

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: P367566

Luminaire Tested: **MSA-SA2D-730-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367566
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-730-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12454 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

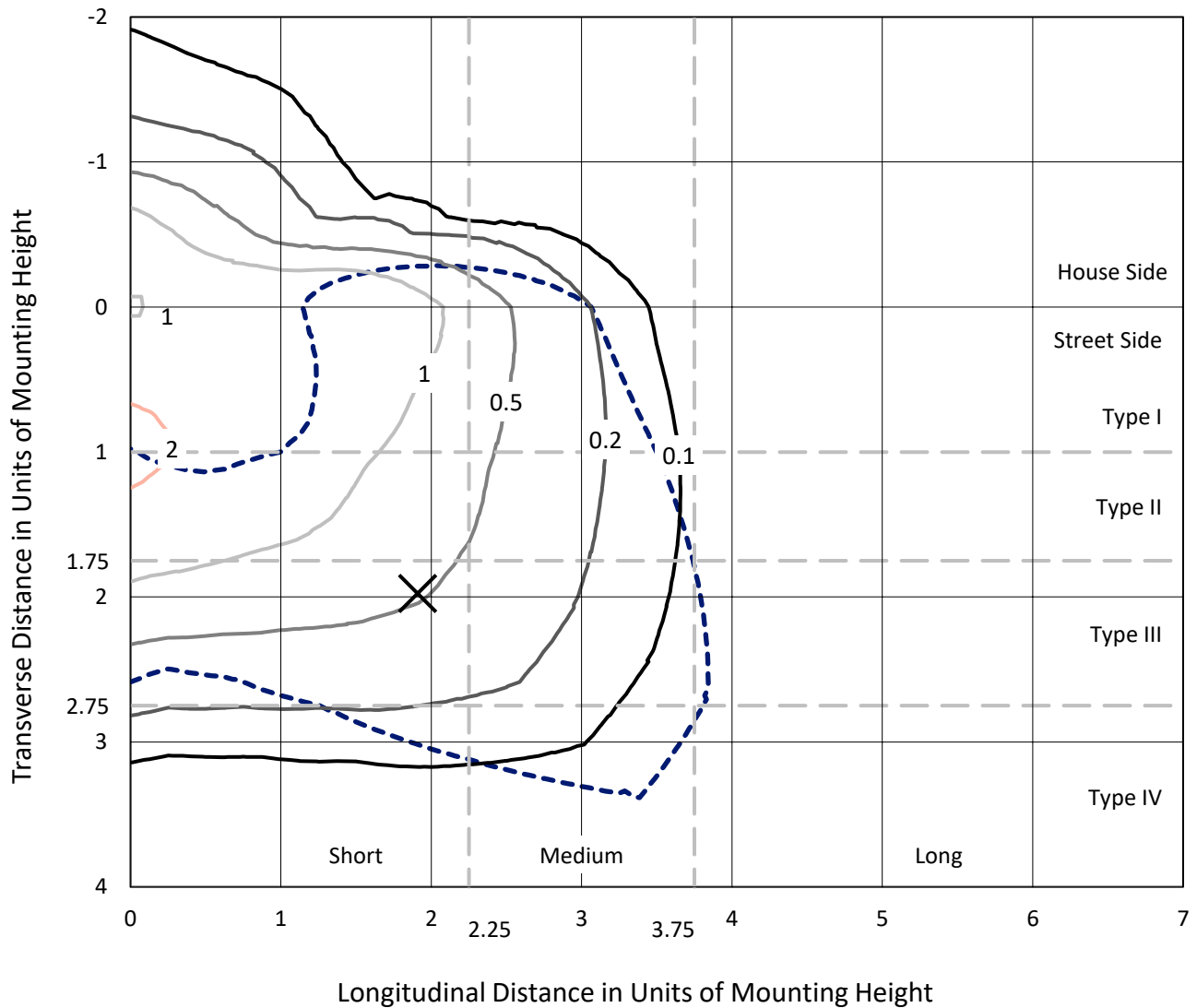
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

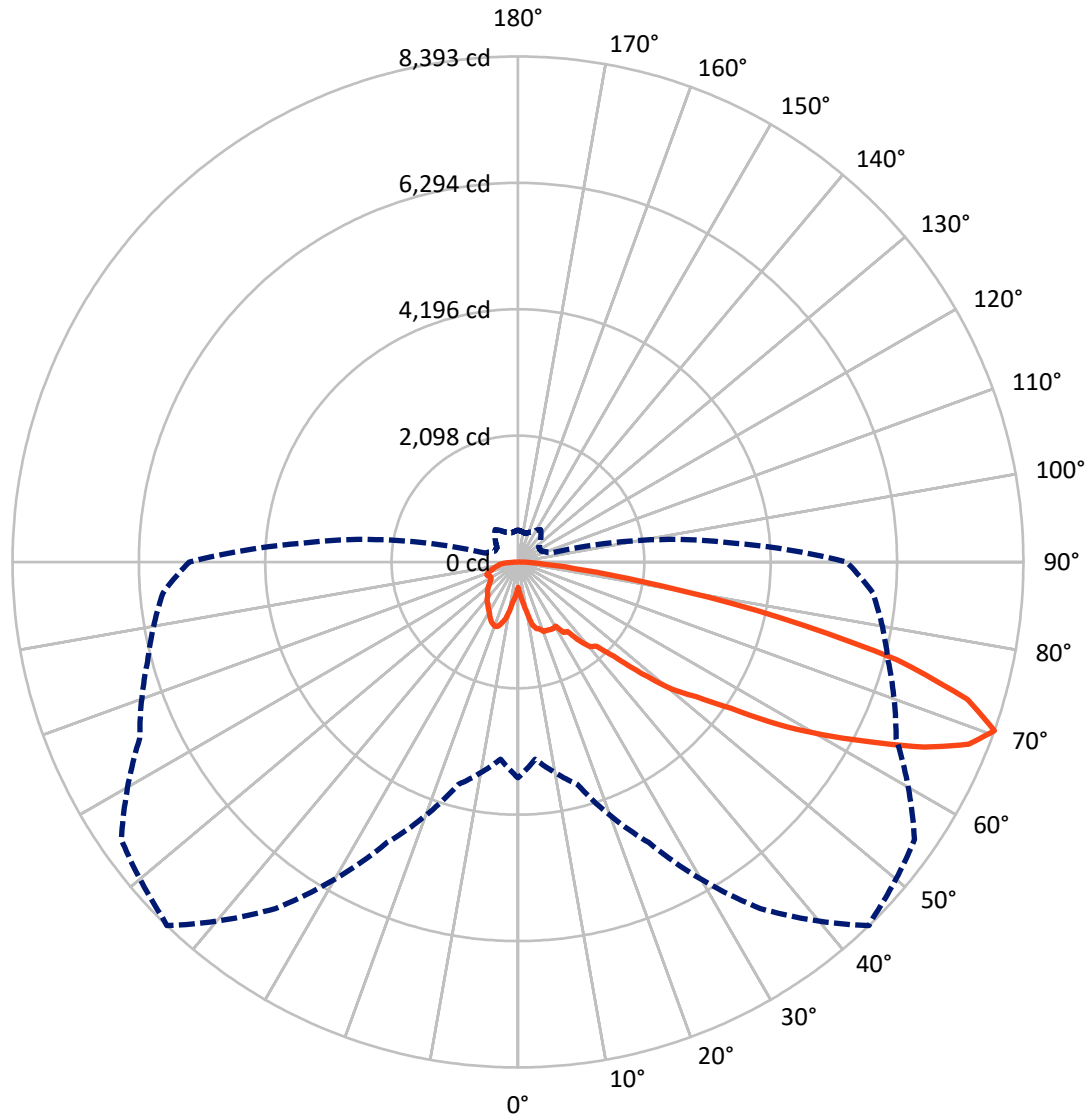
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2747.8	0.0	2747.8
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	9706.2	0.0	9706.2
	% Fixture	77.9	0.0	77.9
Total	Lumens	12454.0	0.0	12454.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.4	0.5
10°-20°	305.7	2.5
20°-30°	571.2	4.6
30°-40°	916.8	7.4
40°-50°	1547.5	12.4
50°-60°	2757.6	22.1
60°-70°	3772.1	30.3
70°-80°	2218.2	17.8
80°-90°	298.7	2.4
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°	12454.0	100.0
0°-180°	12454.0	100.0

Coefficient of Utilization



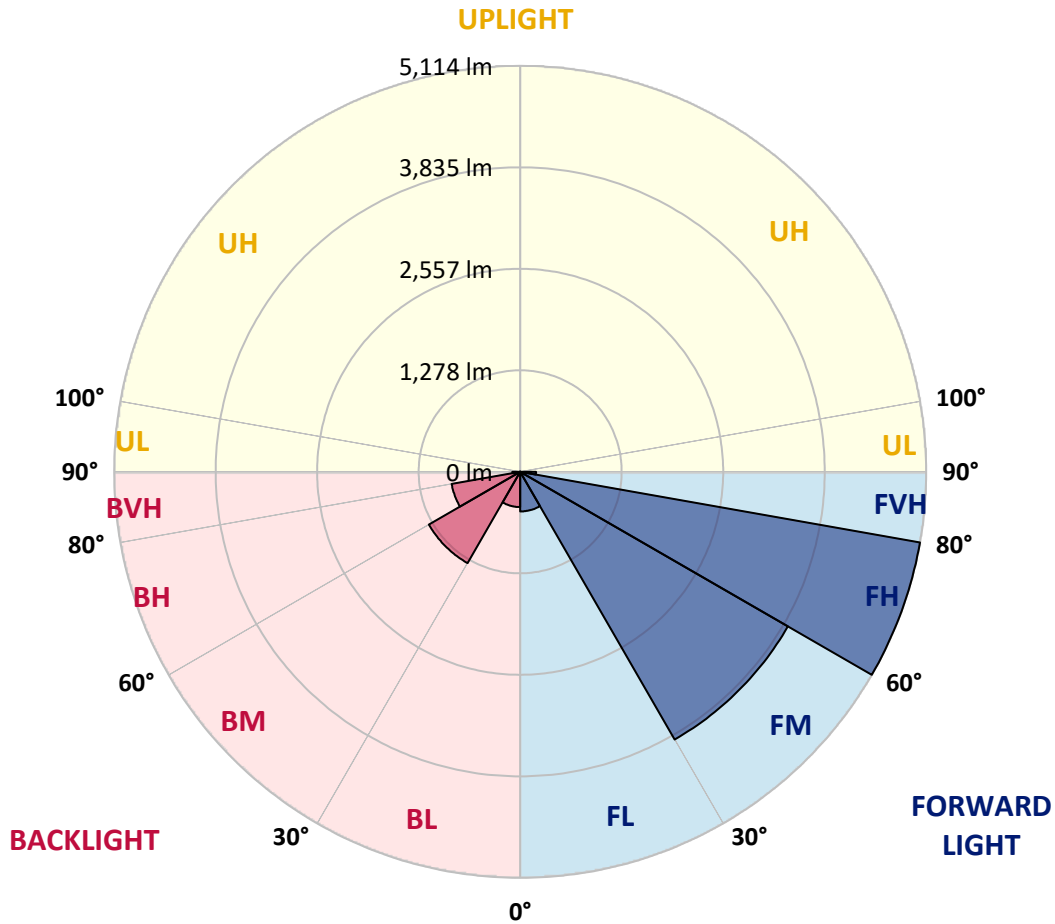
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	499.1	4.0			
FM (30°-60°)	3894.0	31.3			
FH (60°-80°)	5114.0	41.1			G3/7500
FVH (80°-90°)	199.1	1.6			G2/225
BL (0°-30°)	444.1	3.6	B1/500		
BM (30°-60°)	1327.9	10.7	B2/2500		
BH (60°-80°)	876.2	7.0	B2/1000		G2/1000
BVH (80°-90°)	99.6	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3
