

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: P367134

Luminaire Tested: **MSA-SA2A-727-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367134
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-727-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6522 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

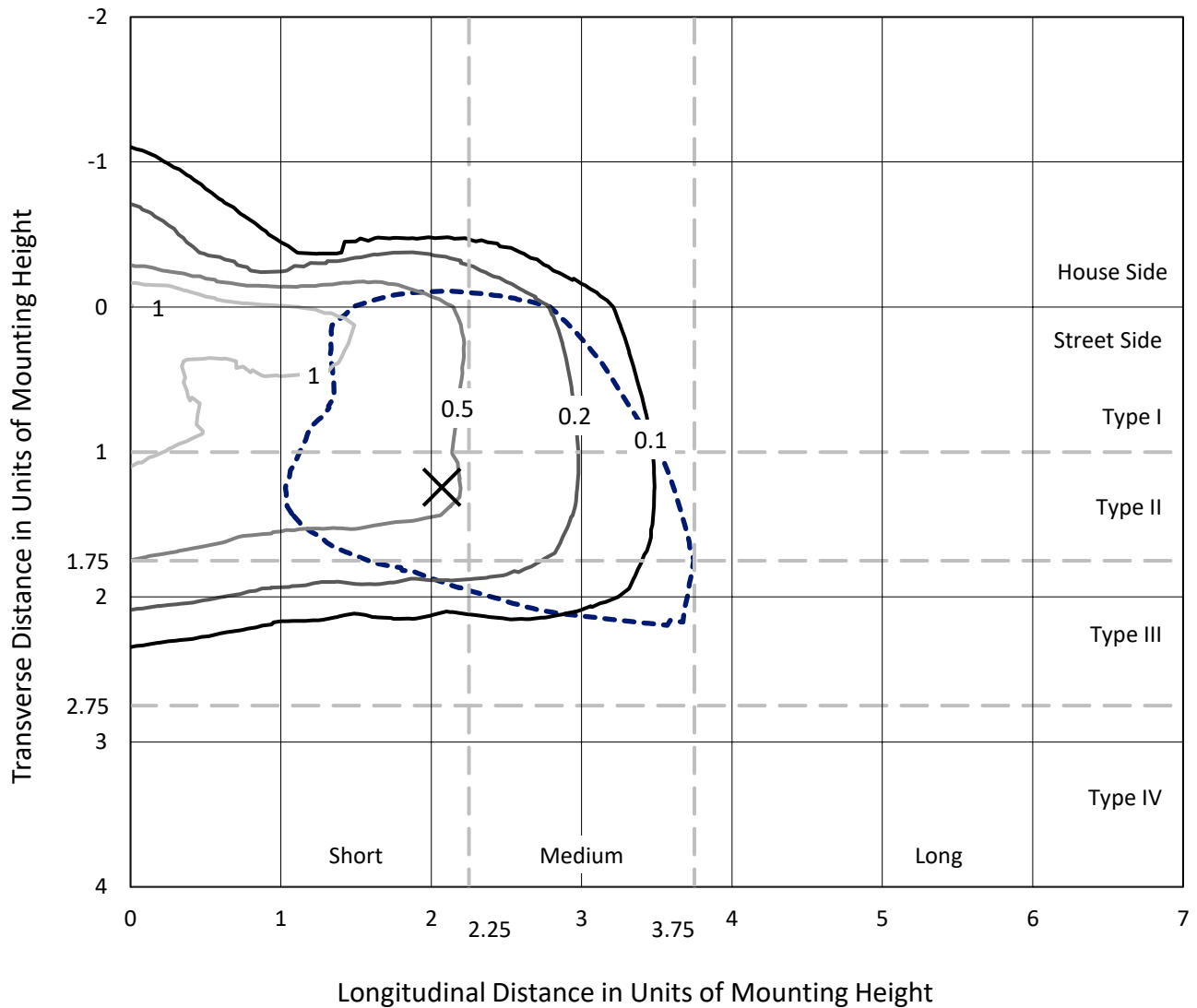
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

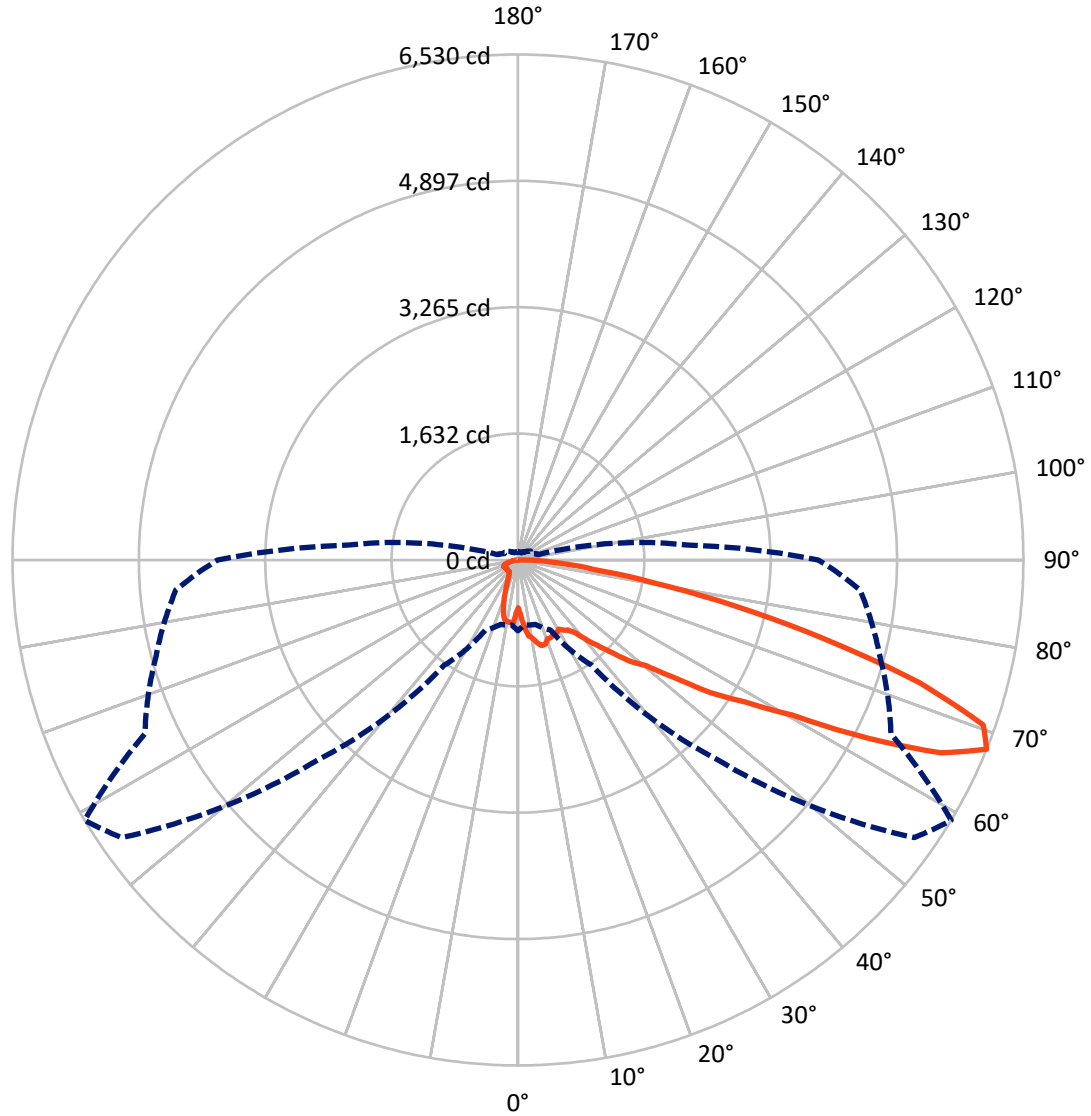
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	981.7	0.0	981.7
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	5540.3	0.0	5540.3
	% Fixture	84.9	0.0	84.9
Total	Lumens	6522.0	0.0	6522.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.6	1.2
10°-20°	238.5	3.7
20°-30°	340.6	5.2
30°-40°	501.9	7.7
40°-50°	848.0	13.0
50°-60°	1475.8	22.6
60°-70°	1880.6	28.8
70°-80°	995.8	15.3
80°-90°	160.2	2.5
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°	6522.0	100.0
0°-180°	6522.0	100.0

Coefficient of Utilization



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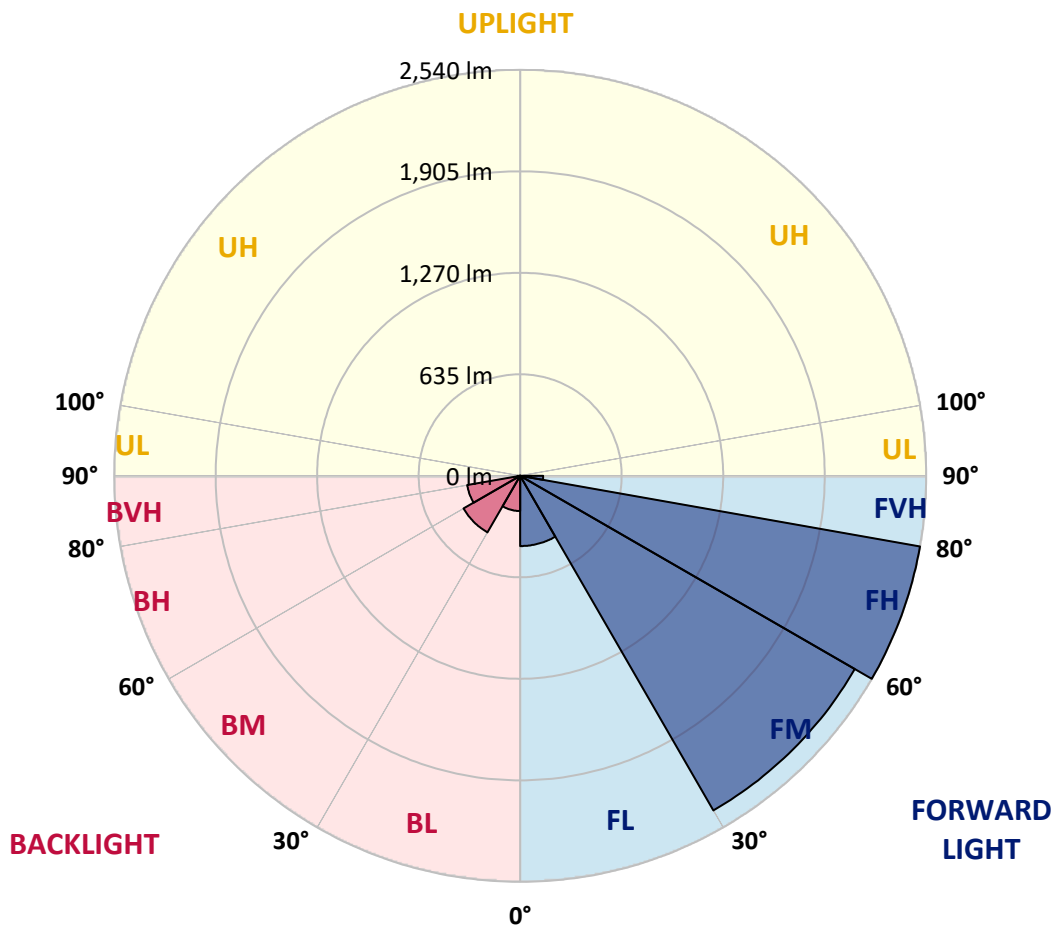
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	439.6	6.7			
FM (30°-60°)	2417.0	37.1			
FH (60°-80°)	2539.9	38.9			G2/5000
FVH (80°-90°)	143.9	2.2			G2/225
BL (0°-30°)	220.2	3.4	B1/500		
BM (30°-60°)	408.8	6.3	B1/1000		
BH (60°-80°)	336.5	5.2	B1/500		G1/500
BVH (80°-90°)	16.3	0.2			G1/100
