

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: P367928

Luminaire Tested: **MSA-SA3C-727-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367928
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-727-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14831 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

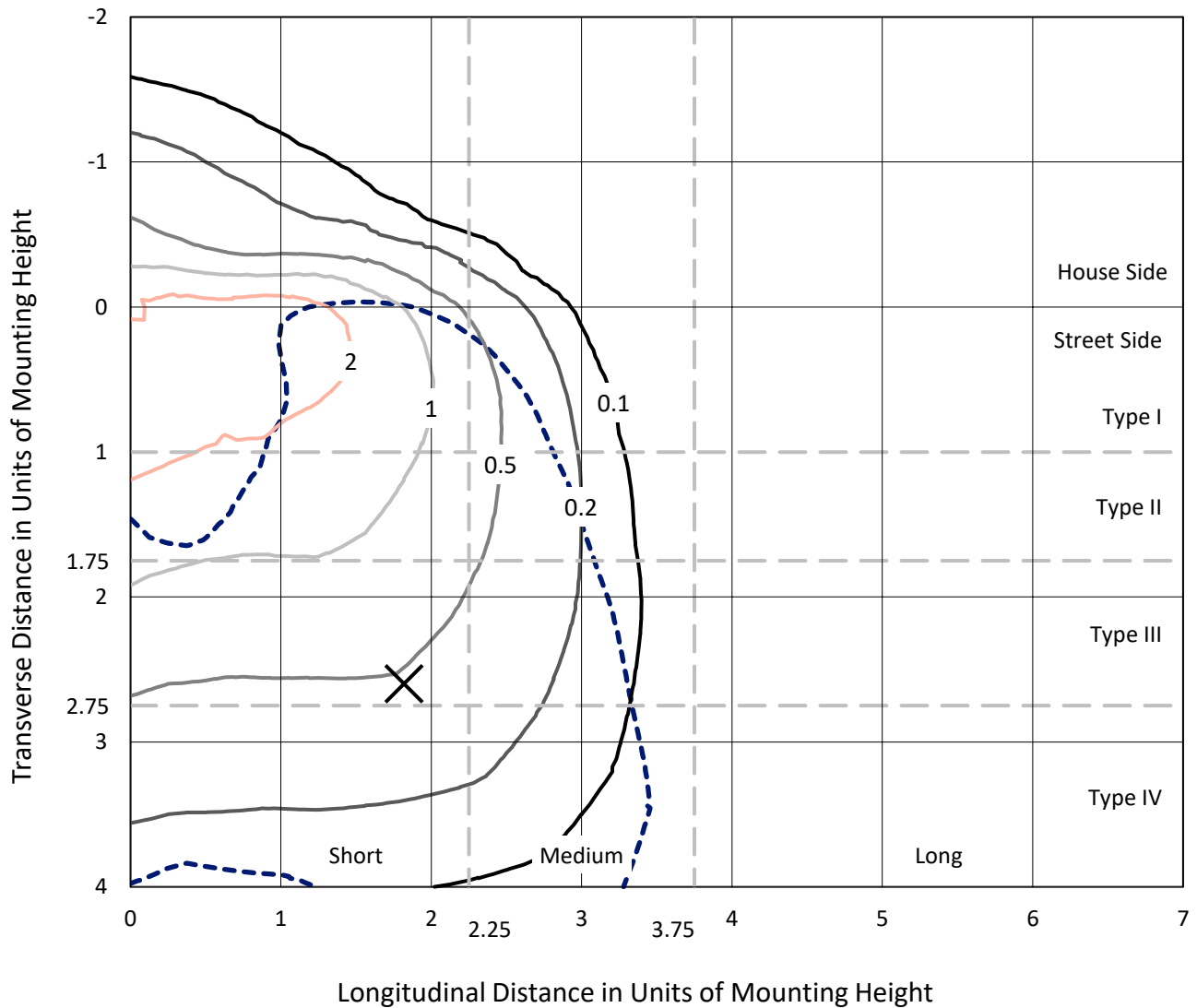
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

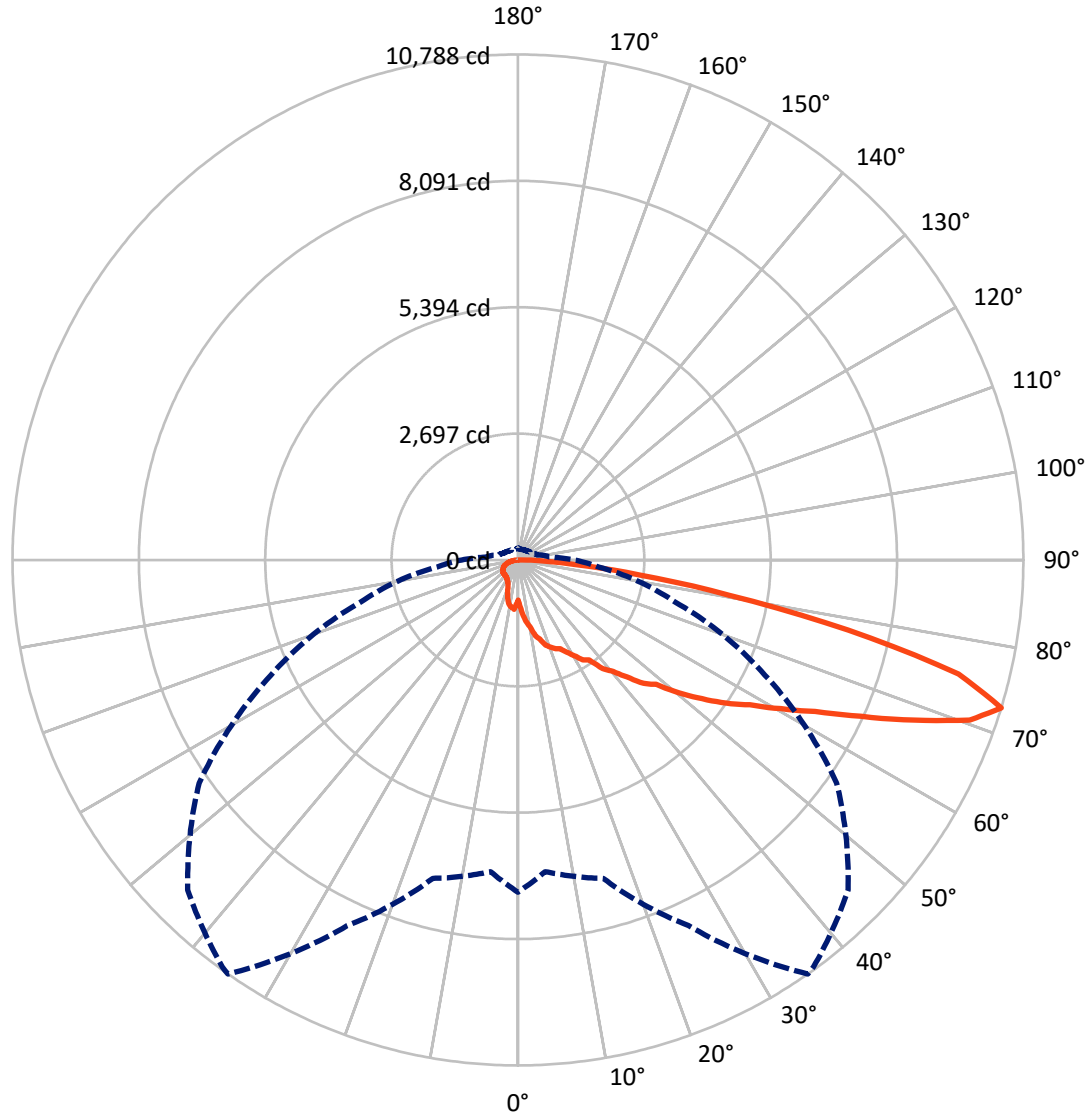
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	1990.3	0.0	1990.3
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	12840.7	0.0	12840.7
	% Fixture	86.6	0.0	86.6
Total	Lumens	14831.0	0.0	14831.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.9	0.8
10°-20°	401.3	2.7
20°-30°	697.2	4.7
30°-40°	1165.3	7.9
40°-50°	2022.5	13.6
50°-60°	3057.5	20.6
60°-70°	3960.9	26.7
70°-80°	2922.7	19.7
80°-90°	489.8	3.3
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°	14831.0	100.0
0°-180°	14831.0	100.0

Coefficient of Utilization



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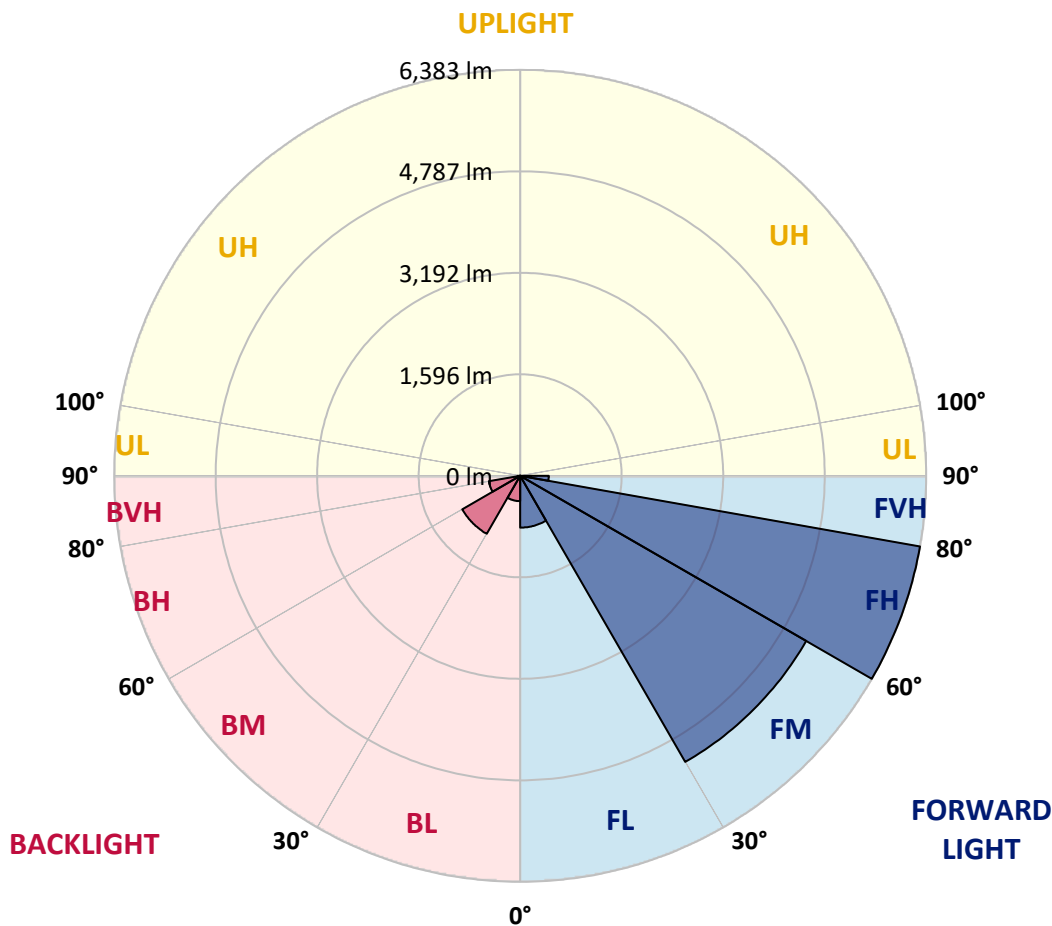
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	814.5	5.5			
FM (30°-60°)	5193.3	35.0			
FH (60°-80°)	6383.1	43.0			G3/7500
FVH (80°-90°)	449.7	3.0			G3/500
BL (0°-30°)	397.8	2.7	B1/500		
BM (30°-60°)	1051.9	7.1	B2/2500		
BH (60°-80°)	500.5	3.4	B2/1000		G2/1000
