

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: P597096

Luminaire Tested: **MSA-SA4A-835-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597096
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-835-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12697 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

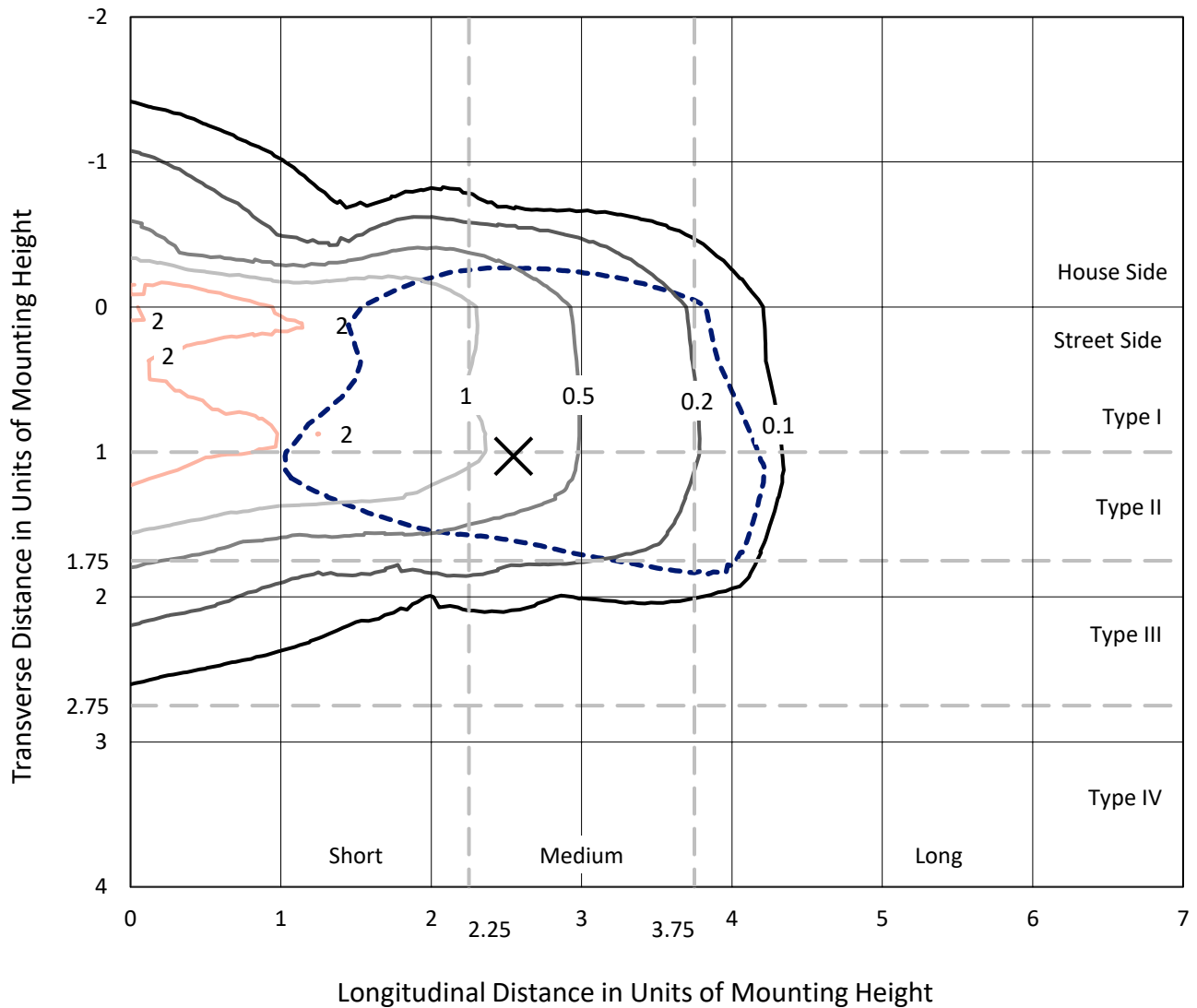
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

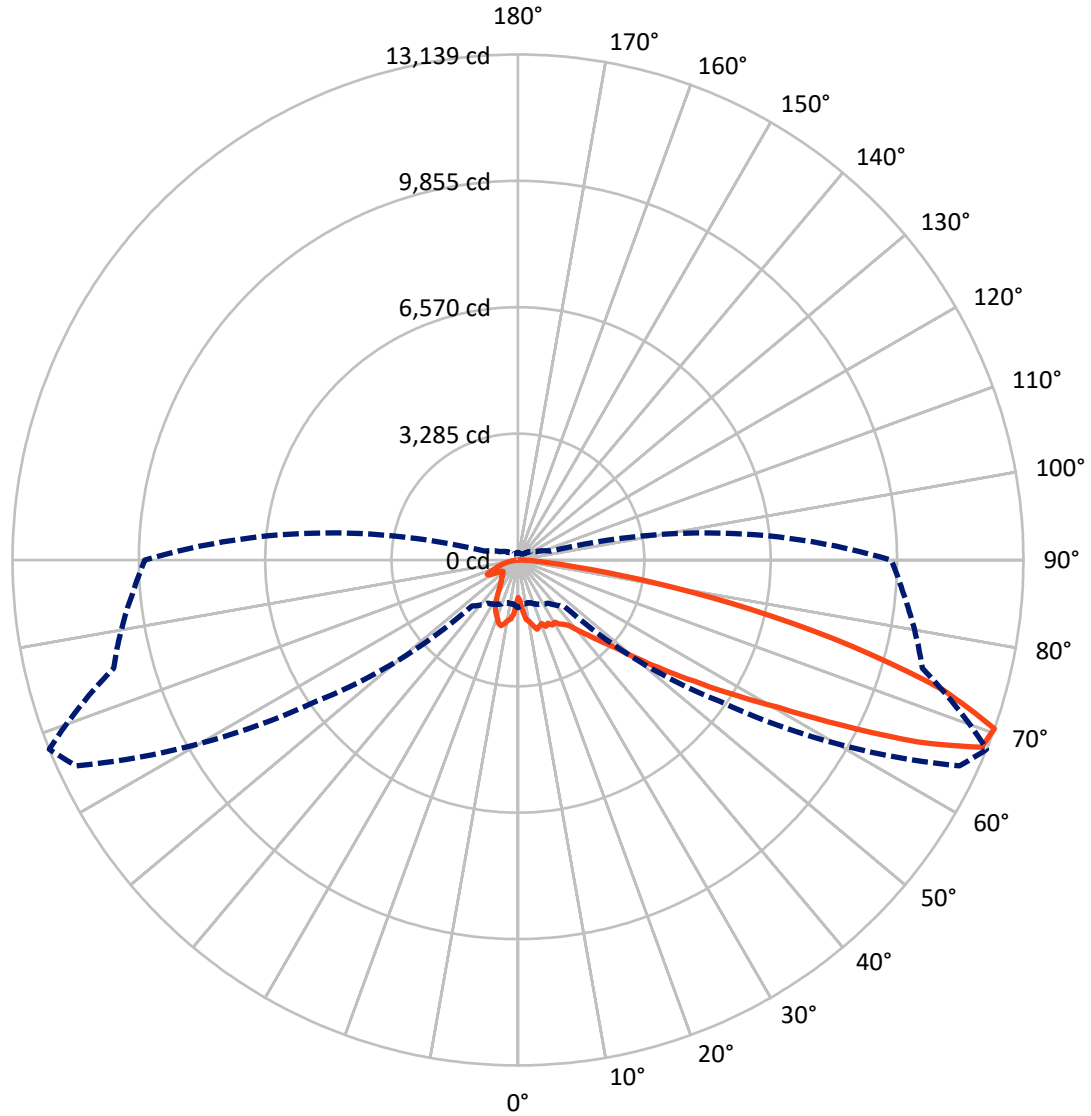
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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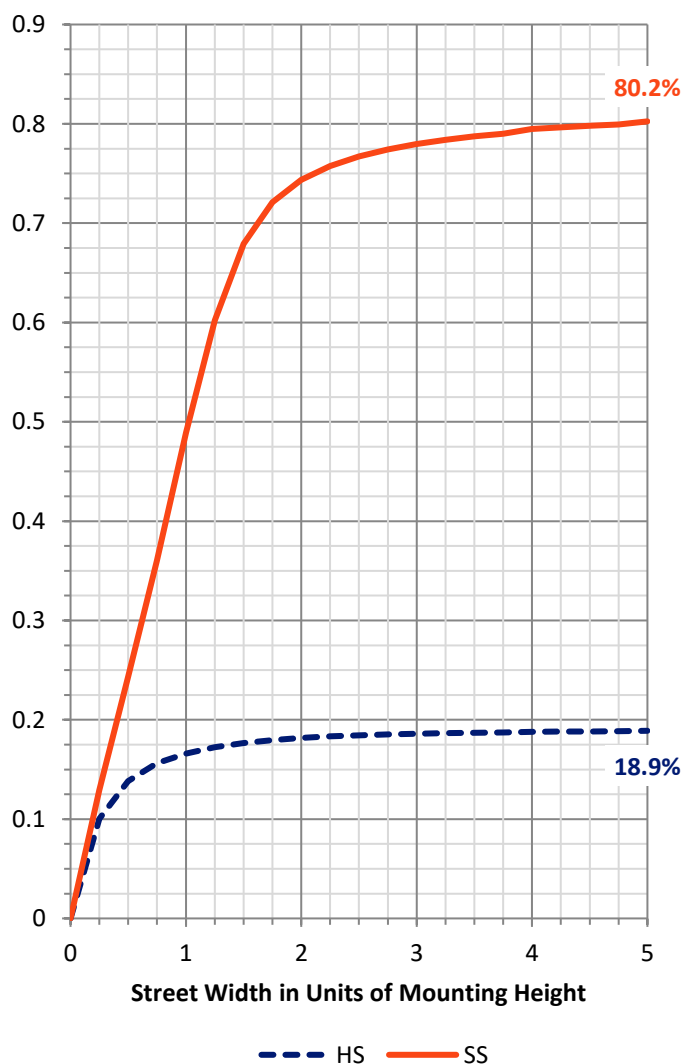
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2424.2	0.0	2424.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	10272.8	0.0	10272.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	12697.0	0.0	12697.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	1.0
10°-20°	423.8	3.3
20°-30°	644.6	5.1
30°-40°	984.7	7.8
40°-50°	1693.0	13.3
50°-60°	2802.4	22.1
60°-70°	3454.9	27.2
70°-80°	2219.4	17.5
80°-90°	344.3	2.7
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°	12697.0	100.0
0°-180°	12697.0	100.0

Coefficient of Utilization



