

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: P366977

Luminaire Tested: **MSA-SA1C-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366977
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-830-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4085 lumens
Efficiency: N/A
Efficacy: 69.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

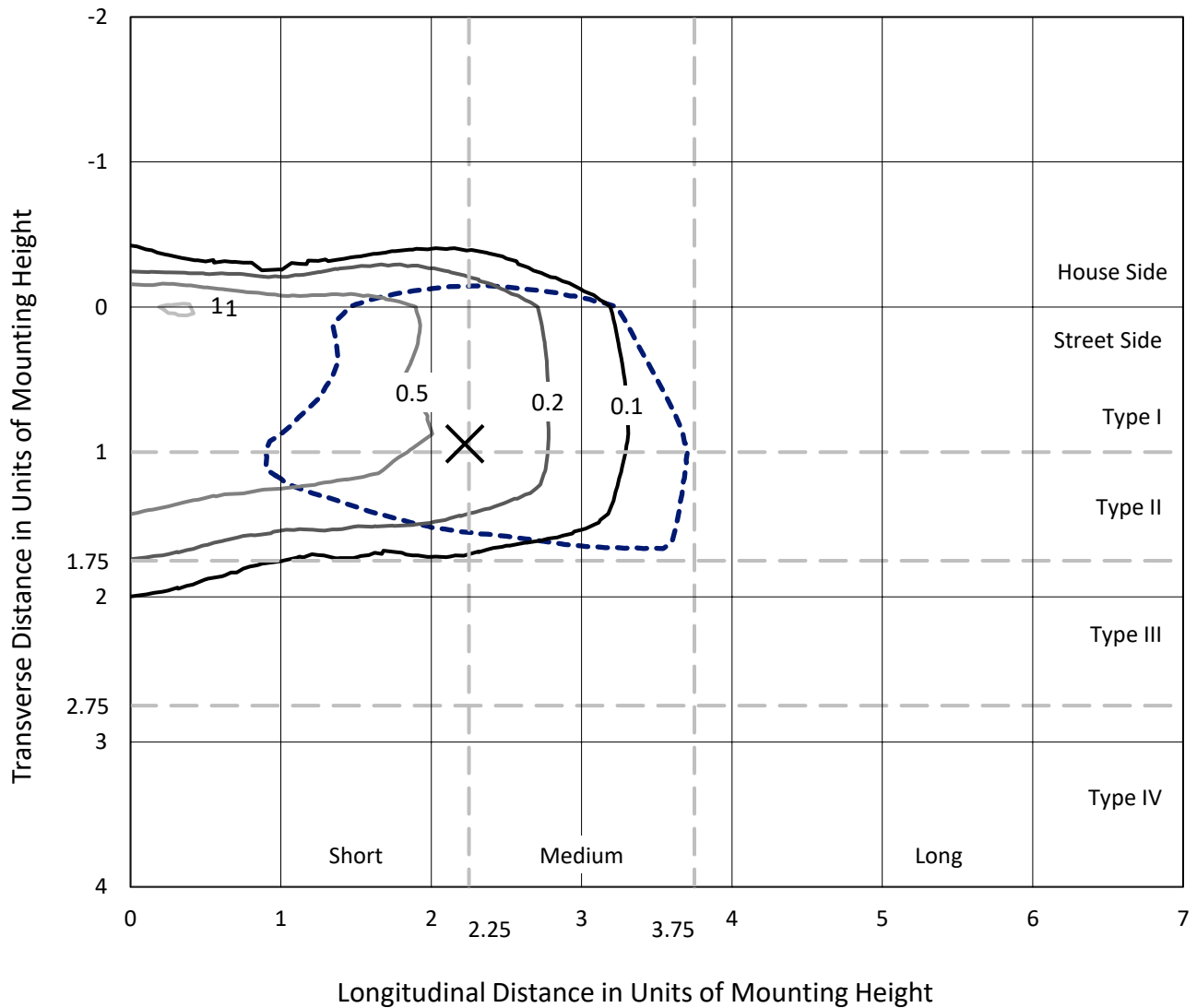
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

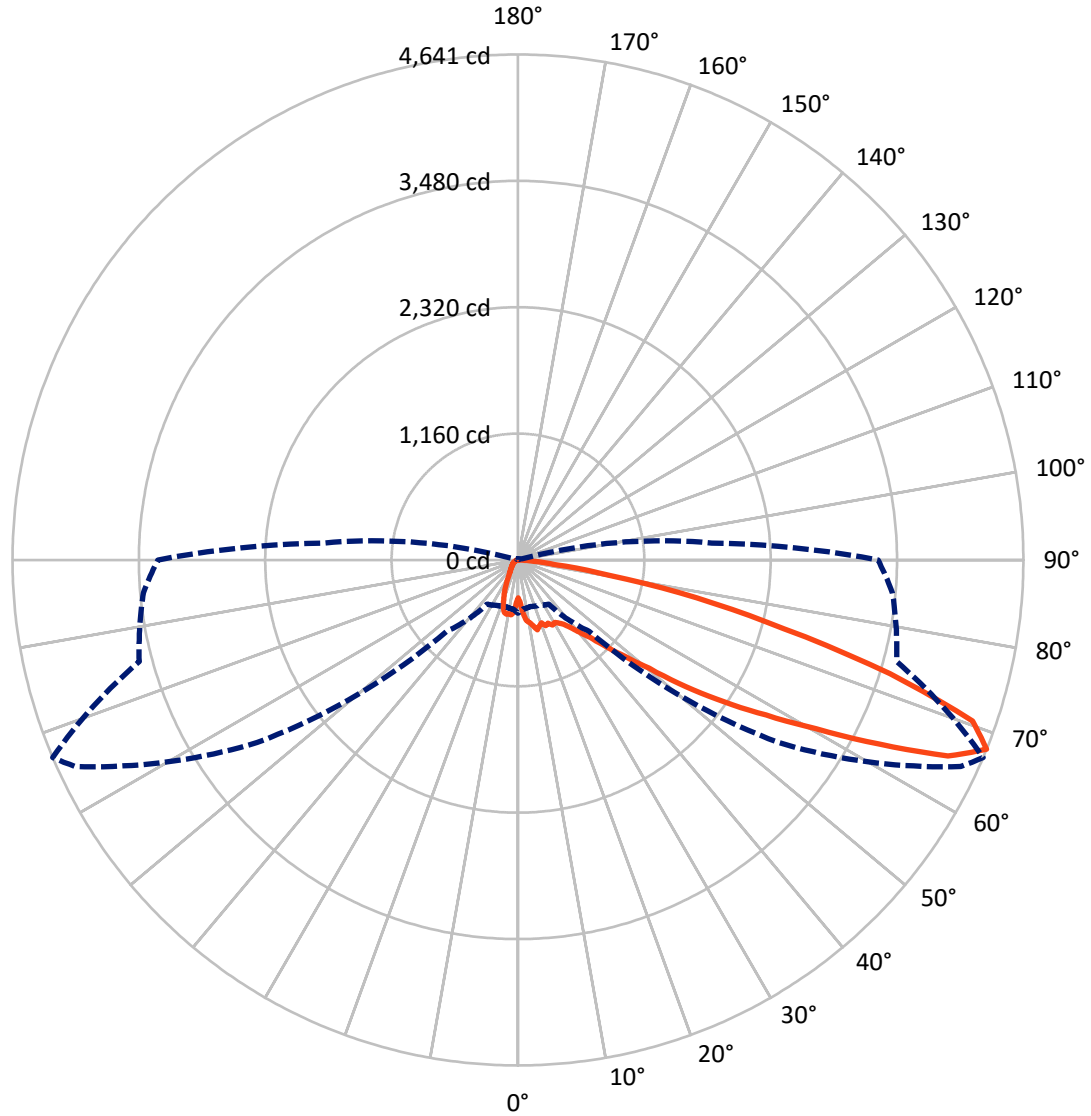
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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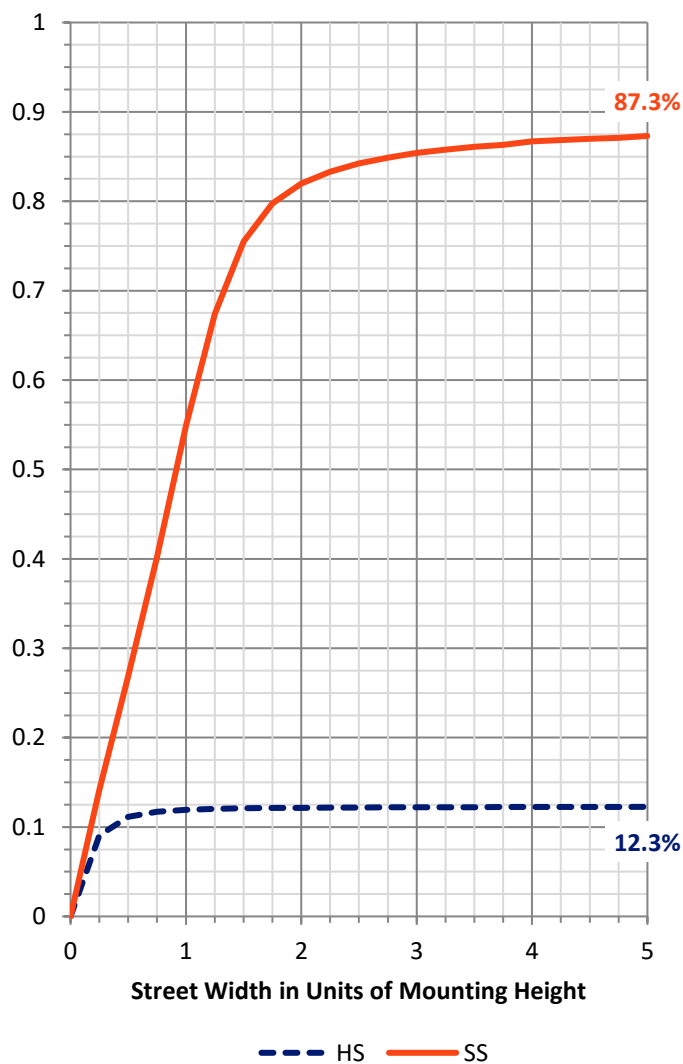
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	505.2	0.0	505.2
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	3579.8	0.0	3579.8
	% Fixture	87.6	0.0	87.6
Total	Lumens	4085.0	0.0	4085.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	1.1
10°-20°	129.2	3.2
20°-30°	202.5	5.0
30°-40°	326.5	8.0
40°-50°	600.0	14.7
50°-60°	1013.4	24.8
60°-70°	1120.3	27.4
70°-80°	586.4	14.4
80°-90°	63.0	1.5
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°	4085.0	100.0
