

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: P367552

Luminaire Tested: **MSA-SA2D-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367552
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-730-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12053 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

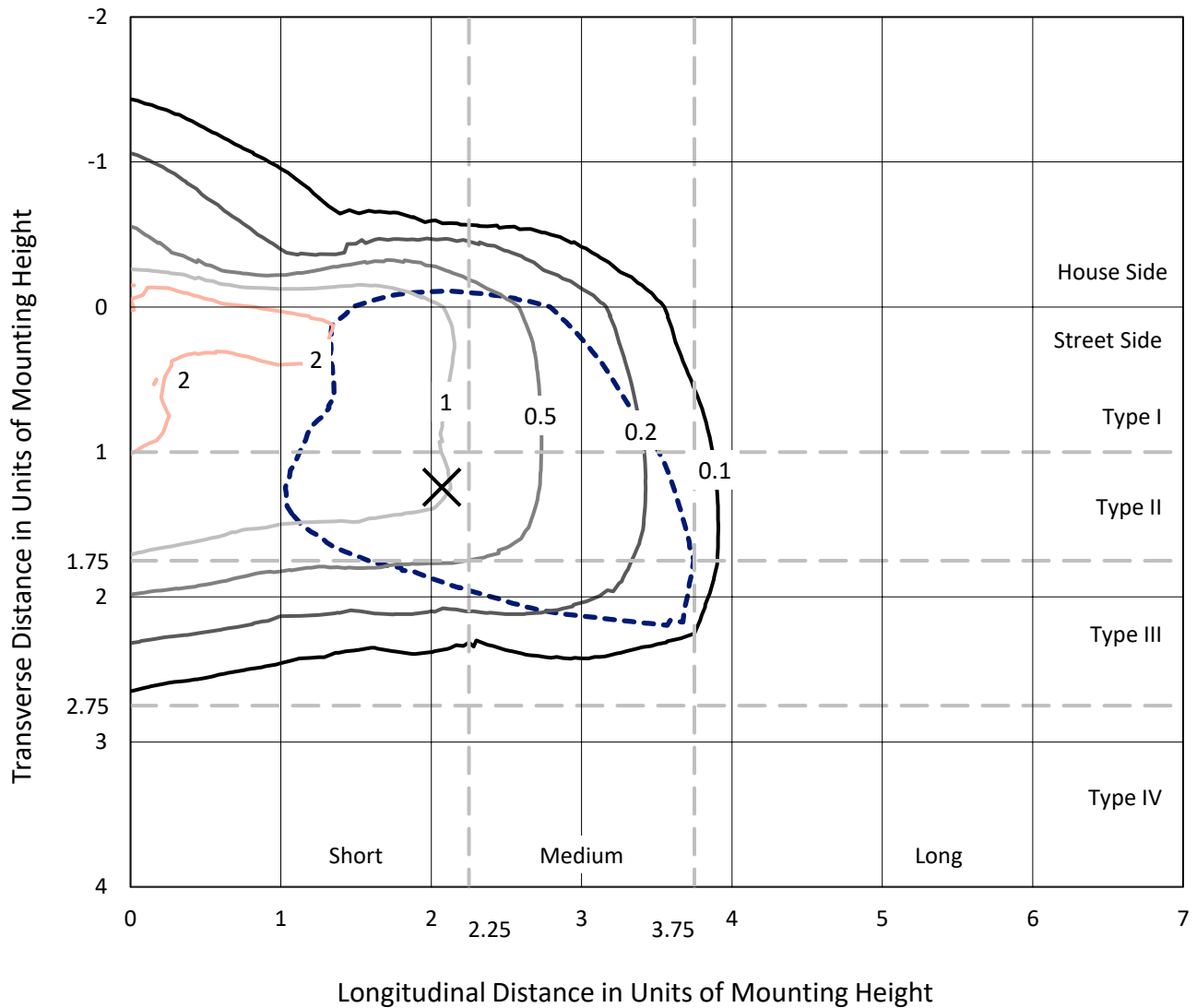
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

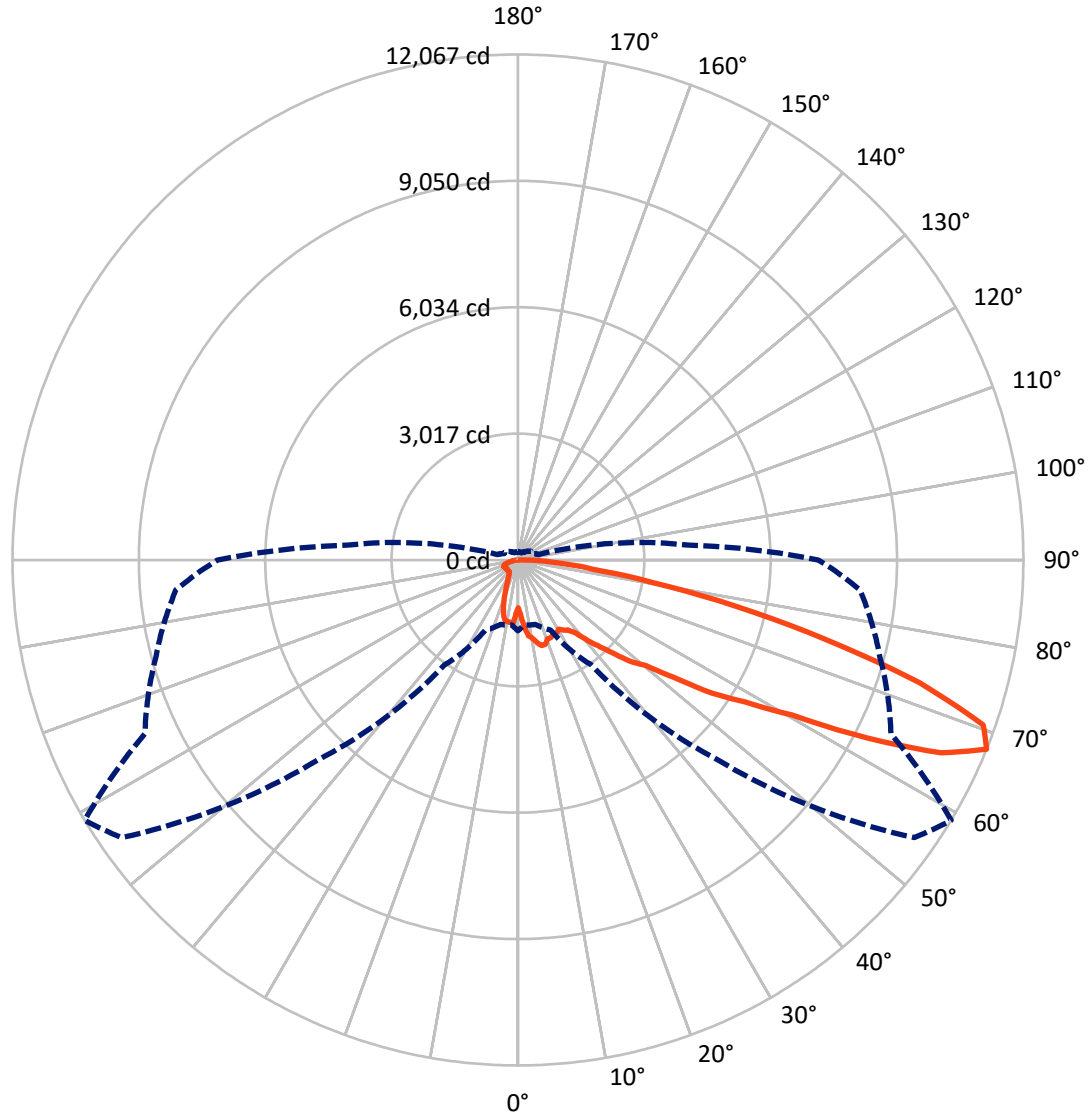
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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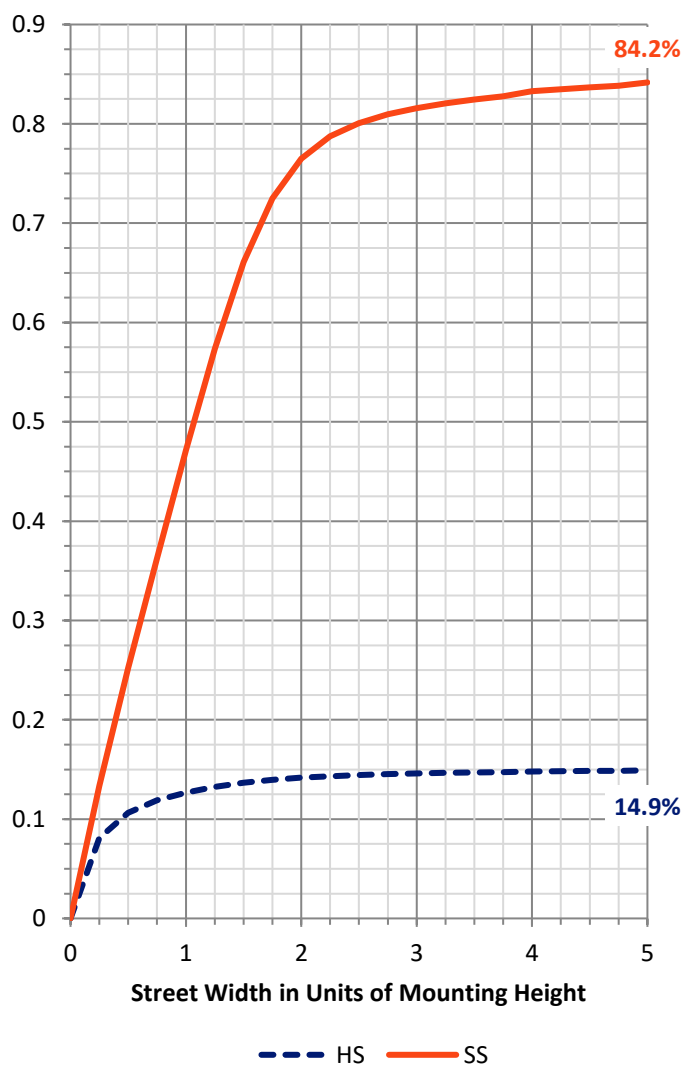
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1814.2	0.0	1814.2
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	10238.8	0.0	10238.8
	% Fixture	84.9	0.0	84.9
Total	Lumens	12053.0	0.0	12053.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.0	1.2
10°-20°	440.8	3.7
20°-30°	629.5	5.2
30°-40°	927.6	7.7
40°-50°	1567.2	13.0
50°-60°	2727.3	22.6
60°-70°	3475.4	28.8
70°-80°	1840.2	15.3
80°-90°	296.0	2.5
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°	12053.0	100.0
0°-180°	12053.0	100.0

Coefficient of Utilization