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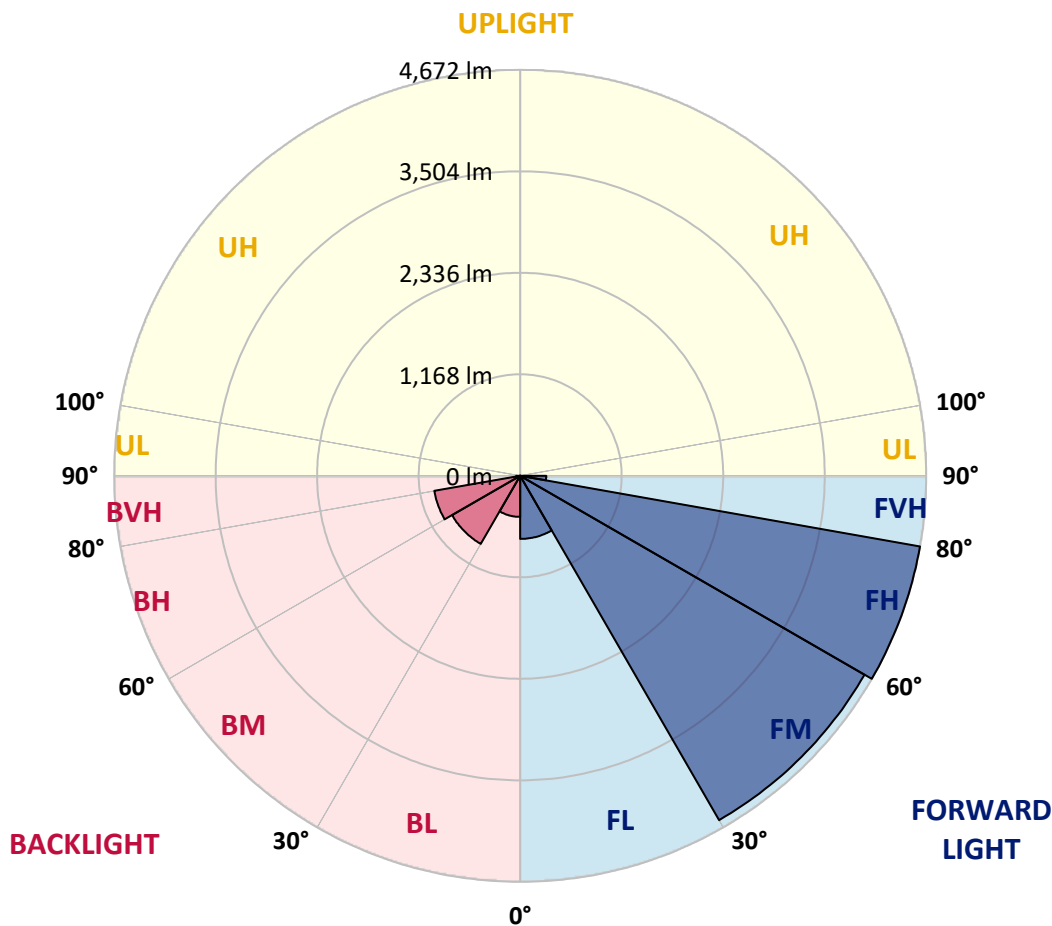
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	726.0	5.7			
FM (30°-60°)	4575.2	36.0			
FH (60°-80°)	4671.5	36.8			G2/5000
FVH (80°-90°)	300.1	2.4			G3/500
BL (0°-30°)	472.4	3.7	B1/500		
BM (30°-60°)	904.8	7.1	B1/1000		
BH (60°-80°)	1002.8	7.9	B3/2500		G3/2500
BVH (80°-90°)	44.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5
2.5°	1118.6	1073.4	1027.7	1050.0	1085.6	1117.0	1110.6	1114.3	1071.3	1065.5	1178.6
5°	1317.9	1240.3	1238.7	1239.8	1242.9	1206.8	1295.0	1340.7	1350.8	1397.6	1508.6
7.5°	1387.0	1355.6	1323.7	1339.7	1299.3	1303.0	1411.4	1530.4	1558.6	1592.6	1744.6
10°	1372.6	1342.8	1352.4	1355.1	1362.5	1422.6	1492.2	1606.4	1630.3	1738.7	1778.1
12.5°	1374.7	1369.4	1414.1	1415.6	1495.4	1603.2	1630.9	1736.1	1745.6	1825.4	1989.6
15°	1447.5	1484.2	1459.2	1472.5	1487.9	1617.0	1656.9	1807.8	1865.2	1967.8	2091.1
17.5°	1589.4	1600.0	1525.1	1505.5	1555.9	1595.3	1686.1	1751.5	1811.5	2098.0	2268.0
20°	1622.4	1651.1	1561.8	1460.3	1567.1	1621.8	1685.1	1714.8	1761.6	2117.1	2358.4
22.5°	1763.7	1704.2	1596.3	1508.1	1543.2	1596.3	1642.0	1754.1	1876.9	2062.4	2448.7
25°	1844.0	1809.4	1713.2	1618.6	1588.9	1590.5	1678.7	1779.1	1821.6	2142.6	2466.8
