

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: P366910

Luminaire Tested: **MSA-SA1C-740-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366910
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-740-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6441 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

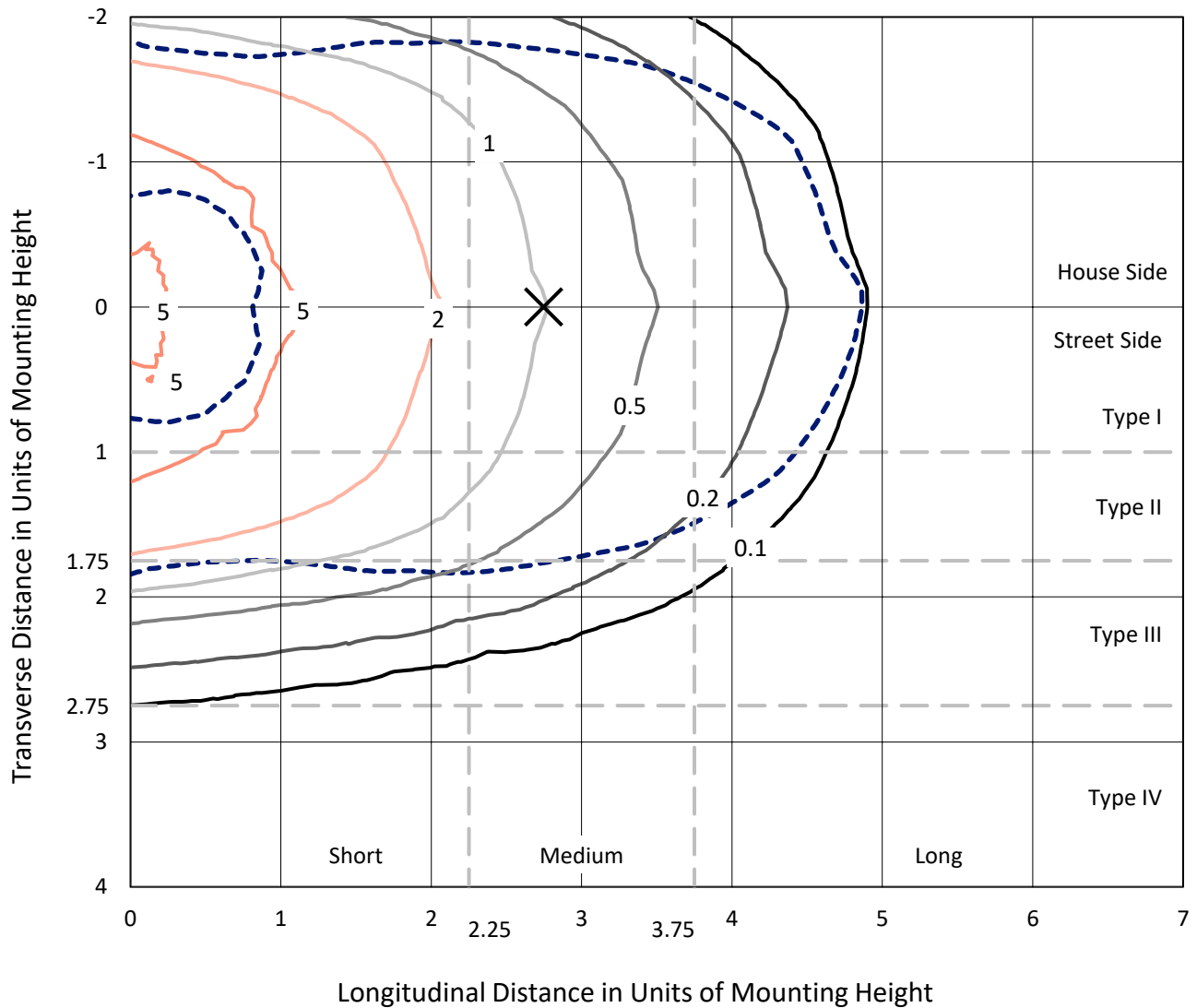
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

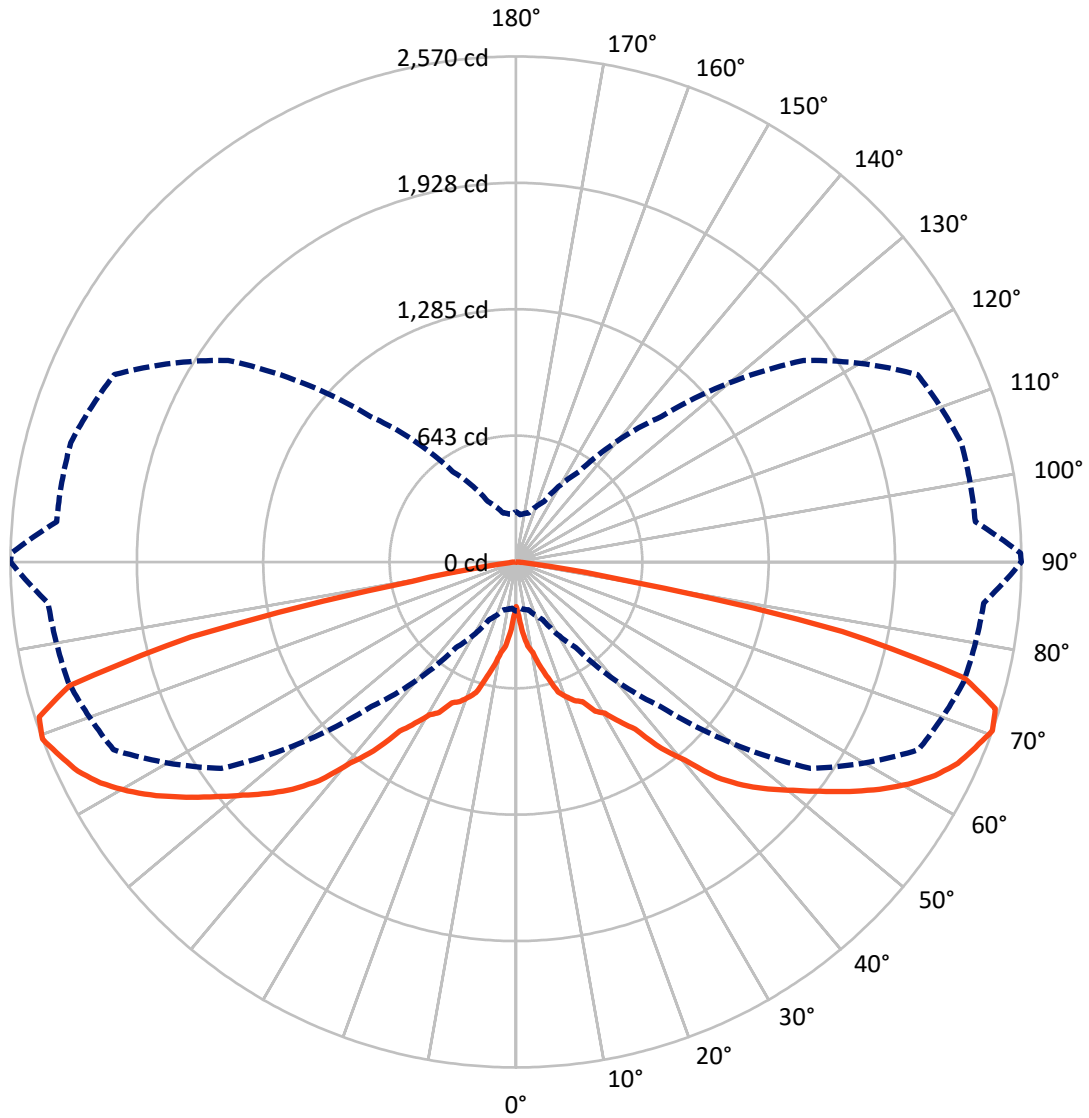
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.6 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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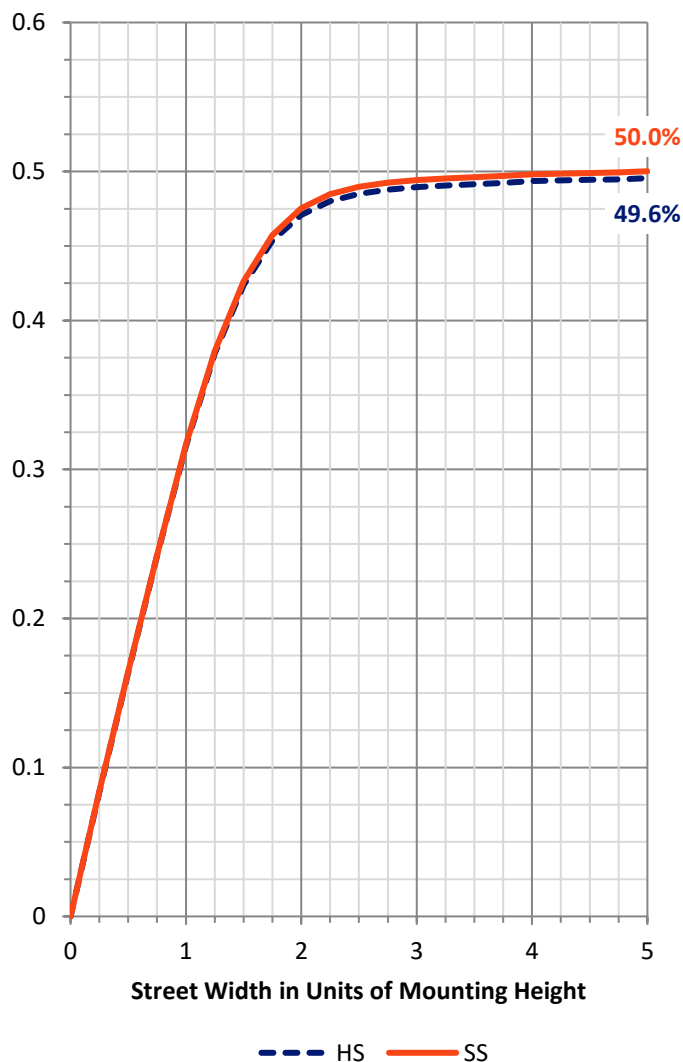
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3208.6	0.0	3208.6
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	3232.4	0.0	3232.4
	% Fixture	50.2	0.0	50.2
Total	Lumens	6441.0	0.0	6441.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.1	0.5
10°-20°	156.3	2.4
20°-30°	337.9	5.2
30°-40°	644.8	10.0
40°-50°	1171.3	18.2
50°-60°	1645.4	25.5
60°-70°	1571.0	24.4
70°-80°	806.3	12.5
80°-90°	73.9	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°	6441.0	100.0
0°-180°	6441.0	100.0

