

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: P596528

Luminaire Tested: **MSA-SA1C-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596528
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-827-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4491 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

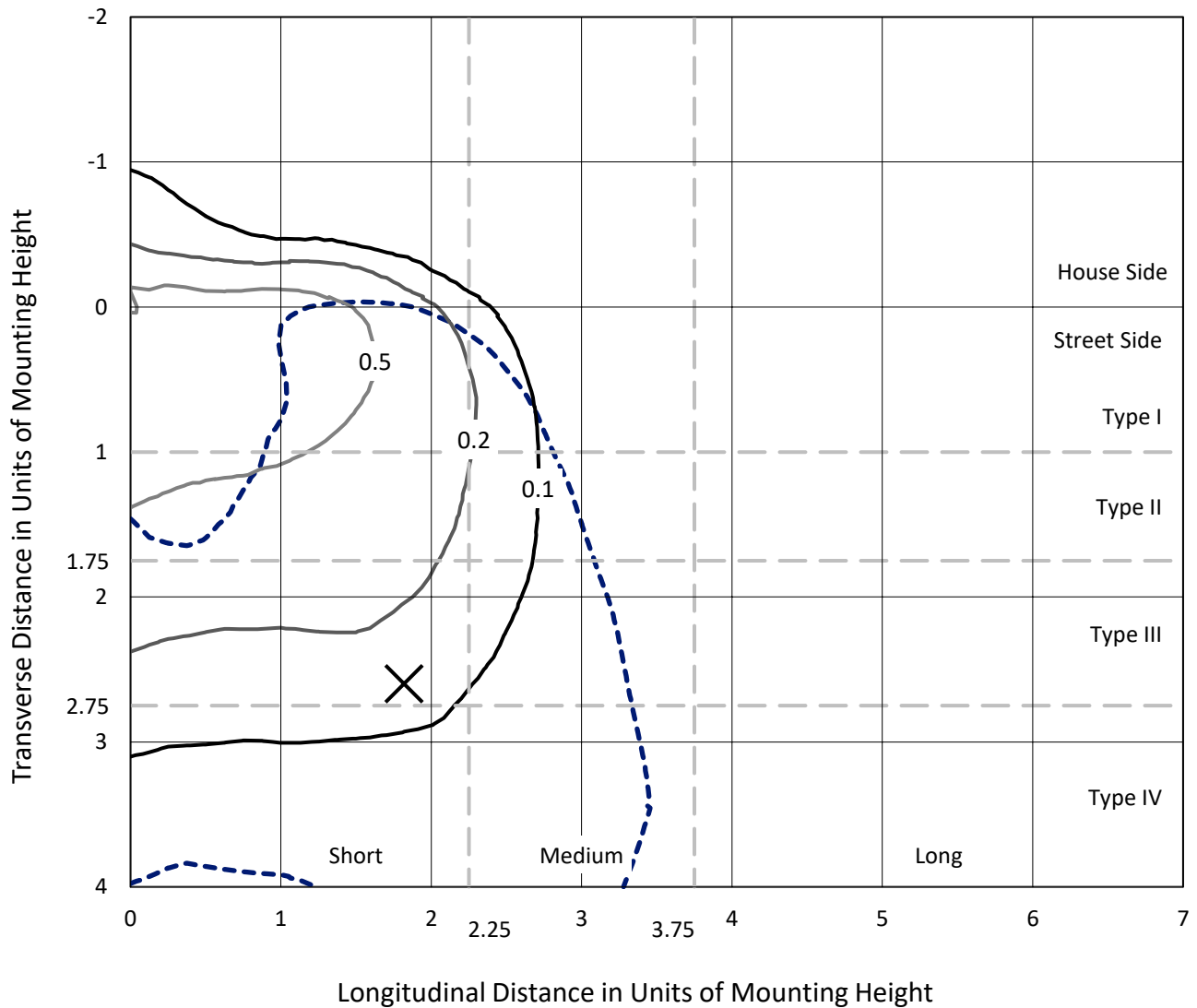
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

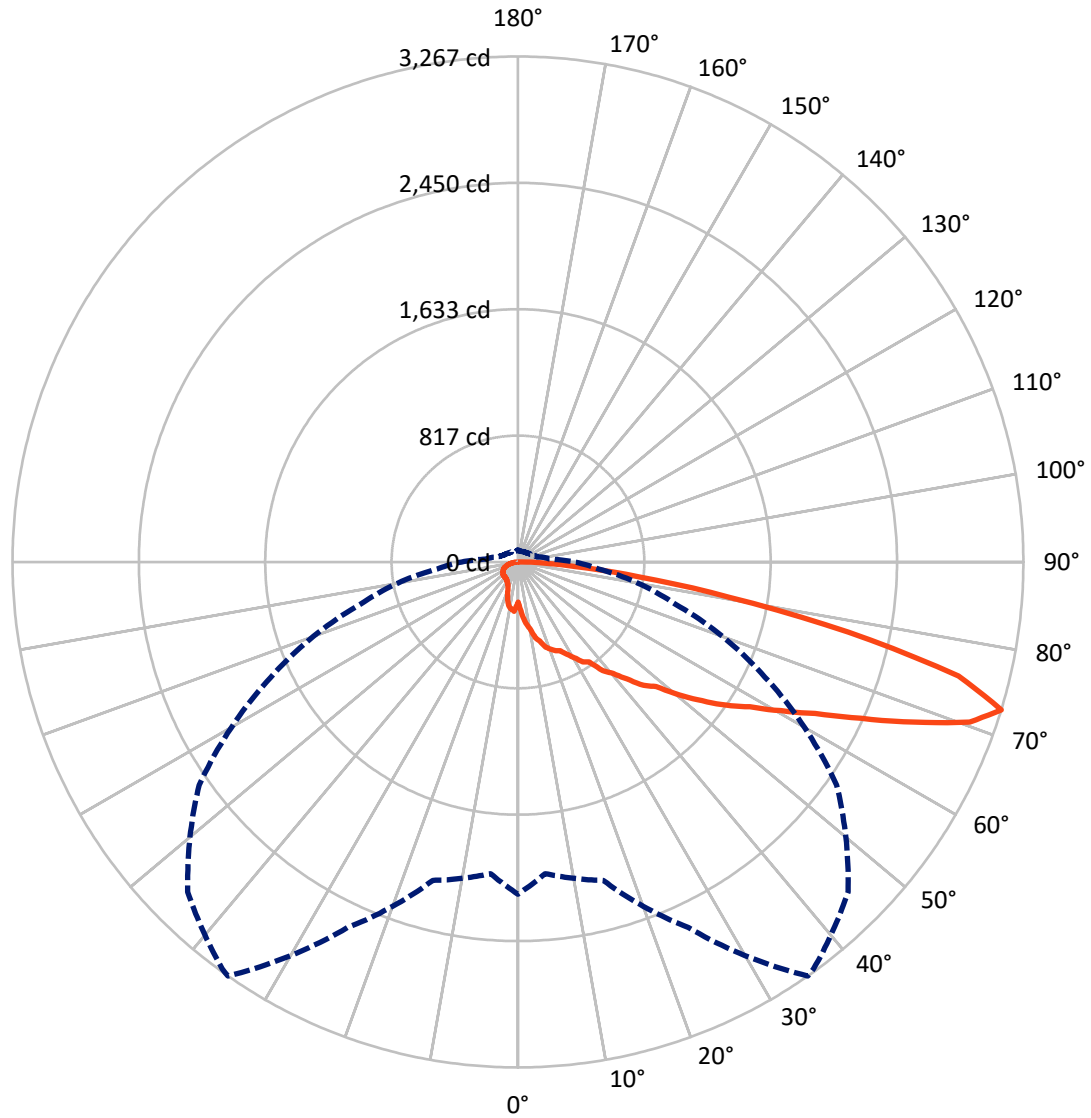
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	602.7	0.0	602.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	3888.3	0.0	3888.3
	% Fixture	86.6	0.0	86.6
Total	Lumens	4491.0	0.0	4491.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	0.8
10°-20°	121.5	2.7
20°-30°	211.1	4.7
30°-40°	352.9	7.9
40°-50°	612.4	13.6
50°-60°	925.8	20.6
60°-70°	1199.4	26.7
70°-80°	885.0	19.7
80°-90°	148.3	3.3
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°	4491.0	100.0
0°-180°	4491.0	100.0

Coefficient of Utilization



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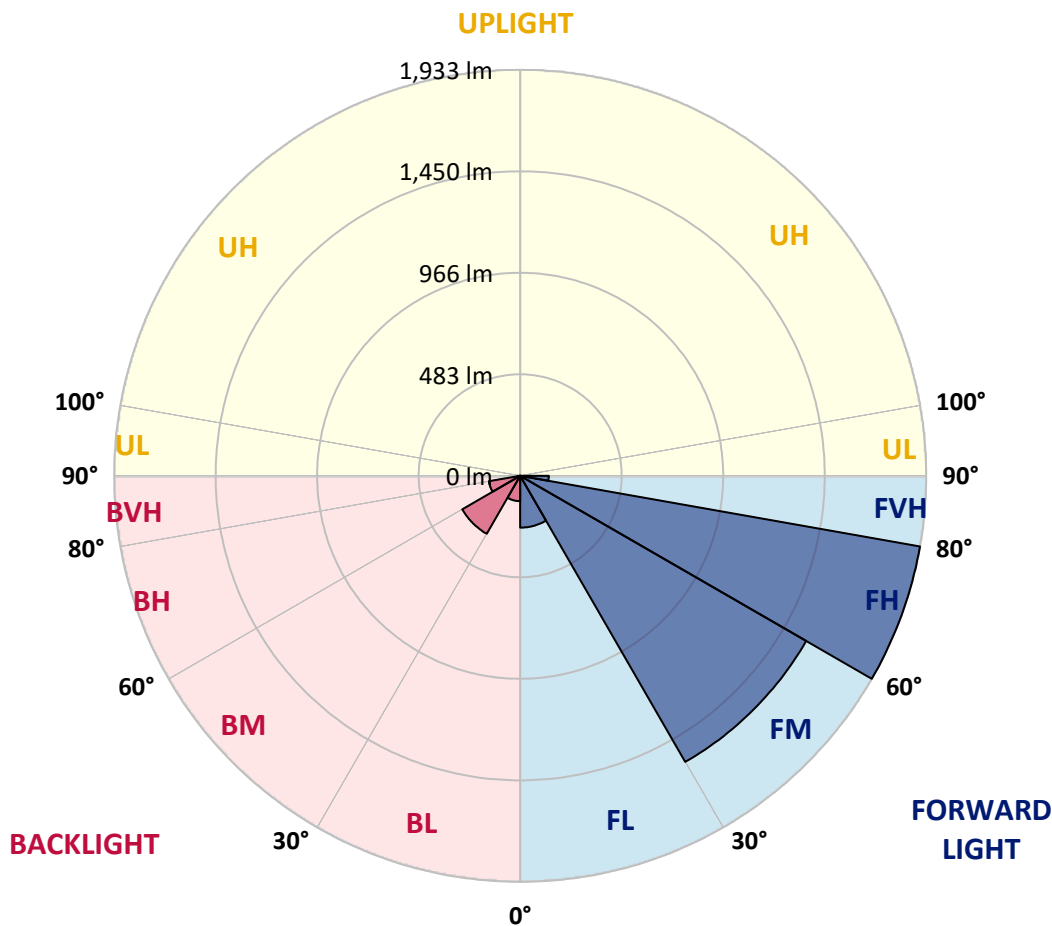
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	246.7	5.5			
FM (30°-60°)	1572.6	35.0			
FH (60°-80°)	1932.9	43.0			G2/5000
FVH (80°-90°)	136.2	3.0			G2/225
BL (0°-30°)	120.5	2.7	B1/500		
BM (30°-60°)	318.5	7.1	B1/1000		
BH (60°-80°)	151.5	3.4	B1/500		G1/500