0°-180°	4085.0	100.0

Coefficient of Utilization



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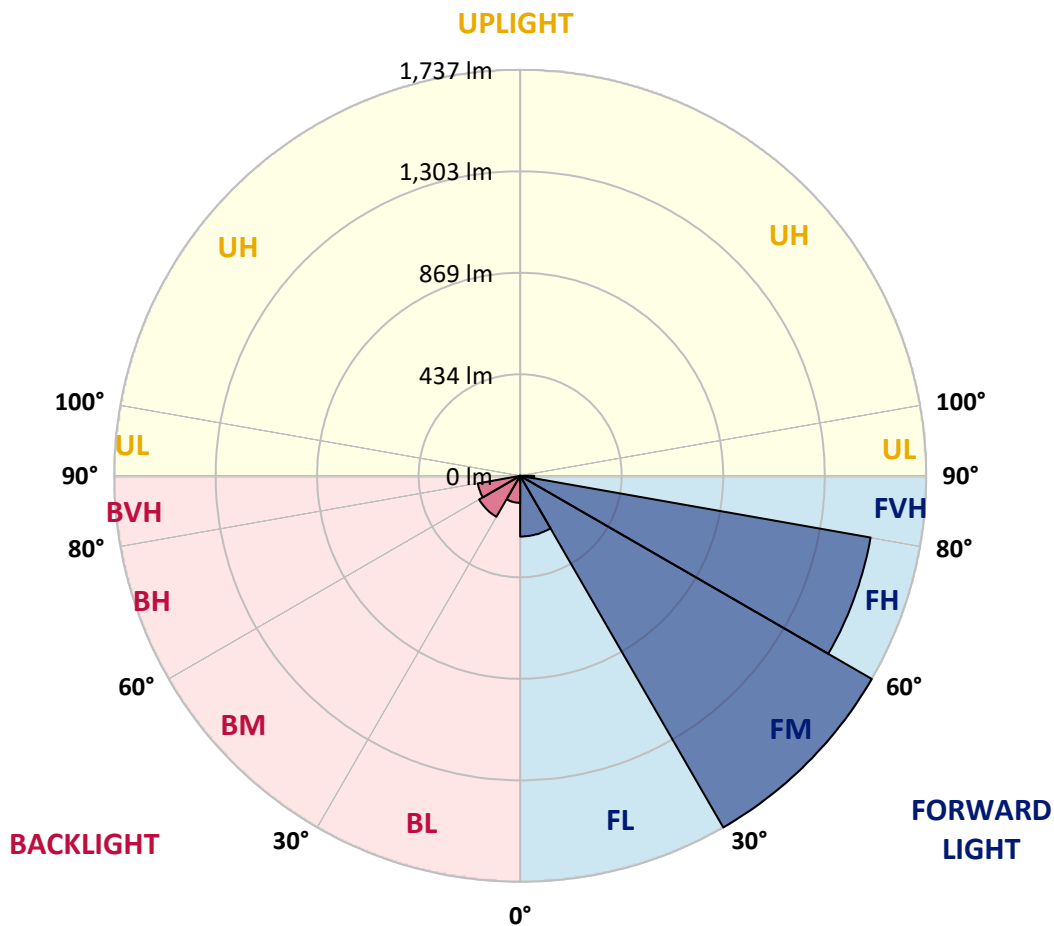
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	259.7	6.4			
FM (30°-60°)	1737.4	42.5			
FH (60°-80°)	1522.4	37.3			G1/1800
FVH (80°-90°)	60.3	1.5			G1/100
BL (0°-30°)	115.7	2.8	B1/500		
BM (30°-60°)	202.6	5.0	B0/220		
BH (60°-80°)	184.3	4.5	B1/500		G1/500
BVH (80°-90°)	2.7	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9
2.5°	410.7	396.8	373.2	380.0	393.7	405.1	399.7	389.2	389.4	378.6	417.3
5°	477.9	459.2	445.5	450.3	449.7	449.3	474.7	484.5	488.6	506.5	532.8
7.5°	497.1	490.5	476.2	480.6	466.3	467.3	512.0	554.3	561.0	571.9	618.8
10°	489.7	476.8	482.0	482.0	482.2	505.4	535.5	575.9	584.0	626.2	631.2
12.5°	481.6	482.2	502.7	499.0	527.2	568.8	579.0	624.4	620.4	657.1	711.6
15°	511.6	527.4	514.1	519.3	522.0	570.9	587.3	647.6	665.0	711.4	746.8
17.5°	563.2	565.3	537.7	530.3	549.8	563.6	596.6	625.6	637.2	759.1	809.2
20°	572.6	585.8	557.8	514.7	556.0	575.0	598.0	611.9	616.9	773.8	844.4
