

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: P368180

Luminaire Tested: **MSA-SA3D-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368180
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-SA3D-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: 15854 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

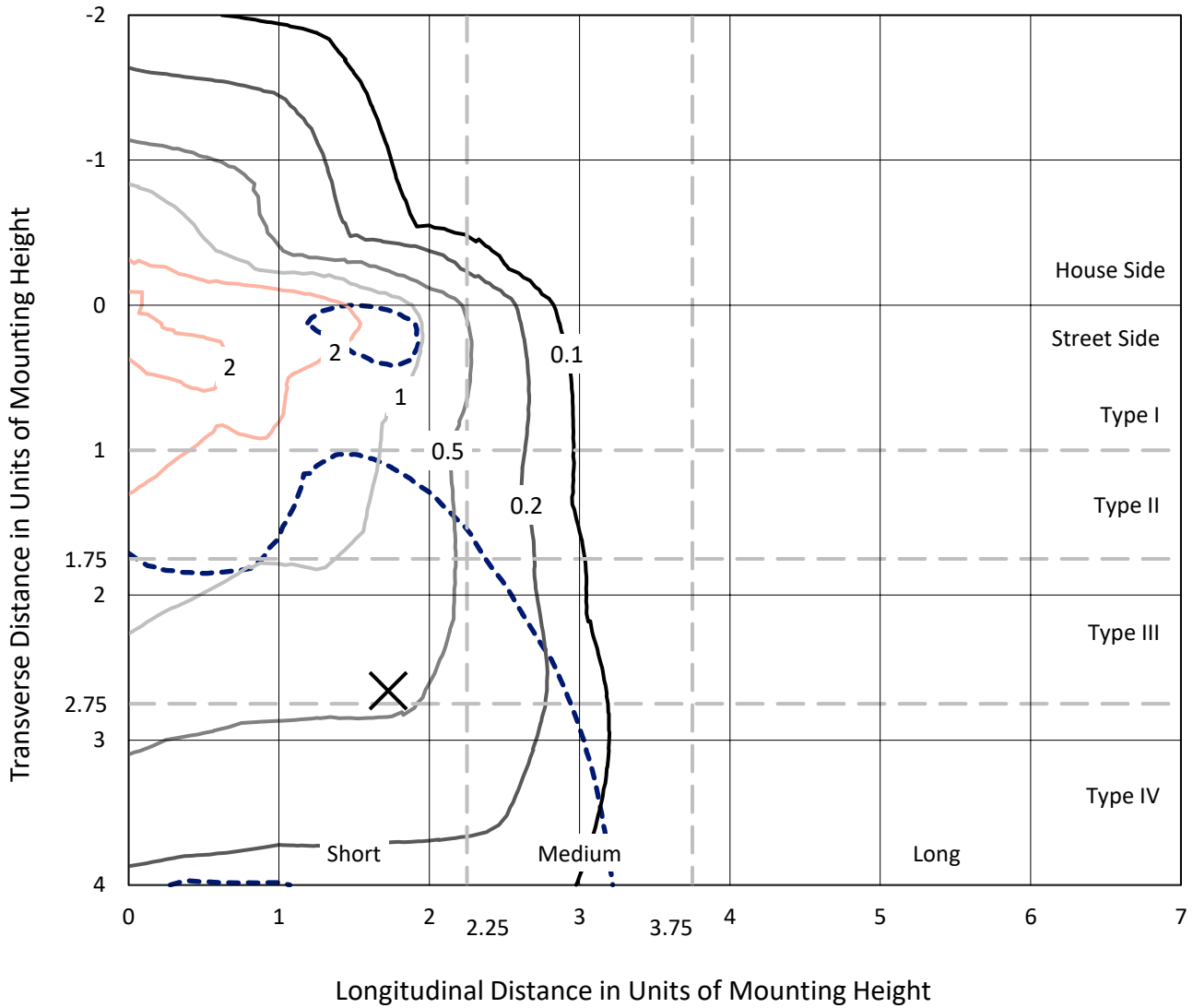
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368180
 CATALOG NUMBER: MSA-SA3D-830-U-T4FT