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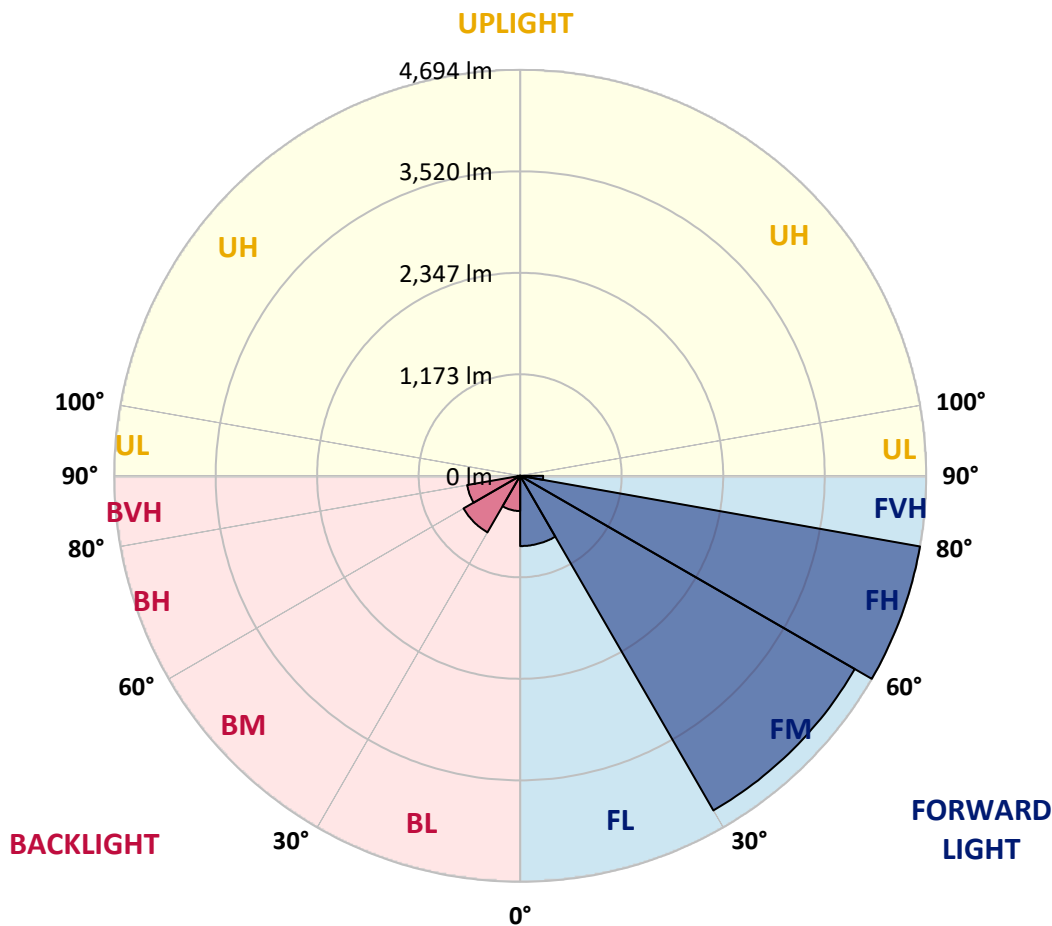
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	812.4	6.7			
FM (30°-60°)	4466.7	37.1			
FH (60°-80°)	4693.8	38.9			G2/5000
FVH (80°-90°)	265.9	2.2			G3/500
BL (0°-30°)	406.8	3.4	B1/500		
BM (30°-60°)	755.4	6.3	B1/1000		
BH (60°-80°)	621.8	5.2	B2/1000		G2/1000
BVH (80°-90°)	30.1	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5
2.5°	1424.0	1357.6	1287.1	1307.0	1347.4	1365.8	1345.9	1326.4	1301.4	1271.8	1372.9
5°	1726.9	1628.3	1614.0	1613.5	1599.2	1542.0	1615.5	1610.4	1640.1	1670.7	1749.4
7.5°	1813.2	1776.4	1736.6	1755.5	1683.5	1680.4	1794.8	1827.5	1884.7	1865.8	1971.5
10°	1768.8	1727.4	1748.3	1740.7	1747.3	1822.9	1892.9	1894.9	1956.2	2016.5	1948.6
12.5°	1690.6	1693.7	1776.9	1773.9	1881.1	2021.6	2042.5	2026.2	2126.3	2085.4	2143.7
15°	1746.3	1783.6	1762.6	1780.5	1822.9	2001.7	2059.9	2119.2	2214.2	2250.9	2192.7
17.5°	1835.2	1855.1	1761.1	1751.4	1838.7	1923.5	2068.1	2118.6	2133.5	2395.5	2313.2
20°	1797.4	1837.7	1745.8	1627.8	1772.9	1885.2	2027.7	2012.4	2084.4	2406.7	2338.3
22.5°	1904.6	1837.7	1720.8	1637.0	1688.1	1791.2	1912.3	2012.9	2098.2	2340.8	2374.5