22.5°	628.7	614.0	569.2	536.5	548.3	569.0	583.3	625.2	655.0	746.0	878.2
25°	657.5	653.6	610.9	582.9	570.9	569.2	602.0	633.7	643.2	774.8	886.5
27.5°	726.5	717.6	634.9	631.4	591.8	557.0	602.6	659.6	677.4	747.7	917.6
30°	820.4	817.1	707.0	704.8	641.8	579.2	636.2	675.5	664.8	761.5	938.3
32.5°	914.9	941.8	829.3	765.1	717.8	660.6	626.6	670.6	689.8	795.3	976.4
35°	1029.1	1048.5	934.0	887.3	782.3	698.8	689.8	718.0	726.3	835.5	1019.7
37.5°	1228.8	1199.4	1101.8	1022.4	967.3	834.9	791.0	768.6	787.9	890.0	1108.2
40°	1376.4	1357.7	1237.5	1190.1	1063.3	985.8	871.0	850.0	871.6	946.0	1169.8
42.5°	1554.4	1515.6	1402.5	1370.4	1239.8	1090.4	973.9	981.2	967.7	1056.4	1277.7
45°	1715.4	1627.9	1564.9	1572.2	1502.6	1300.7	1145.7	1142.2	1131.0	1216.4	1391.3
47.5°	1823.8	1747.3	1686.0	1665.9	1657.6	1670.6	1394.0	1331.4	1323.1	1384.5	1570.1
50°	1882.0	1798.3	1722.4	1726.6	1894.8	2021.5	1650.1	1561.2	1564.3	1628.4	1814.7
52.5°	1842.8	1748.1	1668.1	1745.9	2078.9	2255.4	2074.1	1861.5	1933.6	1917.2	2142.7
55°	1661.9	1579.7	1522.9	1661.9	2099.0	2507.2	2596.1	2313.4	2297.3	2260.0	2477.1