BVH (80°-90°)	12.1	0.3			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5
2.5°	323.8	308.2	294.8	294.2	306.7	311.5	309.6	305.3	300.4	289.8	312.8
5°	405.6	383.4	379.1	374.2	362.9	365.9	347.5	361.5	365.9	376.1	391.4
7.5°	453.9	440.9	430.7	426.5	406.9	404.6	391.0	411.0	419.4	418.1	440.9
10°	472.9	461.0	461.8	448.0	441.6	444.3	445.9	446.2	451.4	455.6	444.1
12.5°	482.7	487.3	504.1	494.7	502.8	506.0	522.1	505.7	506.2	484.6	496.5
15°	531.9	543.4	533.6	533.3	530.8	536.1	549.9	538.8	547.4	540.5	525.2
17.5°	591.3	594.8	576.0	568.3	578.3	576.6	573.1	574.9	553.4	593.3	574.5
20°	609.5	623.2	598.4	568.3	601.3	605.7	604.9	597.5	560.7	618.2	600.0
22.5°	662.5	644.1	624.5	605.3	622.2	624.7	620.5	602.6	590.4	612.2	626.6
25°	686.4	682.0	657.1	654.8	636.2	627.4	634.7	629.5	617.4	656.3	640.4
27.5°	741.2	736.1	678.7	702.3	675.3	673.0	634.5	651.7	663.8	660.9	684.7
30°	803.3	809.3	725.5	749.1	717.8	713.6	674.9	696.8	705.0	707.7	737.4
32.5°	872.3	888.6	805.4	786.1	769.4	772.3	739.5	699.6	731.6	794.3	807.2
35°	947.1	953.8	866.6	837.5	793.9	790.9	791.5	796.4	828.8	900.3	910.3
37.5°	1085.3	1054.2	977.8	904.0	889.4	860.8	880.2	895.5	927.9	1037.6	1079.4
40°	1170.4	1147.4	1030.9	988.1	947.9	950.5	986.8	986.6	1063.1	1176.2	1240.0
42.5°	1249.2	1224.1	1114.2	1071.3	1033.2	1042.6	1052.9	1071.1	1217.8	1400.0	1429.2