Coefficient of Utilization



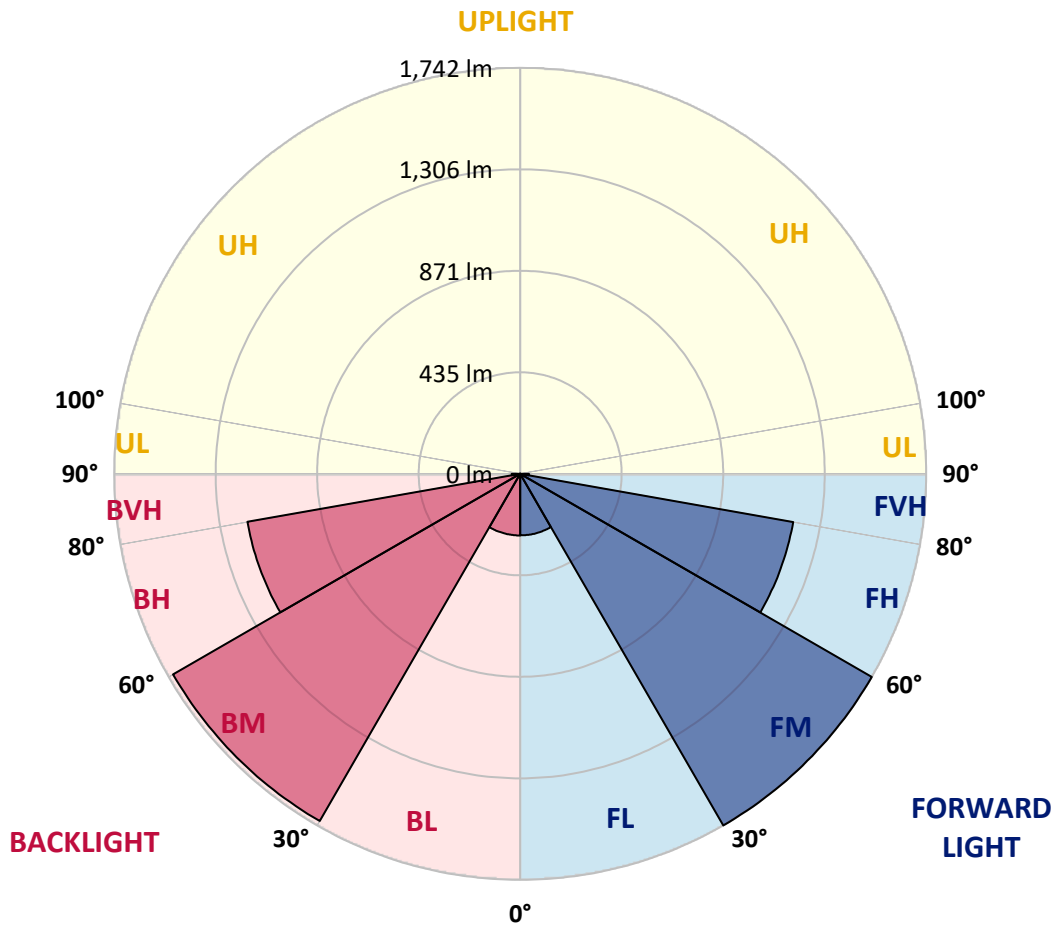
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	263.9	4.1			
FM (30°-60°)	1741.7	27.0			
FH (60°-80°)	1189.3	18.5			G1/1800
FVH (80°-90°)	37.5	0.6			G1/100
BL (0°-30°)	264.4	4.1	B1/500		
BM (30°-60°)	1719.7	26.7	B2/2500		
BH (60°-80°)	1188.0	18.4	B3/2500		G3/2500
BVH (80°-90°)	36.4	0.6			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1
2.5°	273.8	263.7	250.9	258.4	261.6	267.0	266.3	263.7	252.4	271.2	273.3
5°	342.8	326.6	320.6	319.5	321.1	315.9	332.8	327.9	337.0	354.0	357.9
7.5°	390.3	378.3	365.5	369.4	353.2	350.8	372.8	392.3	397.3	428.4	430.5
10°	412.7	401.0	404.4	402.0	400.2	415.3	425.5	439.9	460.5	463.4	467.8
12.5°	431.8	436.5	451.3	450.8	475.4	502.2	498.3	513.2	516.6	552.6	541.7
15°	480.1	489.7	488.7	497.8	508.5	552.6	552.9	578.2	601.4	615.5	611.9
17.5°	550.8	554.2	540.1	540.6	571.7	589.7	609.8	605.4	665.9	693.6	695.4
20°	593.1	601.7	585.5	564.1	619.2	644.0	655.2	629.4	694.1	731.4	731.4
22.5°	667.0	644.8	620.2	605.9	654.4	680.8	679.5	672.2	706.6	772.7	766.4
25°	707.7	695.2	682.9	686.5	711.1	724.7	742.7	725.7	758.1	807.1	786.5