Iso-Footcandle Lines of Horizontal Illumination

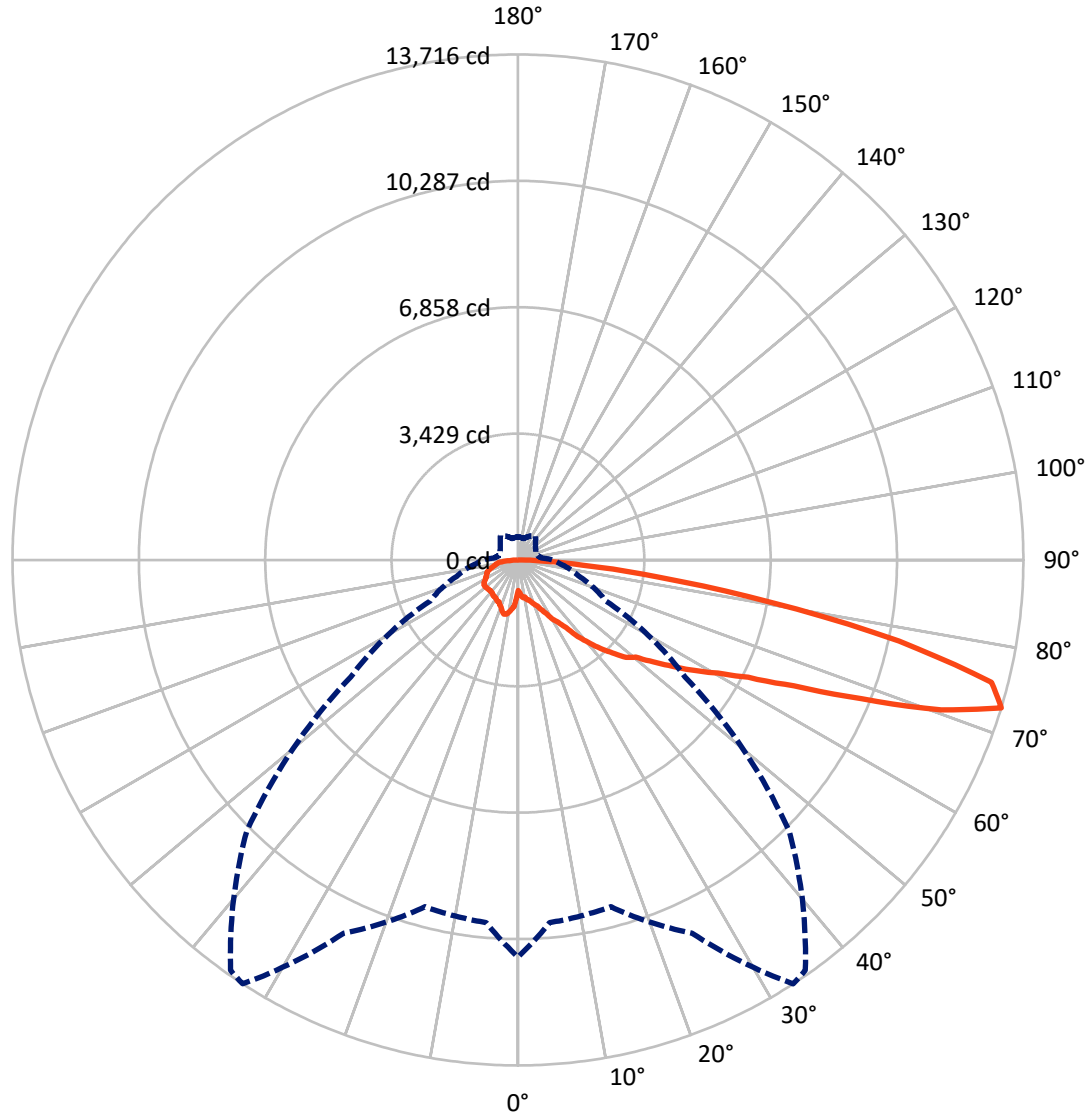
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P368180
CATALOG NUMBER: MSA-SA3D-830-U-T4FT

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368180
 CATALOG NUMBER: MSA-SA3D-830-U-T4FT