2.5°	513.7	503.5	479.0	487.2	497.4	501.5	500.4	499.4	483.6	478.0	506.1
5°	698.1	675.6	657.7	650.6	627.1	608.7	597.5	627.1	622.5	630.1	649.5
7.5°	871.7	857.4	817.0	802.7	754.7	723.1	719.5	743.0	749.1	736.9	770.1
10°	983.5	959.0	950.8	916.6	883.4	878.3	875.3	864.5	849.7	848.7	819.1
12.5°	1070.3	1083.1	1089.7	1050.4	1051.4	1069.8	1060.1	1016.7	991.7	947.8	951.3
15°	1226.1	1244.5	1191.9	1166.8	1118.8	1146.4	1142.8	1106.6	1103.0	1074.4	1041.2
17.5°	1361.9	1370.1	1282.2	1225.0	1208.7	1168.9	1179.6	1180.6	1133.6	1184.7	1155.1
20°	1373.1	1402.2	1301.1	1187.3	1236.3	1231.2	1232.7	1222.5	1160.7	1245.0	1233.7
22.5°	1428.3	1383.9	1293.0	1209.7	1222.5	1230.2	1237.3	1225.0	1221.5	1268.5	1302.7
25°	1418.1	1403.8	1311.9	1241.4	1242.9	1244.5	1248.0	1284.8	1280.7	1344.5	1362.4
27.5°	1513.6	1491.6	1317.5	1300.1	1260.3	1251.6	1227.1	1303.7	1363.4	1361.9	1460.5
30°	1695.4	1672.9	1448.2	1397.6	1325.6	1236.8	1283.8	1385.9	1432.9	1448.7	1573.8
32.5°	1979.3	2016.0	1705.6	1501.8	1412.5	1393.1	1387.9	1377.7	1494.2	1572.3	1686.2
35°	2386.8	2357.7	2008.9	1725.0	1503.9	1420.6	1431.9	1494.2	1632.5	1683.1	1788.3
37.5°	2853.5	2793.2	2397.5	1977.7	1767.4	1663.2	1625.9	1686.2	1716.8	1756.6	1971.6
40°	3327.9	3180.8	2779.0	2310.2	1925.7	1847.0	1814.3	1740.3	1812.3	1893.0	2166.2
42.5°	3786.0	3672.1	3194.1	2706.9	2192.2	1911.9	1894.0	1821.5	2044.6	2129.9	2447.0
