

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: P368048

Luminaire Tested: **MSA-SA3C-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368048
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-830-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14500 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

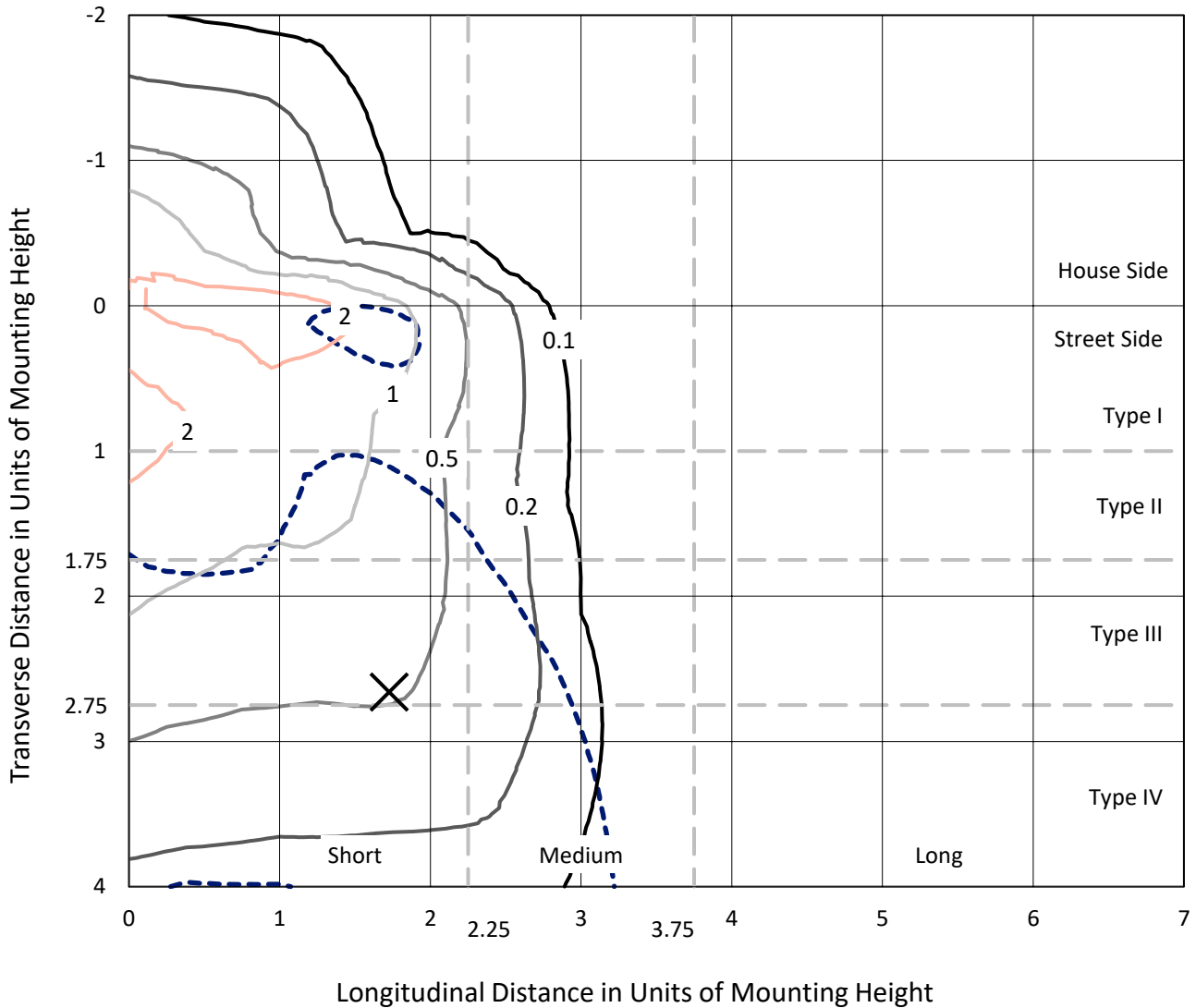
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

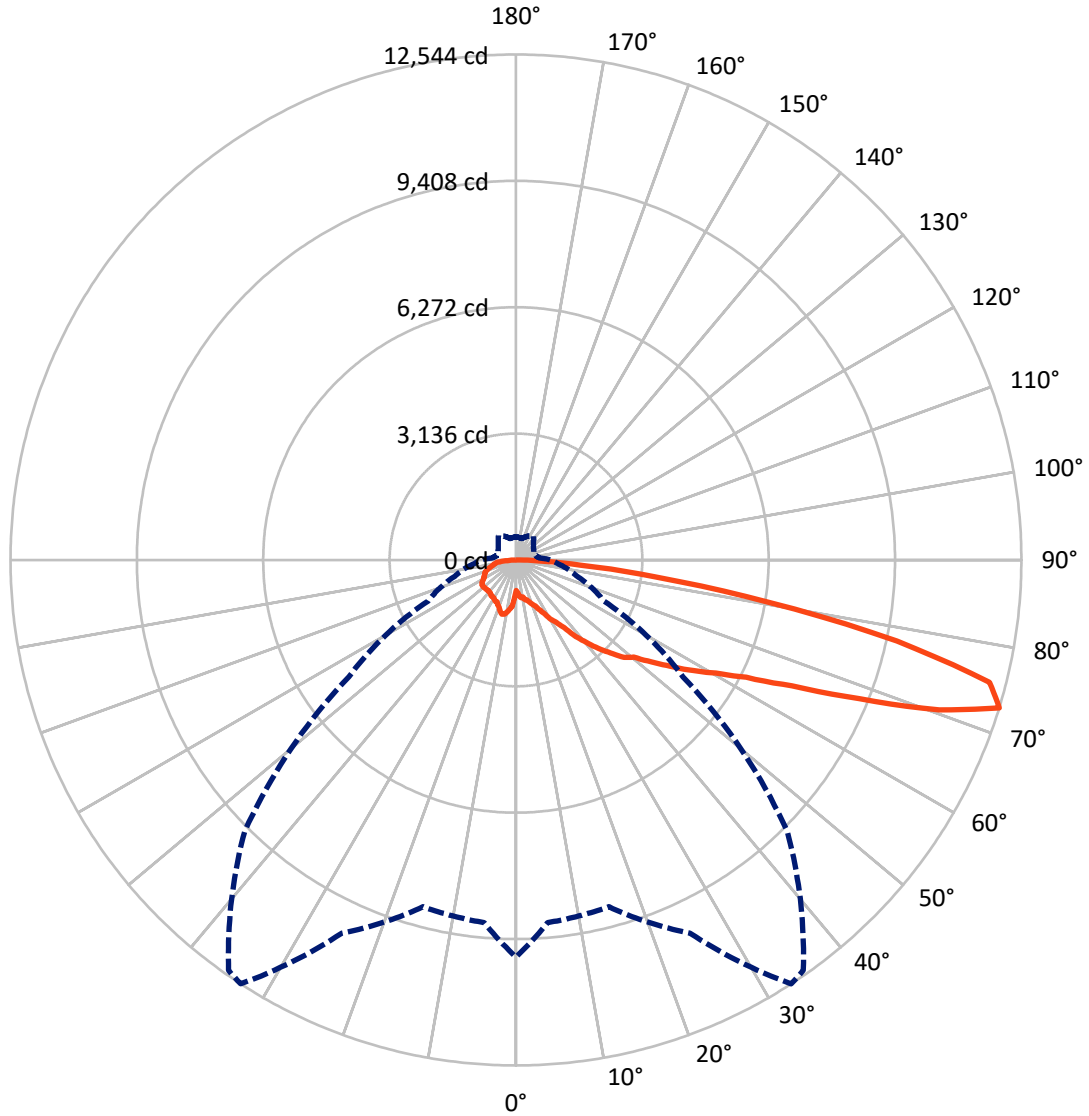
× Max cd
 - - - 1/2 Max cd



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 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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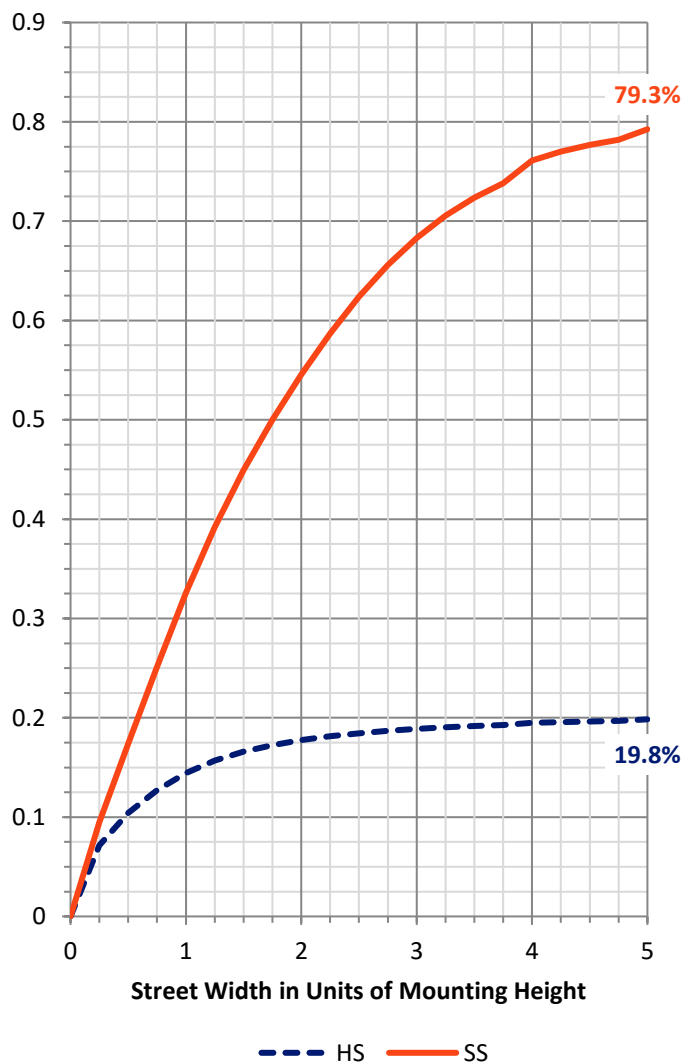
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2933.3	0.0	2933.3
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	11566.7	0.0	11566.7
	% Fixture	79.8	0.0	79.8
Total	Lumens	14500.0	0.0	14500.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	0.7
10°-20°	386.3	2.7
20°-30°	704.5	4.9
30°-40°	1191.8	8.2
40°-50°	1982.8	13.7
50°-60°	2909.9	20.1
60°-70°	3722.5	25.7
70°-80°	3028.6	20.9
80°-90°	469.1	3.2
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°	14500.0	100.0
0°-180°	14500.0	100.0

