

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: P596734

Luminaire Tested: **MSA-SA3D-827-U-T3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-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: 14611 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

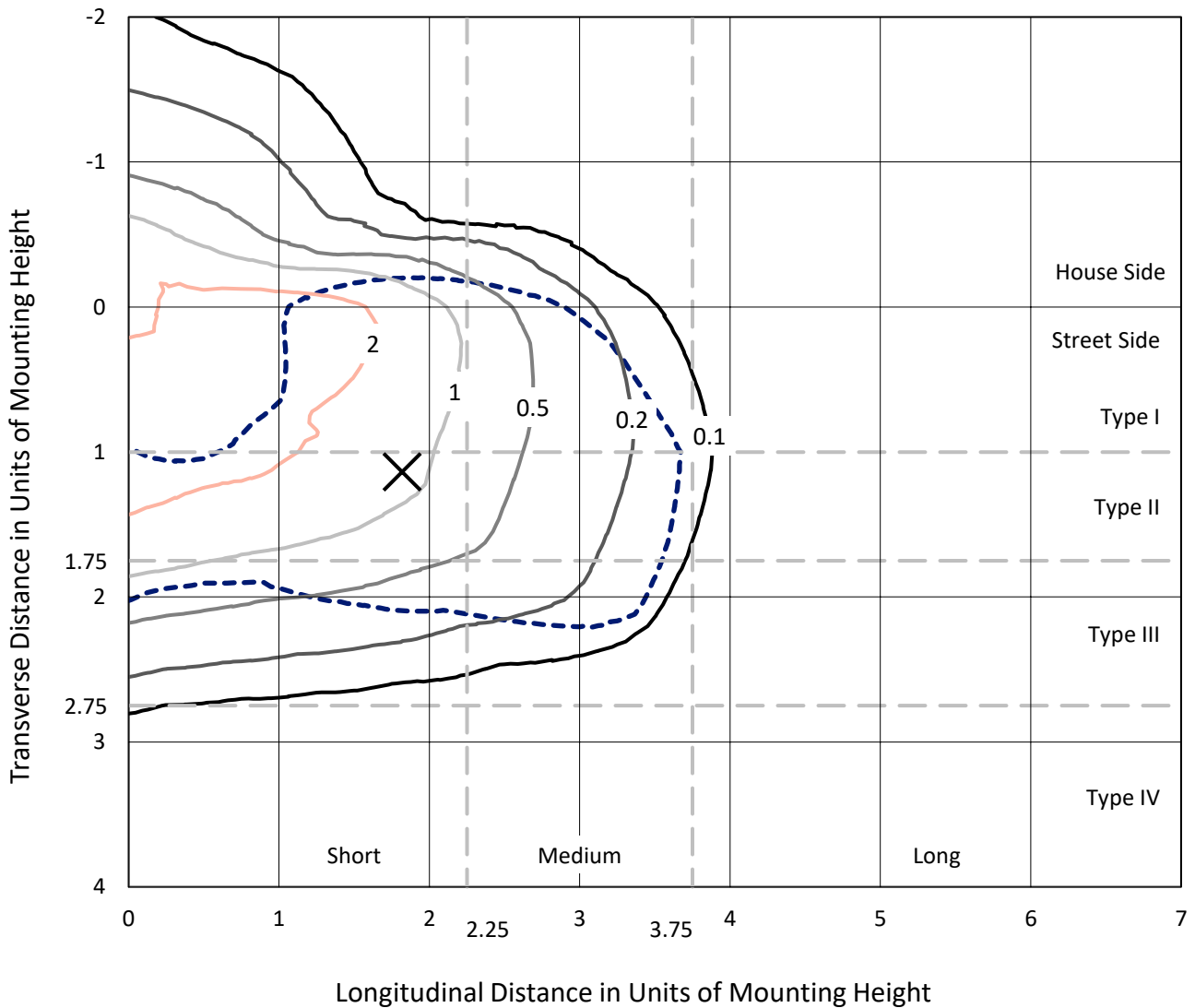
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

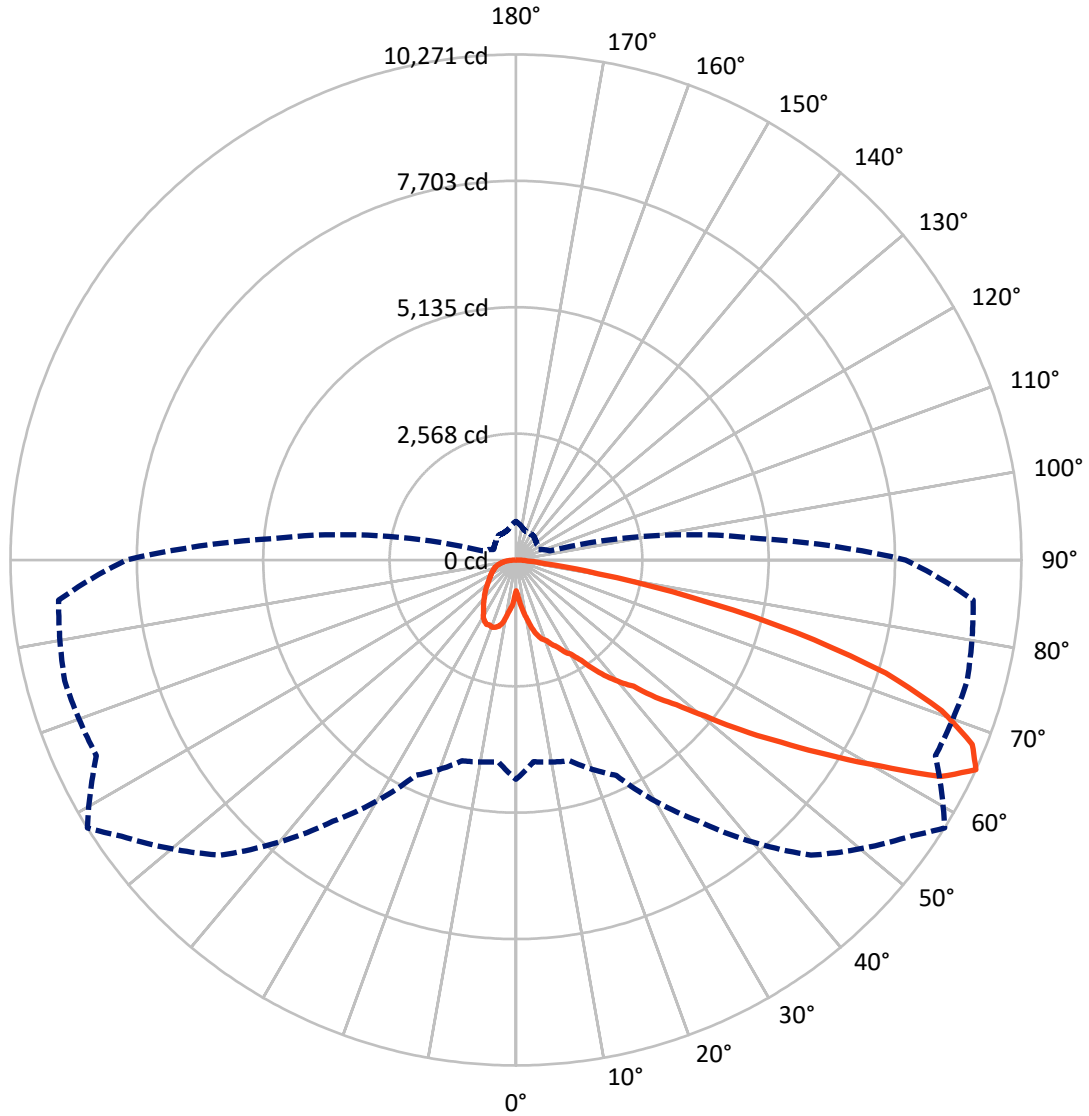
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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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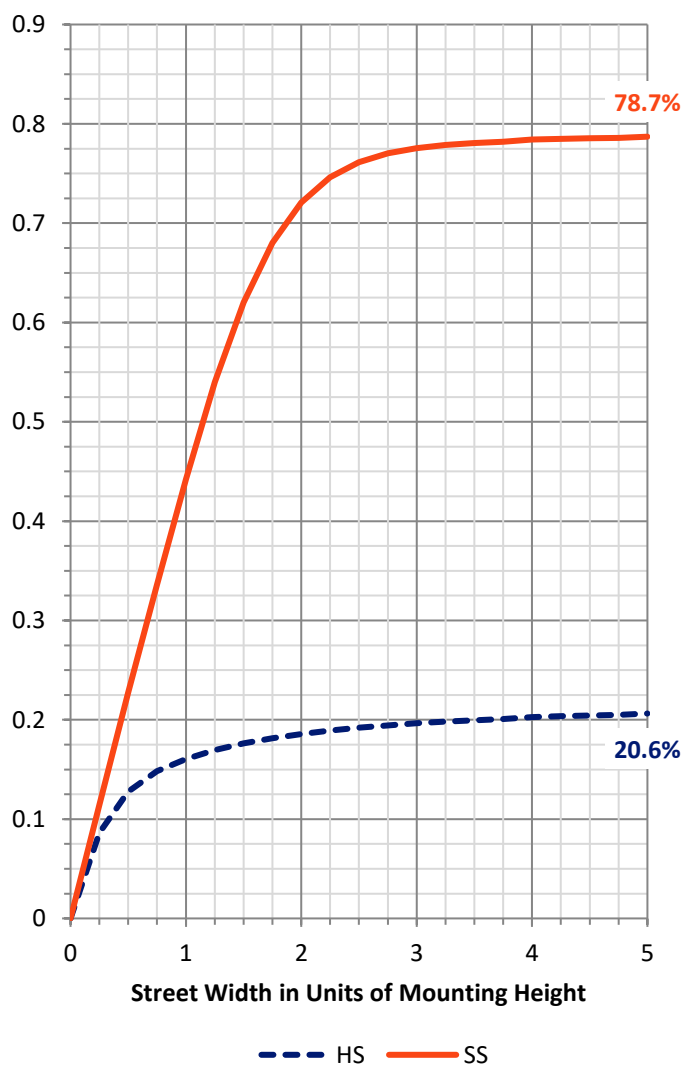
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3077.5	0.0	3077.5
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	11533.5	0.0	11533.5
	% Fixture	78.9	0.0	78.9
Total	Lumens	14611.0	0.0	14611.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	0.7
10°-20°	417.0	2.9
20°-30°	800.1	5.5
30°-40°	1321.0	9.0
40°-50°	2195.6	15.0
50°-60°	3626.0	24.8
60°-70°	4067.7	27.8
70°-80°	1849.5	12.7
80°-90°	238.5	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°	14611.0	100.0
0°-180°	14611.0	100.0

Coefficient of Utilization



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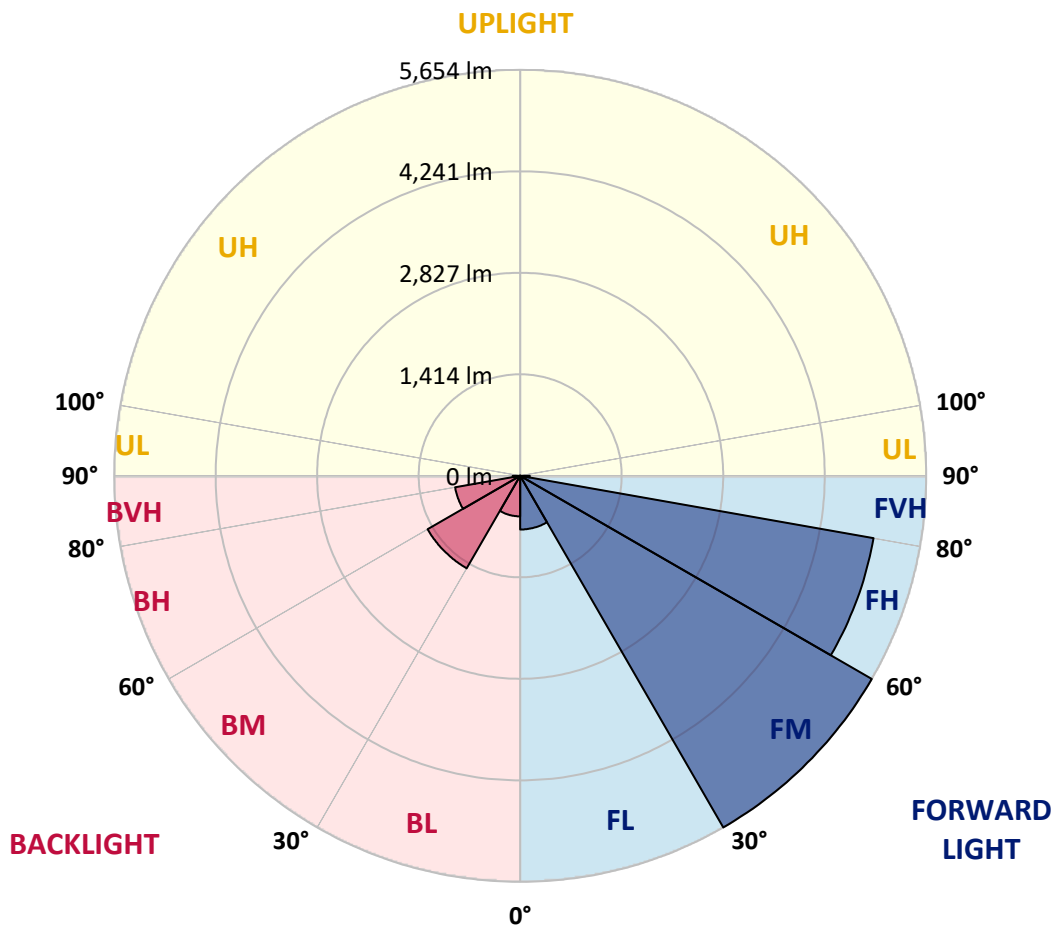
