

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: P597154

Luminaire Tested: **MSA-SA4C-835-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597154  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-835-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 19883 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

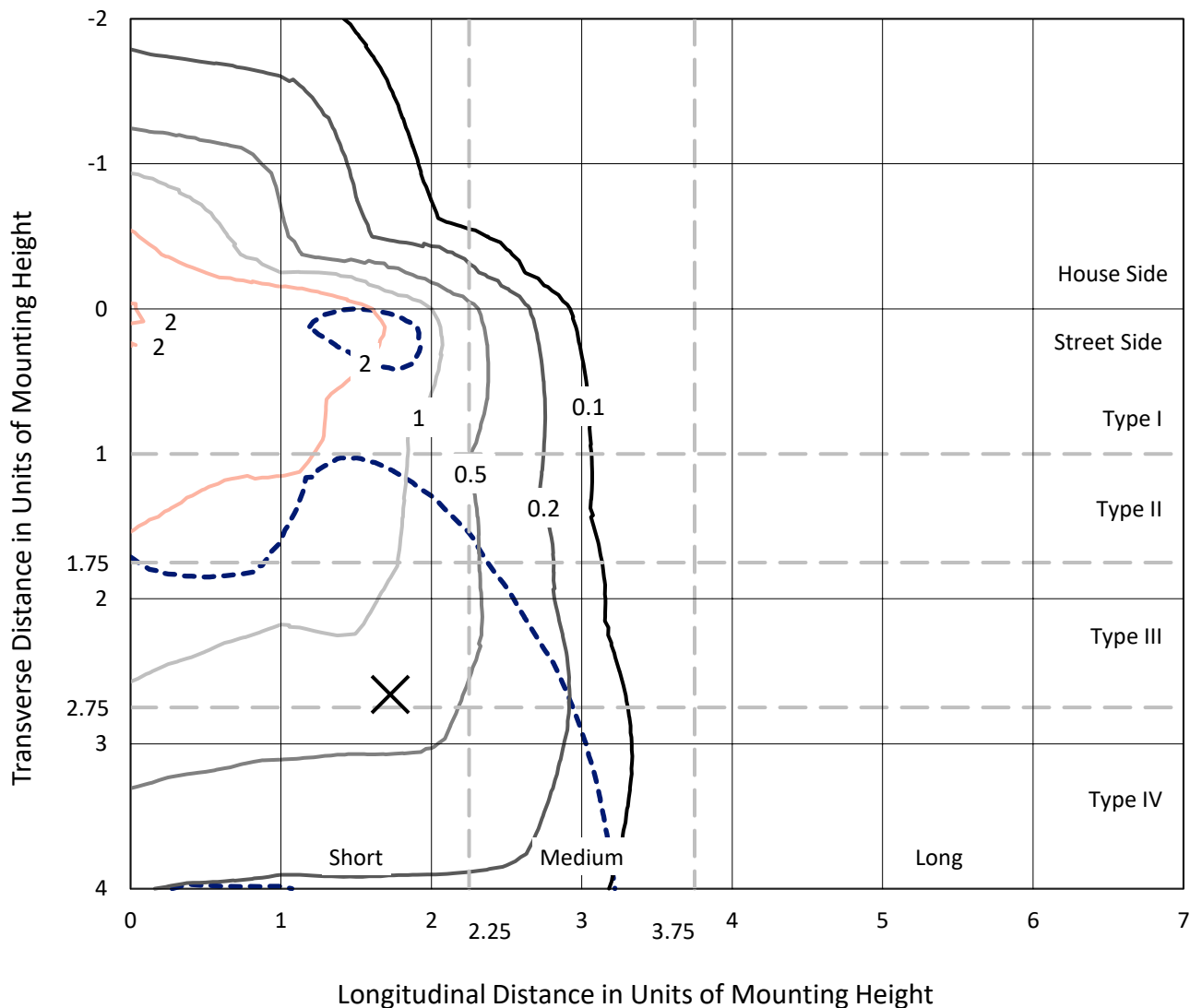
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

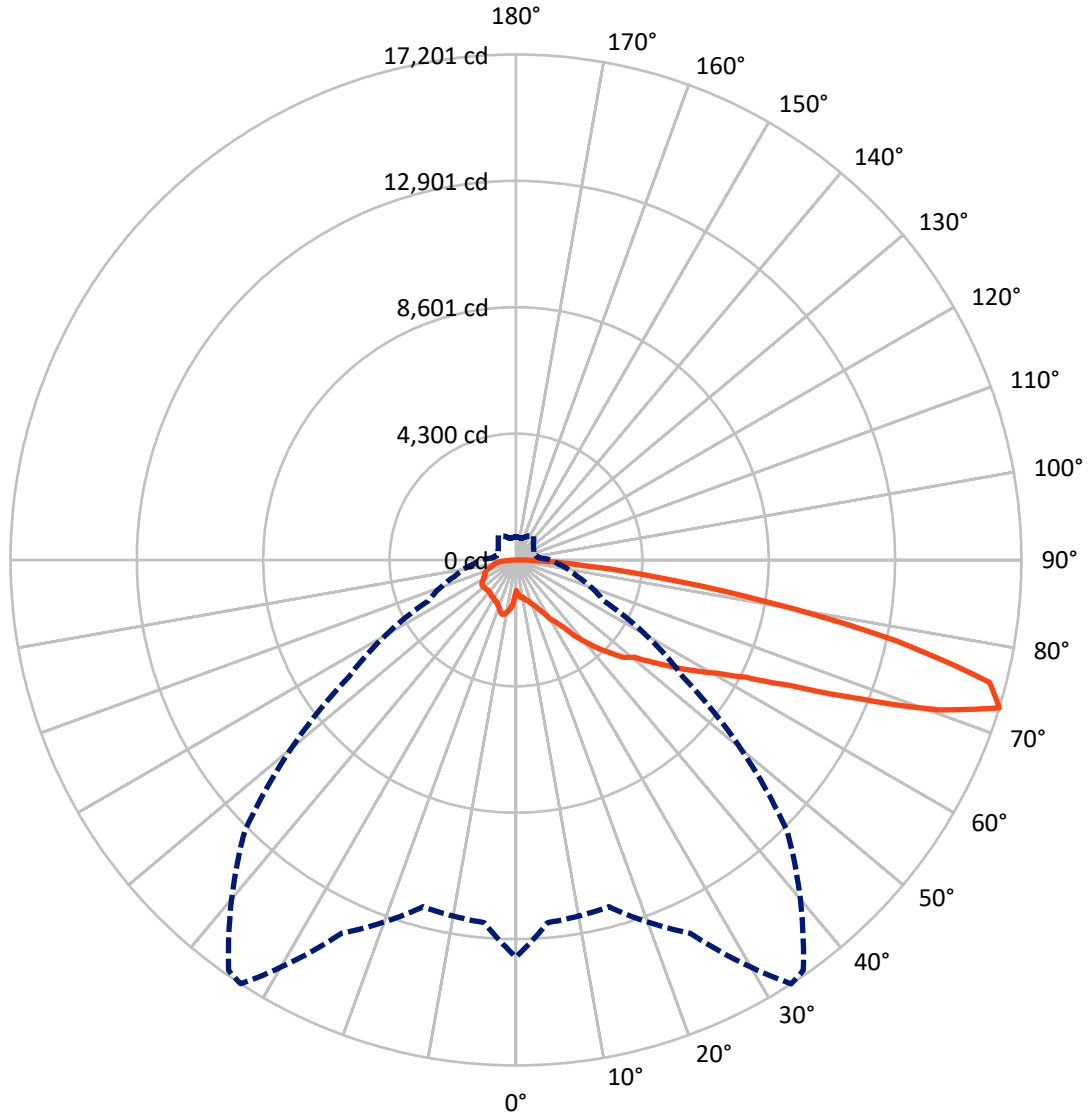
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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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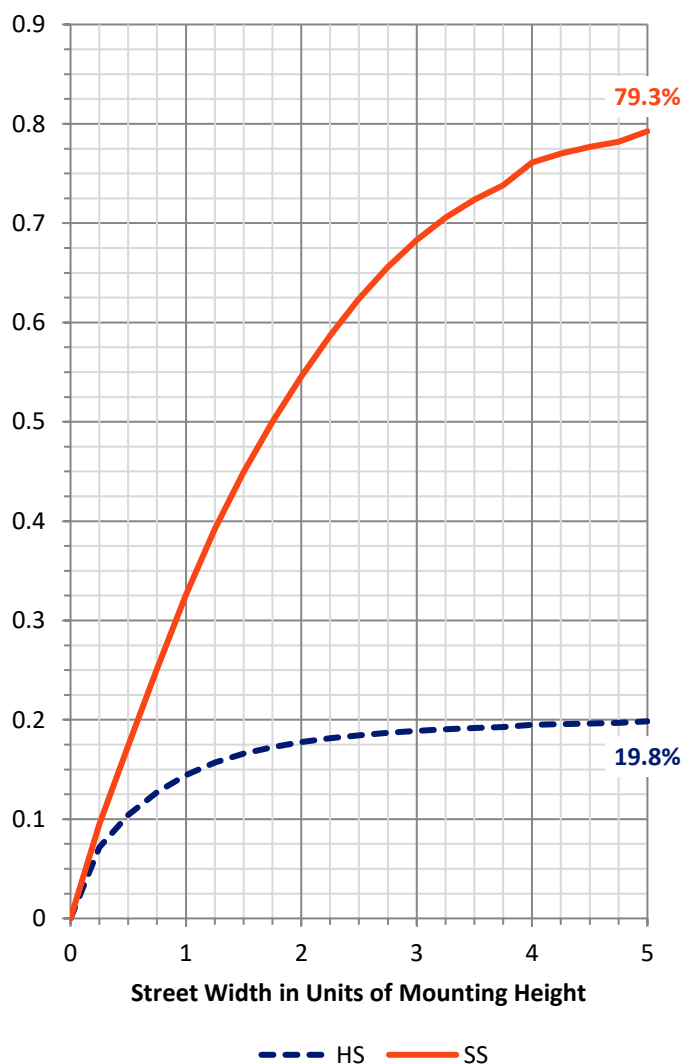
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4022.3	0.0	4022.3
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	15860.7	0.0	15860.7
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	19883.0	0.0	19883.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.4	0.7
10°-20°	529.8	2.7
20°-30°	966.0	4.9
30°-40°	1634.3	8.2
40°-50°	2718.9	13.7
50°-60°	3990.2	20.1
60°-70°	5104.4	25.7
70°-80°	4152.9	20.9
80°-90°	643.2	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°	19883.0	100.0
0°-180°	19883.0	100.0

**Coefficient of Utilization**



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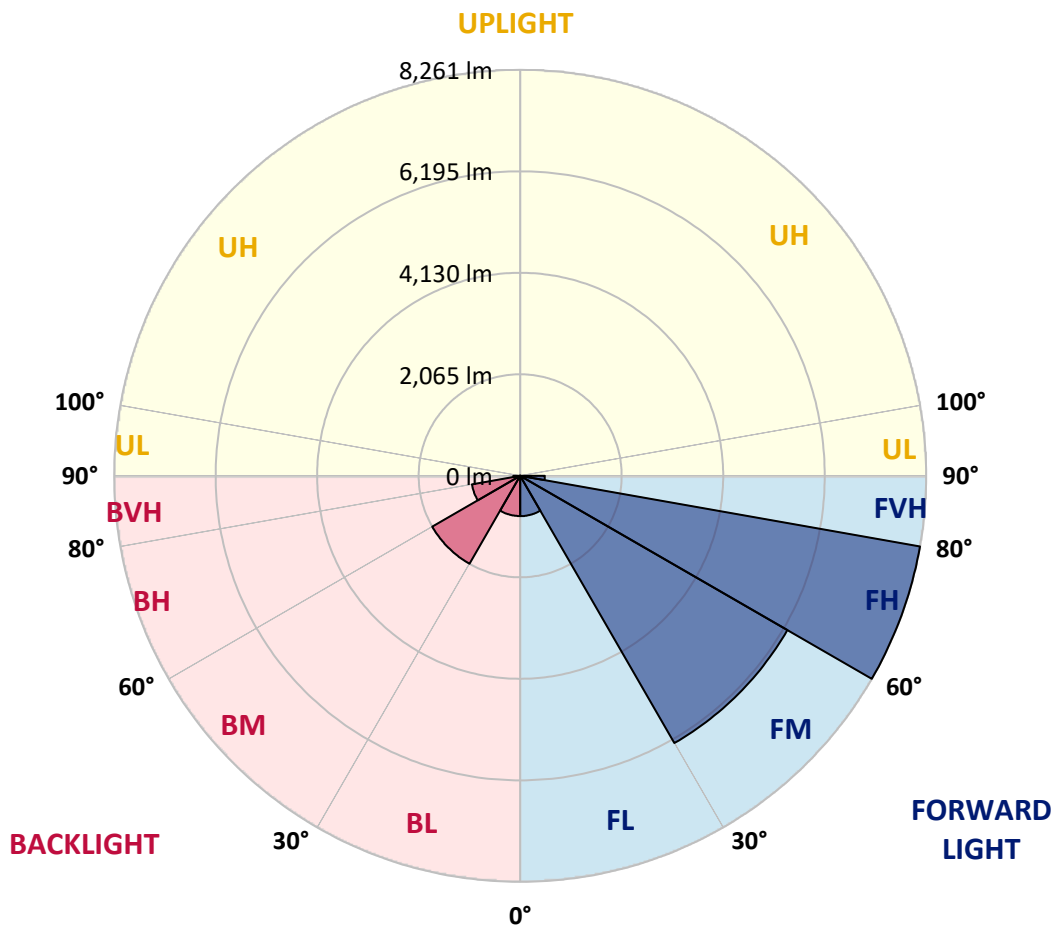
