

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: P596671

Luminaire Tested: **MSA-SA3A-827-U-T4W-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596671
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-827-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6501 lumens
Efficiency: N/A
Efficacy: 67.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

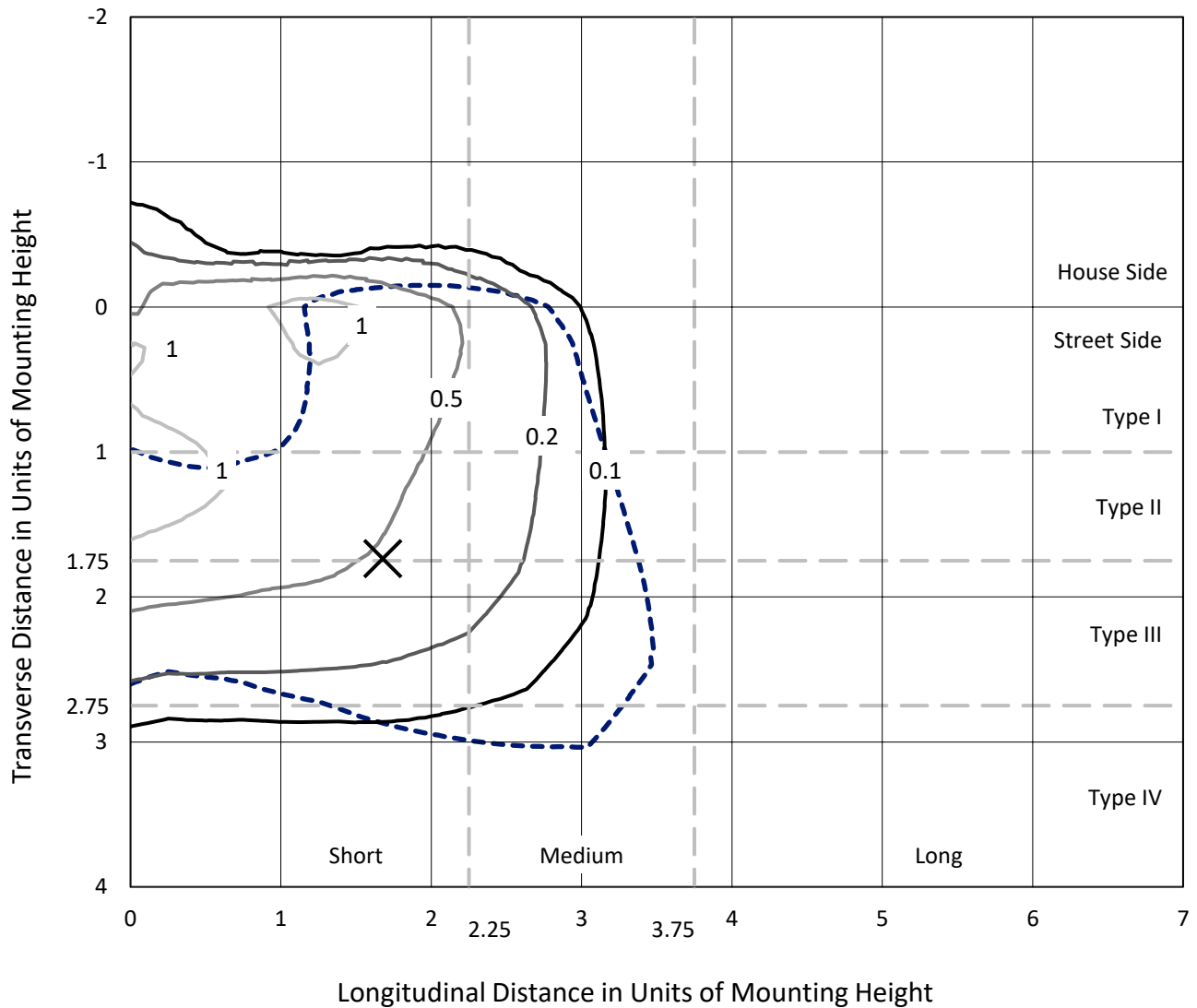
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

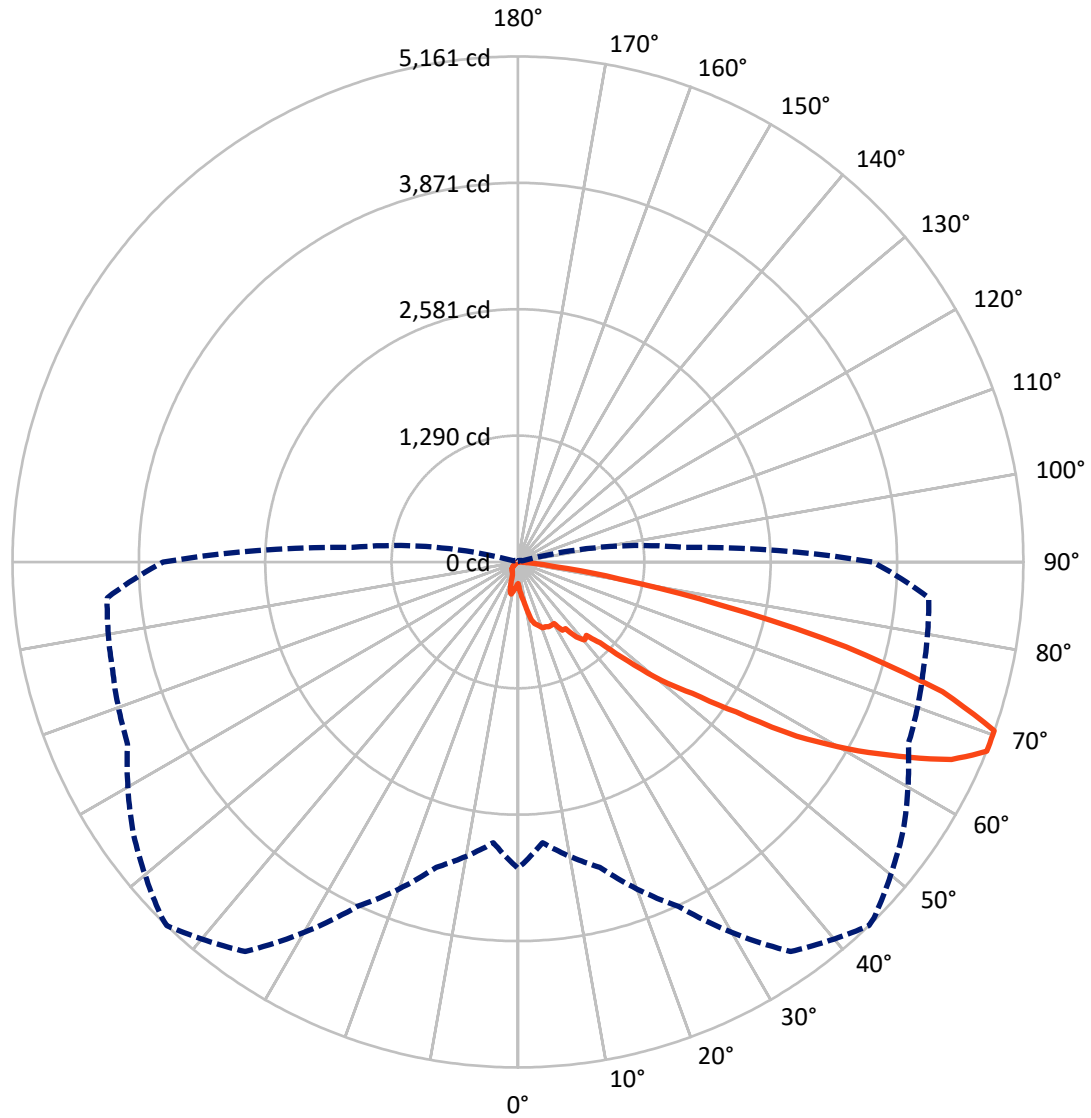
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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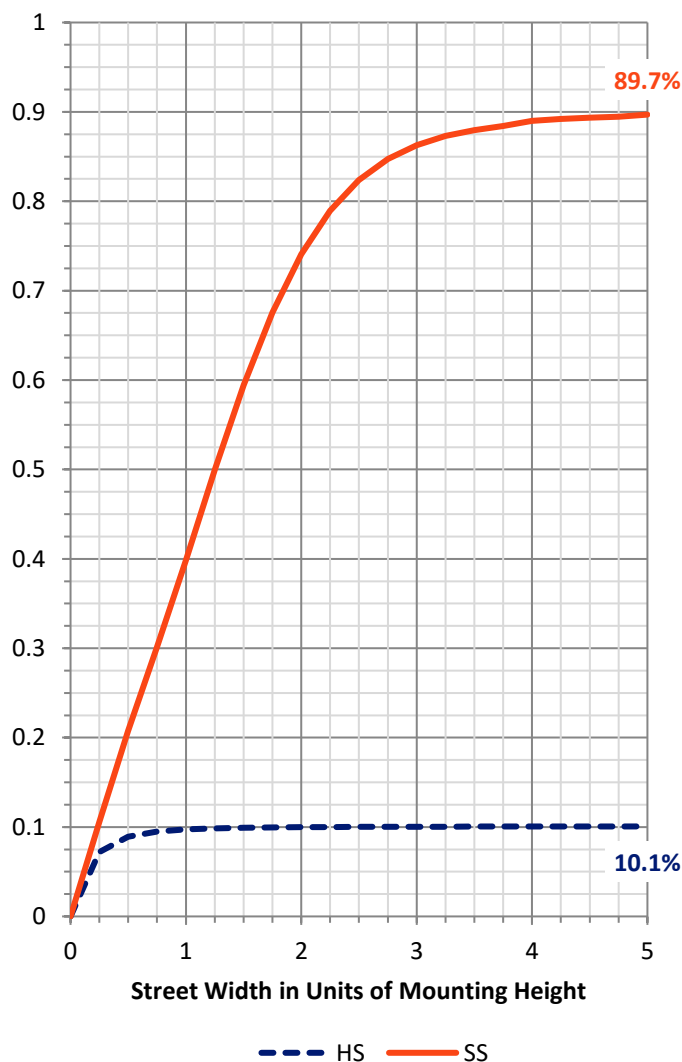
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	660.4	0.0	660.4
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	5840.6	0.0	5840.6
	% Fixture	89.8	0.0	89.8
Total	Lumens	6501.0	0.0	6501.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.5	0.5
10°-20°	135.9	2.1
20°-30°	240.8	3.7
30°-40°	391.3	6.0
40°-50°	783.1	12.0
50°-60°	1606.6	24.7
60°-70°	2207.0	33.9
70°-80°	1037.3	16.0
80°-90°	66.4	1.0
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°	6501.0	100.0