Coefficient of Utilization



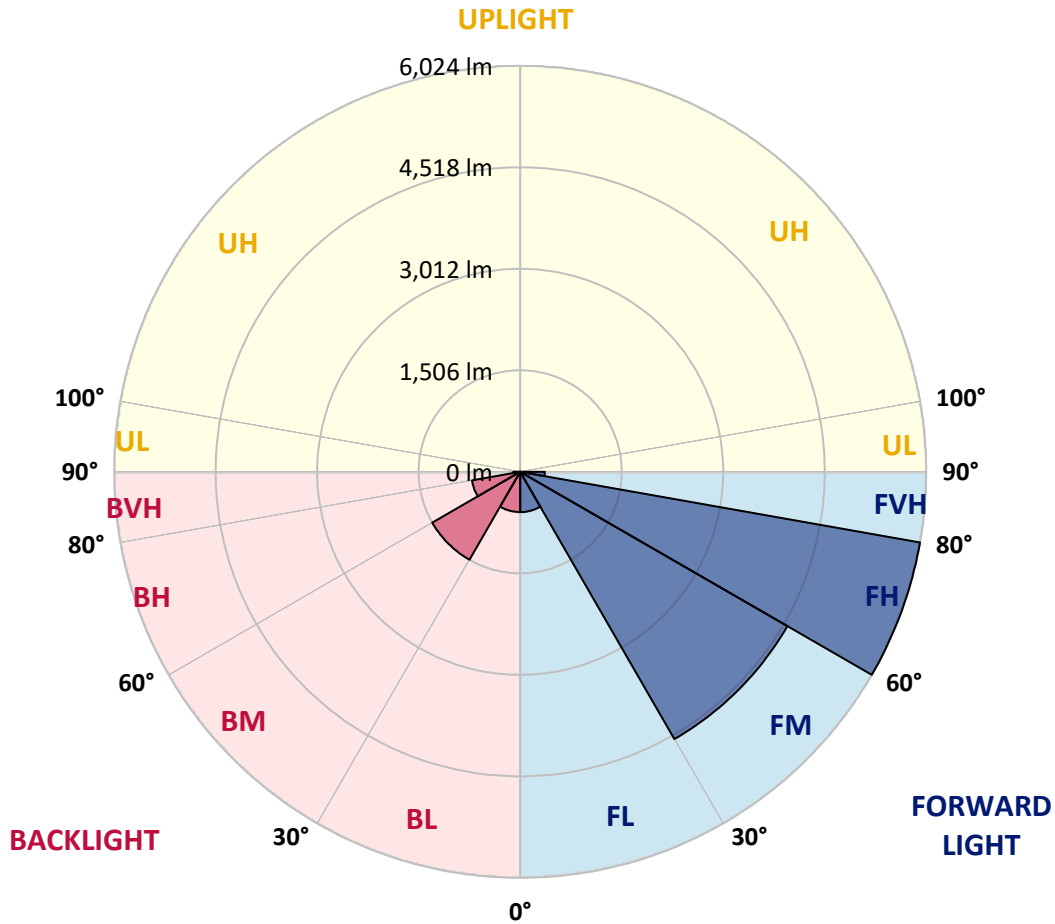
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	598.4	4.1			
FM (30°-60°)	4578.0	31.6			
FH (60°-80°)	6024.2	41.5			G3/7500
FVH (80°-90°)	366.1	2.5			G3/500
BL (0°-30°)	597.0	4.1	B2/1000		
BM (30°-60°)	1506.5	10.4	B2/2500		
BH (60°-80°)	726.8	5.0	B2/1000		G2/1000
BVH (80°-90°)	103.0	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3
2.5°	862.0	834.9	790.4	789.2	813.9	819.3	835.5	836.7	842.7	833.1	901.7
5°	951.0	922.1	904.7	910.7	899.3	913.1	913.1	952.8	1005.7	1067.1	1154.3
7.5°	972.1	951.0	931.2	946.2	948.6	935.4	948.0	1041.2	1136.9	1198.2	1337.8
10°	930.0	908.9	923.9	928.7	928.1	958.2	1023.8	1098.4	1204.8	1317.9	1393.1
12.5°	922.1	937.2	944.4	952.8	1010.0	1019.0	1118.2	1195.2	1302.3	1401.5	1597.0
15°	1038.2	1058.1	1013.6	1010.6	1029.2	1037.6	1140.5	1218.1	1374.5	1541.1	1716.7
17.5°	1203.6	1210.9	1130.9	1090.0	1103.8	1110.4	1155.5	1253.0	1349.2	1657.2	1876.1
20°	1363.6	1368.5	1218.1	1126.7	1175.4	1182.6	1224.7	1280.6	1356.4	1722.2	1983.8
22.5°	1531.5	1500.8	1336.0	1220.5	1248.8	1250.6	1275.2	1305.9	1413.6	1711.9	2115.0
25°	1714.9	1695.7	1488.2	1377.5	1376.3	1351.6	1352.8	1396.7	1474.3	1821.4	2201.0
