

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: P368178

Luminaire Tested: **MSA-SA3D-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368178
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-830-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15794 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

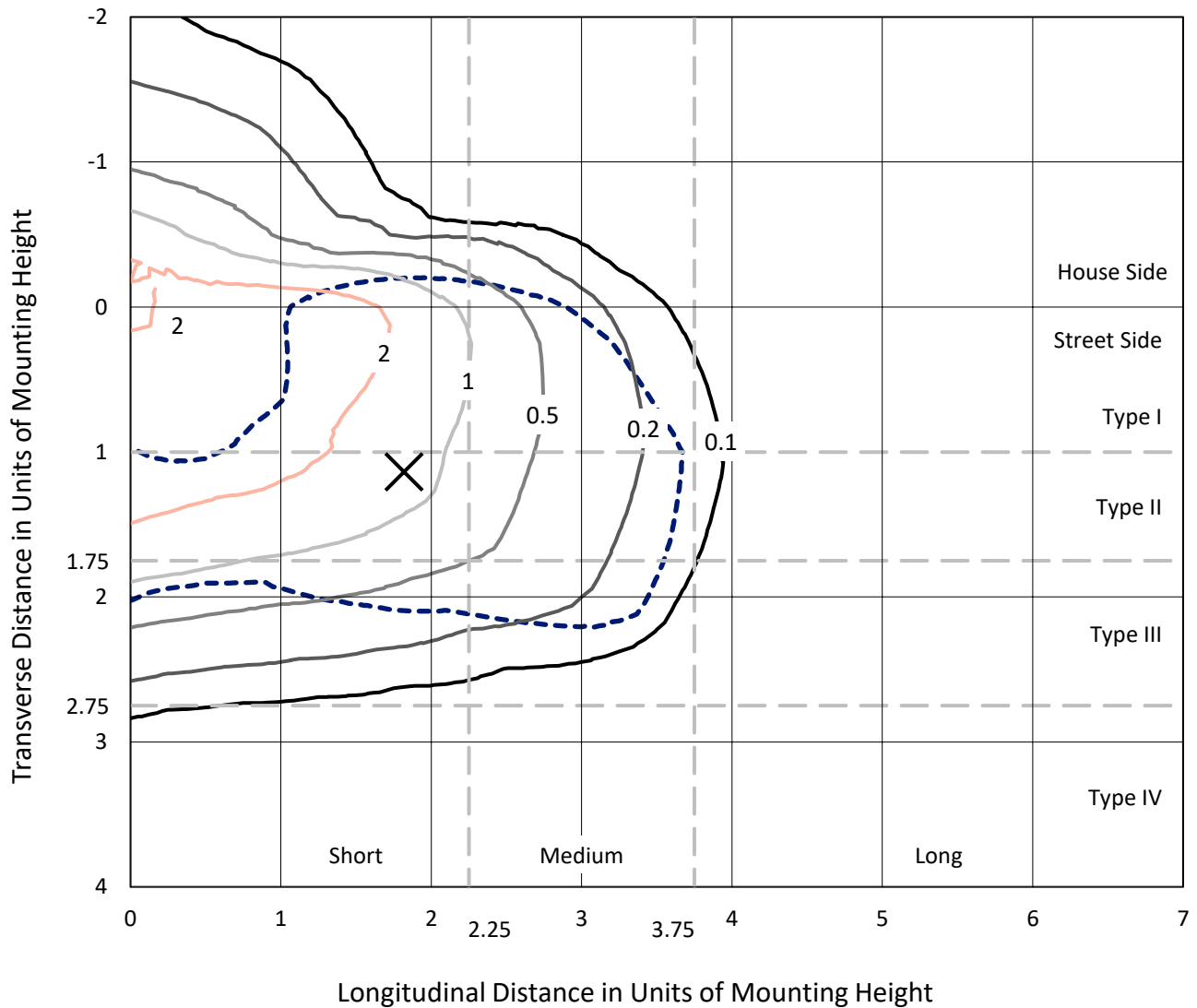
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

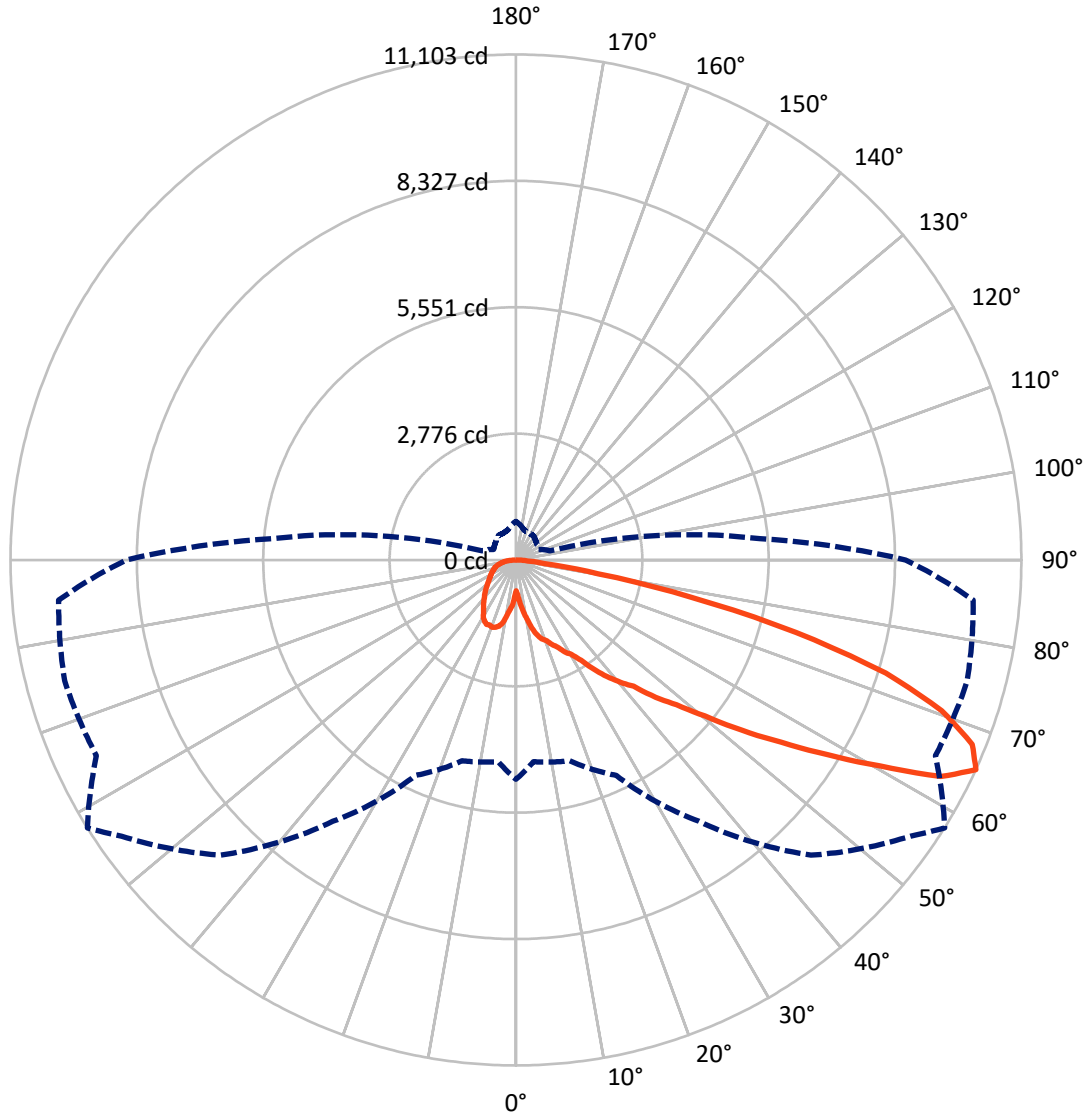
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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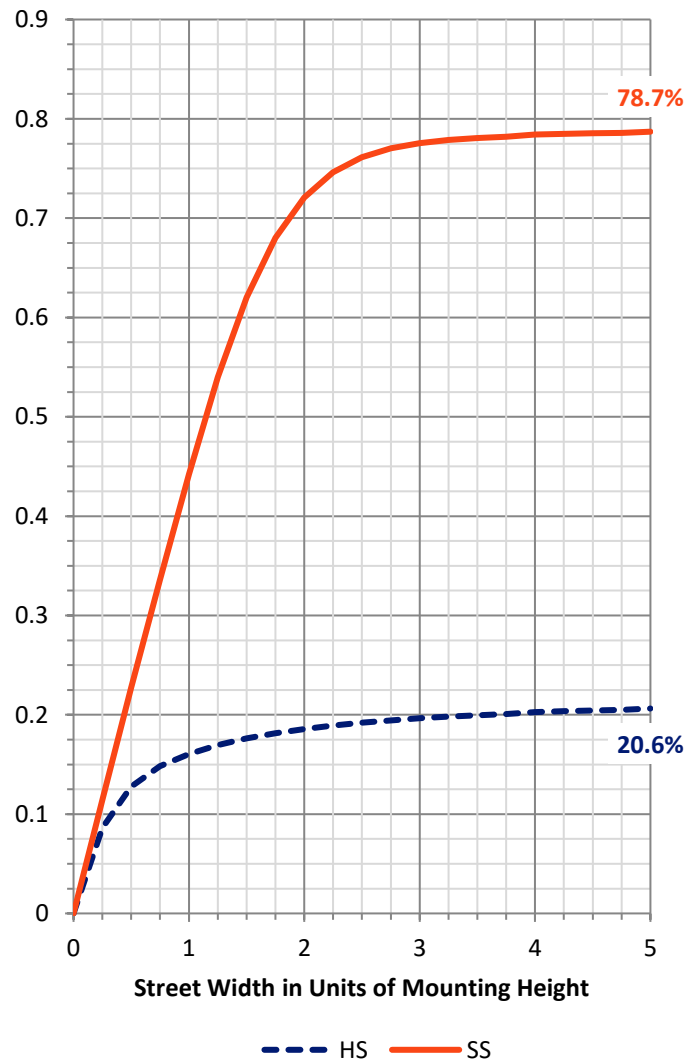
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3326.7	0.0	3326.7
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	12467.3	0.0	12467.3
	% Fixture	78.9	0.0	78.9
Total	Lumens	15794.0	0.0	15794.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.3	0.7
10°-20°	450.7	2.9
20°-30°	864.9	5.5
30°-40°	1427.9	9.0
40°-50°	2373.4	15.0
50°-60°	3919.6	24.8
60°-70°	4397.1	27.8
70°-80°	1999.2	12.7
80°-90°	257.8	1.6
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°	15794.0	100.0
0°-180°	15794.0	100.0



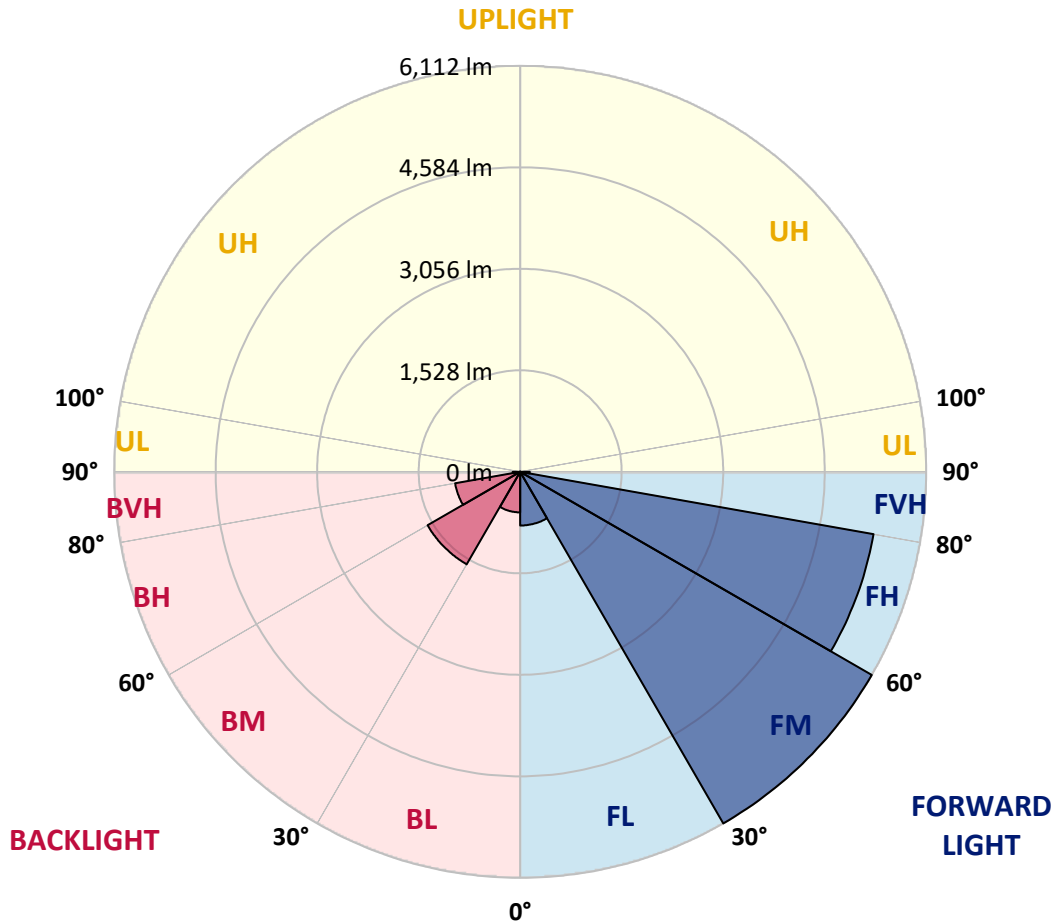
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	808.2	5.1			
