

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: P367768

Luminaire Tested: **MSA-SA3A-830-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367768
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-830-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9573 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

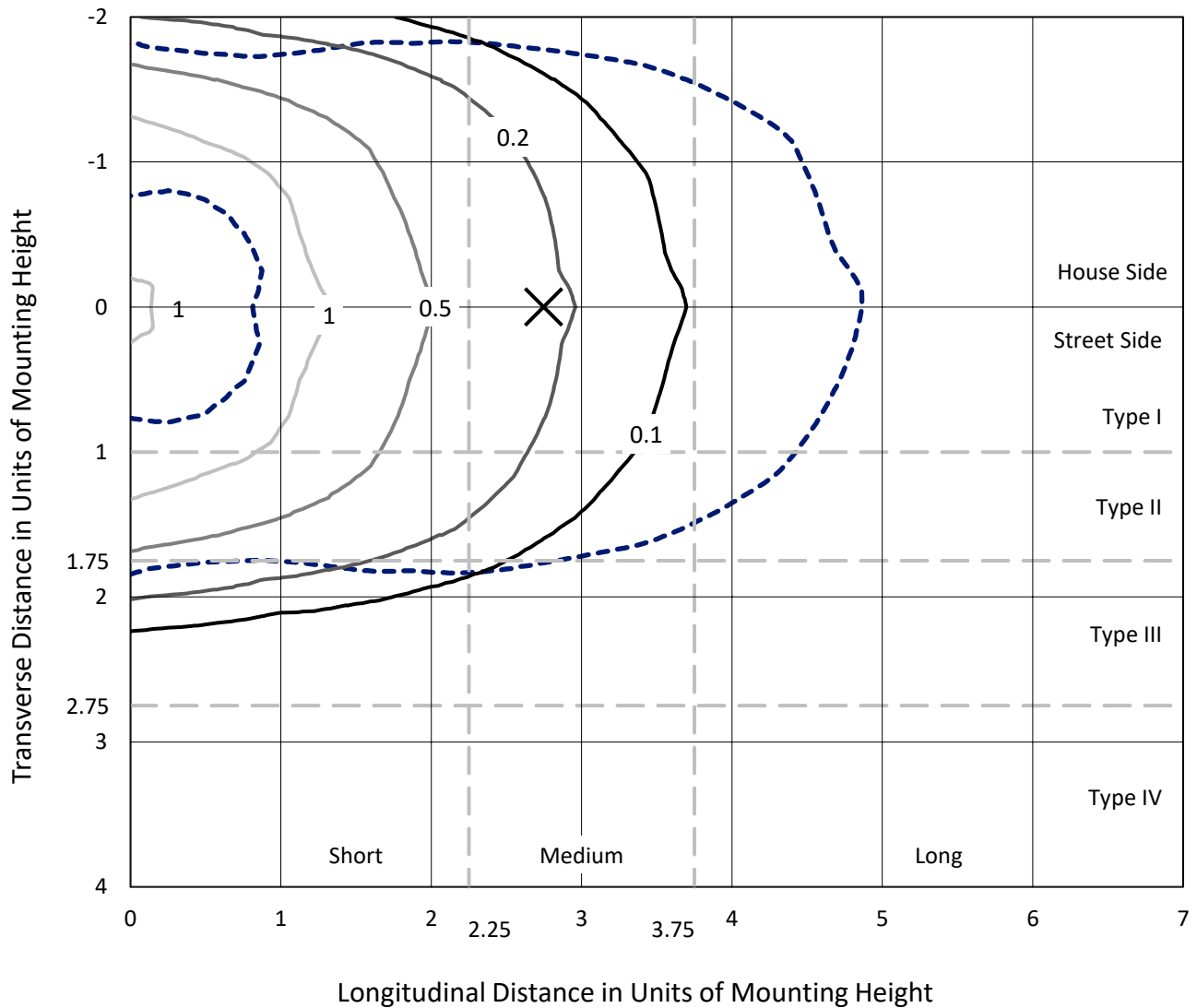
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

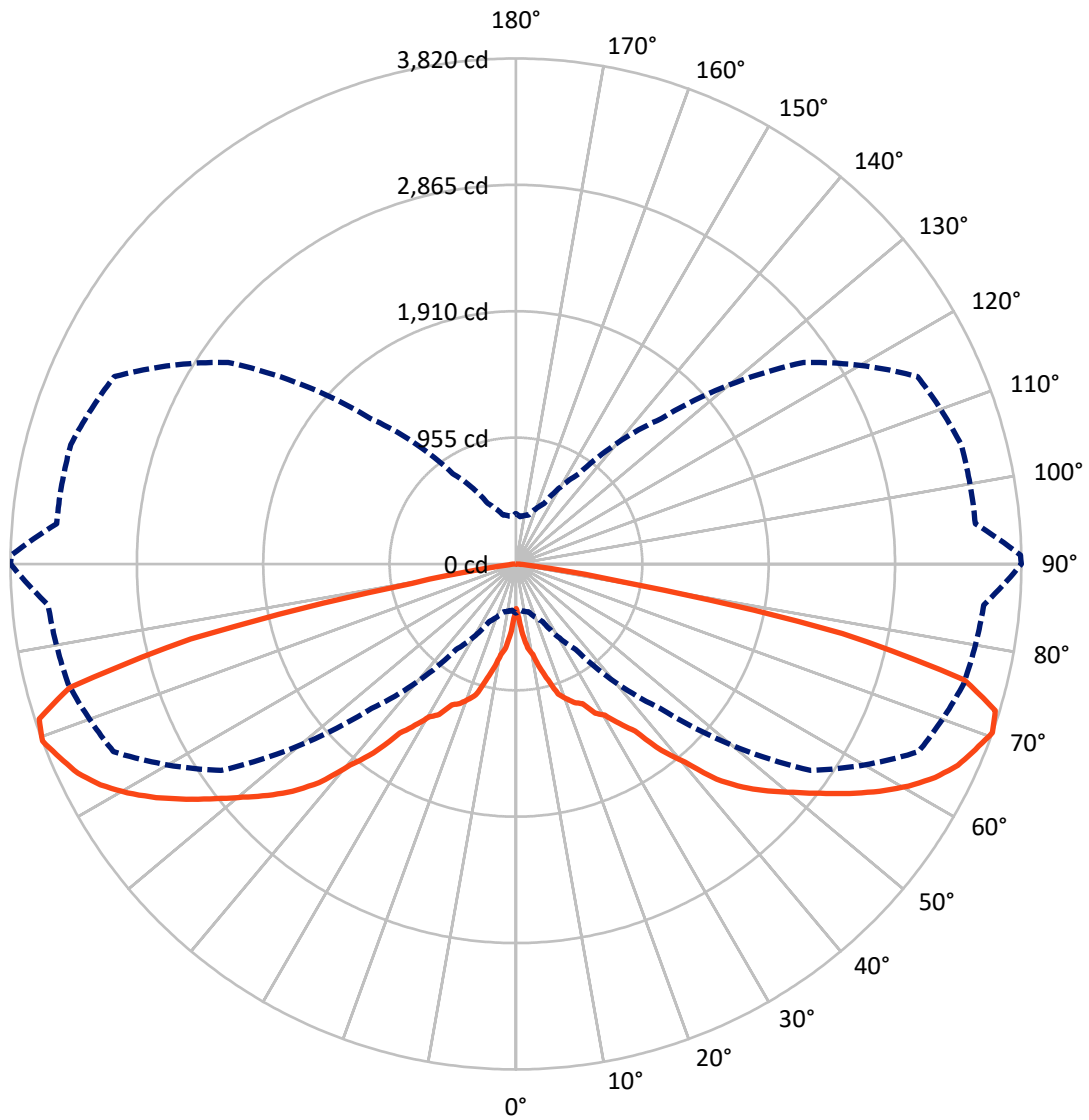
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4768.8	0.0	4768.8
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	4804.2	0.0	4804.2
	% Fixture	50.2	0.0	50.2
Total	Lumens	9573.0	0.0	9573.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.7	0.5
10°-20°	232.3	2.4
20°-30°	502.3	5.2
30°-40°	958.3	10.0
40°-50°	1740.9	18.2
50°-60°	2445.5	25.5
60°-70°	2335.0	24.4
70°-80°	1198.3	12.5
80°-90°	109.9	1.1
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°	9573.0	100.0
0°-180°	9573.0	100.0

Coefficient of Utilization



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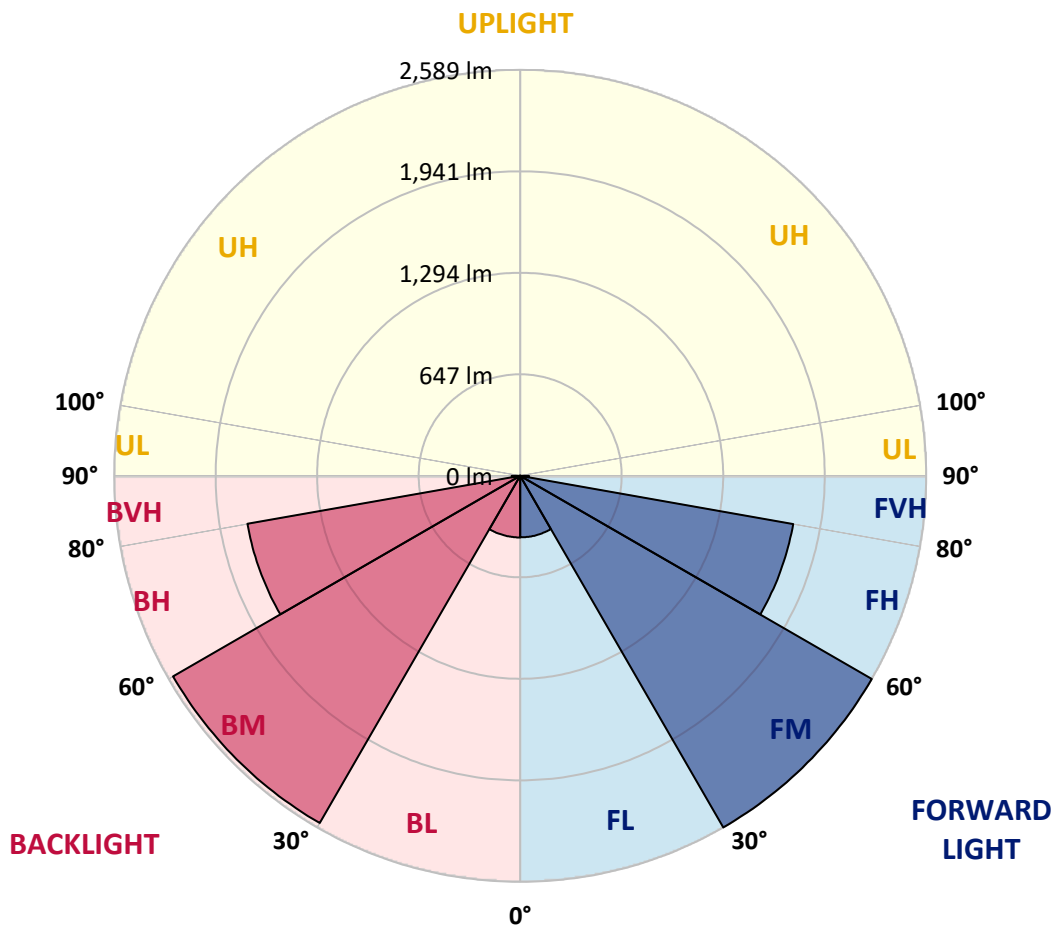
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	392.2	4.1			
FM (30°-60°)	2588.6	27.0			
FH (60°-80°)	1767.6	18.5			G1/1800
FVH (80°-90°)	55.8	0.6			G1/100
BL (0°-30°)	393.0	4.1	B1/500		
BM (30°-60°)	2556.0	26.7	B3/5000		
BH (60°-80°)	1765.7	18.4	B3/2500		G3/2500
