

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: P367528

Luminaire Tested: **MSA-SA2D-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367528
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-727-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11205 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

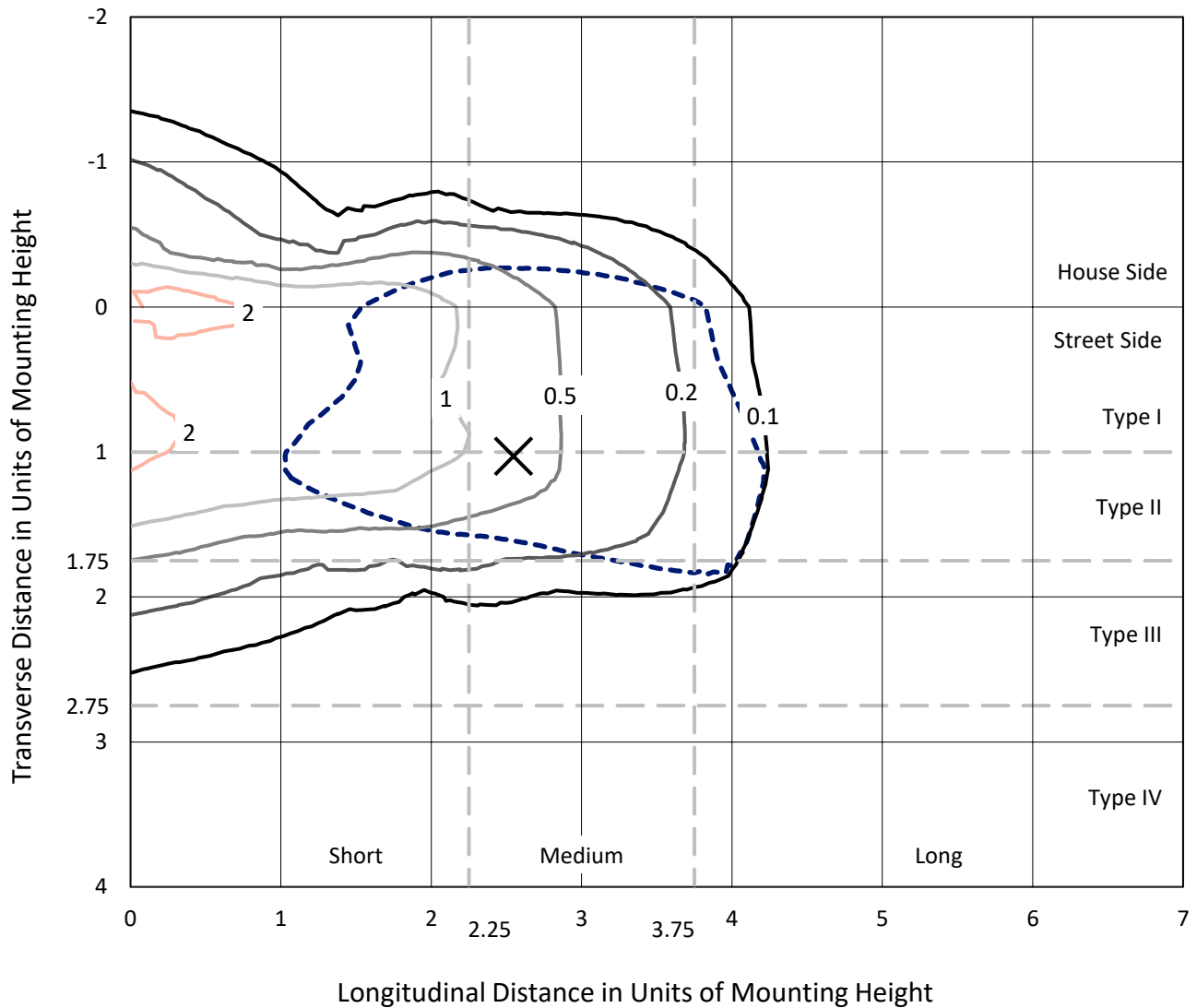
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

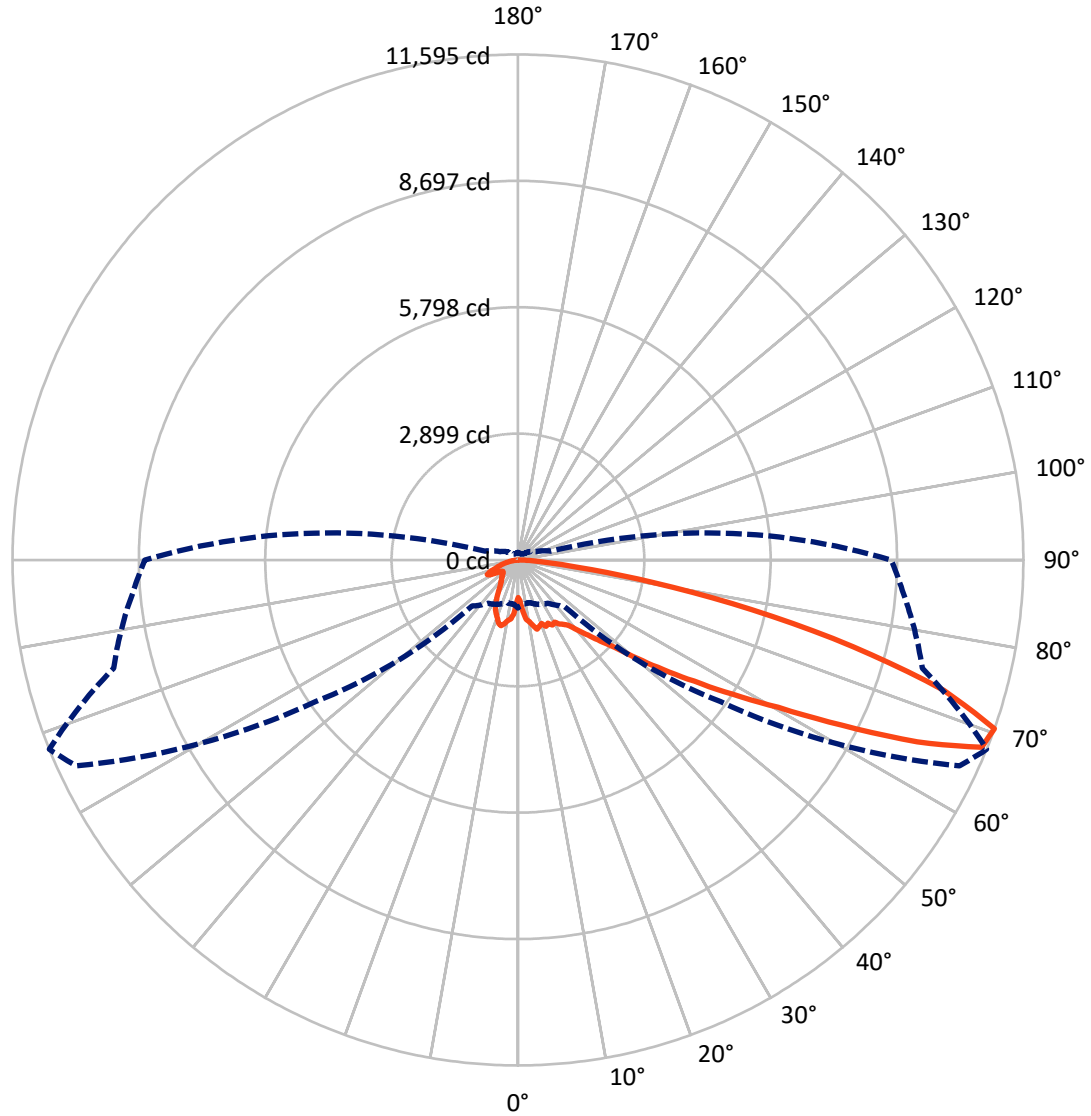
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2139.3	0.0	2139.3
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	9065.7	0.0	9065.7
	% Fixture	80.9	0.0	80.9
Total	Lumens	11205.0	0.0	11205.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	1.0
10°-20°	374.0	3.3
20°-30°	568.9	5.1
30°-40°	868.9	7.8
40°-50°	1494.1	13.3
50°-60°	2473.1	22.1
60°-70°	3048.9	27.2
70°-80°	1958.6	17.5
80°-90°	303.8	2.7
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°	11205.0	100.0
0°-180°	11205.0	100.0

Coefficient of Utilization



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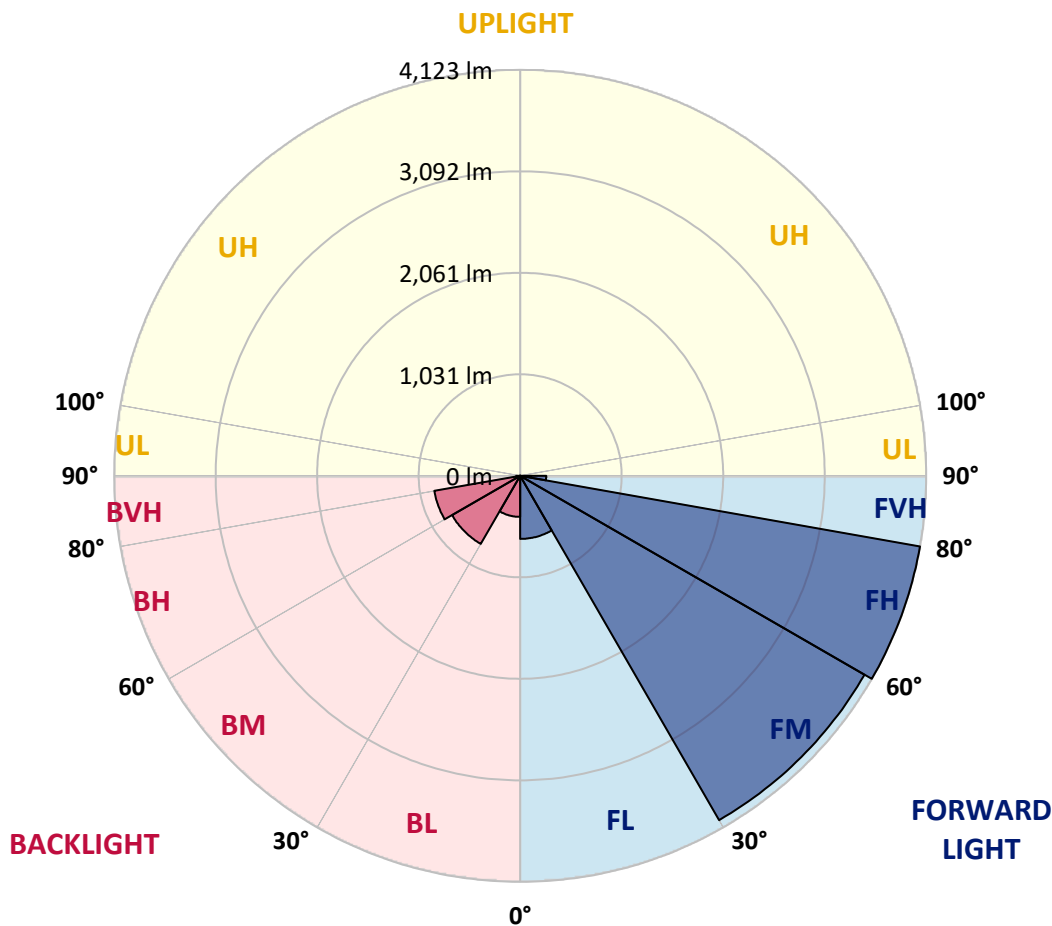
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	640.7	5.7			
FM (30°-60°)	4037.6	36.0			
FH (60°-80°)	4122.6	36.8			G2/5000
FVH (80°-90°)	264.8	2.4			G3/500
BL (0°-30°)	416.9	3.7	B1/500		
BM (30°-60°)	798.5	7.1	B1/1000		
BH (60°-80°)	884.9	7.9	B2/1000		G2/1000