27.5°	2037.9	1982.7	1766.4	1748.3	1636.2	1549.0	1684.5	1840.8	1915.2	2079.9	2555.0
30°	2280.8	2238.8	1955.0	1931.1	1760.0	1608.0	1758.9	1886.5	1875.8	2120.8	2616.1
32.5°	2477.4	2547.5	2261.1	2072.5	1950.8	1805.2	1735.6	1878.5	1984.2	2215.9	2719.7
35°	2758.0	2823.9	2499.7	2372.2	2108.1	1896.6	1898.7	1988.0	2053.3	2327.0	2835.5
37.5°	3243.7	3185.7	2924.8	2723.4	2554.4	2238.8	2144.2	2112.8	2165.5	2463.0	3062.5
40°	3593.9	3545.0	3237.8	3123.0	2794.1	2610.8	2351.4	2321.7	2414.7	2603.3	3247.9
42.5°	4008.9	3921.7	3635.8	3541.2	3197.4	2866.9	2605.5	2622.5	2667.6	2868.0	3498.7
45°	4431.3	4219.8	4057.8	4050.3	3820.8	3364.3	3013.0	2999.2	3000.8	3257.5	3780.4
47.5°	4766.7	4576.4	4391.0	4302.7	4186.9	4224.6	3605.0	3442.9	3394.0	3649.7	4202.8
50°	4993.6	4774.6	4564.7	4544.0	4853.3	5056.8	4160.9	3987.6	4017.9	4210.8	4766.1
52.5°	4998.3	4738.5	4519.6	4664.6	5393.2	5684.4	5118.4	4634.3	4731.1	4862.3	5501.0
55°	4650.8	4381.4	4239.0	4569.5	5604.1	6428.9	6463.9	5670.6	5559.0	5607.3	6379.5
57.5°	3918.0	3645.9	3563.0	3958.9	5204.0	7146.8	8089.0	6908.7	6581.4	6379.5	7279.6
60°	2949.3	2713.9	2662.3	2914.7	4314.4	6935.8	9404.7	8449.8	7782.9	7241.9	8182.5