0°-180°	6501.0	100.0

Coefficient of Utilization

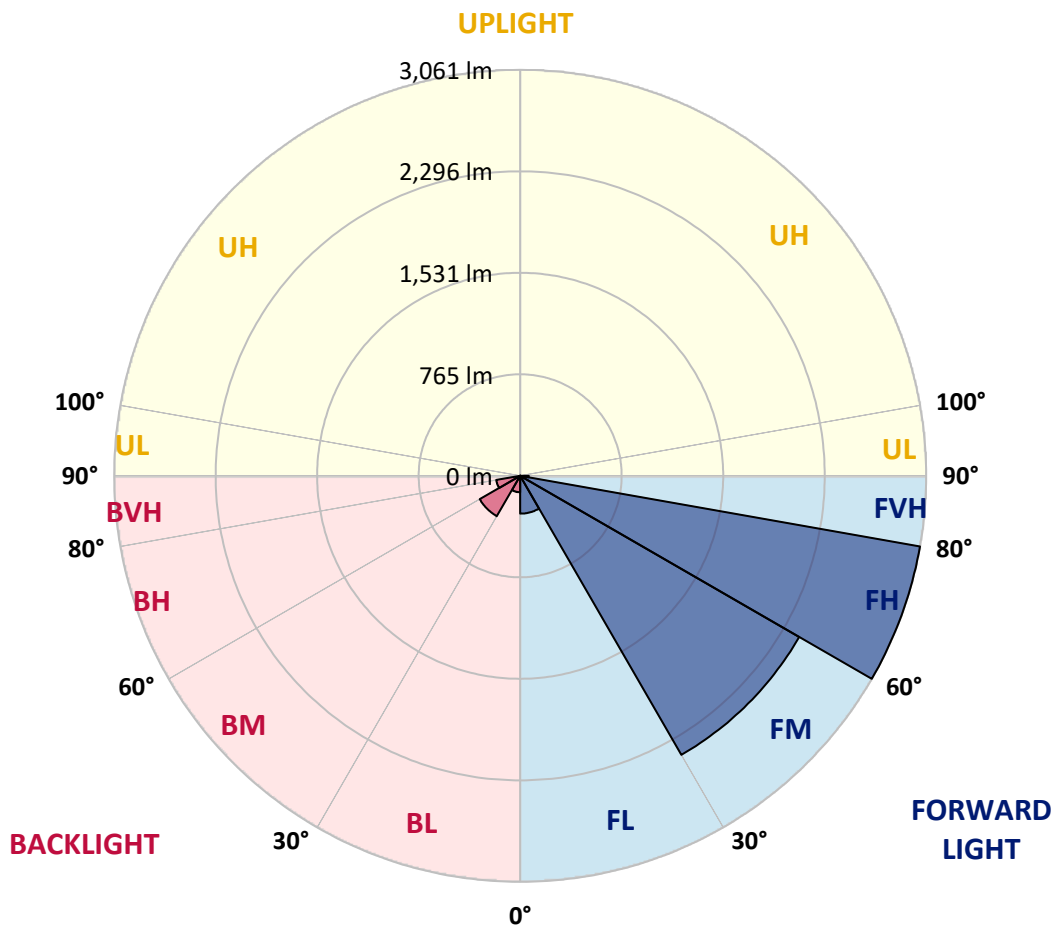


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	285.1	4.4			
FM (30°-60°)	2429.3	37.4			
FH (60°-80°)	3061.1	47.1			G2/5000
FVH (80°-90°)	65.1	1.0			G1/100
BL (0°-30°)	124.0	1.9	B1/500		
BM (30°-60°)	351.8	5.4	B1/1000		
BH (60°-80°)	183.3	2.8	B1/500		G1/500
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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0
2.5°	278.5	269.6	256.7	259.5	261.0	264.9	265.3	260.3	245.9	242.0	259.5
5°	390.4	368.5	364.6	356.3	339.8	330.9	328.7	337.7	326.2	322.6	327.3
7.5°	498.6	480.0	459.6	448.5	414.0	392.9	391.8	395.4	397.6	385.0	391.5
10°	570.7	550.3	546.0	519.8	490.0	485.0	482.9	469.3	458.1	448.8	417.6
12.5°	635.9	635.6	643.5	605.8	601.2	606.2	604.4	555.6	544.5	505.5	496.5
15°	722.7	744.2	710.1	678.6	638.5	655.7	651.0	619.8	612.3	585.8	547.4
17.5°	812.7	818.4	761.4	713.0	702.6	680.0	684.7	673.6	635.6	656.7	618.7
20°	814.8	827.4	766.4	686.5	718.4	717.3	717.7	706.9	656.7	706.2	671.4
22.5°	844.9	814.1	757.5	706.6	712.3	717.7	723.4	710.1	699.4	711.6	718.0