27.5°	785.0	761.7	701.4	749.5	749.5	739.3	777.4	785.5	764.3	844.2	859.6
30°	872.4	864.3	779.0	829.9	814.2	785.5	858.6	853.4	817.9	899.3	892.3
32.5°	955.2	981.8	900.9	872.9	896.4	907.4	869.0	884.7	891.5	970.0	966.6
35°	1082.0	1104.5	997.2	990.1	951.0	940.8	970.0	975.3	975.8	1058.5	1043.4
37.5°	1301.6	1269.2	1163.2	1113.4	1117.8	1105.5	1111.3	1070.0	1075.8	1195.8	1203.4
40°	1462.1	1425.6	1307.6	1271.8	1184.1	1236.6	1190.1	1185.9	1174.4	1330.0	1325.8
42.5°	1639.4	1589.2	1458.7	1410.9	1317.8	1296.3	1274.9	1323.2	1320.1	1464.2	1496.0
45°	1773.3	1672.0	1603.9	1574.1	1518.2	1465.8	1445.4	1467.1	1457.2	1564.2	1619.8
47.5°	1857.9	1769.9	1691.6	1628.9	1575.4	1704.1	1601.0	1572.0	1551.9	1671.7	1725.2
50°	1925.2	1823.7	1731.2	1710.4	1752.7	1866.5	1703.8	1639.9	1664.4	1752.7	1825.5
52.5°	1943.5	1835.9	1752.9	1739.6	1853.9	1874.6	1848.2	1740.6	1734.1	1849.8	1937.7
55°	1887.6	1784.5	1745.1	1817.9	1944.3	1927.0	1967.2	1898.6	1852.4	1949.0	2059.6
57.5°	1743.8	1641.4	1632.1	1737.0	1896.2	2042.9	2062.8	2008.5	1947.9	2050.2	2180.8
60°	1507.5	1414.1	1437.8	1553.7	1793.9	2002.7	2108.2	2058.6	2039.8	2141.6	2293.0
62.5°	1139.7	1066.9	1130.3	1291.9	1607.0	1950.8	2170.8	2163.0	2135.9	2238.7	2392.2