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°	59°	65°	75°	85°
0°	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2
2.5°	770.5	734.6	696.5	707.3	729.1	739.0	728.3	717.8	704.2	688.2	742.9
5°	934.4	881.1	873.4	873.1	865.3	834.4	874.2	871.4	887.5	904.0	946.6
7.5°	981.1	961.2	939.7	949.9	910.9	909.3	971.2	988.9	1019.8	1009.6	1066.8
10°	957.1	934.7	946.0	941.9	945.5	986.4	1024.3	1025.4	1058.5	1091.1	1054.4
12.5°	914.8	916.5	961.5	959.9	1017.9	1093.9	1105.2	1096.4	1150.6	1128.5	1160.0
15°	944.9	965.1	953.8	963.5	986.4	1083.1	1114.6	1146.7	1198.1	1218.0	1186.5
17.5°	993.0	1003.8	953.0	947.7	995.0	1040.8	1119.1	1146.4	1154.4	1296.2	1251.7
20°	972.6	994.4	944.7	880.8	959.3	1020.1	1097.2	1088.9	1127.9	1302.3	1265.3
22.5°	1030.6	994.4	931.1	885.8	913.4	969.3	1034.8	1089.2	1135.4	1266.6	1284.9
25°	1041.7	1024.5	965.4	920.3	910.9	930.8	1024.3	1059.9	1137.9	1315.3	1274.4
27.5°	1109.1	1083.4	962.9	964.3	917.6	882.5	991.1	1066.0	1166.0	1285.2	1300.1
30°	1192.8	1173.2	1022.0	1027.6	962.9	898.2	1013.8	1036.4	1182.3	1332.1	1332.4
32.5°	1255.6	1290.1	1138.4	1063.2	1040.3	991.9	978.9	1080.9	1163.3	1417.3	1387.7
35°	1368.6	1395.4	1227.9	1167.7	1090.0	1035.6	1073.5	1110.2	1242.6	1529.2	1469.8
37.5°	1577.8	1546.9	1394.3	1299.5	1270.5	1192.0	1213.0	1187.3	1328.8	1655.0	1630.6
40°	1698.9	1672.1	1511.5	1459.0	1344.0	1354.0	1327.7	1346.5	1444.1	1788.7	1781.0