BVH (80°-90°)	39.0	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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1
2.5°	987.2	947.3	907.0	926.7	958.1	985.7	980.1	983.4	945.4	940.3	1040.1
5°	1163.0	1094.5	1093.1	1094.1	1096.9	1065.0	1142.8	1183.2	1192.1	1233.4	1331.4
7.5°	1224.0	1196.3	1168.2	1182.2	1146.6	1149.9	1245.5	1350.6	1375.4	1405.5	1539.6
10°	1211.3	1185.1	1193.5	1195.8	1202.4	1255.4	1316.8	1417.7	1438.8	1534.4	1569.1
12.5°	1213.2	1208.5	1247.9	1249.3	1319.6	1414.8	1439.2	1532.1	1540.5	1610.9	1755.8
15°	1277.4	1309.8	1287.8	1299.5	1313.1	1427.0	1462.2	1595.4	1646.0	1736.5	1845.3
17.5°	1402.6	1412.0	1345.9	1328.6	1373.1	1407.8	1488.0	1545.7	1598.7	1851.4	2001.5
20°	1431.7	1457.0	1378.3	1288.7	1383.0	1431.3	1487.1	1513.3	1554.6	1868.3	2081.2
22.5°	1556.5	1503.9	1408.7	1330.9	1361.8	1408.7	1449.1	1548.0	1656.4	1820.0	2160.9
25°	1627.3	1596.8	1511.9	1428.4	1402.2	1403.6	1481.4	1570.1	1607.6	1890.8	2176.9
27.5°	1798.4	1749.7	1558.8	1542.9	1443.9	1367.0	1486.6	1624.5	1690.1	1835.5	2254.7
30°	2012.8	1975.7	1725.3	1704.2	1553.2	1419.1	1552.2	1664.8	1655.4	1871.6	2308.7
32.5°	2186.3	2248.2	1995.4	1828.9	1721.5	1593.0	1531.6	1657.8	1751.1	1955.5	2400.1
35°	2433.9	2492.0	2206.0	2093.4	1860.3	1673.7	1675.6	1754.4	1812.0	2053.6	2502.3
37.5°	2862.5	2811.4	2581.1	2403.4	2254.3	1975.7	1892.2	1864.6	1911.0	2173.6	2702.6
40°	3171.5	3128.4	2857.3	2756.1	2465.8	2304.0	2075.1	2048.9	2130.9	2297.4	2866.3
