

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: P596636

Luminaire Tested: **MSA-SA2D-827-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596636
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-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: 9729 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

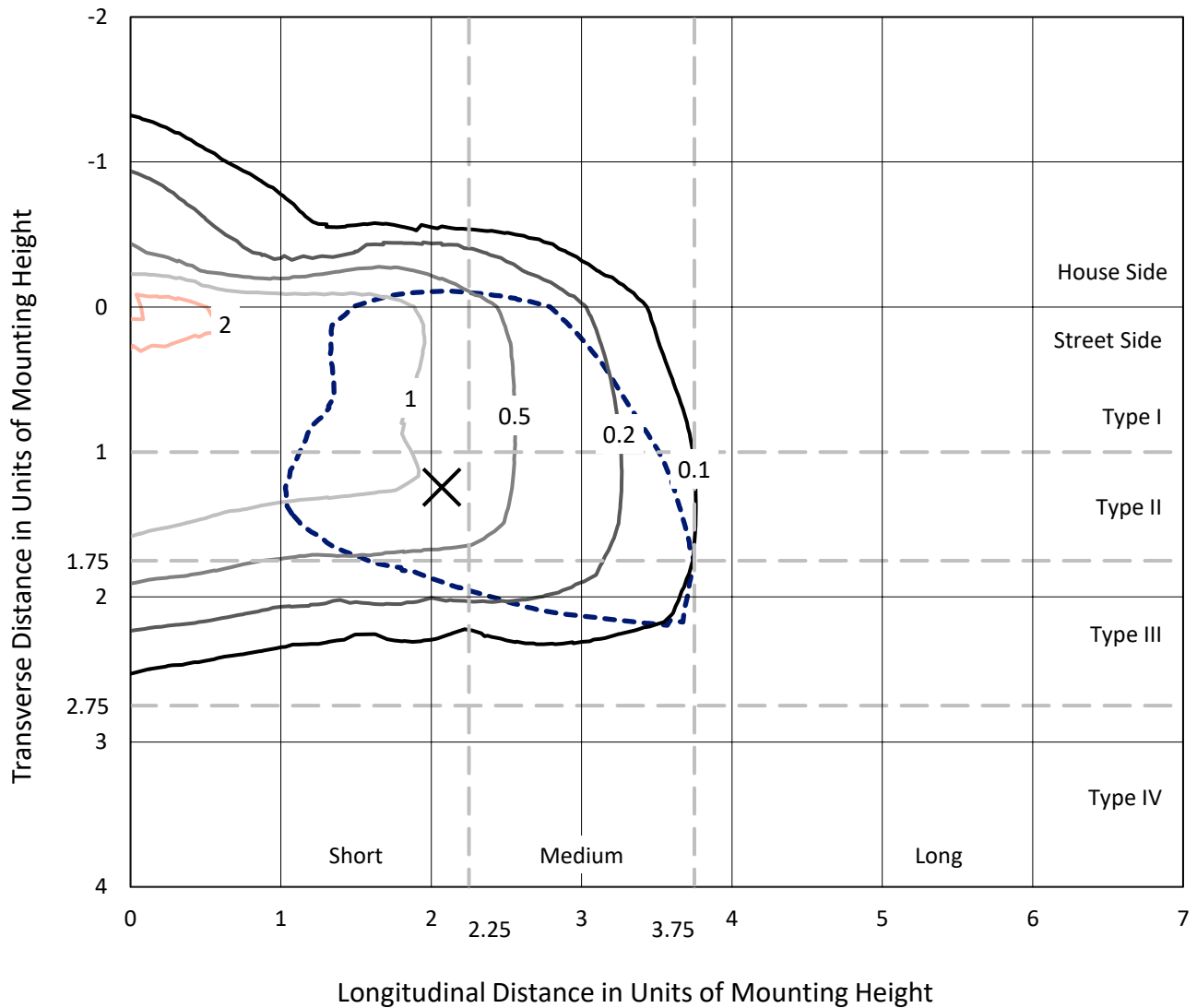
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

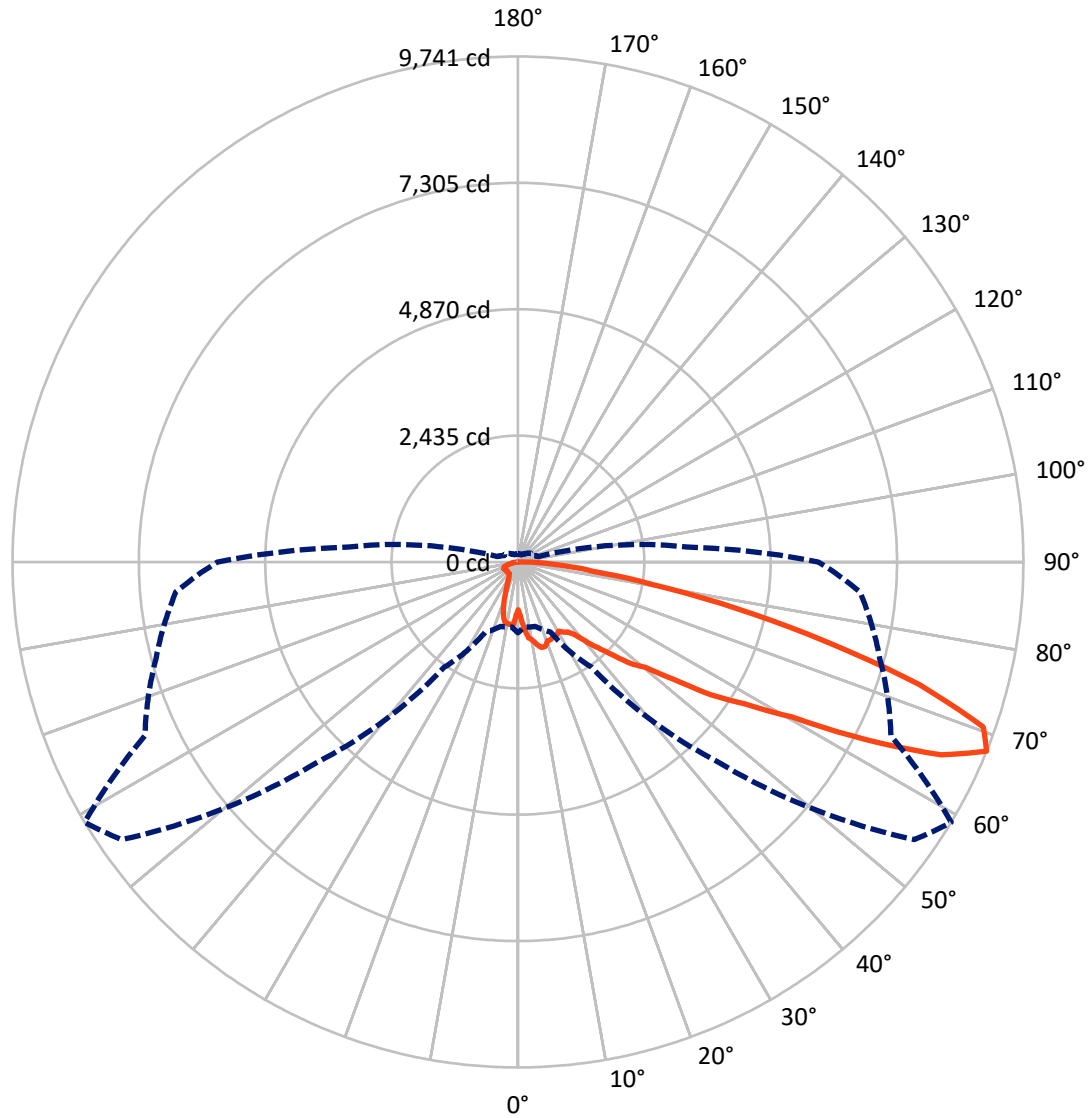
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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	1464.4	0.0	1464.4
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	8264.6	0.0	8264.6
	% Fixture	84.9	0.0	84.9
Total	Lumens	9729.0	0.0	9729.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.2	1.2
10°-20°	355.8	3.7
20°-30°	508.1	5.2
30°-40°	748.8	7.7
40°-50°	1265.0	13.0
50°-60°	2201.4	22.6
60°-70°	2805.3	28.8
70°-80°	1485.4	15.3
80°-90°	239.0	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°	9729.0	100.0
0°-180°	9729.0	100.0

Coefficient of Utilization



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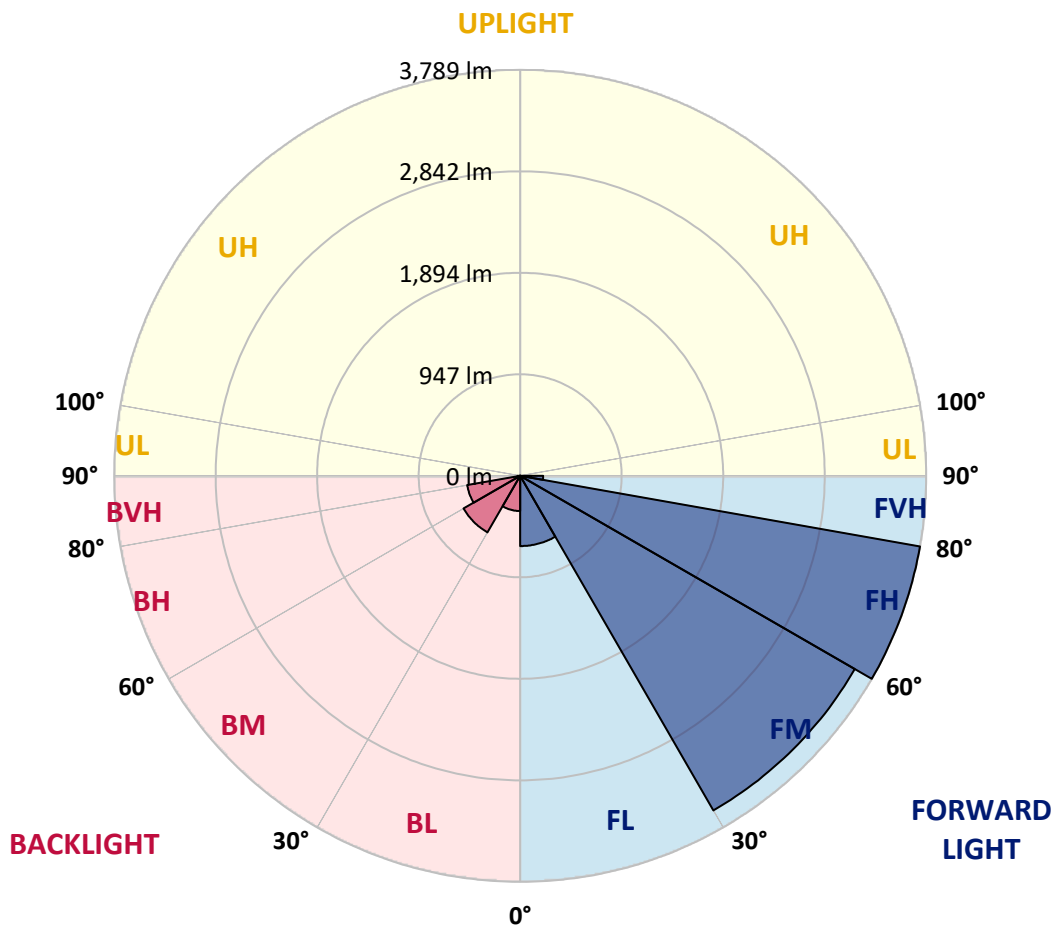
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	655.8	6.7			
FM (30°-60°)	3605.4	37.1			
FH (60°-80°)	3788.8	38.9			G2/5000
FVH (80°-90°)	214.6	2.2			G2/225
BL (0°-30°)	328.4	3.4	B1/500		
BM (30°-60°)	609.8	6.3	B1/1000		
BH (60°-80°)	501.9	5.2	B2/1000		G2/1000