62.5°	2211.7	2042.7	1965.1	2001.3	2985.4	6249.8	10268.8	10396.8	9452.5	8183.6	9064.6
65°	1797.2	1660.6	1591.5	1544.8	1856.7	4832.5	10112.5	12035.7	11402.8	9172.5	9751.2
67.5°	1501.2	1380.0	1348.2	1393.9	1467.7	2803.7	8890.3	12952.3	12995.4	10148.1	10152.4
70°	1246.1	1156.3	1144.6	1274.3	1371.5	1692.0	6421.4	12664.3	13139.4	10879.9	10058.3
72.5°	962.9	914.5	912.9	1116.5	1362.5	1442.2	3824.0	10940.5	11578.7	10646.1	9137.9
75°	668.0	634.5	660.0	917.7	1331.2	1462.9	2182.5	8521.5	8999.3	9059.3	7320.0
77.5°	459.7	431.5	459.1	663.7	1188.7	1498.0	1526.7	6161.6	6214.7	6075.0	4192.7
80°	319.9	300.2	321.5	469.8	925.2	1482.6	1299.8	3879.2	3559.3	2711.2	1342.3
82.5°	198.2	192.4	215.7	334.8	651.5	1348.7	1231.8	2001.8	1528.3	748.2	479.3
85°	104.2	95.7	125.4	218.4	407.6	1058.5	1154.2	913.5	589.9	265.7	192.4
87.5°	30.8	27.6	48.4	88.2	172.7	474.5	660.5	387.4	220.0	78.1	60.0
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°	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5	973.5
2.5°	1186.6	1180.8	1102.1	1112.2	1129.2	1133.5	1132.9	1104.2	1074.0	1158.5	1155.8
5°	1511.3	1458.7	1419.4	1410.9	1362.5	1314.2	1331.2	1325.3	1317.9	1356.1	1360.9
7.5°	1745.1	1672.3	1626.6	1509.2	1397.6	1300.9	1331.7	1341.3	1322.1	1391.2	1411.9