57.5°	1357.5	1286.6	1251.6	1398.3	1879.1	2710.1	3120.4	2824.2	2686.4	2530.2	2754.8
60°	1011.5	959.2	922.8	1000.3	1480.6	2513.0	3463.7	3305.6	3146.1	2790.7	3004.3
62.5°	749.1	706.6	667.9	674.9	1019.5	2161.3	3595.5	3815.6	3724.0	3065.7	3239.7
65°	597.8	559.1	531.9	516.4	631.4	1626.1	3412.1	4233.6	4339.2	3324.7	3409.6
67.5°	488.2	455.5	442.0	459.8	495.3	926.9	2922.3	4487.2	4640.6	3599.5	3451.5
70°	397.2	370.3	368.9	416.9	456.1	565.1	2149.5	4312.1	4427.5	3646.3	3200.6
72.5°	276.8	265.0	283.9	352.1	452.0	470.6	1234.4	3568.4	3572.5	3220.5	2632.6
75°	156.7	154.8	184.6	280.8	440.1	465.8	688.2	2521.7	2523.6	2435.7	1823.8
77.5°	86.2	80.6	107.5	189.8	378.0	455.1	443.9	1721.8	1677.7	1355.4	833.0
80°	39.8	37.5	58.2	121.6	276.4	430.4	355.8	946.4	853.3	441.6	203.3
82.5°	16.4	15.5	26.7	78.1	174.7	346.7	299.9	419.8	336.9	83.9	62.8
85°	2.9	3.1	11.0	47.2	97.8	159.8	243.1	199.3	146.5	23.2	34.4
87.5°	0.0	0.0	2.3	11.4	23.6	43.7	98.6	55.7	38.3	6.8	10.2
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°	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9	347.9
2.5°	425.0	421.5	385.8	387.5	390.0	387.7	387.3	377.4	368.2	398.3	397.9