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	820.6	4.1			
FM (30°-60°)	6277.5	31.6			
FH (60°-80°)	8260.6	41.5			G4/12000
FVH (80°-90°)	502.0	2.5			G4/750
BL (0°-30°)	818.6	4.1	B2/1000		
BM (30°-60°)	2065.8	10.4	B2/2500		
BH (60°-80°)	996.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	141.2	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-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6
2.5°	1182.0	1144.9	1083.8	1082.2	1116.0	1123.4	1145.7	1147.3	1155.6	1142.4	1236.4
5°	1304.1	1264.5	1240.5	1248.8	1233.1	1252.1	1252.1	1306.5	1379.1	1463.3	1582.9
7.5°	1332.9	1304.1	1276.8	1297.5	1300.8	1282.6	1299.9	1427.8	1558.9	1643.1	1834.4
10°	1275.2	1246.3	1266.9	1273.5	1272.7	1314.0	1403.9	1506.1	1652.1	1807.2	1910.3
12.5°	1264.5	1285.1	1295.0	1306.5	1384.9	1397.3	1533.4	1638.9	1785.8	1921.9	2189.9
15°	1423.7	1450.9	1389.8	1385.7	1411.3	1422.8	1563.9	1670.3	1884.7	2113.2	2354.1
17.5°	1650.5	1660.4	1550.7	1494.6	1513.6	1522.6	1584.5	1718.1	1850.1	2272.4	2572.6
20°	1869.9	1876.5	1670.3	1544.9	1611.7	1621.6	1679.4	1756.1	1860.0	2361.5	2720.3
22.5°	2100.0	2058.0	1832.0	1673.6	1712.4	1714.8	1748.6	1790.7	1938.4	2347.5	2900.1