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	747.7	5.1			
FM (30°-60°)	5654.2	38.7			
FH (60°-80°)	4997.3	34.2			G2/5000
FVH (80°-90°)	134.3	0.9			G2/225
BL (0°-30°)	565.0	3.9	B2/1000		
BM (30°-60°)	1488.4	10.2	B2/2500		
BH (60°-80°)	919.9	6.3	B2/1000		G2/1000
BVH (80°-90°)	104.2	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3
2.5°	749.0	726.5	688.8	697.9	719.8	732.0	724.7	714.9	702.2	699.7	755.7
5°	969.9	926.7	909.1	901.7	875.0	859.2	886.5	882.9	897.5	924.3	979.0
7.5°	1131.1	1100.7	1071.5	1068.5	1016.7	998.5	1035.0	1054.5	1080.6	1081.2	1155.5
10°	1217.5	1191.4	1190.8	1163.4	1159.1	1193.8	1194.4	1209.0	1212.1	1243.1	1228.5
12.5°	1311.2	1309.4	1342.9	1342.3	1381.2	1438.4	1409.8	1409.8	1418.3	1380.6	1426.9
15°	1534.6	1554.0	1491.4	1501.7	1501.7	1557.7	1555.9	1566.8	1593.0	1583.2	1562.5
17.5°	1767.0	1779.2	1709.8	1645.3	1650.2	1638.0	1681.8	1686.1	1661.1	1774.3	1749.3
20°	1916.7	1964.1	1818.1	1737.2	1753.0	1767.0	1768.8	1742.7	1729.9	1903.9	1869.8
22.5°	2101.6	2061.5	1927.6	1838.2	1861.9	1843.0	1839.4	1859.5	1877.1	1942.8	1998.2
25°	2225.2	2222.1	2061.5	1963.5	1937.4	1931.9	1969.0	1961.1	2003.1	2122.3	2087.7