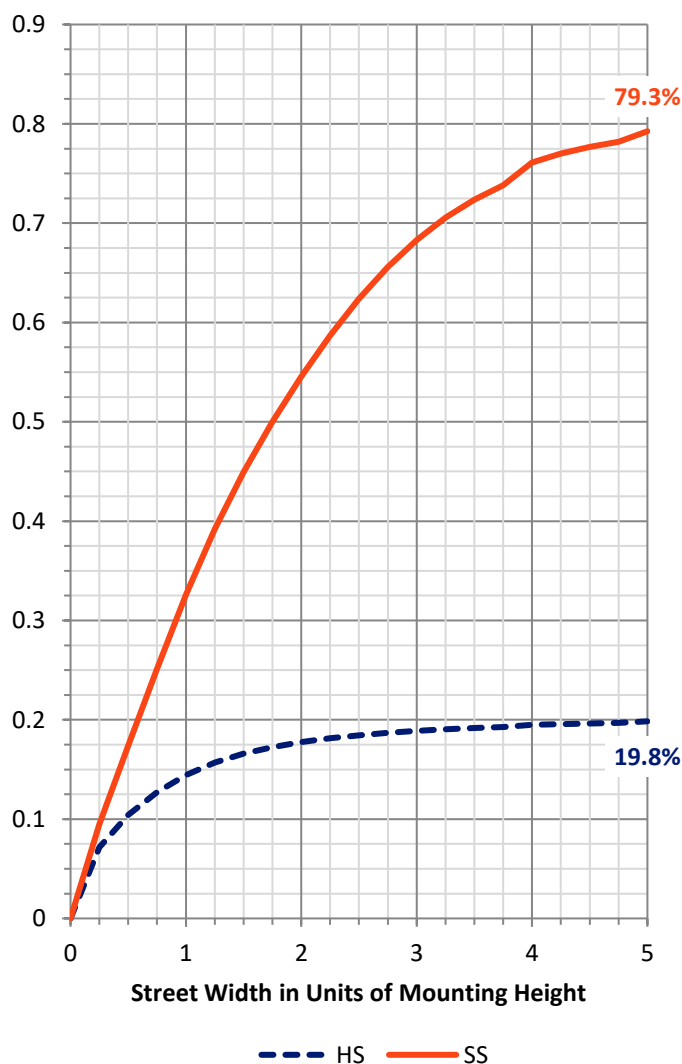
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3207.2	0.0	3207.2
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	12646.8	0.0	12646.8
	% Fixture	79.8	0.0	79.8
Total	Lumens	15854.0	0.0	15854.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	0.7
10°-20°	422.4	2.7
20°-30°	770.3	4.9
30°-40°	1303.1	8.2
40°-50°	2167.9	13.7
50°-60°	3181.6	20.1
60°-70°	4070.1	25.7
70°-80°	3311.4	20.9
80°-90°	512.9	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°	15854.0	100.0
0°-180°	15854.0	100.0