5°	537.5	512.5	487.8	478.3	457.8	430.8	431.0	422.5	413.8	426.1	426.1
7.5°	617.7	583.1	551.8	496.1	441.8	392.7	388.3	376.7	363.5	379.4	382.5
10°	636.4	606.3	565.9	484.1	432.7	384.8	332.2	288.9	268.8	259.4	257.8
12.5°	693.8	671.4	581.1	490.5	416.5	335.5	249.3	197.9	162.9	160.2	156.5
15°	732.1	716.4	596.0	474.5	348.1	241.2	156.7	120.2	106.1	104.9	103.0
17.5°	791.6	764.2	581.7	423.8	272.3	159.1	105.3	94.9	96.6	100.3	97.4
20°	815.8	762.4	550.6	350.2	191.3	106.7	91.4	85.8	90.1	93.7	92.0
22.5°	840.7	767.8	523.0	288.7	125.0	88.3	81.4	78.5	79.0	82.5	82.7
25°	840.5	782.7	491.1	224.8	93.0	78.5	73.6	69.8	68.4	70.9	70.2
27.5°	881.3	765.5	432.9	166.8	81.9	70.2	65.5	60.9	55.7	58.2	58.2
30°	881.5	793.5	392.3	119.8	75.0	62.6	58.4	51.4	45.4	47.5	47.7
32.5°	904.9	769.2	354.8	91.6	69.6	58.0	48.9	42.5	39.0	40.2	40.2
35°	931.7	789.9	297.2	80.8	64.2	51.6	41.9	36.7	34.0	35.0	35.0
37.5°	1020.0	785.6	257.2	75.2	60.7	46.6	38.1	32.3	31.1	31.7	32.5
40°	1051.9	816.5	202.9	71.9	54.9	42.1	33.6	29.2	27.6	28.0	28.2
42.5°	1133.1	823.3	162.0	69.2	49.7	36.5	29.8	26.7	24.7	24.7	25.3