45°	4266.0	4002.0	3619.5	3154.8	2581.8	2230.0	2203.4	2073.2	2359.2	2536.9	2843.3
47.5°	4588.7	4344.1	4009.1	3518.4	2908.1	2762.1	2711.5	2488.9	2748.3	2979.1	3455.6
50°	4894.1	4642.3	4290.5	3916.2	3499.0	3331.0	3223.2	2852.5	3232.9	3608.8	4240.4
52.5°	5331.2	5106.0	4617.3	4317.0	4133.7	3720.6	3640.4	3436.7	3799.7	4306.8	5098.3
55°	5798.4	5491.5	5048.8	4882.3	4808.3	4279.2	4213.9	4084.2	4554.5	5021.2	5932.2
57.5°	6004.7	5684.5	5440.5	5340.9	5334.7	5091.2	5016.1	4925.7	5326.1	5634.0	6717.1
60°	6168.6	5825.0	5727.4	5783.1	5985.3	5825.0	5727.4	5647.8	5954.2	6239.6	7357.4
62.5°	6138.5	5793.8	5843.9	6013.4	6529.7	6576.6	6501.6	6308.6	6576.6	6736.0	7724.6
65°	5652.4	5333.7	5625.3	6027.7	7035.7	7411.0	7407.0	6901.9	6994.9	6994.9	7685.8
67.5°	4800.6	4470.7	4948.2	5901.6	7385.5	8072.3	8073.4	7531.0	7033.2	6968.8	7085.3
70°	3584.8	3286.0	3822.7	5139.7	7024.5	8392.5	8346.0	8038.6	6928.0	6365.7	5918.4
72.5°	2141.2	1948.1	2441.9	3741.5	5992.0	7803.7	7927.3	7453.9	6342.3	5293.9	4230.7
75°	972.3	888.5	1147.4	2149.3	4277.7	6509.2	6643.5	6290.7	5037.6	3807.4	2445.0
77.5°	416.2	393.7	500.9	953.4	2358.7	4451.3	4726.6	4495.8	3413.2	2212.6	1081.6
80°	267.6	253.3	307.9	458.6	1095.3	2405.2	2642.1	2555.8	1738.8	860.4	380.9
82.5°	159.8	155.2	205.8	288.0	597.5	1058.6	1192.9	1224.5	722.1	386.1	218.0
85°	87.3	88.3	112.9	174.6	358.5	412.1	441.2	480.0	340.1	223.7	105.7
87.5°	29.1	33.7	45.4	71.0	127.7	116.4	116.9	135.8	143.5	92.9	33.7