25°	832.7	820.6	766.1	732.4	727.0	731.3	732.7	749.6	742.8	772.2	756.0
27.5°	864.3	846.7	749.2	755.3	736.3	731.3	722.7	779.0	799.1	775.8	818.8
30°	918.4	915.9	778.3	787.2	772.5	728.4	751.4	824.9	850.0	835.6	888.0
32.5°	1003.0	1011.6	863.2	805.1	812.7	832.4	823.8	824.9	888.3	920.2	961.8
35°	1123.1	1118.5	946.0	873.3	833.8	837.1	849.2	907.7	989.8	987.6	1031.7
37.5°	1359.0	1308.1	1092.6	942.8	954.6	970.8	961.8	1040.3	1048.2	1051.1	1156.5
40°	1706.7	1639.0	1323.9	1089.4	975.4	1046.8	1042.5	1061.8	1114.5	1134.2	1288.0
42.5°	2164.9	2073.8	1730.7	1359.0	1075.8	1026.7	1053.2	1089.8	1266.9	1323.2	1491.6
45°	2671.0	2486.8	2136.5	1743.3	1327.5	1175.1	1195.2	1263.3	1508.8	1602.0	1788.1
47.5°	2999.0	2837.0	2538.4	2083.8	1589.9	1509.9	1511.7	1526.4	1793.1	1965.9	2215.4
50°	3284.0	3111.6	2834.5	2439.8	2054.1	1902.8	1868.4	1800.6	2155.2	2391.4	2668.2
52.5°	3686.3	3484.8	3130.6	2857.4	2583.6	2227.2	2215.1	2238.0	2582.1	2830.6	3132.4
55°	4049.0	3804.2	3466.1	3294.1	3187.2	2704.0	2714.4	2752.8	3130.3	3261.8	3545.4
57.5°	4209.3	3944.0	3770.1	3692.7	3635.7	3355.4	3320.2	3297.3	3562.6	3612.8	3978.1
