

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: P368477

Luminaire Tested: **MSA-SA4C-730-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368477
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-SA4C-730-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 18123 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G4

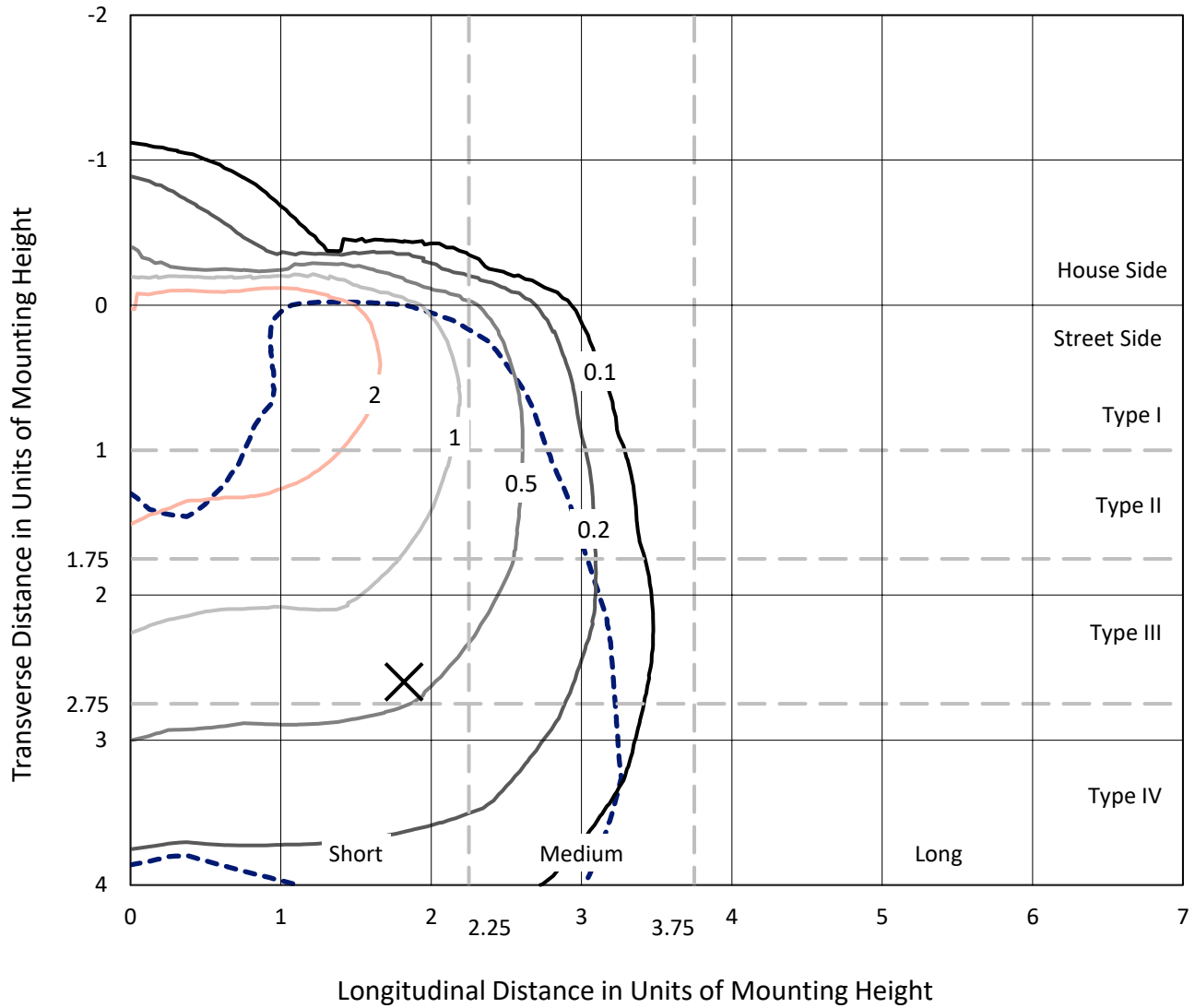
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

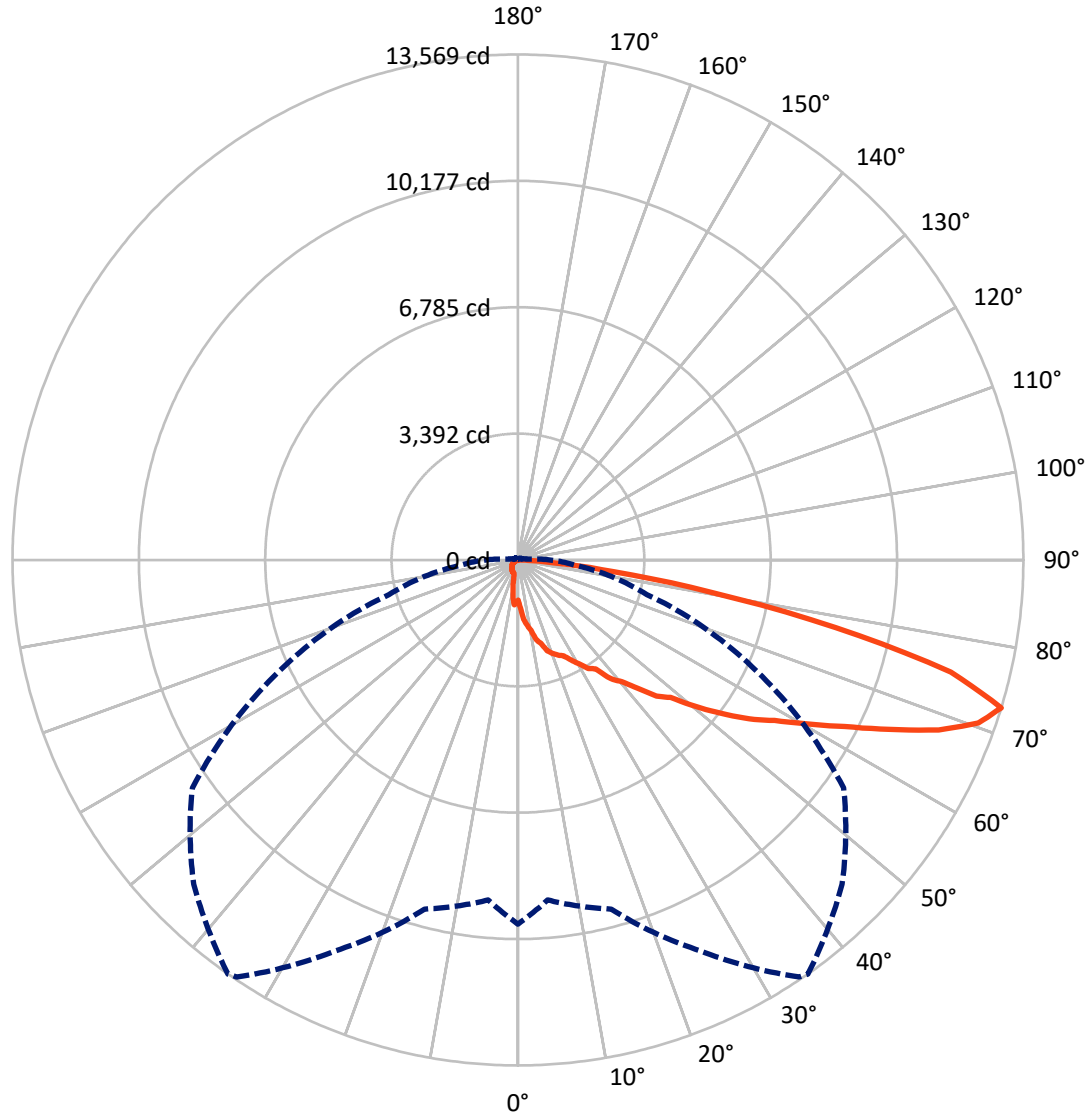
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type IV - Short - N/A

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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	1413.6	0.0	1413.6
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	16709.4	0.0	16709.4
	% Fixture	92.2	0.0	92.2
Total	Lumens	18123.0	0.0	18123.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.7	0.8
10°-20°	463.8	2.6
20°-30°	844.6	4.7
30°-40°	1456.9	8.0
40°-50°	2589.8	14.3
50°-60°	3864.6	21.3
60°-70°	4937.5	27.2
70°-80°	3435.2	19.0
80°-90°	393.0	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°	18123.0	100.0
0°-180°	18123.0	100.0

Coefficient of Utilization



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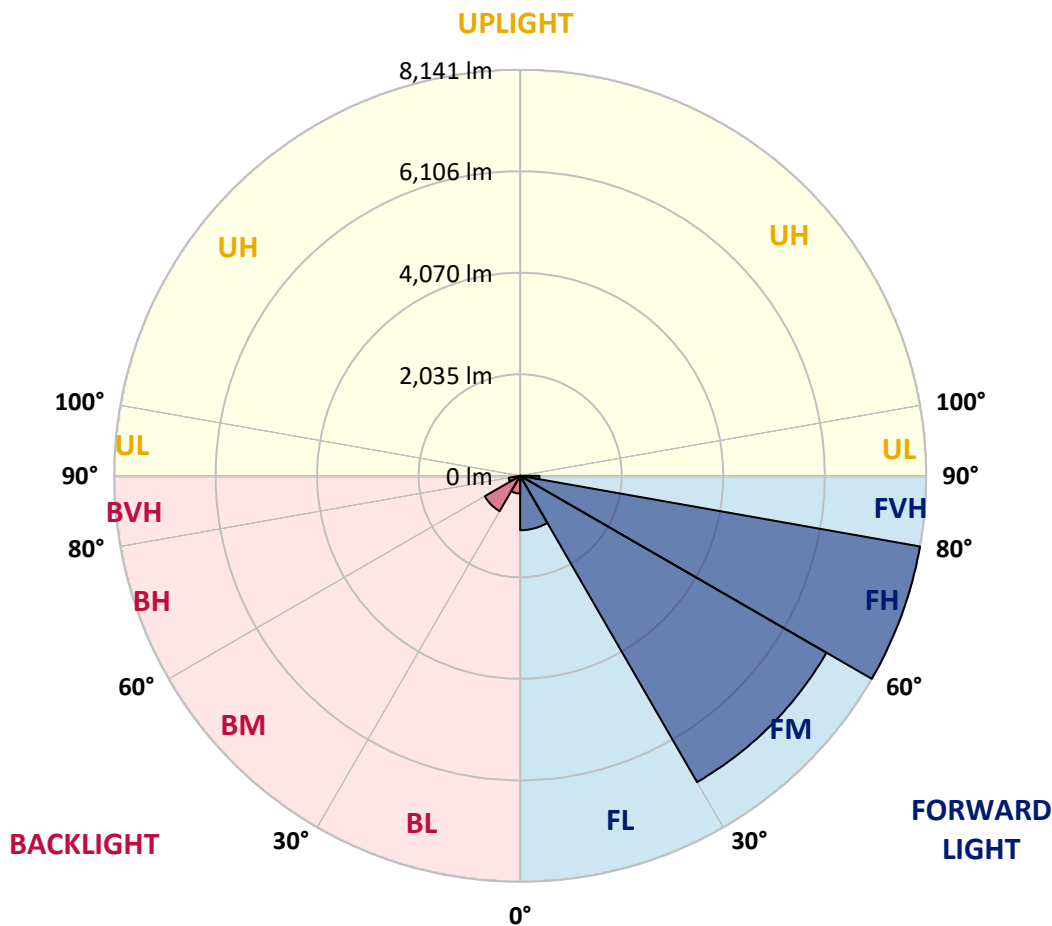
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1090.6	6.0			
FM (30°-60°)	7091.6	39.1			
FH (60°-80°)	8140.9	44.9			G4/12000
FVH (80°-90°)	386.4	2.1			G3/500