Coefficient of Utilization

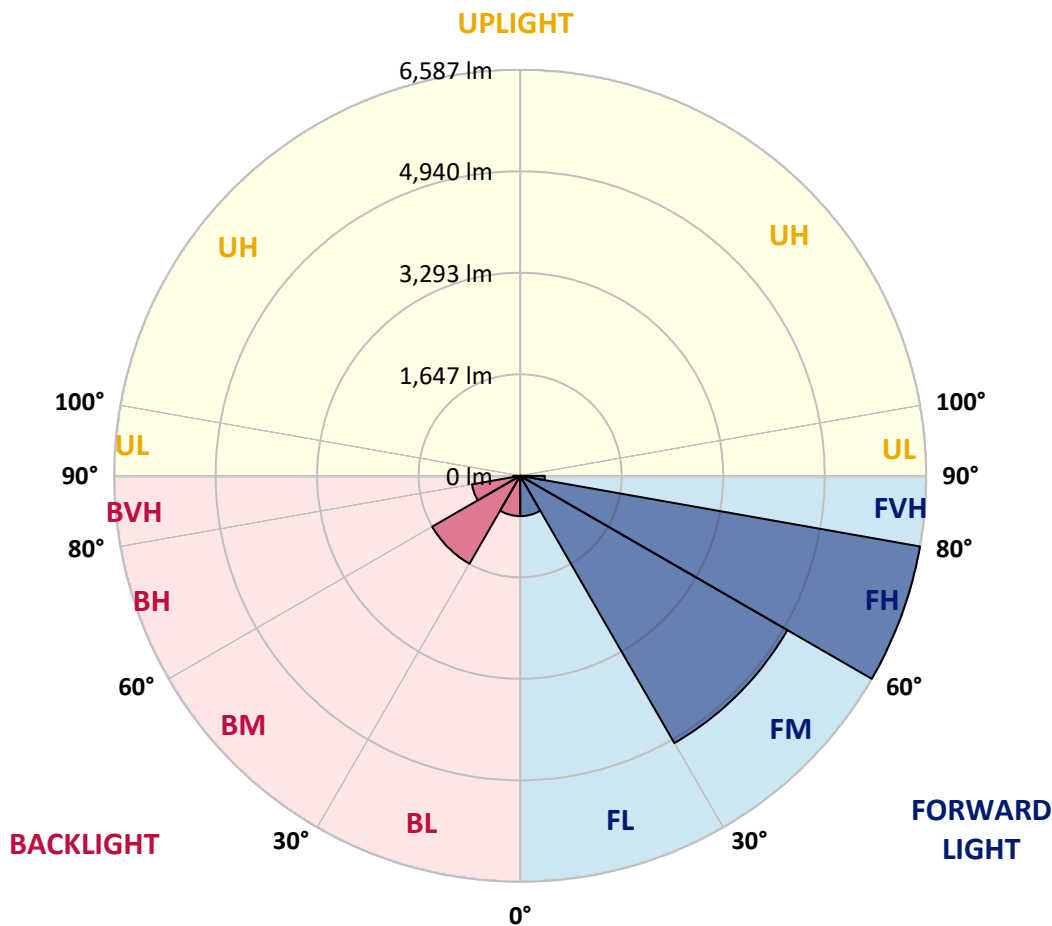


REPORT NUMBER: P368180
 CATALOG NUMBER: MSA-SA3D-830-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	654.3	4.1			
FM (30°-60°)	5005.5	31.6			
FH (60°-80°)	6586.7	41.5			G3/7500
FVH (80°-90°)	400.3	2.5			G3/500
BL (0°-30°)	652.7	4.1	B2/1000		
BM (30°-60°)	1647.2	10.4	B2/2500		
BH (60°-80°)	794.7	5.0	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 IV Short