42.5°	3537.8	3460.9	3208.6	3125.1	2821.7	2530.0	2299.3	2314.3	2354.2	2531.0	3087.6
45°	3910.6	3724.0	3580.9	3574.4	3371.8	2969.0	2659.0	2646.8	2648.2	2874.7	3336.2
47.5°	4206.5	4038.6	3875.0	3797.1	3694.9	3728.2	3181.4	3038.4	2995.2	3220.8	3709.0
50°	4406.8	4213.6	4028.3	4010.0	4283.0	4462.6	3671.9	3519.0	3545.8	3716.0	4206.1
52.5°	4411.0	4181.7	3988.5	4116.5	4759.4	5016.4	4517.0	4089.8	4175.1	4290.9	4854.6
55°	4104.3	3866.5	3740.9	4032.6	4945.6	5673.4	5704.4	5004.2	4905.7	4948.4	5629.8
57.5°	3457.6	3217.5	3144.3	3493.7	4592.5	6307.0	7138.4	6096.9	5808.0	5629.8	6424.2
60°	2602.7	2395.0	2349.5	2572.2	3807.5	6120.8	8299.6	7456.9	6868.3	6390.9	7221.0
62.5°	1951.8	1802.7	1734.2	1766.1	2634.6	5515.4	9062.1	9175.1	8341.8	7221.9	7999.4
65°	1586.0	1465.5	1404.5	1363.3	1638.5	4264.7	8924.2	10621.4	10062.9	8094.6	8605.3
67.5°	1324.8	1217.9	1189.7	1230.1	1295.3	2474.2	7845.6	11430.3	11468.3	8955.6	8959.4
70°	1099.7	1020.4	1010.1	1124.6	1210.4	1493.2	5666.9	11176.2	11595.4	9601.4	8876.4
72.5°	849.7	807.1	805.7	985.3	1202.4	1272.7	3374.6	9654.9	10218.1	9395.1	8064.2
75°	589.5	559.9	582.4	809.9	1174.7	1291.0	1926.0	7520.2	7941.8	7994.8	6459.9
77.5°	405.6	380.8	405.2	585.7	1049.1	1322.0	1347.3	5437.5	5484.4	5361.1	3700.1
80°	282.3	265.0	283.7	414.6	816.5	1308.4	1147.1	3423.4	3141.1	2392.6	1184.6
82.5°	174.9	169.8	190.4	295.4	574.9	1190.2	1087.0	1766.6	1348.7	660.3	423.0
85°	91.9	84.4	110.7	192.7	359.7	934.2	1018.6	806.1	520.5	234.5	169.8
