

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: P596720

Luminaire Tested: **MSA-SA3D-827-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596720
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15027 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

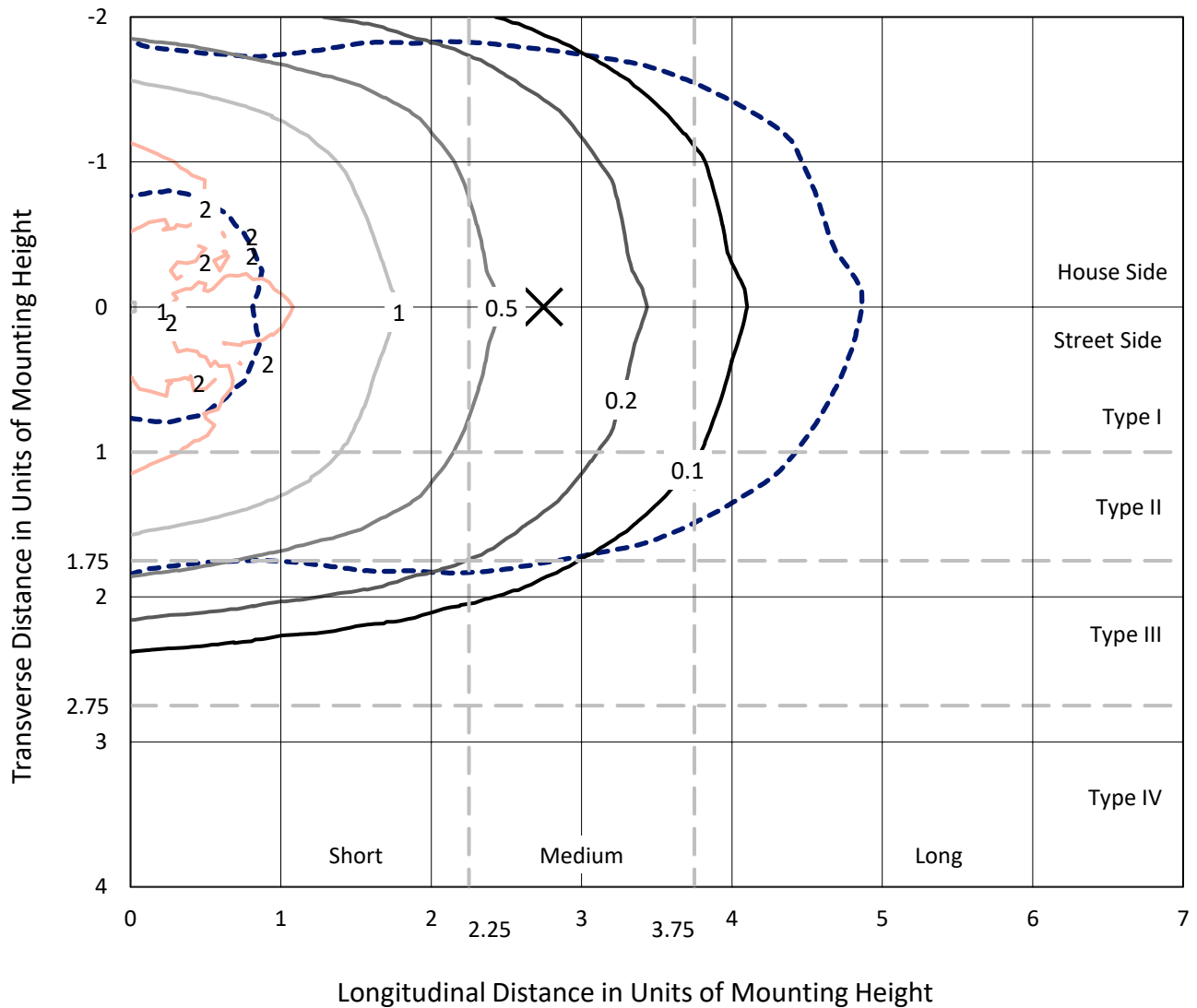
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

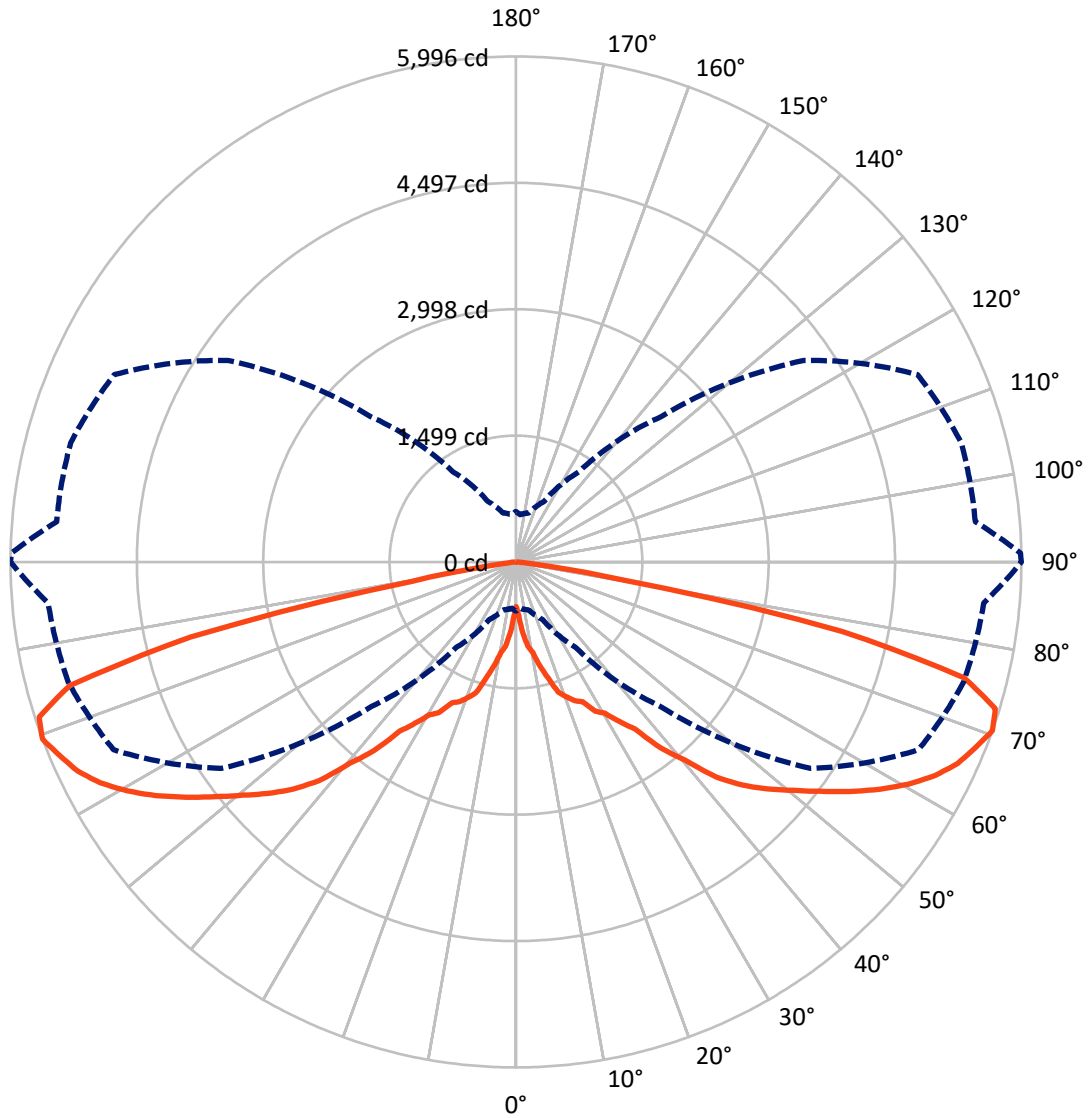
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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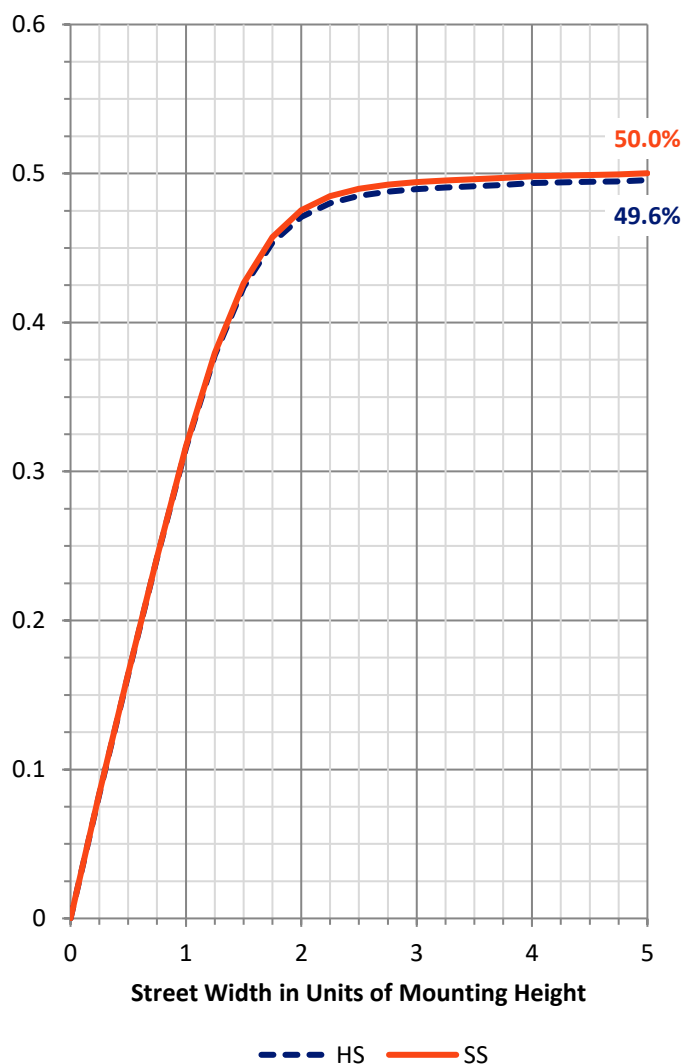
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7485.7	0.0	7485.7
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	7541.3	0.0	7541.3
	% Fixture	50.2	0.0	50.2
Total	Lumens	15027.0	0.0	15027.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.5	0.5
10°-20°	364.6	2.4
20°-30°	788.4	5.2
30°-40°	1504.2	10.0
40°-50°	2732.7	18.2
50°-60°	3838.8	25.5
60°-70°	3665.3	24.4
70°-80°	1881.0	12.5
80°-90°	172.5	1.1
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°	15027.0	100.0
0°-180°	15027.0	100.0

Coefficient of Utilization

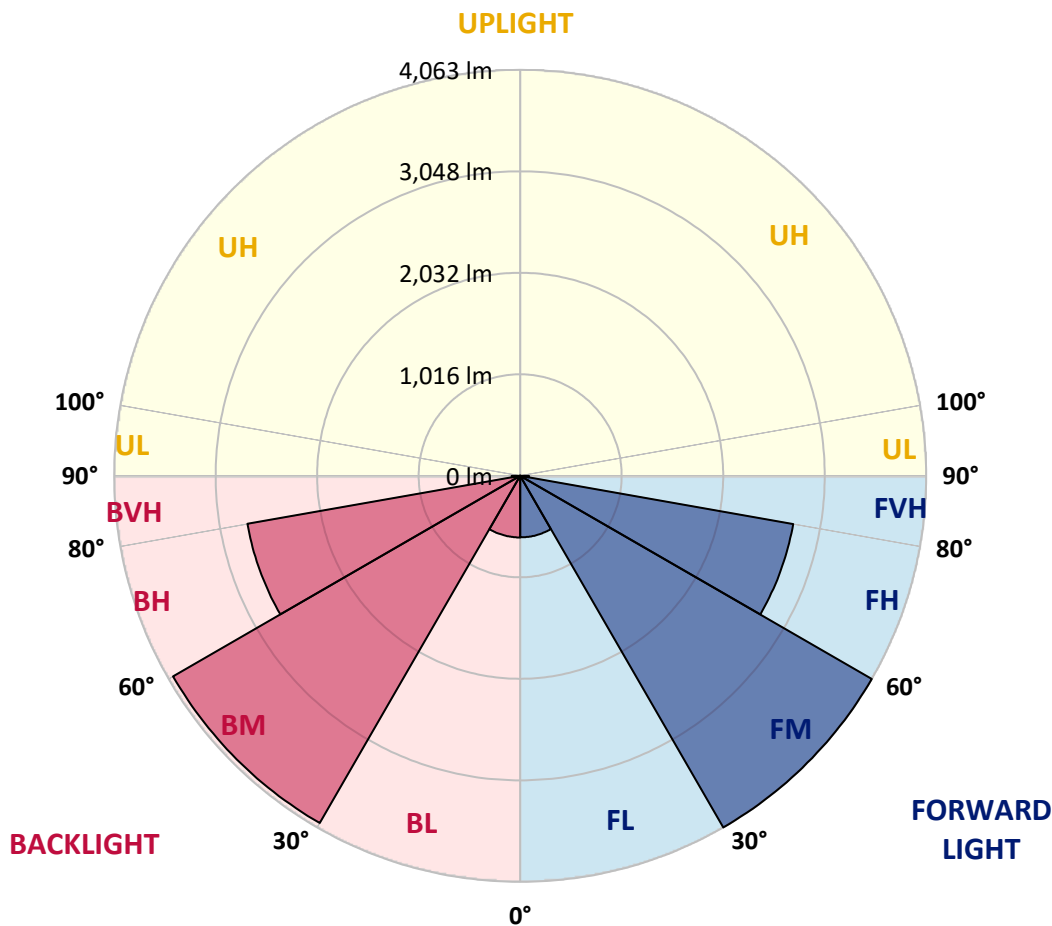


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	615.7	4.1			
