

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: P367663

Luminaire Tested: **MSA-SA3A-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367663
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-727-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8113 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

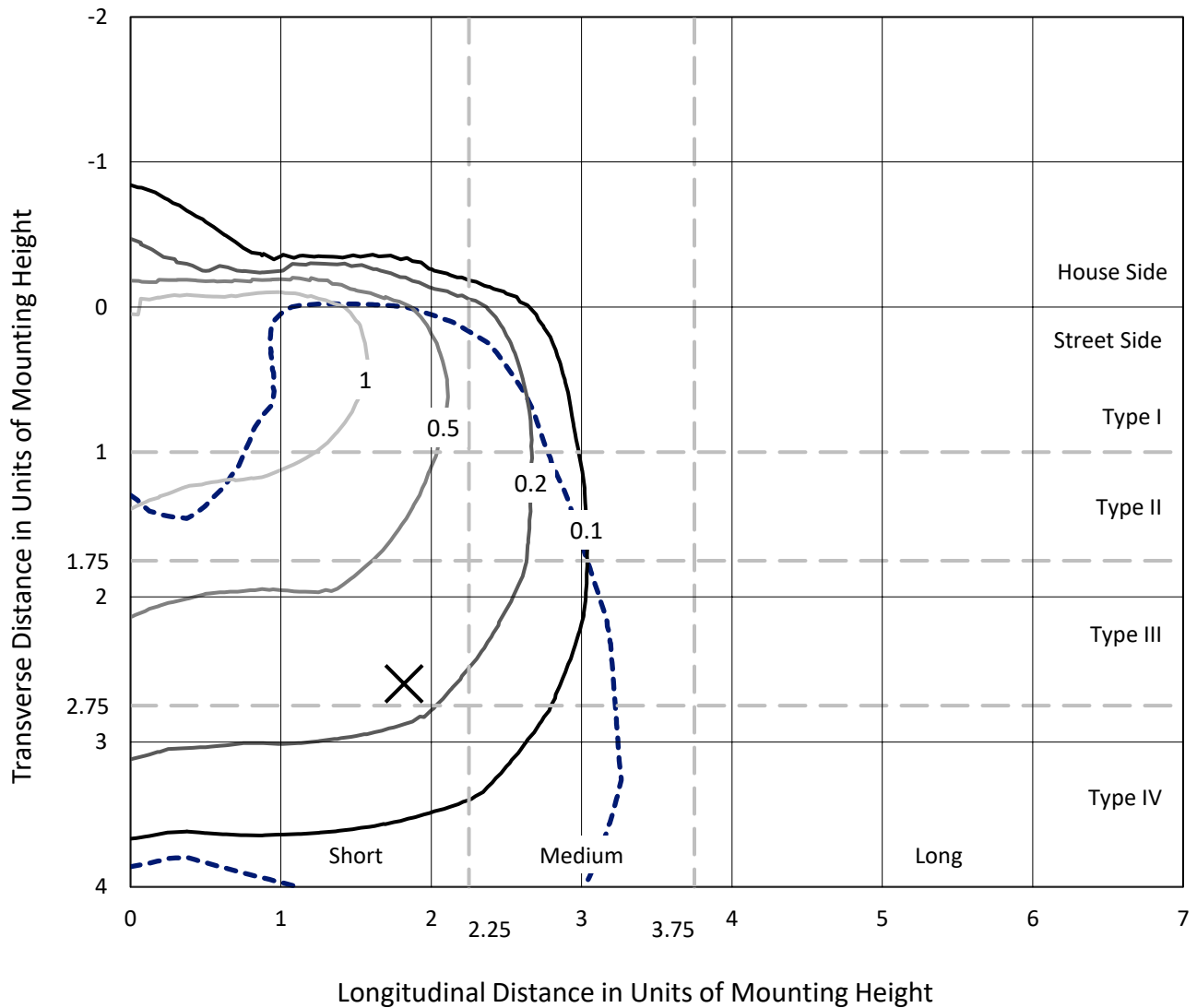
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367663
 CATALOG NUMBER: MSA-SA3A-727-U-SL4-HSS