45°	1312.6	1257.6	1178.6	1169.1	1137.6	1125.2	1169.1	1198.2	1402.7	1581.2	1598.0
47.5°	1355.8	1310.5	1233.3	1224.8	1201.7	1232.1	1351.9	1370.7	1546.1	1763.1	1761.7
50°	1421.3	1359.4	1289.6	1285.2	1350.6	1366.9	1512.9	1511.0	1685.6	1914.1	1882.5
52.5°	1496.8	1418.8	1343.1	1390.5	1490.1	1498.2	1624.9	1676.4	1838.0	2059.8	1977.2
55°	1583.7	1496.5	1423.2	1486.5	1634.9	1611.1	1739.3	1865.3	2028.8	2213.3	2045.6
57.5°	1691.2	1585.4	1526.2	1622.4	1766.9	1788.0	1903.2	2061.7	2182.3	2308.8	2095.5
60°	1804.7	1680.5	1626.2	1717.9	1951.9	1976.0	2088.8	2225.0	2354.4	2398.7	2086.1
62.5°	1913.0	1778.6	1729.5	1842.6	2157.0	2216.8	2300.0	2386.8	2497.6	2420.6	1972.4
65°	2033.5	1899.0	1868.1	2037.8	2435.1	2494.5	2603.2	2577.2	2546.7	2343.1	1784.4
67.5°	2161.2	2024.5	2030.3	2264.1	2763.1	2773.2	2940.2	2766.9	2489.0	2138.0	1468.7
70°	2229.8	2089.9	2149.1	2505.5	3096.8	3082.2	3116.4	2817.9	2253.8	1690.1	1012.3
72.5°	2146.6	2021.9	2130.3	2607.1	3266.6	3250.9	3017.5	2515.2	1762.1	1051.0	524.8
75°	1817.5	1697.1	1863.1	2323.9	2940.8	2955.3	2568.0	1870.4	1008.8	422.7	217.9
77.5°	1235.0	1172.9	1315.1	1732.2	2184.4	2234.8	1905.3	1093.7	423.6	175.0	131.9
80°	652.7	623.2	728.2	997.9	1383.2	1420.7	1120.4	544.8	217.0	113.3	94.1
82.5°	354.6	342.2	398.5	513.1	785.9	818.7	581.0	361.9	146.3	70.9	57.5
85°	238.3	233.5	270.8	275.6	371.7	382.4	304.4	278.7	87.8	34.7	38.0