25°	1925.1	1893.4	1784.1	1700.8	1683.5	1720.2	1892.9	1958.8	2102.8	2430.7	2355.1
27.5°	2049.7	2002.2	1779.5	1782.0	1695.7	1630.9	1831.6	1970.0	2154.9	2375.0	2402.6
30°	2204.4	2168.2	1888.8	1899.0	1779.5	1660.0	1873.5	1915.4	2185.0	2461.9	2462.4
32.5°	2320.4	2384.2	2103.8	1964.9	1922.5	1833.1	1809.1	1997.6	2149.8	2619.2	2564.5
35°	2529.3	2578.8	2269.3	2158.0	2014.4	1913.8	1983.8	2051.7	2296.4	2826.0	2716.2
37.5°	2915.9	2858.7	2576.8	2401.6	2348.0	2202.9	2241.7	2194.2	2455.7	3058.4	3013.5
40°	3139.7	3090.1	2793.4	2696.3	2483.8	2502.2	2453.7	2488.4	2668.7	3305.7	3291.4
42.5°	3360.3	3293.9	3043.1	2975.7	2763.7	2673.8	2682.5	2794.9	2997.2	3705.1	3657.6
45°	3578.4	3408.3	3298.5	3316.4	3214.2	3029.8	3042.6	3148.3	3355.7	4161.7	4052.4
47.5°	3745.4	3605.0	3519.2	3497.2	3446.6	3693.3	3583.0	3625.9	3717.3	4568.3	4526.9
50°	4061.6	3897.6	3785.8	3754.1	3925.7	4268.9	4044.2	3951.8	4146.4	5093.8	5072.4
52.5°	4567.7	4363.4	4177.0	4175.0	4423.2	4645.9	4804.2	4644.9	4716.4	5632.2	5693.5
55°	5009.6	4773.1	4605.5	4698.0	5051.4	5187.8	5725.6	5601.0	5540.7	6175.6	6350.8
57.5°	5174.5	4898.2	4788.9	4925.3	5446.3	6147.0	6715.5	6387.6	6328.9	6790.6	7157.8