FM (30°-60°)	4063.5	27.0			
FH (60°-80°)	2774.7	18.5			G2/5000
FVH (80°-90°)	87.5	0.6			G1/100
BL (0°-30°)	616.9	4.1	B2/1000		
BM (30°-60°)	4012.2	26.7	B3/5000		
BH (60°-80°)	2771.6	18.4	B4/5000		G4/5000
BVH (80°-90°)	84.9	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4
2.5°	638.9	615.1	585.3	602.9	610.2	623.0	621.2	615.1	588.9	632.8	637.6
5°	799.6	761.9	747.9	745.4	749.1	736.9	776.5	764.9	786.2	825.8	835.0
7.5°	910.5	882.5	852.6	861.8	824.0	818.5	869.7	915.4	926.9	999.4	1004.3
10°	962.9	935.5	943.4	937.9	933.6	969.0	992.7	1026.2	1074.3	1081.0	1091.4
12.5°	1007.3	1018.3	1053.0	1051.8	1109.0	1171.8	1162.6	1197.3	1205.3	1289.3	1263.7
15°	1120.0	1142.5	1140.1	1161.4	1186.4	1289.3	1289.9	1349.0	1403.2	1436.1	1427.5
17.5°	1285.0	1293.0	1260.1	1261.3	1333.8	1375.8	1422.7	1412.3	1553.6	1618.2	1622.4
20°	1383.7	1403.8	1366.0	1316.1	1444.6	1502.5	1528.6	1468.4	1619.4	1706.5	1706.5
22.5°	1556.1	1504.3	1447.0	1413.5	1526.8	1588.3	1585.3	1568.2	1648.6	1802.7	1788.1
25°	1651.1	1621.8	1593.2	1601.7	1659.0	1690.6	1732.7	1693.1	1768.6	1883.1	1835.0
27.5°	1831.3	1777.1	1636.4	1748.5	1748.5	1724.8	1813.7	1832.5	1783.2	1969.6	2005.5