25°	2351.6	2325.2	2040.6	1888.9	1887.2	1853.4	1855.0	1915.3	2021.7	2497.6	3018.1
27.5°	2685.7	2689.0	2275.7	2194.1	2066.2	2043.9	1932.6	2044.8	2166.0	2499.2	3272.9
30°	3118.7	3038.7	2603.2	2471.2	2345.0	2298.0	2147.0	2242.7	2295.5	2641.9	3550.1
32.5°	3470.9	3447.8	2944.6	2745.0	2538.8	2593.3	2426.7	2342.5	2437.4	2887.7	3969.9
35°	3808.2	3732.4	3305.9	3046.1	2829.2	2796.2	2688.1	2702.1	2759.9	3198.7	4518.4
37.5°	4311.4	4270.2	3817.3	3401.6	3300.2	3165.7	3097.2	3141.0	3095.6	3597.1	5340.8
40°	4873.9	4634.7	4244.6	3874.2	3684.5	3589.7	3613.6	3572.3	3537.7	4044.1	6078.2
42.5°	5412.5	5194.8	4528.3	4361.7	4114.3	4153.9	4022.7	4051.6	4149.7	4678.4	6760.3
45°	5999.0	5528.0	4829.4	4682.6	4505.2	4555.5	4660.3	4629.0	4789.8	5426.6	7402.9
47.5°	6291.8	5843.9	5198.9	4959.7	4957.2	4852.5	5490.1	5559.4	5307.8	5980.9	8055.3
50°	6573.9	6133.4	5473.6	5311.9	5194.8	5419.1	6286.0	6126.8	5776.3	6616.8	8772.9
52.5°	6966.5	6464.2	5788.7	5616.3	5761.4	5969.3	6921.2	6889.8	6235.7	7270.9	9396.5
55°	7265.9	6758.7	6262.9	6102.9	6380.1	6583.8	7567.8	7378.9	6629.2	7750.9	9791.6
57.5°	7790.5	7270.1	6963.2	6607.7	7105.9	7102.6	8191.4	8045.4	7049.8	8145.2	9950.8
60°	8624.4	8013.2	7692.4	7282.4	7816.1	8006.6	8904.1	8483.4	7347.6	8394.3	9663.7
62.5°	9794.9	9069.0	8548.6	8142.7	8793.5	9138.3	9784.2	8802.6	7366.6	8323.4	8909.0