45°	1222.8	840.5	128.9	66.9	45.4	32.7	26.9	24.5	21.3	20.9	21.8
47.5°	1352.8	906.4	105.1	62.4	40.2	30.5	24.9	21.1	18.7	17.8	18.7
50°	1570.1	1018.3	92.8	56.8	36.5	28.6	22.0	18.0	16.2	15.1	15.7
52.5°	1876.8	1211.6	86.4	51.6	33.2	25.7	19.7	15.7	13.9	13.1	13.5
55°	2217.5	1433.4	83.3	46.4	30.3	22.6	17.2	13.9	12.2	11.2	11.4
57.5°	2532.5	1641.8	80.2	41.4	27.4	20.1	15.1	12.2	10.6	9.5	9.7
60°	2842.9	1808.2	72.7	35.6	24.7	18.0	13.3	10.6	9.5	8.3	8.3
62.5°	3117.5	1907.7	62.0	30.9	22.2	16.0	11.8	9.5	8.7	7.5	7.5
65°	3304.4	1912.3	49.9	26.5	19.5	13.7	10.4	8.9	8.1	6.6	6.4
67.5°	3307.1	1787.9	40.0	23.6	17.2	12.0	9.3	8.5	7.5	6.2	5.8
70°	2960.0	1477.1	33.4	20.7	14.9	10.6	8.1	8.1	7.3	6.0	5.4
72.5°	2367.7	1128.7	28.0	18.0	13.3	9.1	7.5	7.7	7.0	6.0	5.4
75°	1591.5	647.4	23.2	15.3	11.6	7.7	7.3	7.5	7.3	6.0	5.2
77.5°	732.9	206.2	18.0	12.6	9.9	6.4	7.0	7.0	6.6	5.4	4.6
80°	165.2	50.8	13.1	9.3	8.1	4.8	6.4	5.8	5.2	3.7	2.7
82.5°	60.1	15.5	7.9	5.8	5.0	1.9	4.1	4.1	3.7	2.7	1.7
85°	34.4	8.1	4.4	3.7	2.7	0.8	2.3	2.5	2.1	1.9	0.8
87.5°	11.2	1.9	2.1	2.3	2.1	0.4	0.8	0.8	0.6	0.4	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)