

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: P367154

Luminaire Tested: **MSA-SA2A-730-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367154
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-SA2A-730-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: 7191 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G2

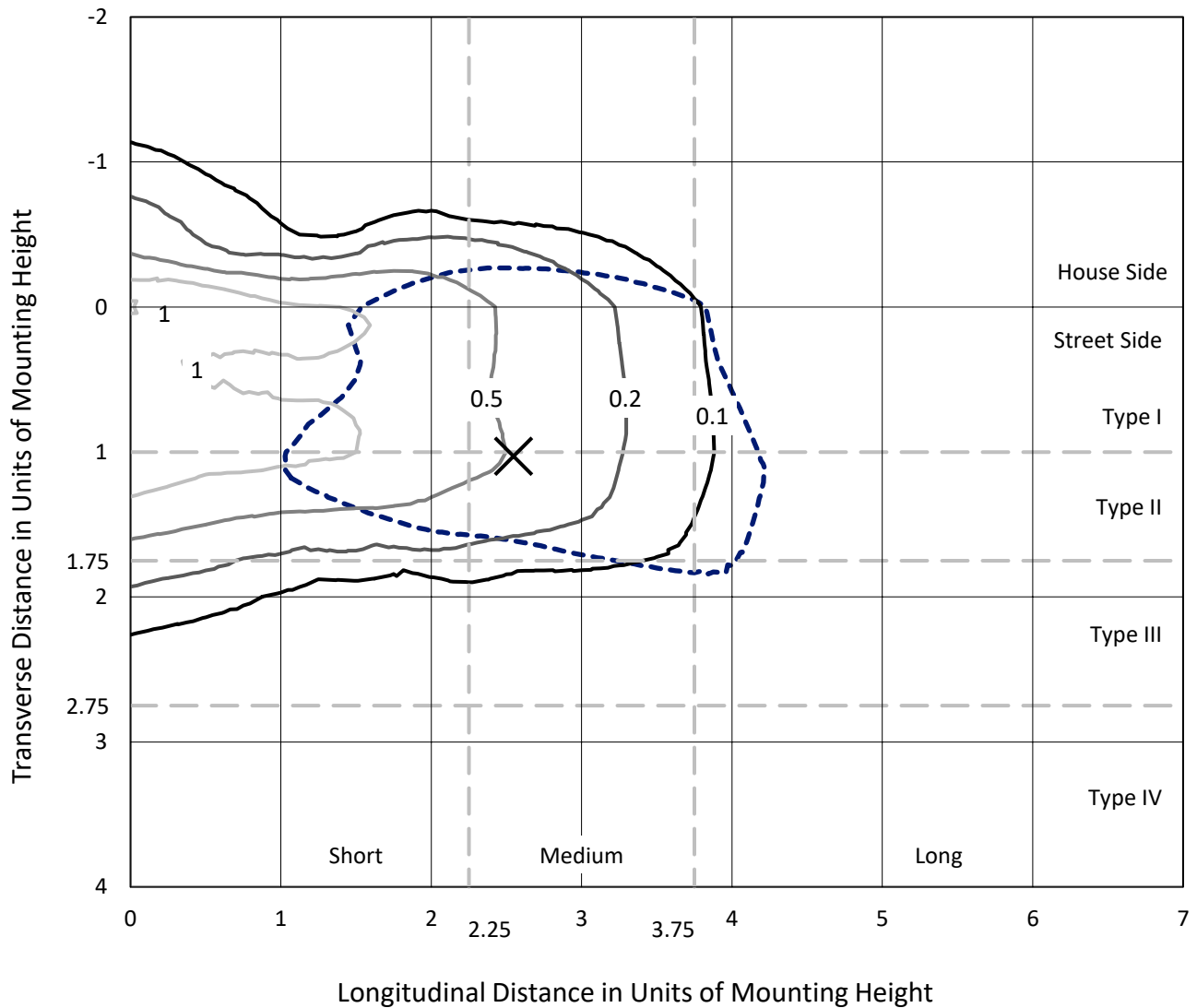
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

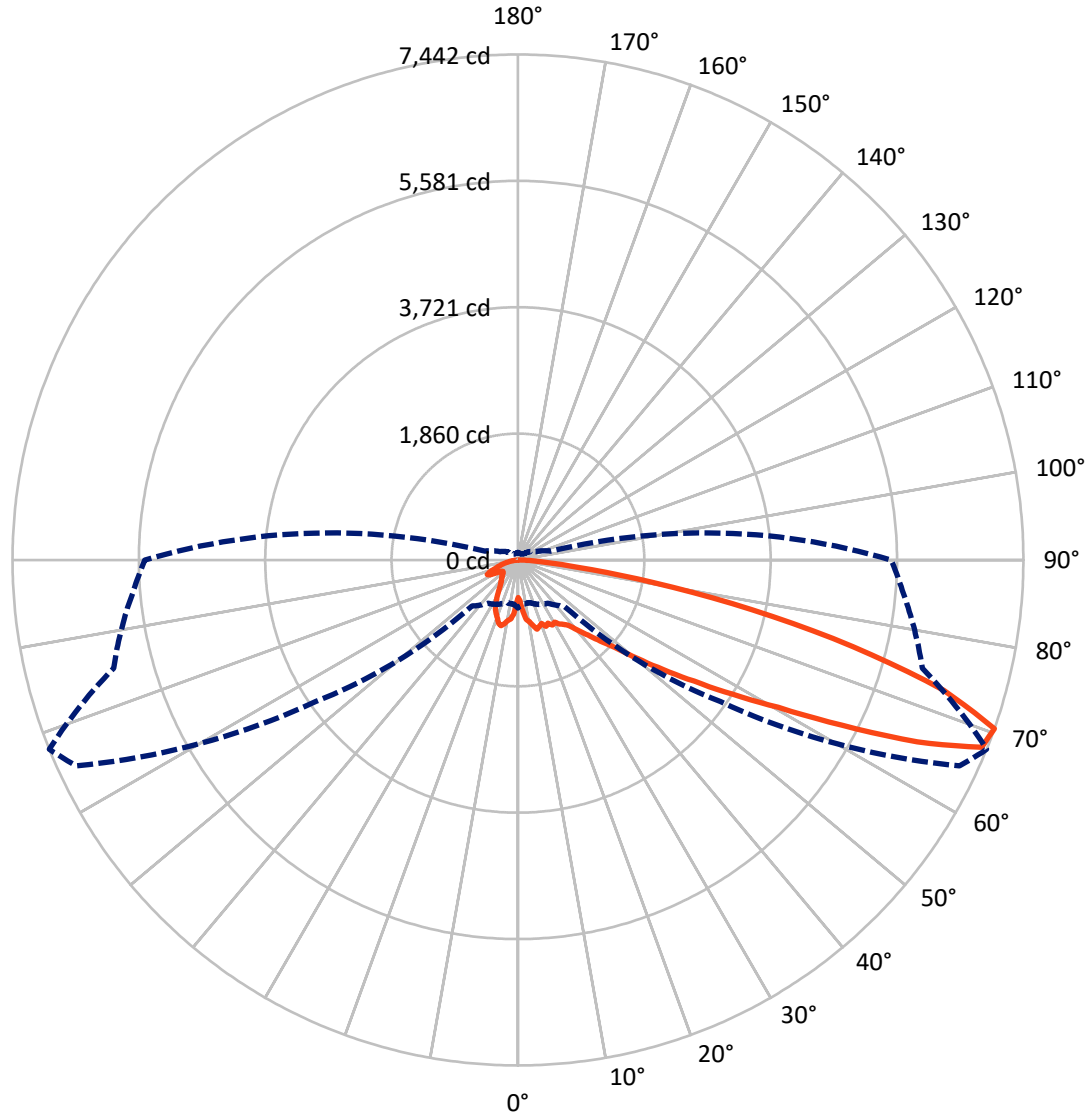
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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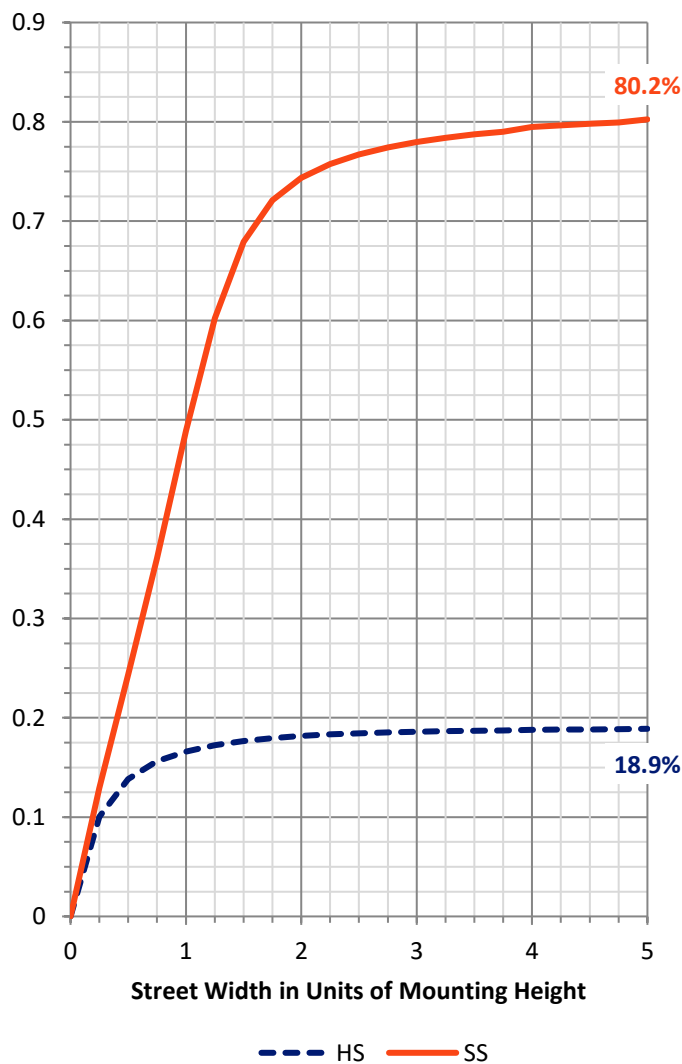
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1372.9	0.0	1372.9
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	5818.1	0.0	5818.1
	% Fixture	80.9	0.0	80.9
Total	Lumens	7191.0	0.0	7191.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	1.0
10°-20°	240.0	3.3
20°-30°	365.1	5.1
30°-40°	557.7	7.8
40°-50°	958.9	13.3
50°-60°	1587.1	22.1
60°-70°	1956.7	27.2
70°-80°	1256.9	17.5
80°-90°	195.0	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°	7191.0	100.0
0°-180°	7191.0	100.0

Coefficient of Utilization