BVH (80°-90°)	40.1	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	1069.1	1017.9	973.6	971.7	1012.8	1028.6	1022.3	1008.4	991.9	957.1	1033.1
5°	1339.4	1266.0	1252.1	1235.6	1198.3	1208.4	1147.6	1193.8	1208.4	1242.0	1292.6
7.5°	1499.0	1455.9	1422.4	1408.4	1343.9	1336.3	1291.3	1357.2	1385.0	1380.6	1455.9
10°	1561.6	1522.4	1524.9	1479.3	1458.4	1467.3	1472.4	1473.6	1490.7	1504.7	1466.7
12.5°	1593.9	1609.1	1664.8	1633.8	1660.4	1671.1	1724.3	1669.9	1671.8	1600.2	1639.5
15°	1756.6	1794.6	1762.3	1761.0	1752.8	1770.5	1816.1	1779.4	1807.9	1785.1	1734.4
17.5°	1952.8	1964.2	1902.2	1876.9	1909.8	1904.1	1892.7	1898.4	1827.5	1959.2	1897.1
20°	2013.0	2057.9	1976.2	1876.9	1985.7	2000.3	1997.8	1973.1	1851.5	2041.4	1981.3
22.5°	2187.7	2126.9	2062.3	1999.0	2054.7	2063.0	2049.0	1990.2	1949.7	2021.8	2069.3
25°	2266.8	2252.2	2169.9	2162.3	2100.9	2071.8	2095.9	2078.8	2038.9	2167.4	2114.9
27.5°	2447.8	2430.7	2241.5	2319.3	2230.1	2222.5	2095.2	2152.2	2192.1	2182.6	2261.1
30°	2652.9	2672.6	2395.9	2473.8	2370.6	2356.7	2228.8	2301.0	2328.2	2337.1	2435.2
32.5°	2880.8	2934.6	2659.9	2596.0	2540.9	2550.4	2442.1	2310.5	2416.2	2623.2	2665.6
35°	3127.7	3149.8	2861.8	2765.6	2621.9	2611.8	2613.7	2630.1	2737.1	2973.2	3006.1
37.5°	3584.1	3481.5	3229.0	2985.3	2937.1	2842.8	2906.8	2957.4	3064.4	3426.5	3564.5
40°	3865.1	3789.2	3404.3	3263.1	3130.2	3139.1	3258.7	3258.1	3510.7	3884.1	4094.9
42.5°	4125.3	4042.4	3679.7	3537.9	3411.9	3442.9	3477.1	3537.2	4021.5	4623.5	4719.7