27.5°	1958.6	1961.0	1659.6	1600.0	1506.8	1490.6	1409.4	1491.2	1579.6	1822.6	2386.8
30°	2274.4	2216.0	1898.4	1802.2	1710.1	1675.8	1565.8	1635.5	1674.0	1926.7	2588.9
32.5°	2531.2	2514.4	2147.4	2001.9	1851.5	1891.2	1769.7	1708.3	1777.5	2105.9	2895.1
35°	2777.2	2721.9	2410.9	2221.4	2063.2	2039.2	1960.4	1970.6	2012.7	2332.7	3295.1
37.5°	3144.2	3114.1	2783.8	2480.7	2406.7	2308.6	2258.7	2290.6	2257.5	2623.2	3894.9
40°	3554.4	3380.0	3095.4	2825.3	2687.0	2617.8	2635.3	2605.2	2579.9	2949.3	4432.6
42.5°	3947.2	3788.4	3302.4	3180.8	3000.4	3029.3	2933.6	2954.7	3026.3	3411.8	4930.1
45°	4374.9	4031.4	3521.9	3414.8	3285.5	3322.2	3398.6	3375.7	3493.0	3957.4	5398.7
47.5°	4588.4	4261.8	3791.4	3617.0	3615.1	3538.8	4003.7	4054.3	3870.8	4361.6	5874.5
50°	4794.1	4472.9	3991.7	3873.8	3788.4	3952.0	4584.2	4468.1	4212.5	4825.4	6397.8
52.5°	5080.5	4714.1	4221.5	4095.8	4201.6	4353.2	5047.4	5024.5	4547.5	5302.4	6852.5
55°	5298.8	4928.9	4567.4	4450.7	4652.8	4801.3	5519.0	5381.2	4834.4	5652.5	7140.7
57.5°	5681.4	5301.8	5078.0	4818.8	5182.1	5179.7	5973.7	5867.2	5141.2	5940.0	7256.8
60°	6289.5	5843.8	5609.8	5310.8	5700.0	5839.0	6493.4	6186.7	5358.4	6121.7	7047.4
62.5°	7143.1	6613.7	6234.2	5938.2	6412.8	6664.3	7135.3	6419.4	5372.2	6070.0	6497.0