60°	4314.3	4061.9	3983.1	4001.0	4173.8	3876.2	3844.3	3711.0	3920.3	3961.6	4365.9
62.5°	4248.0	4017.8	4034.7	4184.2	4567.8	4372.0	4279.9	4056.9	4212.9	4246.2	4644.5
65°	3830.4	3590.5	3807.1	4168.8	4868.2	4863.5	4820.8	4376.3	4374.9	4417.6	4666.0
67.5°	3128.8	2877.2	3227.4	3879.8	4855.6	5161.4	5141.3	4800.1	4398.2	4284.2	4210.7
70°	2175.3	1956.9	2354.1	3204.1	4422.9	5159.2	5127.0	5084.7	4213.9	3687.7	3264.7
72.5°	1130.3	1010.2	1380.1	2207.9	3525.7	4533.0	4639.5	4569.9	3598.1	2679.3	1922.5
75°	383.9	344.5	569.3	1171.9	2343.7	3461.5	3586.2	3515.6	2443.8	1437.5	760.3
77.5°	148.8	138.4	204.0	475.7	1175.8	2109.3	2244.8	2172.7	1310.6	526.6	178.9
80°	84.6	81.7	112.6	214.4	518.4	1049.3	1144.6	1038.2	472.5	177.4	46.6
82.5°	35.8	36.9	62.7	115.8	260.6	370.3	413.0	376.8	197.9	121.5	17.2
85°	7.9	9.7	29.8	64.5	109.3	105.8	110.8	123.0	121.5	89.3	7.5
87.5°	0.0	0.0	9.3	17.6	26.2	17.2	13.6	24.0	37.3	35.8	3.2
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°	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0	219.0
2.5°	262.8	259.2	236.6	235.2	236.6	232.7	232.3	224.1	224.8	243.4	244.8