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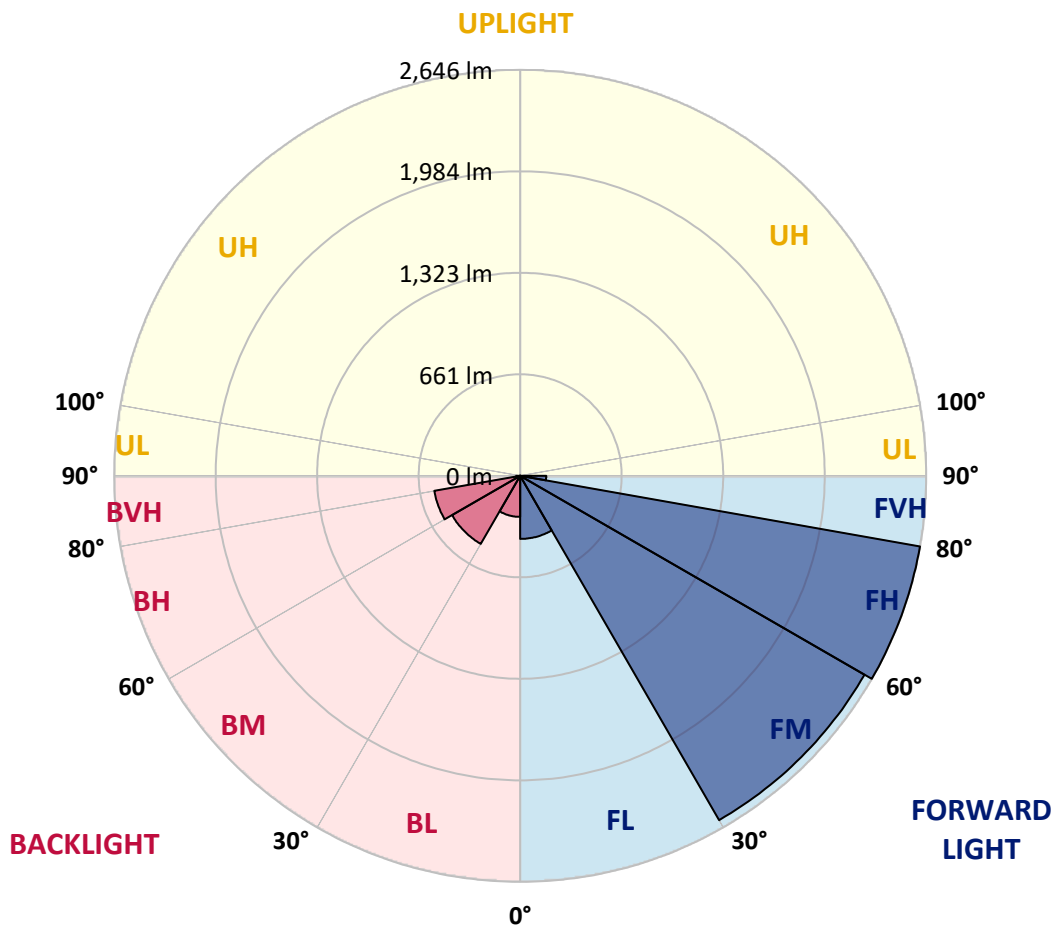
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	411.2	5.7			
FM (30°-60°)	2591.2	36.0			
FH (60°-80°)	2645.7	36.8			G2/5000
FVH (80°-90°)	169.9	2.4			G2/225
BL (0°-30°)	267.5	3.7	B1/500		
BM (30°-60°)	512.5	7.1	B1/1000		
BH (60°-80°)	567.9	7.9	B2/1000		G2/1000
BVH (80°-90°)	25.0	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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4
2.5°	633.5	607.9	582.1	594.7	614.9	632.6	629.0	631.1	606.7	603.4	667.5
5°	746.4	702.4	701.5	702.1	703.9	683.5	733.4	759.3	765.0	791.5	854.4
7.5°	785.5	767.7	749.7	758.7	735.8	738.0	799.4	866.8	882.7	902.0	988.1
10°	777.4	760.5	765.9	767.4	771.7	805.7	845.1	909.8	923.3	984.7	1007.0
12.5°	778.6	775.6	800.9	801.8	846.9	908.0	923.6	983.2	988.7	1033.8	1126.8
15°	819.8	840.6	826.4	834.0	842.7	915.8	938.4	1023.9	1056.4	1114.5	1184.3
17.5°	900.2	906.2	863.8	852.6	881.2	903.5	954.9	992.0	1026.0	1188.2	1284.5
20°	918.8	935.1	884.5	827.0	887.5	918.5	954.3	971.2	997.7	1199.0	1335.7
22.5°	998.9	965.2	904.1	854.1	874.0	904.1	930.0	993.5	1063.0	1168.0	1386.8
25°	1044.3	1024.8	970.3	916.7	899.9	900.8	950.7	1007.6	1031.7	1213.5	1397.1