30°	2035.4	2016.5	1817.3	1936.1	1899.5	1832.5	2003.1	1990.9	1908.1	2098.1	2081.6
32.5°	2228.4	2290.5	2101.7	2036.6	2091.4	2117.0	2027.4	2064.0	2079.8	2263.1	2255.2
35°	2524.4	2576.8	2326.5	2310.0	2218.7	2194.9	2263.1	2275.3	2276.5	2469.6	2434.3
37.5°	3036.6	2961.1	2713.8	2597.5	2607.8	2579.2	2592.6	2496.4	2509.8	2789.9	2807.6
40°	3411.1	3325.9	3050.6	2967.2	2762.5	2884.9	2776.5	2766.8	2740.0	3103.0	3093.2
42.5°	3824.7	3707.7	3403.2	3291.8	3074.3	3024.4	2974.5	3087.1	3079.8	3416.0	3490.3
45°	4137.1	3900.8	3741.8	3672.4	3542.1	3419.7	3372.2	3422.7	3399.6	3649.3	3779.0
47.5°	4334.4	4129.2	3946.5	3800.3	3675.5	3975.7	3735.1	3667.5	3620.6	3900.2	4025.0
50°	4491.5	4254.6	4039.0	3990.3	4089.0	4354.5	3975.1	3825.9	3883.1	4089.0	4258.9
52.5°	4534.2	4283.3	4089.6	4058.5	4325.3	4373.4	4311.9	4061.0	4045.7	4315.5	4520.8
55°	4403.8	4163.3	4071.3	4241.2	4536.0	4495.8	4589.6	4429.4	4321.6	4547.0	4805.2
57.5°	4068.3	3829.5	3807.6	4052.4	4423.9	4766.2	4812.5	4685.8	4544.5	4783.3	5087.8
60°	3517.1	3299.1	3354.5	3624.9	4185.2	4672.4	4918.5	4802.8	4758.9	4996.4	5349.7
62.5°	2659.0	2489.1	2637.1	3014.1	3749.1	4551.2	5064.6	5046.4	4983.0	5223.0	5581.1
65°	1695.5	1606.0	1757.0	2140.1	3072.5	4330.8	5134.7	5159.0	5217.5	5397.8	5760.1