10°	1806.8	1749.4	1699.9	1549.0	1487.4	1431.1	1347.6	1252.5	1239.8	1199.9	1204.7
12.5°	1965.6	1957.7	1789.2	1656.4	1576.1	1464.0	1283.9	1168.5	1069.7	1074.5	1045.8
15°	2091.1	2095.3	1892.8	1706.9	1491.6	1320.5	1108.5	965.0	863.5	843.3	822.6
17.5°	2259.5	2251.0	1901.3	1646.3	1373.7	1122.8	863.0	720.6	703.6	715.3	697.2
20°	2332.8	2257.9	1847.1	1495.9	1189.3	852.9	652.0	576.6	609.5	656.3	657.3
22.5°	2398.7	2270.7	1819.0	1374.7	943.8	620.1	523.4	509.6	548.4	611.6	617.0
25°	2396.1	2329.7	1768.5	1252.5	731.7	484.1	454.9	465.0	511.2	577.1	580.8
27.5°	2516.7	2284.5	1637.2	1092.0	551.1	414.5	421.9	440.5	462.3	525.0	537.2
30°	2515.6	2368.4	1571.3	897.0	442.7	380.0	399.1	415.0	433.1	490.5	497.4
32.5°	2575.2	2313.7	1531.5	697.7	397.0	371.4	376.2	392.2	418.2	457.0	461.8
35°	2646.9	2375.9	1404.0	554.2	380.0	364.0	367.7	376.8	400.7	436.3	441.1
37.5°	2877.0	2387.6	1353.5	467.1	378.9	360.8	360.3	365.1	392.2	424.6	438.9
40°	2966.8	2494.4	1206.3	436.3	375.2	360.8	353.4	356.0	378.4	419.8	431.0
42.5°	3182.0	2530.0	1097.3	425.7	375.2	354.4	342.8	347.0	373.0	409.7	427.2
45°	3403.6	2580.5	967.7	423.5	374.6	353.9	331.6	341.2	362.4	393.2	412.4
47.5°	3719.3	2762.2	838.0	417.1	370.4	356.6	328.9	328.4	347.0	373.6	391.6