BL (0°-30°)	355.5	2.0	B1/500		
BM (30°-60°)	819.7	4.5	B1/1000		
BH (60°-80°)	231.8	1.3	B1/500		G1/500
BVH (80°-90°)	6.6	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6
2.5°	1373.9	1320.1	1232.6	1239.0	1278.2	1286.4	1298.2	1267.3	1239.9	1191.6	1285.5
5°	1760.1	1682.7	1633.5	1618.0	1595.2	1597.1	1541.5	1561.5	1556.1	1591.6	1634.4
7.5°	1977.9	1935.1	1873.1	1855.8	1772.0	1762.9	1694.5	1786.6	1795.7	1782.9	1853.1
10°	2064.4	2007.9	2015.2	1950.5	1908.6	1919.6	1930.5	1937.8	1949.6	1961.5	1875.8
12.5°	2115.4	2125.5	2224.8	2157.3	2199.3	2199.3	2273.0	2194.7	2197.4	2111.8	2126.4
15°	2345.0	2400.6	2356.0	2355.0	2309.5	2321.3	2407.0	2345.0	2376.9	2351.4	2253.0
17.5°	2632.9	2643.8	2559.1	2521.8	2562.8	2563.7	2527.2	2524.5	2413.3	2601.0	2481.7
20°	2724.9	2786.9	2666.6	2520.9	2691.2	2683.0	2680.3	2637.5	2452.5	2713.1	2614.7
22.5°	2975.5	2887.1	2805.1	2709.4	2775.9	2775.9	2765.9	2672.1	2600.1	2703.1	2745.0
25°	3053.8	3064.7	2958.2	2927.2	2929.0	2847.0	2839.7	2799.6	2730.4	2906.2	2822.4
27.5°	3323.5	3318.9	3062.9	3149.5	3039.2	3040.1	2838.8	2929.0	2940.8	2916.2	3010.1
30°	3588.6	3662.4	3276.1	3385.4	3269.7	3235.1	3038.3	3118.5	3139.5	3111.2	3229.6
32.5°	3926.6	4035.0	3659.7	3552.2	3375.4	3473.8	3338.1	3148.6	3252.4	3504.8	3571.3
35°	4284.6	4337.5	3937.5	3787.2	3587.7	3586.8	3582.2	3597.7	3712.5	3996.7	4053.2
37.5°	4927.8	4803.0	4441.3	4097.0	4141.6	4042.3	3973.1	4045.9	4165.3	4633.6	4875.0