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°	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3
2.5°	510.6	501.5	478.0	479.5	488.2	490.2	492.8	478.0	474.9	503.0	505.5
5°	652.6	622.5	608.7	604.1	590.8	586.2	610.7	622.0	633.2	655.2	665.9
7.5°	766.5	732.8	707.8	684.8	665.4	654.1	695.5	727.2	746.6	791.5	811.9
10°	818.6	789.5	780.3	761.9	776.7	810.4	818.1	819.1	862.0	861.0	869.6
12.5°	922.2	903.3	873.2	879.8	918.7	953.4	943.7	958.5	973.8	1010.6	993.7
15°	1016.7	1011.6	983.5	988.1	995.8	1039.2	1044.8	1059.6	1083.1	1112.2	1092.3
17.5°	1133.1	1131.1	1062.7	1056.5	1074.4	1116.8	1103.5	1077.5	1155.1	1186.2	1178.1
20°	1212.3	1197.0	1109.1	1083.1	1128.5	1134.2	1118.8	1077.5	1144.9	1212.8	1231.2
22.5°	1278.2	1260.3	1169.9	1118.8	1109.6	1112.2	1112.2	1104.5	1137.7	1193.4	1192.9
25°	1331.3	1348.1	1233.2	1184.2	1135.2	1073.9	1066.2	1072.9	1091.8	1199.0	1195.4
27.5°	1464.5	1418.1	1254.7	1217.9	1117.3	1020.8	1041.7	1051.9	1058.1	1175.5	1194.9
30°	1551.4	1565.6	1331.3	1237.8	1091.3	961.6	968.7	998.3	1034.1	1173.0	1178.6
32.5°	1668.3	1637.7	1450.8	1204.6	1021.8	925.8	912.5	952.4	1005.5	1131.6	1146.9
35°	1777.1	1813.3	1501.3	1198.5	973.3	872.2	886.5	900.3	955.4	1085.6	1103.5
37.5°	2032.4	1949.7	1643.3	1168.9	933.0	845.1	829.8	850.7	897.7	998.3	1039.7
40°	2226.4	2231.5	1673.9	1131.6	855.8	806.3	773.6	794.6	814.5	894.7	912.5
42.5°	2590.5	2479.2	1749.0	1049.9	807.3	748.1	729.7	738.9	742.0	775.7	805.3