67.5°	985.4	937.9	1029.9	1343.5	2188.2	3556.1	5004.3	5353.9	5384.4	5487.9	5877.7
70°	582.8	551.8	589.5	754.6	1238.8	2422.7	4268.6	5268.7	5498.9	5570.7	5996.4
72.5°	444.6	415.4	398.9	446.4	646.8	1251.5	2886.2	4466.0	5406.9	5515.9	5946.5
75°	384.3	356.3	336.8	341.1	384.9	594.4	1564.6	3194.3	4607.3	5022.6	5492.8
77.5°	330.1	305.1	291.1	289.9	295.4	326.4	654.1	1732.1	2885.5	3610.3	3959.9
80°	264.3	244.8	241.8	241.8	233.9	231.4	325.2	659.0	1098.1	1302.1	1248.5
82.5°	193.1	173.6	193.1	190.6	178.4	168.7	207.1	285.0	338.6	267.4	211.3
85°	130.3	112.7	127.3	129.7	118.2	87.7	124.2	142.5	146.2	91.4	75.5
87.5°	45.7	44.5	71.9	62.7	51.2	29.8	45.7	49.3	51.8	32.3	21.9
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4
2.5°	639.5	632.2	595.6	601.1	615.1	621.8	628.5	601.1	587.7	630.3	626.1
5°	837.4	810.6	780.8	776.5	778.3	752.1	767.4	760.7	763.7	791.1	796.6
7.5°	1003.1	970.8	931.2	900.1	846.5	803.9	839.8	858.1	863.6	912.3	930.6
10°	1092.6	1065.2	1053.6	995.1	977.5	972.0	963.5	934.2	966.5	954.9	964.1
12.5°	1268.0	1262.5	1202.2	1163.8	1167.5	1177.8	1124.3	1095.0	1053.0	1118.8	1095.0
15°	1417.2	1440.9	1380.7	1310.6	1275.9	1293.6	1252.8	1210.1	1172.4	1192.5	1166.9
