88.6	90.5
45°	2601.6	792.5	250.7	174.7	122.8	100.6	86.7	84.8	79.1	80.4	82.9
47.5°	2909.3	878.0	239.9	162.0	117.7	98.1	81.0	76.6	72.8	72.2	74.7
50°	3258.7	960.9	227.9	148.1	112.7	94.3	75.3	68.4	65.8	65.8	67.7
52.5°	3571.4	1040.0	216.5	138.6	108.9	87.4	70.3	63.3	61.4	61.4	63.9
55°	3900.6	1122.9	206.4	129.8	103.8	80.4	65.8	59.5	58.9	57.6	59.5
57.5°	4481.7	1304.0	193.7	122.2	96.8	74.7	62.0	55.7	54.4	52.5	54.4
60°	5328.0	1581.9	177.2	114.6	88.6	70.9	58.9	51.3	49.4	46.2	46.8
62.5°	6155.3	1806.6	158.3	105.1	81.0	67.1	53.8	46.2	43.0	39.2	39.9
65°	6864.3	1895.2	138.0	93.7	73.4	58.2	46.8	40.5	36.1	31.0	30.4
67.5°	6947.9	1673.7	118.4	82.9	65.8	49.4	39.9	36.1	29.1	24.7	23.4
70°	6252.8	1247.0	98.7	73.4	57.0	41.8	34.2	31.7	27.2	23.4	21.5
72.5°	4979.2	920.4	82.9	65.2	50.0	35.4	29.1	29.8	27.2	22.8	20.3
75°	3292.9	526.7	67.7	54.4	41.8	28.5	26.6	26.6	26.0	21.5	19.0
77.5°	1584.4	227.2	51.9	43.0	33.5	21.5	24.1	24.1	24.7	19.6	15.8
80°	449.4	68.4	32.3	29.1	24.7	14.6	19.0	18.4	16.5	11.4	7.0
82.5°	80.4	26.6	14.6	15.2	13.9	5.7	10.8	10.1	8.2	4.4	0.6
85°	22.2	10.1	8.2	8.9	7.0	1.9	4.4	5.7	4.4	2.5	0.0
87.5°	5.7	4.4	5.7	6.3	5.1	0.6	1.9	0.6	1.9	0.6	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)