45°	3053.7	2792.7	1778.6	940.1	743.5	724.1	686.8	682.2	665.4	670.0	696.0
47.5°	3694.5	3281.9	1757.1	823.2	686.8	693.0	639.3	618.4	594.9	600.5	625.0
50°	4523.3	3907.0	1755.6	724.1	648.0	652.1	608.2	570.4	546.9	558.6	580.1
52.5°	5453.2	4534.1	1762.8	656.2	605.6	603.6	587.8	541.8	522.9	535.2	559.7
55°	6342.8	5073.3	1815.9	613.3	561.7	565.3	571.4	532.6	511.7	522.9	548.4
57.5°	7116.9	5499.2	1796.0	567.8	520.9	537.2	553.5	519.8	504.0	520.4	545.9
60°	7658.2	5696.8	1638.7	524.4	490.7	513.2	544.9	518.3	516.3	551.5	582.1
62.5°	7855.8	5623.8	1332.3	490.2	472.9	510.1	564.8	552.0	554.1	597.5	639.8
65°	7567.3	5239.8	993.7	468.3	459.1	524.9	610.7	571.9	543.8	579.6	618.4
67.5°	6746.7	4557.0	726.1	449.4	443.2	548.4	653.1	569.9	517.8	554.1	585.7
70°	5458.3	3597.0	562.2	425.4	422.3	532.6	657.2	554.6	489.7	513.2	531.1
72.5°	3740.0	2462.9	465.7	402.4	386.1	471.8	624.0	520.4	456.0	469.8	484.6
75°	2090.1	1382.3	391.7	373.8	338.0	420.3	585.2	499.9	431.0	435.1	455.5
77.5°	938.1	598.0	332.4	336.0	294.6	371.8	534.6	467.2	392.7	383.5	403.9
80°	354.9	291.6	269.6	283.9	247.7	322.2	482.1	437.6	352.3	340.6	352.3
82.5°	205.8	176.7	200.2	218.6	196.6	296.2	460.1	410.6	310.5	280.9	291.1
85°	95.5	91.4	120.0	142.0	137.4	230.8	393.7	308.9	221.1	186.9	206.8
87.5°	25.0	28.1	42.4	50.0	51.1	79.2	151.7	114.9	86.3	65.4	62.8
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)