BVH (80°-90°)	54.1	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	407.0	391.9	372.8	384.1	388.8	396.9	395.7	391.9	375.2	403.1	406.2
5°	509.4	485.4	476.4	474.9	477.2	469.5	494.7	487.3	500.9	526.1	531.9
7.5°	580.0	562.2	543.2	549.0	524.9	521.4	554.0	583.1	590.5	636.7	639.8
10°	613.4	595.9	601.0	597.5	594.8	617.3	632.4	653.7	684.4	688.7	695.3
12.5°	641.7	648.7	670.8	670.0	706.5	746.5	740.7	762.8	767.8	821.4	805.1
15°	713.5	727.9	726.3	739.9	755.8	821.4	821.7	859.4	893.9	914.9	909.4
17.5°	818.6	823.7	802.7	803.5	849.7	876.4	906.3	899.7	989.7	1030.9	1033.6
20°	881.5	894.3	870.2	838.4	920.3	957.1	973.8	935.4	1031.6	1087.1	1087.1
22.5°	991.3	958.3	921.8	900.5	972.7	1011.9	1009.9	999.0	1050.3	1148.4	1139.1
25°	1051.8	1033.2	1015.0	1020.4	1056.9	1077.0	1103.8	1078.6	1126.7	1199.6	1169.0
27.5°	1166.7	1132.1	1042.5	1113.9	1113.9	1098.8	1155.4	1167.4	1136.0	1254.7	1277.6
30°	1296.6	1284.6	1157.7	1233.4	1210.1	1167.4	1276.1	1268.3	1215.5	1336.6	1326.1
32.5°	1419.6	1459.2	1338.9	1297.4	1332.3	1348.6	1291.6	1314.9	1325.0	1441.7	1436.7
35°	1608.2	1641.5	1482.1	1471.6	1413.4	1398.3	1441.7	1449.5	1450.3	1573.3	1550.8
37.5°	1934.5	1886.4	1728.8	1654.7	1661.3	1643.1	1651.6	1590.3	1598.9	1777.3	1788.6
40°	2173.1	2118.8	1943.4	1890.2	1759.9	1837.9	1768.8	1762.6	1745.5	1976.8	1970.6
42.5°	2436.5	2362.0	2168.0	2097.0	1958.5	1926.7	1894.9	1966.7	1962.0	2176.2	2223.5