45°	4334.8	4153.2	3892.4	3860.7	3756.9	3715.7	3860.7	3956.9	4632.3	5221.7	5277.4
47.5°	4477.3	4327.9	4072.8	4044.9	3968.3	4069.0	4464.6	4526.6	5105.8	5822.4	5818.0
50°	4693.7	4489.3	4258.9	4244.3	4460.2	4514.0	4996.3	4990.0	5566.7	6321.2	6216.8
52.5°	4943.1	4685.5	4435.5	4591.8	4921.0	4947.6	5366.0	5536.3	6069.9	6802.3	6529.5
55°	5229.9	4941.9	4700.1	4909.0	5398.9	5320.4	5743.9	6159.8	6699.7	7309.3	6755.4
57.5°	5585.0	5235.6	5040.0	5357.8	5835.0	5904.7	6285.1	6808.6	7206.8	7624.6	6920.0
60°	5959.8	5549.6	5370.4	5673.0	6445.9	6525.7	6897.9	7347.9	7775.2	7921.4	6889.0
62.5°	6317.4	5873.7	5711.6	6085.1	7123.2	7320.7	7595.4	7882.2	8248.1	7993.6	6513.6
65°	6715.6	6271.2	6169.3	6729.5	8041.7	8237.9	8596.9	8510.8	8410.1	7737.9	5892.7
67.5°	7137.1	6685.8	6704.8	7477.1	9124.8	9158.3	9709.7	9137.4	8219.6	7060.5	4850.1
70°	7363.8	6901.7	7097.3	8274.0	10226.8	10178.7	10291.4	9305.8	7442.9	5581.2	3342.9
72.5°	7089.0	6676.9	7035.2	8609.5	10787.7	10735.8	9964.8	8306.3	5819.2	3470.8	1733.2
75°	6002.2	5604.6	6152.8	7674.6	9711.6	9759.7	8480.4	6176.9	3331.5	1395.8	719.7
77.5°	4078.5	3873.4	4343.1	5720.5	7213.7	7380.2	6292.1	3611.9	1398.9	577.9	435.5
80°	2155.4	2057.9	2404.8	3295.4	4567.8	4691.8	3699.9	1799.0	716.6	374.1	310.8
82.5°	1171.1	1129.9	1316.0	1694.6	2595.3	2703.6	1918.6	1195.1	483.0	234.2	189.9
85°	786.8	771.0	894.4	910.3	1227.4	1262.8	1005.2	920.4	289.9	114.6	125.3