87.5°	119.2	114.4	142.6	125.9	141.8	142.0	139.5	177.9	22.2	11.5	6.9
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°	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5
2.5°	313.2	306.5	283.3	283.1	286.6	284.3	286.0	276.6	272.6	291.0	290.0
5°	389.3	369.2	349.8	343.1	335.3	318.2	319.1	319.3	316.5	327.4	328.2
7.5°	434.0	409.8	392.0	356.3	328.4	306.5	309.4	312.6	309.4	323.9	329.3
10°	440.5	421.3	400.0	360.4	341.8	322.0	302.1	284.5	282.3	275.6	277.7
12.5°	479.2	463.3	418.8	375.3	353.7	323.4	286.9	266.8	250.0	252.8	247.5
15°	511.0	499.7	446.4	389.5	337.7	300.2	261.5	233.9	218.7	217.0	211.6
17.5°	554.2	538.1	448.9	379.7	317.2	272.2	228.5	197.2	190.7	188.0	185.4
20°	574.9	545.9	439.9	349.1	293.3	238.8	195.9	169.1	167.1	171.9	171.0
22.5°	592.9	552.4	431.9	330.5	255.9	205.1	173.7	156.0	153.9	160.1	161.2
25°	603.4	571.0	423.0	311.5	232.7	180.0	157.0	147.0	147.4	155.5	154.5
27.5°	651.0	577.5	400.8	289.1	206.1	161.4	148.9	143.8	141.7	152.8	153.7
30°	680.9	620.1	395.8	265.3	186.3	147.8	141.7	139.5	139.2	152.6	153.5
32.5°	736.4	634.3	398.1	239.4	168.5	143.6	136.3	136.1	139.9	152.8	154.3
35°	813.5	694.1	387.0	224.7	158.7	137.1	132.1	133.6	140.1	154.1	156.2
37.5°	963.8	750.4	390.5	210.8	155.5	134.9	130.9	131.9	142.4	157.6	163.3
40°	1082.8	852.6	385.1	203.9	151.0	134.6	128.4	132.3	142.2	159.5	164.7