FM (30°-60°)	6112.0	38.7			
FH (60°-80°)	5401.9	34.2			G3/7500
FVH (80°-90°)	145.2	0.9			G2/225
BL (0°-30°)	610.7	3.9	B2/1000		
BM (30°-60°)	1608.9	10.2	B2/2500		
BH (60°-80°)	994.4	6.3	B2/1000		G2/1000
BVH (80°-90°)	112.6	0.7			G2/225
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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1
2.5°	809.7	785.3	744.6	754.4	778.1	791.3	783.4	772.8	759.0	756.4	816.9
5°	1048.4	1001.7	982.7	974.8	945.8	928.7	958.3	954.4	970.2	999.1	1058.3
7.5°	1222.7	1189.8	1158.3	1155.0	1099.1	1079.3	1118.8	1139.9	1168.1	1168.8	1249.0
10°	1316.1	1287.8	1287.2	1257.6	1253.0	1290.5	1291.1	1306.9	1310.2	1343.7	1328.0
12.5°	1417.4	1415.4	1451.6	1451.0	1493.1	1554.9	1524.0	1524.0	1533.2	1492.4	1542.4
15°	1658.8	1679.8	1612.1	1623.3	1623.3	1683.8	1681.8	1693.7	1721.9	1711.4	1689.1
17.5°	1910.1	1923.2	1848.2	1778.5	1783.8	1770.6	1818.0	1822.6	1795.6	1917.9	1891.0
20°	2071.9	2123.2	1965.3	1877.8	1894.9	1910.1	1912.0	1883.7	1869.9	2058.0	2021.2
22.5°	2271.8	2228.4	2083.7	1987.0	2012.7	1992.3	1988.3	2010.0	2029.1	2100.1	2160.0
25°	2405.3	2402.0	2228.4	2122.5	2094.2	2088.3	2128.4	2119.9	2165.3	2294.2	2256.7