17.5°	1607.8	1607.2	1489.7	1414.8	1411.7	1410.5	1350.2	1256.4	1301.5	1287.5	1288.7
20°	1708.9	1692.5	1546.3	1459.8	1533.5	1507.3	1453.1	1332.5	1384.9	1402.0	1412.9
22.5°	1793.6	1784.4	1607.2	1543.9	1591.4	1592.0	1537.8	1474.4	1467.7	1520.7	1492.1
25°	1852.6	1889.2	1722.3	1707.1	1727.8	1707.1	1654.1	1612.7	1585.9	1665.1	1585.9
27.5°	1992.7	1941.0	1740.0	1826.5	1839.2	1735.1	1801.5	1752.8	1678.5	1776.5	1808.8
30°	2092.6	2123.1	1864.2	1994.5	1979.3	1883.1	1910.5	1908.7	1819.8	2011.0	1988.5
32.5°	2264.3	2227.8	2067.0	2056.7	2093.2	2088.9	2042.7	2065.2	2087.1	2226.0	2259.5
35°	2440.4	2479.3	2196.7	2266.8	2256.4	2190.7	2311.9	2297.8	2363.0	2648.0	2553.6
37.5°	2837.4	2651.7	2487.9	2478.7	2548.2	2558.5	2519.5	2581.0	2721.7	2941.0	3042.1
40°	3097.5	3012.8	2734.5	2745.5	2649.2	2814.9	2705.3	2903.2	3010.4	3380.1	3344.1
42.5°	3490.9	3284.5	3017.1	3053.6	3034.2	2954.4	3098.7	3200.4	3353.9	3635.9	3818.0
45°	3783.9	3500.7	3374.0	3351.5	3349.0	3487.9	3469.6	3632.2	3687.0	3899.0	4050.0
47.5°	4006.2	3765.6	3578.0	3603.6	3529.3	3925.8	3714.4	3765.0	3875.8	4075.6	4251.6
50°	4269.9	4001.9	3788.7	3852.1	4032.9	4185.2	3994.0	3907.5	3961.7	4197.4	4393.5