50°	4234.2	3046.0	737.6	409.2	370.9	354.4	323.6	316.2	328.4	351.8	369.3
52.5°	4951.0	3529.6	698.3	404.9	366.7	345.9	314.6	302.9	309.8	328.4	345.4
55°	5783.2	4182.6	737.1	404.9	358.2	332.7	301.8	288.0	291.7	304.5	321.0
57.5°	6755.7	4994.1	924.6	399.1	347.5	316.7	286.4	270.5	271.5	282.7	297.6
60°	7771.2	5900.7	1345.0	394.3	340.1	299.2	268.4	251.9	250.3	260.9	274.2
62.5°	8788.3	6737.1	1787.1	405.5	338.0	284.3	249.2	232.8	232.2	241.8	252.9
65°	9597.1	7308.9	1897.1	450.6	351.8	267.3	229.6	214.2	213.1	221.1	233.3
67.5°	9994.0	7391.8	1441.2	507.0	381.0	251.4	210.4	196.1	195.0	203.5	214.2
70°	9700.2	6825.3	889.6	512.8	379.4	232.8	190.8	178.6	176.4	185.5	193.4
72.5°	8612.9	5970.3	675.9	453.8	328.4	206.2	171.1	160.5	157.3	165.3	172.7
75°	6913.0	4740.1	541.5	366.1	258.8	173.8	151.4	141.4	137.6	145.1	151.4
77.5°	4026.9	2666.6	395.9	285.9	195.6	141.9	129.1	120.1	115.8	123.8	128.6
80°	1309.4	888.5	248.7	205.1	142.9	111.1	104.7	98.3	94.1	99.4	101.0
82.5°	470.3	330.5	137.6	125.9	95.1	79.7	79.2	75.5	70.1	72.3	72.3
85°	208.3	150.9	81.8	67.5	56.9	42.5	50.0	47.3	42.0	40.9	39.3
87.5°	58.5	50.0	29.8	22.9	18.6	6.9	15.9	14.3	11.7	10.6	7.4
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)