42.5°	1818.3	1782.4	1646.7	1610.2	1495.5	1446.8	1451.5	1512.3	1621.8	2004.8	1979.1
45°	1936.3	1844.3	1784.9	1794.5	1739.2	1639.5	1646.4	1703.6	1815.8	2251.9	2192.8
47.5°	2026.7	1950.7	1904.2	1892.4	1865.0	1998.5	1938.8	1962.0	2011.5	2471.9	2449.5
50°	2197.8	2109.0	2048.5	2031.4	2124.2	2310.0	2188.4	2138.3	2243.6	2756.3	2744.7
52.5°	2471.7	2361.1	2260.2	2259.1	2393.4	2513.9	2599.6	2513.4	2552.1	3047.6	3080.8
55°	2710.7	2582.8	2492.1	2542.1	2733.4	2807.2	3098.2	3030.8	2998.2	3341.7	3436.5
57.5°	2800.0	2650.5	2591.3	2665.1	2947.0	3326.2	3633.8	3456.4	3424.6	3674.5	3873.2
60°	2604.0	2445.9	2449.5	2588.6	3076.9	3707.3	4219.5	4068.8	3882.6	4088.7	4282.8
62.5°	2045.8	1902.9	1996.0	2207.4	2968.0	4077.7	5004.4	5068.0	4405.7	4432.3	4509.9
65°	1390.5	1291.5	1375.5	1582.5	2407.3	4279.7	5752.0	6006.8	4882.2	4657.3	4608.1
67.5°	915.1	845.2	861.5	999.1	1657.2	3648.5	6252.0	6529.7	5317.8	4841.9	4435.0
70°	708.6	652.3	645.1	717.2	982.8	2534.7	5955.7	6378.0	5583.1	4668.9	3865.7
72.5°	556.1	513.2	517.1	586.5	761.1	1406.2	4608.6	5423.7	5183.5	4026.6	2970.0
75°	433.6	398.5	418.2	497.5	703.9	873.9	3179.7	4116.4	4007.5	2981.6	1693.9
77.5°	314.8	292.1	320.0	423.7	661.7	749.8	1979.4	2871.8	2567.3	1530.9	581.2
80°	206.5	193.7	216.7	345.5	600.0	721.6	1223.3	1759.7	1268.6	430.0	220.0
82.5°	121.6	116.1	135.1	233.8	482.3	676.3	815.9	977.8	519.0	181.9	116.9