87.5°	393.7	377.9	471.0	415.9	468.4	469.1	460.8	587.4	73.4	38.0	22.8
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°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	1034.3	1012.2	935.6	934.9	946.3	938.7	944.4	913.4	900.1	960.9	957.7
5°	1285.6	1219.2	1155.2	1133.1	1107.1	1050.8	1054.0	1054.6	1045.1	1081.2	1083.7
7.5°	1433.1	1353.4	1294.5	1176.8	1084.3	1012.2	1021.7	1032.4	1021.7	1069.8	1087.5
10°	1454.6	1391.3	1321.1	1190.1	1128.6	1063.4	997.6	939.4	932.4	910.3	917.2
12.5°	1582.5	1530.0	1383.1	1239.4	1167.9	1067.9	947.6	881.1	825.4	834.9	817.2
15°	1687.6	1650.2	1474.3	1286.3	1115.4	991.3	863.4	772.3	722.3	716.6	698.8
17.5°	1830.0	1776.8	1482.5	1254.0	1047.6	898.9	754.5	651.4	629.8	621.0	612.1
20°	1898.4	1802.8	1452.7	1152.7	968.5	788.7	646.9	558.3	552.0	567.8	564.6
22.5°	1957.9	1824.3	1426.2	1091.3	845.1	677.3	573.5	515.3	508.3	528.6	532.4
25°	1992.7	1885.7	1397.0	1028.6	768.5	594.4	518.4	485.5	486.8	513.4	510.2
27.5°	2149.7	1907.2	1323.6	954.6	680.5	533.0	491.8	474.8	467.8	504.5	507.7
30°	2248.4	2047.8	1307.2	876.1	615.3	488.0	467.8	460.8	459.6	503.9	507.0
32.5°	2432.0	2094.6	1314.8	790.6	556.4	474.1	450.1	449.4	462.1	504.5	509.6
35°	2686.5	2292.1	1278.0	741.9	524.1	452.6	436.1	441.2	462.7	508.9	515.9
37.5°	3182.8	2478.2	1289.4	696.3	513.4	445.6	432.3	435.5	470.3	520.3	539.3
40°	3575.9	2815.6	1271.7	673.5	498.8	444.4	424.1	436.8	469.7	526.7	543.8