27.5°	2599.4	2659.9	2352.1	2378.4	2254.0	2123.2	2252.1	2290.9	2372.4	2351.4	2434.9
30°	2975.6	2930.2	2608.6	2601.3	2460.6	2350.7	2440.2	2407.3	2554.0	2549.4	2611.2
32.5°	3282.7	3314.3	2909.8	2834.2	2729.6	2597.4	2538.2	2629.6	2708.5	2838.1	2873.0
35°	3607.7	3600.4	3218.3	3065.7	2892.7	2838.1	2911.1	2949.3	3117.0	3236.0	3153.2
37.5°	4112.8	4055.6	3618.2	3329.4	3199.9	3180.1	3305.1	3249.9	3431.4	3459.7	3506.4
40°	4582.4	4410.1	3983.9	3653.0	3447.2	3520.8	3524.8	3532.0	3629.4	3706.3	3937.2
42.5°	5029.0	4908.0	4355.5	4106.9	3803.7	3732.0	3776.7	3791.8	4037.8	4195.0	4514.7
45°	5639.4	5315.1	4889.6	4634.4	4295.0	4203.6	4172.0	4302.2	4539.7	4897.5	5171.8
47.5°	6155.7	5863.0	5457.2	5121.1	4741.6	5002.7	4823.8	4750.8	5069.8	5513.1	5949.8
50°	6583.9	6261.6	5863.7	5669.7	5609.1	5842.0	5377.6	5386.2	5678.2	6303.7	6804.2
52.5°	6915.4	6571.4	6218.9	6120.2	6458.3	6592.5	6257.0	6206.4	6419.5	7158.8	7759.9
55°	7225.2	6860.2	6587.8	6789.1	7358.7	7373.8	7350.2	7069.3	7325.8	8075.0	8749.2
57.5°	7304.8	6911.5	6730.6	7019.3	7789.5	8388.7	8624.2	8073.0	8334.1	8908.3	9596.3
60°	6895.0	6558.3	6485.9	6877.9	8022.4	8898.5	9513.4	9183.9	9085.9	9577.2	10189.6
62.5°	6055.7	5665.1	5723.6	6268.2	7777.0	9100.4	10215.9	10473.1	9879.8	10109.4	10448.7