65°	11242.5	10359.9	9677.7	9248.8	10322.8	10815.2	10848.2	8999.7	7191.7	7590.1	7322.0
67.5°	12654.6	11662.3	10950.5	11032.1	12600.1	12833.6	12001.3	9164.7	6252.2	6094.7	5084.3
70°	13584.2	12508.6	12034.3	12900.4	15282.5	15043.3	12935.8	8730.0	4923.4	3950.9	2863.0
72.5°	13514.0	12388.1	12217.4	14010.6	17201.0	17051.7	13049.7	6942.6	3297.7	2160.2	1427.8
75°	11009.9	10134.7	10522.4	13263.3	16648.4	16641.0	11329.9	4297.4	1691.7	1109.4	902.4
77.5°	6087.3	5747.4	6886.5	10042.3	13255.9	13323.5	7655.3	1949.1	912.3	786.1	679.7
80°	2132.2	2100.8	2984.2	5419.1	8720.1	8736.6	3560.0	891.6	663.2	594.7	499.0
82.5°	779.5	772.9	1237.2	2517.4	4801.3	4790.6	1350.2	555.1	491.6	420.7	329.1
85°	311.0	304.4	565.8	1117.6	2205.6	2170.1	524.6	315.1	321.7	250.7	161.7
87.5°	85.8	89.1	192.2	349.7	675.5	626.0	132.0	106.4	130.3	102.3	51.1
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°	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6	1042.6
2.5°	1252.9	1261.2	1179.5	1208.4	1245.5	1265.3	1275.2	1233.1	1247.1	1306.5	1304.1
5°	1607.6	1574.6	1543.3	1575.4	1554.0	1523.5	1573.0	1570.5	1602.6	1634.8	1642.2
7.5°	1872.4	1829.5	1814.6	1742.0	1669.5	1596.0	1659.6	1699.2	1707.4	1787.4	1821.2
10°	1968.0	1951.6	1957.3	1861.6	1852.6	1860.0	1801.4	1737.9	1776.7	1743.7	1768.4