52.5°	4514.1	4232.1	3997.6	4050.6	4346.0	4276.6	4255.9	4037.2	4030.5	4219.9	4442.8
55°	4799.7	4481.8	4274.7	4442.8	4547.6	4461.7	4428.8	4162.7	3998.2	4103.6	4313.7
57.5°	5079.9	4729.1	4523.2	4557.9	4690.7	4605.4	4358.8	3948.9	3743.7	3764.4	3976.9
60°	5342.3	4956.2	4786.3	4752.8	4858.8	4524.4	4092.6	3557.3	3285.1	3235.1	3419.1
62.5°	5567.1	5146.2	4985.5	4894.1	4995.2	4527.5	3677.9	2928.8	2629.8	2460.5	2603.6
65°	5745.5	5304.0	5189.5	5142.0	5178.5	4252.2	3031.7	2150.5	1783.8	1596.2	1679.7
67.5°	5864.3	5392.3	5339.9	5402.0	4914.8	3541.5	2246.1	1376.4	1037.2	934.8	987.2
70°	5987.3	5470.2	5468.4	5257.1	4167.5	2441.6	1311.8	793.6	603.5	564.0	596.8
72.5°	5945.9	5377.7	5405.1	4597.5	2888.0	1305.1	692.5	448.8	408.7	422.7	451.9
75°	5506.2	4889.2	4757.1	3305.2	1638.3	606.6	398.9	339.8	337.4	358.7	387.3
77.5°	3994.0	3405.0	3055.5	1873.4	702.2	328.3	293.5	283.8	283.8	300.9	326.4
80°	1316.7	1139.5	1187.6	724.7	331.9	226.6	229.0	233.3	232.0	236.3	257.6
82.5°	216.2	224.1	346.5	296.0	200.4	154.7	173.0	181.5	183.9	164.4	187.0
85°	76.7	86.5	147.4	137.0	115.7	78.0	113.9	127.3	125.5	109.6	121.2
87.5°	23.8	30.5	53.6	41.4	34.7	21.3	42.6	49.9	62.7	25.6	23.1
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)