65°	726.7	688.4	753.1	917.3	1317.0	1856.3	2200.9	2211.3	2236.4	2313.6	2469.0
67.5°	422.4	402.0	441.4	575.9	937.9	1524.2	2145.0	2294.8	2307.9	2352.3	2519.3
70°	249.8	236.5	252.7	323.4	531.0	1038.4	1829.7	2258.3	2357.0	2387.8	2570.2
72.5°	190.6	178.0	171.0	191.3	277.2	536.4	1237.1	1914.2	2317.6	2364.3	2548.8
75°	164.7	152.7	144.4	146.2	165.0	254.8	670.6	1369.2	1974.8	2152.8	2354.4
77.5°	141.5	130.8	124.8	124.3	126.6	139.9	280.4	742.4	1236.8	1547.5	1697.3
80°	113.3	104.9	103.6	103.6	100.2	99.2	139.4	282.5	470.7	558.1	535.1
82.5°	82.8	74.4	82.8	81.7	76.5	72.3	88.8	122.2	145.1	114.6	90.6
85°	55.9	48.3	54.6	55.6	50.6	37.6	53.3	61.1	62.7	39.2	32.4
87.5°	19.6	19.1	30.8	26.9	21.9	12.8	19.6	21.1	22.2	13.8	9.4
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°	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1	226.1
2.5°	274.1	271.0	255.3	257.7	263.7	266.5	269.4	257.7	251.9	270.2	268.4
5°	358.9	347.5	334.7	332.8	333.6	322.4	328.9	326.0	327.3	339.1	341.4
7.5°	429.9	416.1	399.1	385.8	362.9	344.6	360.0	367.8	370.2	391.0	398.9
10°	468.3	456.6	451.6	426.5	419.0	416.6	413.0	400.4	414.3	409.3	413.2
12.5°	543.5	541.1	515.3	498.9	500.4	504.9	481.9	469.4	451.3	479.5	469.4