27.5°	2404.7	2460.6	2175.9	2200.2	2085.2	1964.1	2083.4	2119.3	2194.7	2175.3	2252.5
30°	2752.7	2710.7	2413.2	2406.5	2276.3	2174.7	2257.4	2227.0	2362.7	2358.4	2415.6
32.5°	3036.9	3066.1	2691.9	2621.9	2525.1	2402.8	2348.1	2432.7	2505.7	2625.5	2657.8
35°	3337.4	3330.7	2977.2	2836.1	2676.0	2625.5	2693.1	2728.4	2883.5	2993.7	2917.0
37.5°	3804.7	3751.8	3347.2	3080.1	2960.2	2941.9	3057.5	3006.4	3174.4	3200.5	3243.7
40°	4239.2	4079.8	3685.5	3379.4	3189.0	3257.1	3260.8	3267.5	3357.5	3428.7	3642.3
42.5°	4652.3	4540.4	4029.3	3799.3	3518.8	3452.4	3493.8	3507.8	3735.4	3880.8	4176.5
45°	5217.0	4917.0	4523.3	4287.3	3973.3	3888.7	3859.5	3980.0	4199.6	4530.6	4784.4
47.5°	5694.6	5423.9	5048.5	4737.5	4386.4	4628.0	4462.5	4395.0	4690.1	5100.2	5504.2
50°	6090.8	5792.6	5424.5	5245.0	5189.0	5404.4	4974.8	4982.7	5252.9	5831.5	6294.6
52.5°	6397.4	6079.2	5753.1	5661.8	5974.5	6098.7	5788.3	5741.5	5938.6	6622.6	7178.7
55°	6684.0	6346.3	6094.4	6280.6	6807.5	6821.5	6799.6	6539.8	6777.1	7470.2	8093.8
57.5°	6757.6	6393.8	6226.4	6493.6	7206.1	7760.4	7978.2	7468.3	7709.9	8241.1	8877.5
60°	6378.6	6067.0	6000.1	6362.7	7421.5	8232.0	8800.9	8496.0	8405.4	8859.9	9426.4
62.5°	5602.2	5240.7	5294.9	5798.7	7194.5	8418.8	9450.7	9688.6	9139.8	9352.1	9666.1