87.5°	27.2	24.4	42.7	77.8	152.4	418.8	582.9	341.9	194.1	68.9	53.0
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°	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1	859.1
2.5°	1047.2	1042.0	972.6	981.5	996.5	1000.3	999.8	974.5	947.8	1022.3	1020.0
5°	1333.7	1287.3	1252.6	1245.1	1202.4	1159.7	1174.7	1169.6	1163.0	1196.8	1201.0
7.5°	1540.1	1475.8	1435.5	1331.8	1233.4	1148.0	1175.2	1183.6	1166.8	1227.7	1246.0
10°	1594.4	1543.8	1500.2	1367.0	1312.6	1262.9	1189.3	1105.3	1094.1	1058.9	1063.1
12.5°	1734.7	1727.6	1579.0	1461.7	1390.9	1292.0	1133.0	1031.2	944.0	948.2	922.9
15°	1845.3	1849.1	1670.4	1506.3	1316.4	1165.4	978.2	851.6	762.1	744.2	725.9
17.5°	1994.0	1986.5	1677.9	1452.8	1212.3	990.9	761.6	635.9	620.9	631.2	615.3
20°	2058.7	1992.6	1630.1	1320.1	1049.5	752.7	575.4	508.8	537.9	579.2	580.1
22.5°	2116.9	2003.8	1605.2	1213.2	832.9	547.3	461.9	449.7	484.0	539.8	544.5
25°	2114.5	2055.9	1560.7	1105.3	645.8	427.2	401.4	410.3	451.1	509.3	512.6
27.5°	2221.0	2016.0	1444.9	963.7	486.3	365.8	372.4	388.8	408.0	463.3	474.1
30°	2220.0	2090.1	1386.7	791.6	390.6	335.3	352.2	366.3	382.2	432.8	438.9
32.5°	2272.6	2041.8	1351.5	615.7	350.3	327.8	332.0	346.1	369.1	403.3	407.5
35°	2335.9	2096.7	1239.0	489.1	335.3	321.2	324.5	332.5	353.6	385.0	389.2
37.5°	2538.9	2107.0	1194.4	412.2	334.4	318.4	318.0	322.2	346.1	374.7	387.4
40°	2618.2	2201.3	1064.5	385.0	331.1	318.4	311.9	314.2	333.9	370.5	380.3