15°	607.5	617.6	591.8	561.8	546.9	554.5	537.0	518.7	502.5	511.1	500.2
17.5°	689.2	688.9	638.5	606.4	605.1	604.6	578.7	538.5	557.9	551.8	552.4
20°	732.5	725.4	662.8	625.7	657.3	646.1	622.9	571.2	593.6	600.9	605.6
22.5°	768.8	764.9	688.9	661.7	682.1	682.4	659.1	632.0	629.1	651.8	639.6
25°	794.1	809.8	738.2	731.7	740.6	731.7	709.0	691.2	679.8	713.7	679.8
27.5°	854.1	831.9	745.8	782.9	788.4	743.7	772.2	751.3	719.4	761.5	775.3
30°	896.9	910.0	799.1	854.9	848.4	807.1	818.9	818.1	780.0	862.0	852.3
32.5°	970.6	954.9	886.0	881.5	897.2	895.4	875.5	885.2	894.6	954.1	968.5
35°	1046.0	1062.7	941.6	971.6	967.2	939.0	990.9	984.9	1012.9	1135.0	1094.6
37.5°	1216.2	1136.6	1066.4	1062.5	1092.2	1096.6	1079.9	1106.3	1166.6	1260.6	1303.9
40°	1327.7	1291.4	1172.1	1176.8	1135.5	1206.5	1159.6	1244.4	1290.3	1448.8	1433.4
42.5°	1496.3	1407.8	1293.2	1308.9	1300.5	1266.3	1328.2	1371.8	1437.6	1558.4	1636.5
45°	1621.9	1500.5	1446.2	1436.5	1435.5	1495.0	1487.2	1556.9	1580.4	1671.2	1735.9
47.5°	1717.2	1614.0	1533.6	1544.6	1512.8	1682.7	1592.1	1613.8	1661.3	1746.9	1822.4
50°	1830.2	1715.3	1624.0	1651.1	1728.6	1793.9	1711.9	1674.9	1698.1	1799.1	1883.2