Iso-Footcandle Lines of Horizontal Illumination

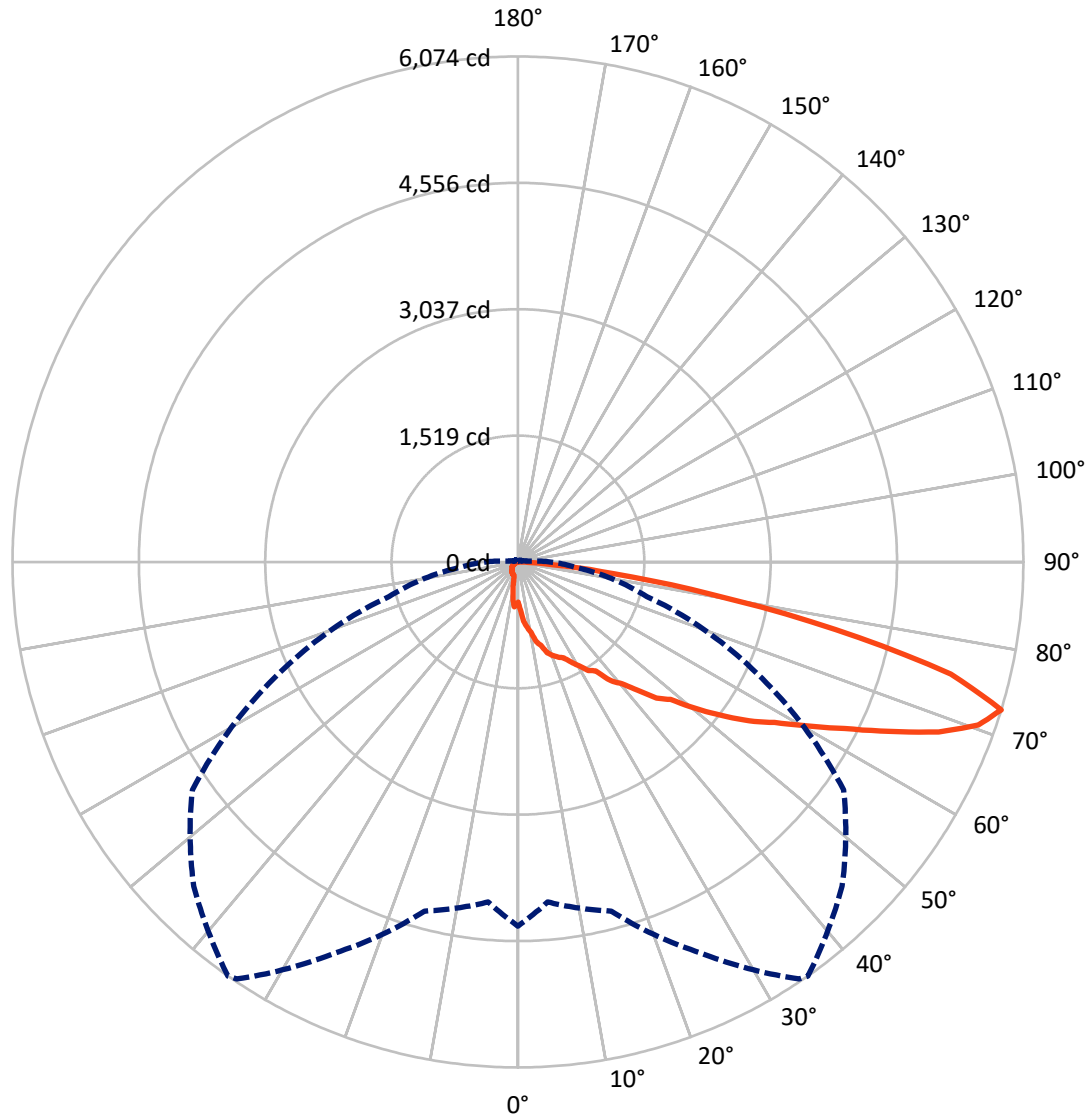
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc
 Type IV - Short - N/A

REPORT NUMBER: P367663
CATALOG NUMBER: MSA-SA3A-727-U-SL4-HSS

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	632.8	0.0	632.8
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	7480.2	0.0	7480.2
	% Fixture	92.2	0.0	92.2
Total	Lumens	8113.0	0.0	8113.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	0.8
10°-20°	207.6	2.6
20°-30°	378.1	4.7
30°-40°	652.2	8.0
40°-50°	1159.4	14.3
50°-60°	1730.0	21.3
60°-70°	2210.3	27.2
70°-80°	1537.8	19.0
80°-90°	175.9	2.2
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°	8113.0	100.0
0°-180°	8113.0	100.0