27.5°	1154.2	1122.9	1000.4	990.2	926.7	877.3	954.0	1042.5	1084.7	1178.0	1447.0
30°	1291.7	1267.9	1107.2	1093.7	996.8	910.7	996.2	1068.4	1062.4	1201.1	1481.6
32.5°	1403.1	1442.8	1280.6	1173.7	1104.8	1022.4	982.9	1063.9	1123.8	1255.0	1540.3
35°	1562.0	1599.3	1415.7	1343.5	1193.9	1074.1	1075.3	1125.9	1162.9	1317.9	1605.9
37.5°	1837.1	1804.3	1656.5	1542.4	1446.7	1267.9	1214.4	1196.6	1226.4	1395.0	1734.4
40°	2035.4	2007.7	1833.8	1768.7	1582.4	1478.6	1331.7	1314.9	1367.6	1474.4	1839.5
42.5°	2270.4	2221.1	2059.2	2005.6	1810.9	1623.7	1475.6	1485.2	1510.8	1624.3	1981.5
45°	2509.7	2389.9	2298.1	2293.9	2163.9	1905.4	1706.4	1698.6	1699.5	1844.9	2141.0
47.5°	2699.6	2591.9	2486.8	2436.9	2371.3	2392.6	2041.7	1949.9	1922.2	2067.0	2380.3
50°	2828.1	2704.1	2585.2	2573.5	2748.7	2863.9	2356.5	2258.4	2275.6	2384.8	2699.3
52.5°	2830.8	2683.7	2559.7	2641.8	3054.4	3219.4	2898.9	2624.7	2679.5	2753.8	3115.5
55°	2634.0	2481.4	2400.8	2588.0	3173.9	3641.0	3660.9	3211.5	3148.3	3175.7	3613.0
57.5°	2219.0	2064.9	2017.9	2242.2	2947.3	4047.6	4581.2	3912.8	3727.4	3613.0	4122.9
60°	1670.3	1537.0	1507.8	1650.8	2443.5	3928.1	5326.4	4785.6	4407.9	4101.5	4634.2