42.5°	2808.1	2232.7	968.4	375.6	331.1	312.8	302.5	306.2	329.2	361.6	377.0
45°	3003.7	2277.2	854.0	373.8	330.6	312.3	292.6	301.1	319.8	347.0	363.9
47.5°	3282.2	2437.6	739.5	368.1	326.9	314.7	290.3	289.8	306.2	329.7	345.6
50°	3736.6	2688.1	650.9	361.1	327.3	312.8	285.6	279.0	289.8	310.4	325.9
52.5°	4369.3	3114.8	616.2	357.3	323.6	305.3	277.6	267.3	273.4	289.8	304.8
55°	5103.6	3691.2	650.4	357.3	316.1	293.6	266.4	254.2	257.5	268.7	283.2
57.5°	5961.8	4407.2	816.0	352.2	306.7	279.5	252.8	238.7	239.6	249.5	262.6
60°	6858.0	5207.3	1186.9	348.0	300.1	264.0	236.8	222.3	220.9	230.3	242.0
62.5°	7755.6	5945.4	1577.1	357.8	298.3	250.9	219.9	205.4	204.9	213.4	223.2
65°	8469.3	6450.0	1674.2	397.7	310.4	235.9	202.6	189.0	188.1	195.1	205.9
67.5°	8819.7	6523.2	1271.8	447.4	336.2	221.8	185.7	173.0	172.1	179.6	189.0
70°	8560.3	6023.3	785.0	452.5	334.8	205.4	168.4	157.6	155.7	163.7	170.7
72.5°	7600.8	5268.7	596.5	400.5	289.8	182.0	151.0	141.6	138.8	145.8	152.4
75°	6100.6	4183.1	477.9	323.1	228.4	153.3	133.7	124.7	121.5	128.0	133.7
77.5°	3553.7	2353.2	349.4	252.3	172.6	125.2	114.0	106.0	102.2	109.3	113.5
80°	1155.5	784.1	219.5	181.0	126.1	98.0	92.4	86.8	83.0	87.7	89.1
82.5°	415.0	291.7	121.5	111.1	83.9	70.3	69.9	66.6	61.9	63.8	63.8
85°	183.8	133.2	72.2	59.6	50.2	37.5	44.1	41.7	37.0	36.1	34.7
87.5°	51.6	44.1	26.3	20.2	16.4	6.1	14.1	12.7	10.3	9.4	6.6
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)