5°	327.3	309.4	290.0	283.9	278.2	265.3	272.4	272.4	272.4	284.3	287.9
7.5°	385.7	361.7	334.5	311.5	289.3	273.2	284.3	292.2	296.8	312.2	319.4
10°	412.3	388.6	364.2	331.6	314.4	308.3	295.4	288.6	296.8	293.6	297.5
12.5°	468.9	447.4	405.4	371.7	358.8	338.0	300.0	273.5	256.0	253.1	252.4
15°	524.1	510.8	454.6	409.4	364.6	316.5	251.7	216.5	197.9	194.7	195.0
17.5°	594.0	575.0	492.2	427.3	351.3	264.9	194.3	164.2	162.8	170.6	171.4
20°	640.6	609.4	511.2	412.6	307.6	200.4	152.0	144.8	156.3	170.6	169.2
22.5°	685.1	651.4	536.3	399.7	238.4	152.0	139.8	140.5	150.2	165.6	169.6
25°	714.5	702.3	567.1	369.6	181.7	131.6	133.7	139.1	147.3	162.0	162.0
27.5°	803.0	746.0	563.5	311.2	139.8	122.6	127.6	134.4	138.7	156.3	158.1
30°	856.8	838.1	582.2	251.7	122.6	111.1	120.8	126.9	129.8	149.8	150.6
32.5°	922.7	881.5	604.8	185.7	114.0	110.4	108.3	112.9	121.2	138.7	139.8
35°	1003.0	990.8	572.5	145.9	111.1	103.2	98.9	101.4	106.8	118.7	121.2
37.5°	1166.9	1094.4	553.1	125.1	111.1	100.7	96.1	89.6	90.3	98.6	103.2
40°	1304.9	1282.6	499.0	121.5	106.1	97.1	85.7	77.8	72.4	74.9	76.7
42.5°	1558.3	1455.4	429.1	119.7	101.4	87.8	72.8	64.5	56.3	57.0	59.9