65°	4458.8	4113.8	4223.4	4829.4	6482.0	8480.8	9782.9	10270.9	9405.1	9491.5	9326.6
67.5°	3144.6	2831.2	2969.3	3753.0	5392.2	7686.2	9840.1	9999.6	9122.7	9094.2	8399.3
70°	1781.6	1585.1	1734.7	2388.2	3806.0	6123.0	9391.7	9181.8	8616.5	8211.3	7027.8
72.5°	817.2	749.6	821.4	1215.7	2191.1	4074.3	7667.3	7857.7	7424.5	6917.7	5346.6
75°	434.4	410.7	441.1	607.3	1025.3	2216.6	5447.6	5876.0	5645.4	5246.8	3487.7
77.5°	323.1	304.8	319.4	393.7	547.6	867.1	3095.3	3635.6	3723.2	3356.3	1936.8
80°	247.6	233.0	247.6	297.5	379.1	411.9	1323.4	1694.6	1930.1	1559.5	769.7
82.5°	183.8	174.0	196.5	223.3	266.5	257.4	469.7	584.7	753.9	515.4	300.0
85°	146.0	133.9	142.4	151.5	170.4	141.2	214.8	240.3	254.3	213.0	110.7
87.5°	57.2	52.9	103.4	81.5	69.4	42.6	64.5	73.0	74.8	71.8	32.2
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°	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3	627.3
2.5°	761.8	755.7	719.8	731.4	750.2	753.9	761.8	739.9	728.9	769.1	770.9
5°	983.9	951.0	934.0	935.8	923.7	904.8	933.4	952.3	959.6	989.4	1000.3
7.5°	1156.1	1116.5	1087.9	1055.1	1008.8	979.0	1028.9	1065.4	1084.9	1147.0	1171.3
10°	1232.8	1201.1	1195.0	1153.7	1152.4	1151.8	1149.4	1136.6	1178.6	1172.5	1189.6