12.5°	2189.1	2230.3	2128.1	2062.9	2057.1	2011.8	1894.6	1853.4	1809.7	1855.0	1832.0
15°	2366.4	2443.2	2333.4	2218.8	2089.3	2019.2	1919.4	1856.7	1827.8	1837.7	1809.7
17.5°	2626.3	2698.0	2419.2	2243.5	2109.9	2006.8	1854.2	1720.6	1791.5	1797.3	1765.1
20°	2798.7	2803.6	2448.1	2182.5	2062.1	1883.1	1734.6	1617.5	1699.2	1782.5	1818.8
22.5°	2966.9	2929.8	2483.6	2133.8	1888.0	1714.8	1642.2	1634.8	1695.9	1766.0	1774.2
25°	3093.1	3098.9	2504.2	2115.7	1785.8	1549.9	1549.9	1603.5	1657.1	1823.7	1815.5
27.5°	3399.1	3174.0	2424.2	2032.4	1643.9	1453.4	1550.7	1622.4	1648.0	1828.7	1846.8
30°	3621.8	3475.0	2440.7	1889.7	1500.4	1408.0	1488.0	1577.9	1648.8	1857.5	1850.9
32.5°	3995.5	3600.4	2479.4	1689.3	1393.1	1390.7	1461.6	1556.5	1641.4	1826.2	1836.1
35°	4408.7	3969.9	2371.4	1536.7	1367.6	1380.8	1472.3	1510.3	1610.1	1813.8	1822.9
37.5°	5173.3	4162.9	2302.9	1418.7	1351.1	1389.0	1423.7	1482.2	1582.9	1751.9	1811.3
40°	5622.1	4560.5	2048.9	1350.2	1316.4	1382.4	1399.7	1449.2	1503.7	1677.7	1715.6
42.5°	6212.6	4685.9	1832.0	1274.4	1299.1	1355.2	1407.2	1419.5	1455.8	1560.6	1629.9
45°	6705.1	4779.9	1601.8	1213.3	1240.5	1415.4	1418.7	1412.9	1406.3	1445.1	1502.0
47.5°	7214.8	5032.3	1389.8	1145.7	1218.3	1464.9	1424.5	1371.7	1344.5	1349.4	1402.2