45°	2635.5	2485.0	2383.7	2339.5	2256.5	2178.5	2148.2	2180.4	2165.7	2324.8	2407.4
47.5°	2761.3	2630.5	2514.1	2421.0	2341.5	2532.7	2379.5	2336.4	2306.5	2484.6	2564.2
50°	2861.4	2710.4	2573.1	2542.0	2604.9	2774.1	2532.3	2437.3	2473.8	2604.9	2713.1
52.5°	2888.5	2728.7	2605.3	2585.5	2755.4	2786.1	2746.9	2587.1	2577.4	2749.2	2880.0
55°	2805.5	2652.2	2593.6	2701.9	2889.7	2864.1	2923.8	2821.8	2753.1	2896.7	3061.2
57.5°	2591.7	2439.6	2425.7	2581.6	2818.3	3036.3	3065.8	2985.1	2895.1	3047.2	3241.2
60°	2240.6	2101.7	2137.0	2309.3	2666.2	2976.6	3133.3	3059.6	3031.7	3183.0	3408.0
62.5°	1693.9	1585.7	1680.0	1920.1	2388.4	2899.4	3226.4	3214.8	3174.5	3327.3	3555.4
65°	1080.1	1023.1	1119.3	1363.4	1957.4	2758.9	3271.1	3286.6	3323.8	3438.7	3669.5
67.5°	627.8	597.5	656.1	855.9	1394.0	2265.4	3188.0	3410.7	3430.1	3496.1	3744.4
70°	371.3	351.5	375.6	480.7	789.2	1543.4	2719.4	3356.4	3503.1	3548.9	3820.1
72.5°	283.2	264.6	254.1	284.4	412.0	797.3	1838.6	2845.1	3444.5	3513.9	3788.2
75°	244.8	227.0	214.6	217.3	245.2	378.7	996.7	2035.0	2935.1	3199.7	3499.2
77.5°	210.3	194.4	185.5	184.7	188.2	208.0	416.7	1103.4	1838.2	2299.9	2522.6
80°	168.4	156.0	154.0	154.0	149.0	147.4	207.2	419.8	699.5	829.5	795.4
82.5°	123.0	110.6	123.0	121.4	113.7	107.5	131.9	181.6	215.7	170.3	134.6
85°	83.0	71.8	81.1	82.6	75.3	55.9	79.1	90.8	93.1	58.2	48.1
87.5°	29.1	28.3	45.8	40.0	32.6	19.0	29.1	31.4	33.0	20.6	14.0
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0	336.0