Coefficient of Utilization

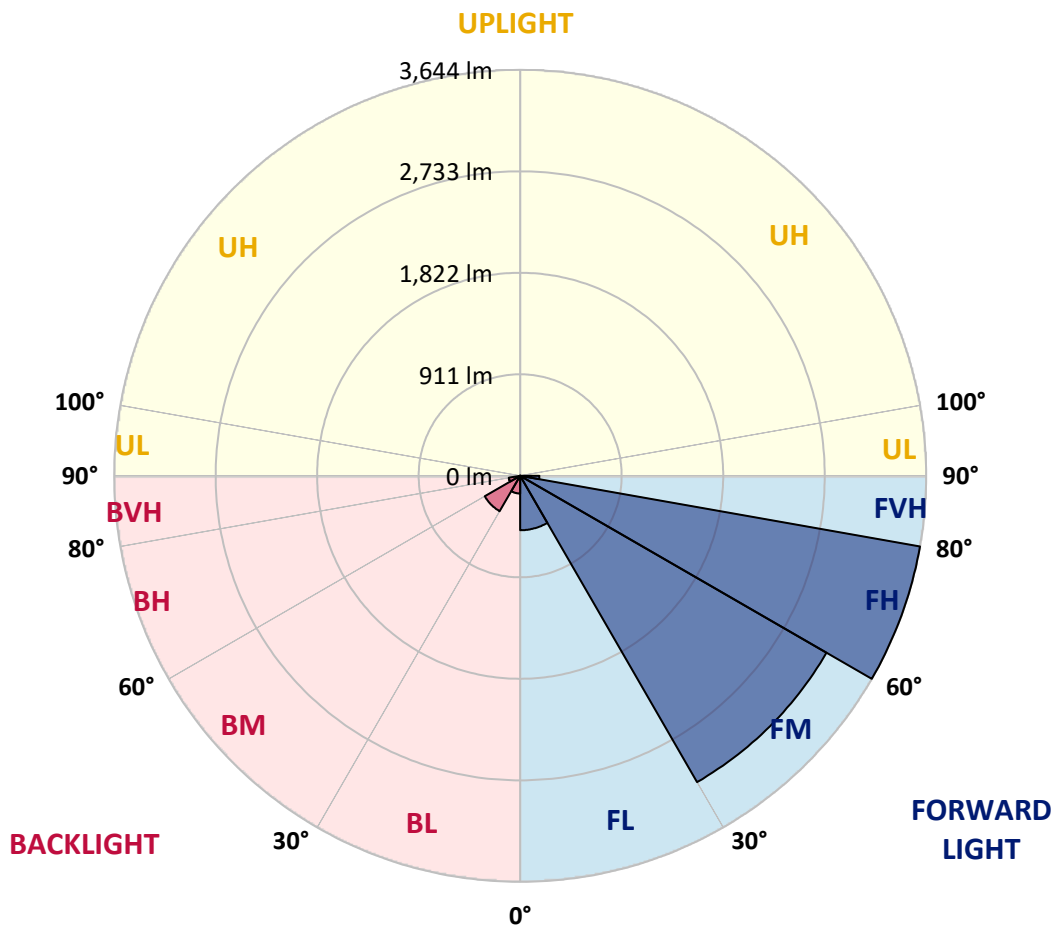


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	488.2	6.0			
FM (30°-60°)	3174.6	39.1			
FH (60°-80°)	3644.4	44.9			G2/5000
FVH (80°-90°)	173.0	2.1			G2/225
BL (0°-30°)	159.2	2.0	B1/500		
BM (30°-60°)	366.9	4.5	B1/1000		
BH (60°-80°)	103.7	1.3	B0/110		G0/110
BVH (80°-90°)	3.0	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