BVH (80°-90°)	24.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6
2.5°	1149.4	1095.8	1038.9	1055.0	1087.6	1102.4	1086.4	1070.7	1050.5	1026.6	1108.2
5°	1393.9	1314.3	1302.8	1302.4	1290.8	1244.7	1304.0	1299.9	1323.8	1348.6	1412.1
7.5°	1463.6	1433.9	1401.7	1417.0	1358.9	1356.4	1448.7	1475.1	1521.3	1506.1	1591.4
10°	1427.7	1394.3	1411.2	1405.0	1410.4	1471.4	1527.9	1529.6	1579.0	1627.7	1572.8
12.5°	1364.6	1367.1	1434.3	1431.8	1518.4	1631.8	1648.7	1635.5	1716.3	1683.3	1730.3
15°	1409.6	1439.7	1422.8	1437.2	1471.4	1615.7	1662.7	1710.5	1787.2	1816.9	1769.9
17.5°	1481.3	1497.4	1421.5	1413.7	1484.2	1552.6	1669.3	1710.1	1722.1	1933.6	1867.2
20°	1450.8	1483.4	1409.2	1313.9	1431.0	1521.7	1636.7	1624.4	1682.5	1942.7	1887.4
22.5°	1537.4	1483.4	1389.0	1321.4	1362.6	1445.9	1543.6	1624.8	1693.6	1889.5	1916.7
25°	1553.9	1528.3	1440.1	1372.9	1358.9	1388.6	1527.9	1581.1	1697.4	1962.0	1901.0
27.5°	1654.5	1616.1	1436.4	1438.4	1368.8	1316.4	1478.4	1590.2	1739.4	1917.1	1939.4
30°	1779.4	1750.1	1524.6	1532.9	1436.4	1339.9	1512.2	1546.0	1763.7	1987.2	1987.6
32.5°	1873.0	1924.5	1698.2	1586.0	1551.8	1479.7	1460.3	1612.4	1735.3	2114.2	2070.1
35°	2041.6	2081.6	1831.8	1741.9	1626.0	1544.8	1601.3	1656.1	1853.6	2281.1	2192.5
37.5°	2353.7	2307.5	2079.9	1938.5	1895.2	1778.2	1809.5	1771.2	1982.2	2468.7	2432.4
40°	2534.3	2494.3	2254.8	2176.4	2004.9	2019.8	1980.6	2008.6	2154.2	2668.3	2656.7