85°	63.8	59.7	80.1	134.3	332.5	617.4	642.3	585.4	250.7	79.0	55.8
87.5°	21.3	20.7	34.0	52.0	125.8	327.8	342.7	278.0	103.4	22.9	12.2
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°	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2	617.2
2.5°	750.4	739.3	675.7	684.6	692.9	688.7	686.2	657.5	654.7	695.6	692.3
5°	945.5	899.6	845.4	843.0	807.3	770.8	778.0	766.4	769.7	786.6	788.2
7.5°	1048.6	991.4	939.7	855.7	784.4	726.6	735.7	733.0	725.5	763.6	773.9
10°	1046.6	995.8	937.5	835.8	787.7	740.7	684.3	631.0	615.2	596.4	598.1
12.5°	1115.7	1070.7	943.6	839.9	774.7	693.7	588.1	529.8	474.0	472.9	458.8
15°	1137.3	1104.1	956.5	816.1	683.8	567.7	458.5	395.2	354.9	346.9	335.0
17.5°	1191.7	1139.8	917.0	739.3	578.2	443.9	344.6	300.4	297.1	302.6	296.6
20°	1195.3	1111.0	845.7	625.7	464.6	336.4	281.1	259.0	270.9	284.4	283.8
22.5°	1192.3	1074.8	784.1	529.0	349.1	270.3	246.3	241.3	252.3	272.5	275.0
25°	1161.3	1063.0	707.0	434.5	283.3	231.6	225.0	228.0	241.8	265.6	265.6
27.5°	1193.7	1014.6	610.2	353.5	238.2	206.2	210.9	218.6	228.8	255.9	260.9
30°	1183.2	1030.6	532.3	284.7	210.0	188.5	199.0	206.7	218.3	246.5	249.0
32.5°	1211.4	987.8	466.8	239.3	191.5	181.6	184.1	194.6	209.8	231.9	236.3
35°	1254.5	1003.5	391.6	215.3	182.4	173.6	178.3	186.6	201.8	223.3	226.9
37.5°	1392.1	1002.7	339.7	202.0	180.8	171.9	174.1	179.9	197.6	217.2	225.5
40°	1480.6	1060.2	292.4	199.0	178.8	171.1	169.1	175.5	189.6	212.8	218.6