65°	8198.7	7555.1	7057.7	6744.9	7528.0	7887.2	7911.2	6563.2	5244.7	5535.2	5339.7
67.5°	9228.5	8504.9	7985.8	8045.4	9188.8	9359.1	8752.1	6683.5	4559.5	4444.6	3707.8
70°	9906.5	9122.1	8776.2	9407.8	11145.0	10970.6	9433.7	6366.5	3590.5	2881.3	2087.9
72.5°	9855.3	9034.3	8909.7	10217.4	12544.1	12435.3	9516.7	5063.0	2404.9	1575.4	1041.2
75°	8029.1	7390.9	7673.6	9672.5	12141.1	12135.7	8262.5	3133.9	1233.7	809.0	658.1
77.5°	4439.2	4191.4	5022.1	7323.5	9667.1	9716.4	5582.7	1421.4	665.3	573.3	495.7
80°	1554.9	1532.1	2176.3	3952.0	6359.3	6371.3	2596.2	650.2	483.6	433.7	363.9
82.5°	568.4	563.6	902.3	1835.8	3501.5	3493.6	984.7	404.8	358.5	306.8	240.0
85°	226.8	222.0	412.6	815.1	1608.5	1582.6	382.6	229.8	234.6	182.9	117.9
87.5°	62.6	65.0	140.2	255.0	492.6	456.6	96.2	77.6	95.0	74.6	37.3
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°	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3	760.3
2.5°	913.7	919.7	860.2	881.2	908.3	922.7	930.0	899.3	909.5	952.8	951.0
5°	1172.4	1148.3	1125.4	1148.9	1133.3	1111.0	1147.1	1145.3	1168.8	1192.2	1197.6
7.5°	1365.5	1334.2	1323.3	1270.4	1217.5	1163.9	1210.3	1239.1	1245.2	1303.5	1328.2
10°	1435.2	1423.2	1427.4	1357.6	1351.0	1356.4	1313.7	1267.4	1295.7	1271.6	1289.7