40°	5286.8	5196.6	4687.3	4483.2	4261.9	4298.3	4486.0	4477.8	4795.7	5285.9	5647.5
42.5°	5635.7	5550.1	5049.0	4884.1	4599.9	4699.2	4781.1	4885.0	5536.4	6327.2	6525.8
45°	5946.4	5694.9	5341.4	5347.8	5200.2	5212.1	5356.9	5452.6	6394.6	7205.4	7344.8
47.5°	6134.0	5927.2	5588.3	5582.0	5572.8	5517.3	6199.6	6287.1	7078.8	8041.8	8054.5
50°	6398.2	6139.5	5842.5	5848.0	6058.4	6176.0	6990.4	6981.3	7739.3	8739.6	8445.4
52.5°	6727.1	6411.0	6083.9	6327.2	6652.4	6843.7	7505.2	7774.8	8449.0	9177.8	8598.4
55°	7148.0	6752.6	6437.4	6749.0	7458.7	7532.5	8009.0	8578.4	9222.5	9625.2	8647.6
57.5°	7641.8	7169.9	6914.8	7416.8	8124.7	8126.5	8742.4	9434.7	9697.1	9807.4	8592.0
60°	8173.9	7623.6	7366.7	7818.6	8859.0	8933.7	9557.7	9907.6	10179.1	9899.4	8492.7
62.5°	8642.1	8034.5	7835.0	8366.1	9664.3	9841.1	10268.4	10218.2	10527.1	10015.1	8240.4
65°	9199.7	8566.5	8435.3	9219.7	10715.7	10958.9	11066.4	10769.4	10643.7	9925.8	7583.5
67.5°	9751.8	9159.6	9156.0	10166.3	12094.1	12177.9	12064.9	11546.5	10508.0	9138.7	6380.0
70°	10140.8	9504.9	9744.5	11203.1	13346.8	13111.7	12636.2	11913.7	9527.7	7004.1	4168.0
72.5°	9775.5	9162.3	9702.6	11572.1	13501.6	13569.1	12305.4	10671.9	7078.8	3582.2	1508.7
75°	7428.6	7053.3	8424.4	10266.5	11987.5	12003.0	10271.1	7527.0	3485.6	973.0	417.3
77.5°	3741.6	3622.3	5332.3	7288.3	8746.0	8720.5	7056.9	4032.3	1121.5	323.4	210.5
80°	1894.1	1798.4	2269.4	3932.1	5193.8	5232.1	4029.5	1805.7	565.8	175.8	145.8