45°	1865.9	1644.0	366.7	117.9	98.2	78.5	61.3	51.6	43.0	43.4	46.2
47.5°	2276.7	1918.9	291.1	112.6	92.5	69.9	49.5	39.4	34.4	35.5	38.0
50°	2743.5	2160.2	230.1	104.3	85.7	61.7	40.1	31.9	30.1	31.2	34.1
52.5°	3160.4	2338.0	190.0	96.8	76.0	50.2	33.7	28.3	27.6	28.3	30.5
55°	3531.0	2441.3	158.8	88.2	65.2	40.5	30.5	26.2	25.8	25.5	26.9
57.5°	3878.8	2471.0	124.0	74.6	53.1	35.1	28.3	24.4	23.7	22.6	23.7
60°	4132.2	2420.1	91.1	59.9	43.4	31.9	26.5	21.9	20.8	19.0	19.7
62.5°	4254.4	2280.7	68.8	48.0	36.9	29.0	23.7	19.0	17.6	15.4	15.8
65°	4138.3	2050.9	54.1	40.5	31.5	24.4	20.1	16.1	14.3	12.2	12.2
67.5°	3623.9	1701.3	45.9	35.1	26.5	20.8	16.5	14.7	11.8	10.0	9.7
70°	2659.9	1223.9	39.4	30.8	22.9	17.9	14.0	13.3	11.5	9.7	9.0
72.5°	1501.3	692.6	33.7	27.2	19.4	15.1	11.8	12.2	11.1	9.0	8.2
75°	572.9	233.4	28.0	22.6	15.8	11.5	10.0	10.0	10.0	7.5	6.5
77.5°	142.0	59.5	22.2	18.3	12.5	7.5	8.2	8.6	8.6	6.5	4.7
80°	39.1	20.1	13.3	13.3	9.0	4.3	5.7	5.7	4.7	2.2	0.0
82.5°	14.3	7.5	4.7	5.7	3.9	1.4	2.2	1.4	1.1	0.0	0.0
85°	6.1	3.9	2.9	3.2	1.8	0.0	0.4	0.7	0.0	0.0	0.0
87.5°	2.5	1.8	1.4	1.4	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)