42.5°	1646.7	1095.3	272.0	197.9	178.5	166.4	164.4	171.9	185.7	207.3	216.1
45°	1822.2	1145.3	255.7	197.3	177.7	165.6	159.7	169.1	180.8	201.5	211.7
47.5°	2028.6	1251.2	246.5	195.4	176.1	166.7	158.1	162.8	175.8	196.5	206.7
50°	2298.9	1391.3	248.5	192.6	178.5	166.9	155.6	157.8	169.7	189.9	200.4
52.5°	2627.5	1608.2	260.9	193.7	180.2	165.6	154.5	153.4	163.6	181.3	191.8
55°	3023.6	1916.1	298.2	199.0	180.2	165.3	152.8	147.9	155.6	170.0	180.2
57.5°	3501.4	2272.7	371.2	201.5	178.8	163.6	149.2	140.4	145.1	157.0	166.7
60°	3911.9	2560.4	446.4	203.1	181.6	159.7	142.1	131.0	134.0	143.2	151.7
62.5°	4121.1	2641.1	469.0	201.8	189.0	157.3	133.5	121.1	121.3	129.1	136.8
65°	4160.3	2533.6	378.1	200.4	198.7	157.0	127.4	112.5	110.6	116.1	122.7
67.5°	3880.6	2199.1	272.8	197.3	199.8	155.3	123.3	105.6	100.6	104.5	110.0
70°	3295.0	1771.0	229.1	191.3	186.6	147.0	116.1	98.4	91.8	94.5	98.7
72.5°	2456.5	1310.3	199.8	178.3	162.5	125.8	105.0	90.4	83.5	85.4	88.4
75°	1364.8	699.0	167.2	155.0	132.7	101.7	89.5	80.1	74.1	74.9	78.2
77.5°	453.3	257.9	122.7	123.0	100.3	78.5	73.8	68.5	63.8	64.1	66.9
80°	205.3	142.6	87.9	88.4	69.9	56.9	56.7	55.0	52.0	51.1	53.1
82.5°	119.1	86.5	60.3	57.5	45.0	37.0	41.2	40.4	39.5	36.5	37.0
85°	58.6	46.4	31.5	29.8	24.9	18.5	22.1	22.9	22.1	18.8	18.5
87.5°	14.4	15.2	7.7	7.2	4.1	1.9	3.3	3.3	4.1	2.8	1.4
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)