82.5°	1163.4	1104.2	1241.8	1779.3	2520.9	2581.9	1528.7	1143.4	350.8	103.9	133.0
85°	225.0	236.9	713.3	891.0	1006.7	983.0	452.8	941.1	105.7	62.0	96.6
87.5°	0.0	3.6	164.9	290.6	291.5	258.7	102.9	208.6	14.6	17.3	11.8
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°	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6	1079.6
2.5°	1301.0	1287.3	1173.4	1160.7	1163.4	1144.3	1137.9	1097.8	1087.8	1149.7	1160.7
5°	1616.2	1525.1	1419.4	1381.1	1321.9	1221.7	1207.1	1181.6	1153.4	1164.3	1156.1
7.5°	1809.3	1688.2	1575.2	1373.9	1207.1	1061.4	1037.7	993.9	950.2	951.1	979.4
10°	1840.3	1738.3	1582.5	1337.4	1147.0	964.8	806.3	691.5	639.6	593.1	606.8
12.5°	2019.8	1925.0	1638.1	1326.5	1059.5	775.3	567.6	455.5	406.3	389.9	388.1
15°	2163.7	2089.0	1732.8	1292.8	865.5	545.7	406.3	373.5	364.4	379.9	375.3
17.5°	2377.8	2243.0	1722.8	1153.4	659.6	414.5	374.4	369.9	380.8	389.9	392.7
20°	2471.7	2277.6	1654.5	934.7	493.8	379.9	365.3	356.2	376.3	403.6	398.1
22.5°	2566.4	2336.8	1574.3	765.3	397.2	363.5	355.3	348.0	363.5	389.9	396.3
25°	2609.2	2431.6	1485.0	597.6	369.0	344.4	338.9	341.6	354.4	378.1	375.3
27.5°	2825.1	2442.5	1314.6	471.9	357.1	330.7	330.7	337.1	337.1	369.0	366.2
30°	2960.0	2627.4	1176.2	397.2	343.5	311.6	322.5	325.2	320.7	355.3	358.0
32.5°	3196.8	2678.5	1041.3	364.4	321.6	308.8	307.0	308.8	312.5	346.2	347.1
35°	3561.3	2929.9	857.3	351.7	310.7	295.2	282.4	292.4	301.6	326.2	330.7