60°	4812.4	4520.2	4526.9	4783.8	5686.3	6851.4	7797.8	7519.4	7175.2	7556.2	7914.8
62.5°	3780.7	3516.6	3688.7	4079.5	5485.1	7535.8	9248.4	9365.8	8142.1	8191.1	8334.6
65°	2569.6	2386.8	2542.1	2924.6	4448.7	7909.1	10630.0	11100.9	9022.6	8606.9	8515.9
67.5°	1691.1	1561.9	1592.0	1846.4	3062.5	6742.6	11553.9	12067.3	9827.6	8948.0	8196.2
70°	1309.6	1205.4	1192.1	1325.4	1816.3	4684.2	11006.4	11786.9	10317.9	8628.3	7144.0
72.5°	1027.7	948.5	955.6	1083.8	1406.6	2598.8	8517.0	10023.2	9579.3	7441.3	5488.6
75°	801.4	736.5	772.8	919.4	1300.9	1615.0	5876.3	7607.3	7406.0	5510.1	3130.5
77.5°	581.8	539.9	591.5	783.0	1222.8	1385.7	3658.1	5307.3	4744.5	2829.1	1074.1
80°	381.5	358.0	400.4	638.5	1108.9	1333.6	2260.6	3252.0	2344.4	794.7	406.6
82.5°	224.7	214.5	249.8	432.1	891.3	1249.8	1507.8	1807.1	959.2	336.1	216.1
85°	118.0	110.3	148.1	248.2	614.4	1141.0	1187.0	1081.8	463.3	146.1	103.2
87.5°	39.3	38.3	62.8	96.0	232.4	605.8	633.3	513.8	191.0	42.4	22.5
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°	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5
2.5°	1386.7	1366.3	1248.8	1265.2	1280.5	1272.8	1268.2	1215.1	1210.0	1285.6	1279.5
5°	1747.3	1662.5	1562.4	1557.8	1491.9	1424.5	1437.8	1416.3	1422.5	1453.6	1456.7