12.5°	1391.0	1384.3	1326.5	1310.0	1311.9	1310.0	1258.9	1256.5	1257.1	1313.1	1293.0
15°	1538.2	1539.4	1486.5	1426.9	1373.3	1356.9	1336.8	1327.7	1341.1	1372.7	1353.2
17.5°	1720.1	1726.2	1574.7	1480.4	1409.8	1408.0	1359.9	1303.3	1384.9	1404.3	1383.0
20°	1837.6	1812.0	1625.8	1467.6	1447.5	1392.8	1333.2	1255.3	1325.9	1373.3	1386.7
22.5°	1948.9	1904.5	1673.3	1490.1	1394.0	1328.9	1271.1	1220.6	1243.1	1296.0	1287.5
25°	2024.4	2012.2	1739.0	1544.3	1392.2	1247.4	1169.5	1137.2	1148.8	1230.9	1223.0
27.5°	2204.5	2073.0	1727.4	1558.3	1333.8	1136.0	1097.1	1062.4	1050.8	1139.7	1164.0
30°	2325.0	2270.8	1804.7	1536.4	1260.1	1044.7	987.5	980.2	983.9	1084.9	1091.6
32.5°	2529.4	2388.8	1931.3	1452.4	1153.0	977.2	911.5	914.5	931.0	1004.6	1019.8
35°	2742.4	2658.4	1948.3	1392.2	1066.0	905.4	878.6	857.3	866.5	931.0	934.0
37.5°	3137.9	2847.6	2053.0	1299.1	1002.1	878.0	826.9	808.0	812.9	849.4	875.6
40°	3485.9	3227.9	2004.3	1209.0	923.0	841.5	777.6	763.6	749.0	784.9	801.4
42.5°	4043.9	3499.3	1987.9	1109.8	885.9	792.2	748.4	711.3	697.3	727.7	757.5
45°	4601.8	3787.1	1898.4	1009.4	833.6	788.6	705.8	670.5	674.2	701.6	732.0
47.5°	5223.7	4173.5	1746.9	912.1	776.4	770.9	663.2	648.0	659.0	689.4	719.8