REPORT NUMBER: P367663

CATALOG NUMBER: MSA-SA3A-727-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3
2.5°	615.0	591.0	551.8	554.7	572.2	575.9	581.2	567.3	555.1	533.5	575.5
5°	787.9	753.3	731.3	724.3	714.1	714.9	690.1	699.0	696.6	712.5	731.7
7.5°	885.4	866.3	838.5	830.8	793.2	789.2	758.6	799.8	803.9	798.1	829.5
10°	924.2	898.9	902.1	873.2	854.4	859.3	864.2	867.5	872.8	878.1	839.7
12.5°	947.0	951.5	995.9	965.8	984.5	984.5	1017.6	982.5	983.7	945.4	951.9
15°	1049.8	1074.7	1054.7	1054.3	1033.9	1039.2	1077.5	1049.8	1064.1	1052.6	1008.6
17.5°	1178.7	1183.6	1145.6	1128.9	1147.3	1147.7	1131.3	1130.1	1080.4	1164.4	1111.0
20°	1219.8	1247.6	1193.7	1128.5	1204.8	1201.1	1199.9	1180.7	1097.9	1214.5	1170.5
22.5°	1332.0	1292.4	1255.7	1212.9	1242.7	1242.7	1238.2	1196.2	1164.0	1210.1	1228.8
25°	1367.1	1372.0	1324.3	1310.4	1311.2	1274.5	1271.2	1253.3	1222.3	1301.0	1263.5
27.5°	1487.8	1485.8	1371.2	1409.9	1360.6	1361.0	1270.8	1311.2	1316.5	1305.5	1347.5
30°	1606.5	1639.5	1466.6	1515.5	1463.7	1448.2	1360.1	1396.0	1405.4	1392.8	1445.8
32.5°	1757.8	1806.3	1638.3	1590.2	1511.0	1555.1	1494.3	1409.5	1456.0	1569.0	1598.7
35°	1918.1	1941.7	1762.7	1695.4	1606.1	1605.7	1603.6	1610.6	1661.9	1789.2	1814.5
37.5°	2206.0	2150.1	1988.2	1834.1	1854.0	1809.6	1778.6	1811.2	1864.6	2074.3	2182.4
40°	2366.7	2326.3	2098.3	2007.0	1907.9	1924.2	2008.2	2004.5	2146.9	2366.3	2528.2
42.5°	2522.9	2484.6	2260.2	2186.4	2059.2	2103.6	2140.3	2186.8	2478.4	2832.4	2921.4
45°	2662.0	2549.4	2391.2	2394.0	2328.0	2333.3	2398.1	2440.9	2862.6	3225.6	3288.0
47.5°	2746.0	2653.4	2501.7	2498.8	2494.8	2469.9	2775.4	2814.5	3168.9	3600.0	3605.7
50°	2864.3	2748.4	2615.5	2617.9	2712.1	2764.7	3129.4	3125.3	3464.6	3912.4	3780.7
52.5°	3011.5	2870.0	2723.6	2832.4	2978.0	3063.7	3359.8	3480.5	3782.3	4108.6	3849.2
55°	3199.9	3022.9	2881.8	3021.3	3339.0	3372.0	3585.3	3840.2	4128.6	4308.8	3871.2
57.5°	3421.0	3209.7	3095.5	3320.2	3637.1	3637.9	3913.6	4223.6	4341.0	4390.4	3846.3
60°	3659.1	3412.8	3297.8	3500.1	3965.8	3999.3	4278.6	4435.3	4556.8	4431.6	3801.9
62.5°	3868.8	3596.7	3507.4	3745.2	4326.4	4405.5	4596.8	4574.3	4712.6	4483.4	3688.9
65°	4118.4	3834.9	3776.2	4127.3	4797.0	4905.9	4954.0	4821.1	4764.8	4443.4	3394.9
67.5°	4365.5	4100.4	4098.8	4551.1	5414.1	5451.6	5401.0	5169.0	4704.0	4091.0	2856.1
70°	4539.7	4255.0	4362.3	5015.2	5974.9	5869.6	5656.7	5333.3	4265.2	3135.5	1865.9
72.5°	4376.1	4101.6	4343.5	5180.4	6044.2	6074.4	5508.7	4777.4	3168.9	1603.6	675.4
75°	3325.5	3157.5	3771.3	4595.9	5366.4	5373.3	4598.0	3369.6	1560.4	435.6	186.8
77.5°	1675.0	1621.6	2387.1	3262.7	3915.3	3903.8	3159.1	1805.1	502.1	144.8	94.2
80°	847.9	805.1	1015.9	1760.2	2325.1	2342.2	1803.9	808.3	253.3	78.7	65.3