62.5°	1252.6	1156.9	1113.0	1133.4	1690.8	3539.6	5815.8	5888.3	5353.5	4634.8	5133.8
65°	1017.8	940.5	901.4	874.9	1051.6	2736.9	5727.3	6816.5	6458.0	5194.9	5522.6
67.5°	850.2	781.6	763.5	789.4	831.3	1587.9	5035.1	7335.6	7360.0	5747.4	5749.8
70°	705.8	654.9	648.3	721.7	776.8	958.3	3636.8	7172.5	7441.5	6161.9	5696.6
72.5°	545.3	518.0	517.0	632.3	771.7	816.8	2165.7	6196.2	6557.6	6029.4	5175.3
75°	378.3	359.3	373.8	519.8	753.9	828.5	1236.0	4826.2	5096.8	5130.8	4145.7
77.5°	260.3	244.4	260.0	375.9	673.2	848.4	864.7	3489.6	3519.7	3440.6	2374.6
80°	181.2	170.0	182.1	266.0	524.0	839.7	736.1	2197.0	2015.8	1535.5	760.2
82.5°	112.3	108.9	122.2	189.6	369.0	763.8	697.6	1133.7	865.6	423.8	271.5
85°	59.0	54.2	71.0	123.7	230.8	599.5	653.7	517.4	334.1	150.5	108.9
87.5°	17.5	15.6	27.4	50.0	97.8	268.8	374.1	219.4	124.6	44.2	34.0
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°	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4	551.4
2.5°	672.0	668.7	624.2	629.9	639.5	641.9	641.6	625.4	608.2	656.1	654.6
5°	855.9	826.1	803.9	799.0	771.7	744.3	753.9	750.6	746.4	768.1	770.8
7.5°	988.4	947.1	921.2	854.7	791.5	736.8	754.2	759.6	748.8	787.9	799.7