42.5°	1255.3	934.1	385.7	197.0	150.9	133.0	128.0	132.6	141.8	157.8	164.8
45°	1403.3	1007.1	393.9	193.0	148.9	135.5	127.5	133.2	139.4	151.6	159.5
47.5°	1524.6	1088.6	402.3	189.2	148.2	137.8	126.9	129.2	135.1	144.7	151.8
50°	1623.5	1145.9	413.1	188.4	148.2	136.7	125.4	125.2	130.2	137.8	144.5
52.5°	1700.6	1186.3	420.4	189.4	148.2	132.3	123.4	121.9	125.0	130.5	137.2
55°	1756.4	1198.8	414.4	191.9	148.0	128.2	120.0	118.7	120.2	124.0	130.3
57.5°	1778.8	1166.0	379.0	187.5	148.0	125.4	115.8	114.2	115.8	118.7	125.0
60°	1722.6	1060.6	327.8	176.2	145.1	121.5	111.0	110.0	112.3	114.8	121.0
62.5°	1581.8	920.5	273.1	162.7	139.2	118.3	106.4	106.6	110.2	113.7	119.8
65°	1362.9	751.0	227.7	149.1	131.7	113.1	101.6	102.9	108.1	112.7	118.8
67.5°	1072.5	556.5	191.7	135.9	121.1	104.7	96.2	96.6	100.2	104.7	110.6
70°	716.9	354.0	157.6	120.4	107.3	93.7	88.0	86.6	85.7	89.5	94.7
72.5°	363.6	209.1	129.4	102.9	92.4	81.8	77.4	74.0	71.3	73.6	77.6
75°	190.5	146.3	104.5	85.5	76.3	69.6	66.3	61.7	59.8	61.1	64.0
77.5°	134.8	114.4	84.5	67.7	62.1	55.2	55.8	51.0	49.5	50.2	53.3
80°	103.5	90.7	65.0	51.2	47.9	41.2	43.1	40.3	38.3	38.0	40.3
82.5°	70.5	68.2	46.2	35.8	33.5	28.8	31.4	30.3	27.8	26.3	27.4
85°	47.5	45.2	28.2	20.7	19.7	15.0	19.2	18.4	16.3	14.0	14.2
87.5°	8.2	15.1	8.1	5.2	4.8	1.7	4.4	4.2	3.8	1.9	1.5
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)