7.5°	1937.8	1832.1	1736.6	1581.3	1449.5	1342.8	1359.6	1354.5	1340.8	1411.2	1430.1
10°	1934.3	1840.3	1732.5	1544.5	1455.7	1368.8	1264.6	1166.1	1137.0	1102.2	1105.3
12.5°	2061.9	1978.7	1743.7	1552.2	1431.7	1282.0	1086.9	979.1	876.0	873.9	847.9
15°	2101.8	2040.5	1767.7	1508.3	1263.6	1049.1	847.4	730.4	655.8	641.0	619.0
17.5°	2202.4	2106.4	1694.7	1366.3	1068.5	820.3	636.9	555.2	549.1	559.3	548.0
20°	2209.0	2053.3	1562.9	1156.4	858.6	621.6	519.4	478.6	500.5	525.6	524.6
22.5°	2203.4	1986.4	1449.0	977.6	645.1	499.5	455.1	445.9	466.3	503.6	508.2
25°	2146.2	1964.4	1306.5	802.9	523.5	428.0	415.8	421.4	446.9	490.8	490.8
27.5°	2206.0	1875.0	1127.8	653.3	440.3	381.0	389.7	404.0	422.9	473.0	482.2
30°	2186.6	1904.6	983.7	526.1	388.2	348.3	367.7	382.0	403.5	455.6	460.2
32.5°	2238.7	1825.5	862.7	442.3	354.0	335.6	340.2	359.6	387.7	428.5	436.7
35°	2318.3	1854.6	723.7	397.9	337.1	320.8	329.4	344.8	372.9	412.7	419.3
37.5°	2572.7	1853.0	627.7	373.4	334.0	317.7	321.8	332.5	365.2	401.5	416.8
40°	2736.2	1959.3	540.4	367.7	330.5	316.2	312.6	324.3	350.4	393.3	404.0
42.5°	3043.1	2024.1	502.6	365.7	330.0	307.5	303.9	317.7	343.2	383.1	399.4