65°	4819.9	4446.9	4565.3	5220.4	7006.8	9167.5	10575.0	11102.5	10166.6	10260.0	10081.7
67.5°	3399.2	3060.4	3209.7	4056.9	5828.8	8308.5	10636.9	10809.2	9861.4	9830.5	9079.3
70°	1925.8	1713.4	1875.2	2581.6	4114.1	6618.8	10152.1	9925.2	9314.2	8876.1	7596.8
72.5°	883.3	810.3	887.9	1314.1	2368.5	4404.2	8288.1	8494.0	8025.7	7477.8	5779.5
75°	469.6	444.0	476.9	656.4	1108.3	2396.1	5888.7	6351.7	6102.4	5671.6	3770.1
77.5°	349.3	329.5	345.3	425.6	592.0	937.3	3345.9	3930.0	4024.7	3628.1	2093.6
80°	267.7	251.9	267.7	321.6	409.8	445.3	1430.6	1831.8	2086.3	1685.8	832.0
82.5°	198.6	188.1	212.4	241.4	288.1	278.2	507.8	632.1	814.9	557.1	324.3
85°	157.9	144.7	153.9	163.8	184.2	152.6	232.2	259.8	274.9	230.2	119.7
87.5°	61.8	57.2	111.8	88.1	75.0	46.0	69.7	78.9	80.9	77.6	34.9
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°	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1
2.5°	823.5	816.9	778.1	790.6	811.0	814.9	823.5	799.8	788.0	831.4	833.3
5°	1063.6	1028.0	1009.6	1011.6	998.4	978.0	1009.0	1029.4	1037.2	1069.5	1081.3
7.5°	1249.7	1206.9	1176.0	1140.5	1090.5	1058.3	1112.2	1151.7	1172.7	1239.8	1266.1
10°	1332.6	1298.4	1291.8	1247.1	1245.7	1245.1	1242.5	1228.6	1274.0	1267.5	1285.9