42.5°	2712.4	2658.8	2456.4	2401.9	2230.8	2158.3	2165.3	2256.0	2419.3	2990.7	2952.3
45°	2888.4	2751.1	2662.5	2676.9	2594.5	2445.6	2455.9	2541.3	2708.7	3359.3	3271.0
47.5°	3023.2	2909.9	2840.6	2822.9	2782.1	2981.2	2892.1	2926.8	3000.6	3687.4	3654.0
50°	3278.4	3146.1	3055.8	3030.3	3168.8	3445.8	3264.4	3189.8	3346.9	4111.7	4094.3
52.5°	3687.0	3522.1	3371.6	3370.0	3570.3	3750.1	3877.9	3749.3	3807.0	4546.2	4595.7
55°	4043.6	3852.8	3717.5	3792.1	4077.4	4187.5	4621.7	4521.1	4472.4	4984.9	5126.3
57.5°	4176.8	3953.8	3865.5	3975.6	4396.1	4961.8	5420.6	5156.0	5108.6	5481.3	5777.7
60°	3884.5	3648.7	3654.0	3861.4	4589.9	5530.3	6294.3	6069.6	5791.7	6099.3	6388.7
62.5°	3051.7	2838.5	2977.5	3292.9	4427.5	6082.8	7465.1	7560.0	6572.1	6611.7	6727.6
65°	2074.2	1926.6	2051.9	2360.7	3591.0	6384.1	8580.4	8960.5	7282.9	6947.3	6873.9
67.5°	1365.1	1260.8	1285.1	1490.4	2472.0	5442.5	9326.2	9740.5	7932.7	7222.7	6615.8
70°	1057.1	973.0	962.3	1069.9	1466.1	3781.0	8884.2	9514.2	8328.5	6964.6	5766.6
72.5°	829.5	765.6	771.4	874.9	1135.4	2097.7	6874.8	8090.6	7732.3	6006.5	4430.4
75°	646.9	594.5	623.8	742.1	1050.1	1303.6	4743.3	6140.5	5978.1	4447.7	2526.9
77.5°	469.6	435.8	477.4	632.0	987.0	1118.5	2952.7	4284.0	3829.7	2283.6	867.0
80°	308.0	289.0	323.2	515.3	895.1	1076.5	1824.7	2625.0	1892.4	641.5	328.2
82.5°	181.4	173.2	201.6	348.8	719.4	1008.8	1217.0	1458.6	774.3	271.3	174.4
85°	95.2	89.1	119.6	200.4	496.0	921.0	958.1	873.2	373.9	117.9	83.3