10°	1023.3	990.8	962.8	877.3	842.4	810.5	763.2	709.4	702.1	679.6	682.3
12.5°	1113.3	1108.7	1013.3	938.1	892.6	829.1	727.1	661.8	605.8	608.5	592.3
15°	1184.3	1186.7	1072.0	966.7	844.8	747.9	627.8	546.5	489.1	477.6	465.9
17.5°	1279.7	1274.9	1076.8	932.4	778.0	635.9	488.8	408.1	398.5	405.1	394.9
20°	1321.2	1278.8	1046.1	847.2	673.5	483.0	369.3	326.5	345.2	371.7	372.3
22.5°	1358.5	1286.0	1030.2	778.6	534.5	351.2	296.4	288.6	310.6	346.4	349.4
25°	1357.0	1319.4	1001.6	709.4	414.4	274.2	257.6	263.3	289.5	326.8	328.9
27.5°	1425.3	1293.8	927.3	618.5	312.1	234.7	239.0	249.5	261.8	297.3	304.3
30°	1424.7	1341.4	889.9	508.0	250.7	215.2	226.0	235.1	245.3	277.8	281.7
32.5°	1458.5	1310.4	867.4	395.2	224.8	210.4	213.1	222.1	236.9	258.8	261.5
35°	1499.1	1345.6	795.1	313.9	215.2	206.2	208.3	213.4	226.9	247.1	249.8
37.5°	1629.4	1352.2	766.5	264.5	214.6	204.4	204.1	206.8	222.1	240.5	248.6
40°	1680.3	1412.7	683.2	247.1	212.5	204.4	200.1	201.6	214.3	237.8	244.1
42.5°	1802.2	1432.9	621.5	241.1	212.5	200.7	194.1	196.5	211.3	232.0	242.0
45°	1927.7	1461.5	548.0	239.9	212.2	200.4	187.8	193.2	205.3	222.7	233.5
47.5°	2106.4	1564.4	474.6	236.3	209.8	201.9	186.3	186.0	196.5	211.6	221.8