50°	5958.7	4583.6	1621.6	824.5	735.6	718.0	657.8	639.5	649.8	685.7	715.6
52.5°	6762.5	5033.2	1530.3	743.5	689.4	676.0	665.1	647.4	659.6	690.6	721.6
55°	7561.4	5444.0	1468.2	688.2	649.8	658.4	680.3	667.5	673.6	696.7	727.7
57.5°	8154.1	5660.6	1343.5	629.2	617.6	648.0	682.1	660.8	664.4	696.7	730.2
60°	8498.5	5701.9	1138.4	581.1	592.0	627.3	663.2	635.8	633.4	686.4	728.3
62.5°	8460.7	5461.6	903.0	537.3	562.8	596.3	634.6	608.5	615.2	687.6	732.0
65°	7920.4	4970.6	718.0	500.2	527.5	562.2	610.9	600.6	632.8	736.2	784.3
67.5°	6971.2	4253.2	576.8	465.5	494.7	539.1	627.3	654.7	668.7	786.1	835.4
70°	5649.6	3304.6	480.7	435.1	468.5	550.1	674.8	669.3	657.8	762.4	801.4
72.5°	4081.6	2265.3	422.9	405.2	436.3	517.2	676.0	646.8	632.2	696.1	724.1
75°	2553.7	1351.4	369.3	367.5	387.0	463.7	645.6	619.4	579.9	611.5	648.0
77.5°	1458.5	691.8	310.9	327.4	338.9	402.2	578.0	554.3	519.0	532.4	568.3
80°	556.7	334.7	262.2	290.8	287.8	340.7	489.8	484.3	444.2	448.4	470.3
82.5°	262.2	187.4	217.8	250.1	233.7	271.4	397.9	396.1	360.8	326.7	344.4
85°	97.4	99.8	159.4	190.5	162.5	175.2	287.8	279.9	245.8	207.5	229.4
87.5°	21.9	35.9	78.5	99.2	56.6	54.2	116.2	101.0	97.4	57.8	60.8
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)