52.5°	1934.9	1814.0	1713.5	1736.2	1862.8	1833.1	1824.2	1730.5	1727.6	1808.8	1904.3
55°	2057.3	1921.0	1832.3	1904.3	1949.2	1912.4	1898.3	1784.2	1713.8	1758.9	1849.0
57.5°	2177.4	2027.0	1938.8	1953.7	2010.6	1974.0	1868.3	1692.6	1604.6	1613.5	1704.6
60°	2289.9	2124.4	2051.5	2037.2	2082.6	1939.3	1754.2	1524.8	1408.1	1386.7	1465.5
62.5°	2386.2	2205.8	2136.9	2097.8	2141.1	1940.6	1576.4	1255.4	1127.2	1054.6	1116.0
65°	2462.7	2273.4	2224.4	2204.0	2219.7	1822.6	1299.5	921.7	764.6	684.2	720.0
67.5°	2513.6	2311.3	2288.8	2315.5	2106.6	1518.0	962.7	590.0	444.6	400.7	423.2
70°	2566.3	2344.7	2343.9	2253.3	1786.3	1046.5	562.3	340.1	258.7	241.7	255.8
72.5°	2548.6	2305.0	2316.8	1970.6	1237.9	559.4	296.8	192.4	175.2	181.2	193.7
75°	2360.1	2095.7	2039.0	1416.7	702.2	260.0	171.0	145.7	144.6	153.8	166.0
77.5°	1711.9	1459.5	1309.7	803.0	301.0	140.7	125.8	121.6	121.6	129.0	139.9
80°	564.4	488.4	509.0	310.6	142.3	97.1	98.2	100.0	99.5	101.3	110.4
82.5°	92.7	96.1	148.5	126.9	85.9	66.3	74.1	77.8	78.8	70.5	80.1
85°	32.9	37.1	63.2	58.7	49.6	33.4	48.8	54.6	53.8	47.0	51.9
87.5°	10.2	13.1	23.0	17.8	14.9	9.1	18.3	21.4	26.9	11.0	9.9
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)