12.5°	1596.4	1626.5	1551.9	1504.4	1500.2	1467.1	1381.7	1351.6	1319.7	1352.8	1336.0
15°	1725.8	1781.7	1701.7	1618.1	1523.7	1472.5	1399.7	1354.0	1333.0	1340.2	1319.7
17.5°	1915.2	1967.6	1764.3	1636.1	1538.7	1463.5	1352.2	1254.8	1306.5	1310.7	1287.3
20°	2041.0	2044.6	1785.3	1591.6	1503.8	1373.3	1265.0	1179.6	1239.1	1299.9	1326.4
22.5°	2163.7	2136.6	1811.2	1556.1	1376.9	1250.6	1197.6	1192.2	1236.7	1287.9	1293.9
25°	2255.7	2259.9	1826.2	1542.9	1302.3	1130.3	1130.3	1169.4	1208.5	1330.0	1323.9
27.5°	2478.9	2314.7	1767.9	1482.1	1198.8	1059.9	1130.9	1183.2	1201.8	1333.6	1346.8
30°	2641.3	2534.2	1779.9	1378.1	1094.2	1026.8	1085.1	1150.7	1202.4	1354.6	1349.8
32.5°	2913.8	2625.6	1808.2	1231.9	1016.0	1014.2	1065.9	1135.1	1197.0	1331.8	1339.0
35°	3215.1	2895.1	1729.4	1120.6	997.3	1006.9	1073.7	1101.4	1174.2	1322.7	1329.4
37.5°	3772.7	3035.9	1679.4	1034.6	985.3	1013.0	1038.2	1080.9	1154.3	1277.6	1320.9
40°	4100.0	3325.8	1494.2	984.7	960.0	1008.2	1020.8	1056.9	1096.6	1223.5	1251.2
42.5°	4530.7	3417.2	1336.0	929.4	947.4	988.3	1026.2	1035.2	1061.7	1138.1	1188.6
45°	4889.8	3485.8	1168.2	884.8	904.7	1032.2	1034.6	1030.4	1025.6	1053.9	1095.4
47.5°	5261.5	3669.9	1013.6	835.5	888.4	1068.3	1038.8	1000.3	980.5	984.1	1022.6