12.5°	1503.6	1496.3	1433.9	1416.1	1418.1	1416.1	1360.8	1358.2	1358.9	1419.4	1397.7
15°	1662.7	1664.1	1606.8	1542.4	1484.5	1466.7	1445.0	1435.2	1449.6	1483.8	1462.8
17.5°	1859.4	1866.0	1702.2	1600.3	1524.0	1522.0	1470.0	1408.9	1497.0	1518.0	1495.0
20°	1986.4	1958.7	1757.5	1586.5	1564.7	1505.5	1441.1	1356.9	1433.2	1484.5	1499.0
22.5°	2106.7	2058.7	1808.8	1610.8	1506.9	1436.5	1374.0	1319.4	1343.7	1401.0	1391.8
25°	2188.3	2175.1	1879.8	1669.3	1504.9	1348.4	1264.2	1229.3	1241.8	1330.6	1322.0
27.5°	2383.0	2240.9	1867.3	1684.5	1441.7	1228.0	1185.9	1148.4	1135.9	1231.9	1258.2
30°	2513.2	2454.7	1950.8	1660.8	1362.2	1129.3	1067.5	1059.6	1063.6	1172.7	1180.0
32.5°	2734.2	2582.3	2087.6	1570.0	1246.4	1056.3	985.3	988.6	1006.3	1085.9	1102.4
35°	2964.4	2873.6	2106.1	1504.9	1152.3	978.7	949.8	926.7	936.6	1006.3	1009.6
37.5°	3391.9	3078.2	2219.2	1404.3	1083.3	949.1	893.9	873.5	878.7	918.2	946.5
40°	3768.2	3489.3	2166.6	1306.9	997.8	909.6	840.6	825.5	809.7	848.5	866.2
42.5°	4371.3	3782.6	2148.8	1199.7	957.7	856.4	809.0	768.9	753.8	786.6	818.9
45°	4974.4	4093.7	2052.1	1091.2	901.1	852.4	763.0	724.8	728.8	758.4	791.3
47.5°	5646.6	4511.4	1888.4	985.9	839.3	833.3	716.9	700.5	712.3	745.2	778.1