REPORT NUMBER: P368180

CATALOG NUMBER: MSA-SA3D-830-U-T4FT

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3
2.5°	942.5	912.9	864.2	862.9	889.9	895.8	913.5	914.8	921.4	910.9	985.9
5°	1039.8	1008.2	989.2	995.7	983.2	998.4	998.4	1041.8	1099.7	1166.7	1262.1
7.5°	1062.8	1039.8	1018.1	1034.5	1037.2	1022.7	1036.5	1138.5	1243.0	1310.1	1462.7
10°	1016.8	993.8	1010.2	1015.5	1014.8	1047.7	1119.4	1200.9	1317.4	1441.0	1523.2
12.5°	1008.2	1024.7	1032.6	1041.8	1104.3	1114.1	1222.6	1306.8	1423.9	1532.4	1746.2
15°	1135.2	1156.9	1108.2	1104.9	1125.3	1134.5	1247.0	1331.8	1502.8	1685.0	1877.1
17.5°	1316.0	1323.9	1236.5	1191.7	1206.9	1214.1	1263.4	1370.0	1475.2	1811.9	2051.3
20°	1491.0	1496.2	1331.8	1231.9	1285.1	1293.0	1339.1	1400.2	1483.1	1883.0	2169.1
22.5°	1674.5	1640.9	1460.7	1334.5	1365.4	1367.3	1394.3	1427.8	1545.6	1871.8	2312.4
25°	1875.1	1854.0	1627.1	1506.1	1504.8	1477.8	1479.1	1527.2	1612.0	1991.5	2406.5
27.5°	2141.4	2144.1	1814.6	1749.5	1647.5	1629.8	1541.0	1630.4	1727.1	1992.8	2609.7
30°	2486.7	2422.9	2075.7	1970.4	1869.8	1832.3	1712.0	1788.3	1830.4	2106.6	2830.7
32.5°	2767.6	2749.2	2348.0	2188.8	2024.4	2067.8	1934.9	1867.8	1943.5	2302.6	3165.5
35°	3036.6	2976.1	2636.0	2428.9	2255.9	2229.6	2143.4	2154.6	2200.6	2550.5	3602.8
37.5°	3437.8	3404.9	3043.8	2712.3	2631.4	2524.2	2469.6	2504.5	2468.3	2868.2	4258.6
40°	3886.3	3695.6	3384.5	3089.2	2937.9	2862.3	2881.3	2848.5	2820.8	3224.7	4846.5
42.5°	4315.8	4142.1	3610.7	3477.9	3280.6	3312.1	3207.6	3230.6	3308.8	3730.4	5390.4
45°	4783.4	4407.8	3850.8	3733.7	3592.3	3632.4	3716.0	3691.0	3819.2	4327.0	5902.8
47.5°	5016.9	4659.7	4145.4	3954.7	3952.7	3869.2	4377.6	4432.8	4232.2	4768.9	6423.0
50°	5241.8	4890.6	4364.4	4235.5	4142.1	4321.0	5012.3	4885.3	4605.8	5276.0	6995.2
52.5°	5554.9	5154.3	4615.7	4478.2	4594.0	4759.7	5518.7	5493.7	4972.1	5797.6	7492.4
55°	5793.6	5389.1	4993.9	4866.3	5087.2	5249.7	6034.3	5883.7	5285.9	6180.3	7807.5
57.5°	6211.9	5796.9	5552.2	5268.8	5666.0	5663.4	6531.5	6415.1	5621.3	6494.7	7934.4
60°	6876.8	6389.5	6133.6	5806.8	6232.3	6384.2	7099.8	6764.4	5858.7	6693.3	7705.5
62.5°	7810.1	7231.3	6816.3	6492.7	7011.6	7286.6	7801.5	7018.9	5873.8	6636.8	7103.7
65°	8964.3	8260.6	7716.7	7374.7	8231.0	8623.7	8650.0	7176.1	5734.4	6052.1	5838.3
67.5°	10090.3	9299.1	8731.5	8796.6	10046.9	10233.0	9569.4	7307.6	4985.3	4859.7	4054.0
70°	10831.5	9973.9	9595.7	10286.3	12185.7	11995.0	10314.6	6961.0	3925.8	3150.3	2282.8
72.5°	10775.6	9877.9	9741.7	11171.5	13715.5	13596.5	10405.3	5535.8	2629.5	1722.5	1138.5
75°	8778.9	8081.1	8390.2	10575.7	13274.8	13268.9	9034.1	3426.6	1348.9	884.6	719.5
77.5°	4853.8	4582.8	5491.1	8007.4	10569.8	10623.7	6104.0	1554.1	727.4	626.8	541.9
80°	1700.1	1675.1	2379.5	4321.0	6953.1	6966.3	2838.6	711.0	528.8	474.2	397.9
82.5°	621.5	616.3	986.5	2007.3	3828.4	3819.9	1076.6	442.6	392.0	335.4	262.4
85°	247.9	242.7	451.2	891.2	1758.7	1730.4	418.3	251.2	256.5	199.9	128.9
87.5°	68.4	71.0	153.2	278.9	538.6	499.2	105.2	84.8	103.9	81.6	40.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368180