50°	5671.7	3803.4	904.1	795.2	892.1	1068.3	1059.3	969.7	930.0	919.7	960.0
52.5°	6032.7	3819.1	821.1	762.7	877.0	1031.6	1073.1	950.4	883.6	859.0	896.9
55°	6229.4	3621.2	760.9	733.3	838.5	998.5	1065.9	939.6	827.7	809.0	842.7
57.5°	6225.1	3292.7	709.8	692.4	794.6	952.2	1025.6	880.6	793.4	782.6	815.7
60°	6000.8	2907.8	670.7	658.7	749.5	884.8	953.4	842.1	760.3	754.9	791.0
62.5°	5491.9	2510.2	632.8	623.2	707.4	837.3	919.1	799.4	726.0	725.4	759.7
65°	4497.6	2015.1	597.3	594.9	668.3	790.4	886.6	763.3	690.5	702.6	737.5
67.5°	3099.0	1416.0	559.4	566.6	632.2	745.3	862.0	739.3	653.3	677.9	709.2
70°	1700.5	875.8	517.3	531.7	586.5	693.0	823.5	700.2	604.5	642.4	664.1
72.5°	865.0	584.1	465.0	487.8	530.5	616.0	751.3	643.6	552.2	566.6	578.1
75°	581.1	439.7	406.6	431.9	462.6	542.6	666.5	590.7	502.3	500.5	513.1
77.5°	439.1	343.5	345.3	374.1	394.0	477.0	599.1	546.2	460.2	456.0	474.6
80°	321.2	260.5	277.9	308.0	326.0	428.3	555.2	496.9	403.0	386.2	401.8
82.5°	212.9	184.7	205.7	235.8	250.2	357.9	504.1	421.7	328.4	285.7	288.1
85°	100.5	96.8	122.7	137.1	155.8	222.0	377.2	291.7	209.3	173.2	181.1
87.5°	22.9	30.7	40.3	39.7	46.3	59.6	117.3	81.8	60.8	41.5	27.7
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)