2.5°	407.4	402.7	379.4	382.9	391.9	396.1	400.4	382.9	374.4	401.6	398.8
5°	533.5	516.4	497.4	494.7	495.8	479.2	488.9	484.6	486.5	504.0	507.5
7.5°	639.0	618.4	593.2	573.4	539.3	512.1	535.0	546.7	550.2	581.2	592.8
10°	696.0	678.6	671.2	634.0	622.7	619.2	613.8	595.2	615.7	608.4	614.2
12.5°	807.8	804.3	765.9	741.4	743.8	750.4	716.2	697.6	670.8	712.7	697.6
15°	902.8	918.0	879.6	834.9	812.8	824.1	798.1	770.9	746.9	759.7	743.4
17.5°	1024.3	1023.9	949.0	901.3	899.3	898.6	860.2	800.4	829.1	820.2	821.0
20°	1088.7	1078.2	985.1	930.0	976.9	960.3	925.7	848.9	882.3	893.1	900.1
22.5°	1142.6	1136.8	1023.9	983.5	1013.8	1014.2	979.6	939.3	935.0	968.8	950.6
25°	1180.2	1203.5	1097.2	1087.5	1100.7	1087.5	1053.8	1027.4	1010.3	1060.7	1010.3
27.5°	1269.5	1236.5	1108.5	1163.6	1171.7	1105.4	1147.6	1116.6	1069.3	1131.7	1152.3
30°	1333.1	1352.5	1187.6	1270.6	1260.9	1199.6	1217.1	1215.9	1159.3	1281.1	1266.8
32.5°	1442.5	1419.2	1316.8	1310.2	1333.5	1330.8	1301.3	1315.6	1329.6	1418.1	1439.4
35°	1554.6	1579.5	1399.4	1444.1	1437.5	1395.6	1472.8	1463.8	1505.4	1686.9	1626.8
37.5°	1807.6	1689.3	1584.9	1579.1	1623.3	1629.9	1605.1	1644.3	1733.9	1873.6	1938.0
40°	1973.3	1919.3	1742.0	1749.0	1687.7	1793.2	1723.4	1849.5	1917.8	2153.3	2130.4
42.5°	2223.9	2092.4	1922.1	1945.3	1932.9	1882.1	1974.0	2038.8	2136.6	2316.2	2432.2
45°	2410.5	2230.1	2149.4	2135.1	2133.5	2222.0	2210.3	2313.9	2348.8	2483.8	2580.1