42.5°	4145.6	3084.6	1273.6	650.7	498.2	439.3	422.8	438.0	468.4	521.0	544.4
45°	4634.2	3325.8	1300.8	637.4	491.8	447.5	420.9	439.9	460.2	500.7	526.7
47.5°	5034.9	3594.8	1328.7	624.8	489.3	455.1	419.0	426.6	446.3	477.9	501.3
50°	5361.6	3784.1	1364.1	622.2	489.3	451.3	414.0	413.4	429.8	455.1	477.3
52.5°	5616.0	3917.7	1388.2	625.4	489.3	436.8	407.7	402.6	412.7	431.1	453.2
55°	5800.2	3958.8	1368.6	633.6	488.7	423.5	396.3	391.8	396.9	409.6	430.4
57.5°	5874.3	3850.6	1251.5	619.1	488.7	414.0	382.3	377.3	382.3	391.8	412.7
60°	5688.8	3502.4	1082.4	581.7	479.2	401.3	366.5	363.3	370.9	379.2	399.4
62.5°	5223.6	3039.7	902.0	537.4	459.6	390.6	351.3	352.0	364.0	375.4	395.6
65°	4500.7	2480.1	752.0	492.5	434.9	373.5	335.5	339.9	357.0	372.2	392.5
67.5°	3541.7	1837.6	633.0	448.8	400.1	345.6	317.8	319.0	331.1	345.6	365.2
70°	2367.4	1169.2	520.3	397.5	354.5	309.5	290.5	286.1	283.0	295.6	312.7
72.5°	1200.8	690.6	427.3	339.9	305.1	270.3	255.7	244.3	235.5	243.1	256.4
75°	629.2	483.0	345.0	282.3	251.9	229.8	219.0	203.8	197.5	201.9	211.4
77.5°	445.0	377.9	279.2	223.5	205.1	182.3	184.2	168.4	163.3	165.8	176.0
80°	341.8	299.4	214.6	169.0	158.3	136.1	142.4	132.9	126.6	125.3	132.9
82.5°	232.9	225.4	152.6	118.4	110.8	95.0	103.8	100.0	91.8	86.7	90.5
85°	157.0	149.4	93.1	68.4	65.2	49.4	63.3	60.8	53.8	46.2	46.8
87.5°	27.2	50.0	26.6	17.1	15.8	5.7	14.6	13.9	12.7	6.3	5.1
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)