37.5°	4273.7	3187.7	698.8	341.6	305.2	282.4	277.9	276.0	292.4	320.7	329.8
40°	4850.4	3644.2	568.5	333.4	294.3	275.1	263.3	264.2	278.8	299.7	313.4
42.5°	5666.7	3974.0	481.9	320.7	278.8	259.6	246.0	254.2	260.6	282.4	291.5
45°	6348.1	4230.0	424.5	312.5	263.3	245.1	234.1	243.2	236.9	247.8	260.6
47.5°	6890.2	4453.2	381.7	292.4	253.3	236.9	223.2	220.5	209.5	212.3	224.1
50°	7188.1	4415.8	346.2	272.4	240.5	228.7	209.5	190.4	175.8	174.9	182.2
52.5°	7293.8	4216.3	317.0	255.1	225.0	210.5	188.6	162.2	147.6	143.0	149.4
55°	7323.0	3929.3	290.6	236.0	210.5	187.7	164.9	136.7	121.2	113.9	120.3
57.5°	7228.2	3487.5	265.1	217.7	193.1	165.8	141.2	112.1	97.5	88.4	93.8
60°	6994.1	2926.3	242.3	195.0	174.9	146.7	119.3	90.2	74.7	66.5	69.2
62.5°	6475.7	2294.0	217.7	174.0	155.8	128.5	100.2	71.1	56.5	49.2	50.1
65°	5686.7	1710.0	189.5	154.0	138.5	111.1	80.2	54.7	42.8	36.4	35.5
67.5°	4530.6	1158.8	161.3	133.0	123.0	93.8	63.8	42.8	33.7	29.2	27.3
70°	2663.0	584.0	133.9	114.8	105.7	78.3	50.1	34.6	31.0	27.3	25.5
72.5°	878.2	252.4	104.8	94.7	87.5	62.9	39.2	31.9	30.1	26.4	24.6
75°	306.1	145.8	77.4	72.9	69.2	47.4	32.8	29.2	29.2	25.5	22.8
77.5°	200.4	113.0	57.4	52.8	51.9	34.6	28.2	27.3	25.5	21.0	17.3
80°	166.7	63.8	40.1	37.4	36.4	21.9	22.8	20.0	15.5	9.1	3.6
82.5°	154.0	38.3	21.0	22.8	21.0	8.2	12.8	10.9	8.2	3.6	0.0
85°	90.2	17.3	11.8	11.8	9.1	1.8	6.4	6.4	3.6	0.9	0.0
87.5°	10.0	8.2	6.4	6.4	4.6	0.0	2.7	1.8	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)