50°	7777.3	5215.4	1239.7	1090.4	1223.2	1464.9	1452.5	1329.6	1275.2	1261.2	1316.4
52.5°	8272.2	5236.9	1125.9	1045.9	1202.6	1414.6	1471.5	1303.2	1211.7	1177.9	1229.8
55°	8542.0	4965.5	1043.4	1005.5	1149.8	1369.2	1461.6	1288.4	1135.0	1109.4	1155.6
57.5°	8536.2	4515.1	973.3	949.4	1089.6	1305.7	1406.3	1207.6	1088.0	1073.1	1118.5
60°	8228.5	3987.2	919.7	903.2	1027.7	1213.3	1307.4	1154.8	1042.6	1035.2	1084.7
62.5°	7530.7	3442.0	867.7	854.5	970.0	1148.2	1260.3	1096.2	995.6	994.7	1041.8
65°	6167.3	2763.2	819.1	815.8	916.4	1083.8	1215.8	1046.7	946.9	963.4	1011.2
67.5°	4249.5	1941.7	767.1	777.0	866.9	1022.0	1182.0	1013.7	895.8	929.6	972.5
70°	2331.8	1201.0	709.4	729.2	804.2	950.2	1129.2	960.1	829.0	880.9	910.6
72.5°	1186.1	800.9	637.6	668.9	727.5	844.6	1030.2	882.6	757.2	777.0	792.7
75°	796.8	603.0	557.6	592.2	634.3	744.0	913.9	810.0	688.7	686.3	703.6
77.5°	602.1	471.0	473.5	513.0	540.3	654.1	821.5	748.9	631.0	625.2	650.8
80°	440.5	357.2	381.1	422.3	447.1	587.3	761.3	681.3	552.6	529.5	551.0
82.5°	292.0	253.2	282.1	323.3	343.1	490.8	691.2	578.2	450.4	391.8	395.1
85°	137.7	132.8	168.3	188.1	213.6	304.4	517.2	400.0	287.0	237.6	248.3
87.5°	31.3	42.1	55.3	54.4	63.5	81.7	160.8	112.2	83.3	56.9	37.9
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)