50°	6441.2	4954.7	1752.9	891.2	795.2	776.1	711.0	691.3	702.5	741.3	773.5
52.5°	7310.0	5440.8	1654.2	803.7	745.2	730.7	718.9	699.8	713.0	746.5	780.1
55°	8173.6	5884.7	1587.1	743.9	702.5	711.7	735.3	721.5	728.1	753.1	786.6
57.5°	8814.3	6118.9	1452.3	680.1	667.6	700.5	737.3	714.3	718.2	753.1	789.3
60°	9186.6	6163.6	1230.6	628.1	640.0	678.1	716.9	687.3	684.7	741.9	787.3
62.5°	9145.8	5903.8	976.1	580.8	608.4	644.6	686.0	657.7	665.0	743.2	791.3
65°	8561.7	5373.0	776.1	540.7	570.3	607.7	660.4	649.2	684.0	795.9	847.8
67.5°	7535.6	4597.6	623.5	503.2	534.7	582.8	678.1	707.7	722.8	849.8	903.1
70°	6107.0	3572.1	519.6	470.3	506.5	594.6	729.4	723.5	711.0	824.1	866.2
72.5°	4412.1	2448.7	457.1	438.0	471.6	559.1	730.7	699.2	683.4	752.4	782.7
75°	2760.5	1460.8	399.2	397.3	418.3	501.2	697.9	669.6	626.8	661.0	700.5
77.5°	1576.6	747.8	336.1	353.9	366.4	434.8	624.8	599.2	561.0	575.5	614.3
80°	601.8	361.8	283.5	314.4	311.1	368.3	529.5	523.6	480.1	484.7	508.4
82.5°	283.5	202.6	235.5	270.3	252.6	293.3	430.2	428.2	390.0	353.2	372.3
85°	105.2	107.9	172.3	205.9	175.6	189.4	311.1	302.6	265.7	224.3	248.0
87.5°	23.7	38.8	84.8	107.2	61.2	58.5	125.6	109.2	105.2	62.5	65.8
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)