82.5°	520.8	494.3	555.9	796.5	1128.5	1155.8	684.4	511.8	157.0	46.5	59.5
85°	100.7	106.0	319.3	398.9	450.7	440.1	202.7	421.3	47.3	27.7	43.2
87.5°	0.0	1.6	73.8	130.1	130.5	115.8	46.1	93.4	6.5	7.7	5.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367663
 CATALOG NUMBER: MSA-SA3A-727-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3
2.5°	582.4	576.3	525.3	519.6	520.8	512.2	509.4	491.4	487.0	514.7	519.6
5°	723.5	682.7	635.4	618.3	591.8	546.9	540.4	529.0	516.3	521.2	517.5
7.5°	810.0	755.7	705.2	615.0	540.4	475.1	464.5	445.0	425.4	425.8	438.4
10°	823.8	778.2	708.4	598.7	513.5	431.9	360.9	309.6	286.3	265.5	271.6
12.5°	904.2	861.8	733.3	593.8	474.3	347.1	254.1	203.9	181.9	174.6	173.7
15°	968.6	935.2	775.7	578.7	387.4	244.3	181.9	167.2	163.1	170.1	168.0
17.5°	1064.5	1004.1	771.2	516.3	295.3	185.6	167.6	165.6	170.5	174.6	175.8
20°	1106.5	1019.6	740.6	418.4	221.0	170.1	163.5	159.5	168.4	180.7	178.2
22.5°	1148.9	1046.1	704.7	342.6	177.8	162.7	159.1	155.8	162.7	174.6	177.4
25°	1168.1	1088.5	664.8	267.5	165.2	154.2	151.7	152.9	158.6	169.3	168.0
27.5°	1264.7	1093.4	588.5	211.3	159.9	148.0	148.0	150.9	150.9	165.2	164.0
30°	1325.1	1176.2	526.5	177.8	153.8	139.5	144.4	145.6	143.6	159.1	160.3
32.5°	1431.1	1199.0	466.2	163.1	144.0	138.3	137.4	138.3	139.9	155.0	155.4
35°	1594.2	1311.6	383.8	157.4	139.1	132.1	126.4	130.9	135.0	146.0	148.0
37.5°	1913.2	1427.0	312.8	152.9	136.6	126.4	124.4	123.6	130.9	143.6	147.6
40°	2171.3	1631.4	254.5	149.3	131.7	123.2	117.9	118.3	124.8	134.2	140.3
42.5°	2536.8	1779.0	215.7	143.6	124.8	116.2	110.1	113.8	116.6	126.4	130.5
45°	2841.8	1893.6	190.1	139.9	117.9	109.7	104.8	108.9	106.0	110.9	116.6
47.5°	3084.5	1993.5	170.9	130.9	113.4	106.0	99.9	98.7	93.8	95.0	100.3
50°	3217.9	1976.8	155.0	121.9	107.7	102.4	93.8	85.2	78.7	78.3	81.6
52.5°	3265.2	1887.5	141.9	114.2	100.7	94.2	84.4	72.6	66.1	64.0	66.9
55°	3278.2	1759.0	130.1	105.6	94.2	84.0	73.8	61.2	54.2	51.0	53.8
57.5°	3235.8	1561.2	118.7	97.5	86.5	74.2	63.2	50.2	43.6	39.6	42.0
60°	3131.0	1310.0	108.5	87.3	78.3	65.7	53.4	40.4	33.4	29.8	31.0
62.5°	2898.9	1026.9	97.5	77.9	69.7	57.5	44.9	31.8	25.3	22.0	22.4
65°	2545.7	765.5	84.8	68.9	62.0	49.8	35.9	24.5	19.2	16.3	15.9
67.5°	2028.2	518.8	72.2	59.5	55.1	42.0	28.5	19.2	15.1	13.1	12.2
70°	1192.1	261.4	60.0	51.4	47.3	35.1	22.4	15.5	13.9	12.2	11.4
72.5°	393.2	113.0	46.9	42.4	39.2	28.1	17.5	14.3	13.5	11.8	11.0
75°	137.0	65.3	34.7	32.6	31.0	21.2	14.7	13.1	13.1	11.4	10.2
77.5°	89.7	50.6	25.7	23.7	23.2	15.5	12.6	12.2	11.4	9.4	7.7
80°	74.6	28.5	17.9	16.7	16.3	9.8	10.2	9.0	6.9	4.1	1.6
82.5°	68.9	17.1	9.4	10.2	9.4	3.7	5.7	4.9	3.7	1.6	0.0
85°	40.4	7.7	5.3	5.3	4.1	0.8	2.9	2.9	1.6	0.4	0.0
87.5°	4.5	3.7	2.9	2.9	2.0	0.0	1.2	0.8	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)