50°	2398.1	1725.1	417.7	231.7	210.1	200.7	183.3	179.1	186.0	199.2	209.2
52.5°	2804.0	1999.0	395.5	229.3	207.7	195.9	178.2	171.5	175.5	186.0	195.6
55°	3275.4	2368.9	417.4	229.3	202.8	188.4	170.9	163.1	165.2	172.5	181.8
57.5°	3826.1	2828.4	523.7	226.0	196.8	179.4	162.2	153.2	153.8	160.1	168.5
60°	4401.2	3341.9	761.7	223.3	192.6	169.4	152.0	142.7	141.8	147.8	155.3
62.5°	4977.3	3815.6	1012.1	229.6	191.4	161.0	141.2	131.8	131.5	136.9	143.3
65°	5435.3	4139.4	1074.4	255.2	199.2	151.4	130.0	121.3	120.7	125.2	132.1
67.5°	5660.2	4186.4	816.2	287.1	215.8	142.4	119.2	111.1	110.5	115.3	121.3
70°	5493.7	3865.5	503.8	290.4	214.9	131.8	108.0	101.1	99.9	105.0	109.5
72.5°	4878.0	3381.3	382.8	257.0	186.0	116.8	96.9	90.9	89.1	93.6	97.8
75°	3915.2	2684.6	306.7	207.4	146.6	98.4	85.8	80.1	77.9	82.2	85.8
77.5°	2280.7	1510.2	224.2	161.9	110.8	80.4	73.1	68.0	65.6	70.1	72.8
80°	741.6	503.2	140.8	116.2	81.0	62.9	59.3	55.7	53.3	56.3	57.2
82.5°	266.3	187.2	77.9	71.3	53.9	45.1	44.8	42.7	39.7	40.9	40.9
85°	118.0	85.5	46.3	38.2	32.2	24.1	28.3	26.8	23.8	23.2	22.3
87.5°	33.1	28.3	16.9	12.9	10.5	3.9	9.0	8.1	6.6	6.0	4.2
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)