87.5°	31.7	30.9	50.7	77.5	187.6	489.0	511.2	414.8	154.2	34.2	18.1
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°	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6
2.5°	1119.3	1102.8	1008.0	1021.2	1033.6	1027.4	1023.7	980.8	976.7	1037.7	1032.8
5°	1410.4	1342.0	1261.2	1257.5	1204.3	1149.8	1160.6	1143.3	1148.2	1173.3	1175.8
7.5°	1564.2	1478.8	1401.7	1276.4	1170.0	1083.9	1097.5	1093.4	1082.2	1139.1	1154.4
10°	1561.3	1485.4	1398.5	1246.7	1175.0	1104.9	1020.8	941.2	917.7	889.7	892.2
12.5°	1664.4	1597.2	1407.5	1252.9	1155.6	1034.8	877.3	790.3	707.1	705.4	684.4
15°	1696.5	1647.1	1426.9	1217.5	1020.0	846.8	684.0	589.6	529.4	517.4	499.7
17.5°	1777.7	1700.2	1367.9	1102.8	862.5	662.1	514.1	448.1	443.2	451.4	442.4
20°	1783.1	1657.4	1261.6	933.4	693.0	501.7	419.3	386.3	404.0	424.2	423.4
22.5°	1778.6	1603.4	1169.6	789.1	520.7	403.2	367.3	359.9	376.4	406.5	410.2
25°	1732.4	1585.6	1054.6	648.1	422.6	345.5	335.6	340.1	360.7	396.2	396.2
27.5°	1780.6	1513.5	910.3	527.3	355.4	307.6	314.6	326.1	341.4	381.8	389.2
30°	1765.0	1537.4	794.1	424.6	313.3	281.2	296.8	308.4	325.7	367.8	371.5
32.5°	1807.0	1473.5	696.3	357.0	285.7	270.9	274.6	290.2	312.9	345.9	352.5
35°	1871.3	1497.0	584.2	321.2	272.1	258.9	265.9	278.3	301.0	333.1	338.5
37.5°	2076.7	1495.7	506.7	301.4	269.6	256.4	259.7	268.4	294.8	324.1	336.4
40°	2208.6	1581.5	436.2	296.8	266.7	255.2	252.3	261.8	282.8	317.5	326.1