CATALOG NUMBER: MSA-SA3D-830-U-T4FT

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3	831.3
2.5°	999.0	1005.6	940.5	963.5	993.1	1008.9	1016.8	983.2	994.4	1041.8	1039.8
5°	1281.8	1255.5	1230.5	1256.2	1239.1	1214.8	1254.2	1252.2	1277.9	1303.5	1309.5
7.5°	1493.0	1458.8	1446.9	1389.0	1331.2	1272.6	1323.3	1354.8	1361.4	1425.2	1452.2
10°	1569.3	1556.1	1560.7	1484.4	1477.2	1483.1	1436.4	1385.8	1416.7	1390.4	1410.1
12.5°	1745.5	1778.4	1696.8	1644.9	1640.3	1604.1	1510.7	1477.8	1443.0	1479.1	1460.7
15°	1886.9	1948.1	1860.6	1769.2	1665.9	1610.0	1530.4	1480.5	1457.4	1465.3	1443.0
17.5°	2094.1	2151.3	1929.0	1788.9	1682.4	1600.2	1478.5	1371.9	1428.5	1433.1	1407.5
20°	2231.5	2235.5	1952.0	1740.3	1644.2	1501.5	1383.1	1289.7	1354.8	1421.3	1450.2
22.5°	2365.7	2336.1	1980.3	1701.4	1505.5	1367.3	1309.5	1303.5	1352.2	1408.1	1414.7
25°	2466.3	2470.9	1996.8	1687.0	1423.9	1235.8	1235.8	1278.6	1321.3	1454.2	1447.6
27.5°	2710.3	2530.8	1933.0	1620.6	1310.8	1158.9	1236.5	1293.7	1314.1	1458.1	1472.6
30°	2887.9	2770.9	1946.1	1506.8	1196.3	1122.7	1186.5	1258.2	1314.7	1481.1	1475.9
32.5°	3185.9	2870.8	1977.0	1347.0	1110.8	1108.9	1165.4	1241.1	1308.8	1456.1	1464.0
35°	3515.4	3165.5	1890.9	1225.3	1090.5	1101.0	1174.0	1204.2	1283.8	1446.3	1453.5
37.5°	4125.0	3319.4	1836.3	1131.2	1077.3	1107.6	1135.2	1181.9	1262.1	1396.9	1444.3
40°	4482.8	3636.4	1633.7	1076.6	1049.7	1102.3	1116.1	1155.6	1199.0	1337.7	1368.0
42.5°	4953.7	3736.3	1460.7	1016.1	1035.9	1080.6	1122.0	1131.9	1160.8	1244.4	1299.6
45°	5346.4	3811.3	1277.2	967.5	989.2	1128.6	1131.2	1126.6	1121.4	1152.3	1197.7
47.5°	5752.8	4012.6	1108.2	913.5	971.4	1168.1	1135.8	1093.7	1072.0	1076.0	1118.1
50°	6201.4	4158.6	988.5	869.5	975.4	1168.1	1158.2	1060.2	1016.8	1005.6	1049.7
52.5°	6596.0	4175.7	897.7	834.0	958.9	1127.9	1173.3	1039.2	966.1	939.2	980.6
55°	6811.1	3959.3	832.0	801.7	916.8	1091.8	1165.4	1027.3	905.0	884.6	921.4
57.5°	6806.4	3600.2	776.1	757.0	868.8	1041.1	1121.4	962.9	867.5	855.7	891.8
60°	6561.1	3179.3	733.3	720.2	819.5	967.5	1042.4	920.8	831.3	825.4	864.9
62.5°	6004.7	2744.5	691.9	681.4	773.4	915.5	1005.0	874.1	793.8	793.2	830.7
65°	4917.6	2203.3	653.1	650.5	730.7	864.2	969.4	834.6	755.0	768.2	806.3
67.5°	3388.4	1548.2	611.7	619.5	691.2	814.9	942.5	808.3	714.3	741.2	775.4
70°	1859.3	957.6	565.6	581.4	641.2	757.7	900.4	765.6	661.0	702.4	726.1
72.5°	945.8	638.6	508.4	533.4	580.1	673.5	821.5	703.7	603.8	619.5	632.0
75°	635.3	480.8	444.6	472.2	505.8	593.2	728.7	645.9	549.2	547.2	561.0
77.5°	480.1	375.5	377.5	409.1	430.8	521.5	655.1	597.2	503.1	498.5	518.9
80°	351.2	284.8	303.9	336.7	356.5	468.3	607.0	543.3	440.7	422.2	439.3
82.5°	232.8	201.9	224.9	257.8	273.6	391.3	551.1	461.0	359.1	312.4	315.0
85°	109.8	105.9	134.2	150.0	170.3	242.7	412.4	319.0	228.9	189.4	198.0
87.5°	25.0	33.5	44.1	43.4	50.6	65.1	128.2	89.4	66.4	45.4	30.3
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)