47.5°	2552.1	2398.9	2279.4	2295.7	2248.3	2500.9	2366.3	2398.5	2469.1	2596.4	2708.5
50°	2720.1	2549.4	2413.6	2454.0	2569.2	2666.2	2544.4	2489.3	2523.8	2674.0	2798.9
52.5°	2875.7	2696.1	2546.7	2580.5	2768.6	2724.4	2711.2	2571.9	2567.7	2688.3	2830.3
55°	3057.7	2855.1	2723.2	2830.3	2897.0	2842.3	2821.4	2651.8	2547.1	2614.2	2748.1
57.5°	3236.1	3012.7	2881.5	2903.6	2988.2	2933.9	2776.8	2515.7	2384.9	2398.1	2533.5
60°	3403.4	3157.4	3049.1	3027.8	3095.3	2882.3	2607.2	2266.2	2092.8	2060.9	2178.1
62.5°	3546.5	3278.4	3176.0	3117.8	3182.2	2884.2	2343.0	1865.8	1675.3	1567.4	1658.6
65°	3660.2	3378.9	3306.0	3275.7	3299.0	2708.9	1931.4	1370.0	1136.4	1016.9	1070.0
67.5°	3735.9	3435.2	3401.8	3441.4	3131.0	2256.1	1430.9	876.8	660.7	595.5	628.9
70°	3814.2	3484.8	3483.7	3349.0	2654.9	1555.4	835.7	505.5	384.5	359.3	380.2
72.5°	3787.8	3425.9	3443.3	2928.9	1839.8	831.4	441.1	285.9	260.3	269.3	287.9
75°	3507.7	3114.7	3030.5	2105.6	1043.7	386.4	254.1	216.5	214.9	228.5	246.8
77.5°	2544.4	2169.2	1946.5	1193.4	447.3	209.1	187.0	180.8	180.8	191.7	208.0
80°	838.8	725.9	756.6	461.7	211.4	144.3	145.9	148.6	147.8	150.5	164.1
82.5°	137.7	142.8	220.8	188.6	127.6	98.5	110.2	115.6	117.2	104.8	119.1
85°	48.9	55.1	93.9	87.3	73.7	49.7	72.6	81.1	79.9	69.8	77.2
87.5°	15.1	19.4	34.1	26.4	22.1	13.6	27.2	31.8	40.0	16.3	14.7
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)