42.5°	2456.4	1633.9	405.7	295.2	266.3	248.2	245.3	256.4	277.1	309.2	322.4
45°	2718.2	1708.5	381.4	294.4	265.1	247.0	238.3	252.3	269.6	300.6	315.8
47.5°	3026.1	1866.4	367.8	291.5	262.6	248.6	235.8	242.8	262.2	293.1	308.4
50°	3429.3	2075.4	370.6	287.4	266.3	249.0	232.1	235.4	253.1	283.2	298.9
52.5°	3919.5	2399.1	389.2	289.0	268.8	247.0	230.5	228.8	244.1	270.5	286.1
55°	4510.3	2858.3	444.8	296.8	268.8	246.5	228.0	220.6	232.1	253.6	268.8
57.5°	5223.2	3390.2	553.7	300.6	266.7	244.1	222.6	209.4	216.4	234.2	248.6
60°	5835.4	3819.4	665.8	303.0	270.9	238.3	211.9	195.4	200.0	213.6	226.3
62.5°	6147.5	3939.7	699.6	301.0	282.0	234.6	199.1	180.6	181.0	192.5	204.1
65°	6206.0	3779.4	564.0	298.9	296.4	234.2	190.1	167.8	164.9	173.2	183.1
67.5°	5788.8	3280.5	406.9	294.4	298.1	231.7	183.9	157.5	150.1	155.8	164.1
70°	4915.2	2641.9	341.8	285.3	278.3	219.3	173.2	146.8	136.9	141.0	147.2
72.5°	3664.3	1954.6	298.1	265.9	242.4	187.6	156.7	134.8	124.5	127.4	131.9
75°	2035.8	1042.7	249.4	231.3	197.9	151.7	133.6	119.6	110.5	111.7	116.7
77.5°	676.1	384.7	183.1	183.5	149.7	117.1	110.1	102.2	95.2	95.6	99.8
80°	306.3	212.7	131.1	131.9	104.3	84.9	84.5	82.0	77.5	76.3	79.2
82.5°	177.7	129.0	89.9	85.8	67.2	55.2	61.4	60.2	59.0	54.4	55.2
85°	87.4	69.3	47.0	44.5	37.1	27.6	33.0	34.2	33.0	28.0	27.6
87.5°	21.4	22.7	11.5	10.7	6.2	2.9	4.9	4.9	6.2	4.1	2.1
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)