45°	3367.5	2116.6	472.5	364.7	328.4	305.9	295.2	312.6	334.0	372.3	391.2
47.5°	3749.0	2312.2	455.6	361.1	325.4	308.0	292.2	300.8	324.8	363.2	382.0
50°	4248.5	2571.2	459.2	356.0	330.0	308.5	287.6	291.6	313.6	350.9	370.3
52.5°	4855.8	2972.1	482.2	358.0	333.0	305.9	285.5	283.5	302.4	335.1	354.5
55°	5587.7	3541.1	551.1	367.7	333.0	305.4	282.5	273.3	287.6	314.1	333.0
57.5°	6470.8	4200.0	686.0	372.3	330.5	302.4	275.8	259.5	268.2	290.1	308.0
60°	7229.3	4731.7	824.9	375.4	335.6	295.2	262.5	242.1	247.7	264.6	280.4
62.5°	7616.0	4880.8	866.8	372.9	349.4	290.6	246.7	223.7	224.2	238.5	252.8
65°	7688.5	4682.2	698.7	370.3	367.2	290.1	235.5	207.9	204.3	214.5	226.8
67.5°	7171.6	4064.1	504.1	364.7	369.3	287.0	227.8	195.1	185.9	193.1	203.3
70°	6089.3	3273.0	423.4	353.4	344.8	271.7	214.5	181.8	169.6	174.7	182.3
72.5°	4539.7	2421.5	369.3	329.4	300.3	232.4	194.1	167.0	154.3	157.8	163.4
75°	2522.1	1291.7	309.0	286.5	245.2	188.0	165.5	148.1	136.9	138.4	144.5
77.5°	837.6	476.5	226.8	227.3	185.4	145.1	136.4	126.7	118.0	118.5	123.6
80°	379.5	263.6	162.4	163.4	129.2	105.2	104.7	101.6	96.0	94.5	98.1
82.5°	220.1	159.9	111.3	106.2	83.3	68.4	76.1	74.6	73.0	67.4	68.4
85°	108.3	85.8	58.2	55.2	46.0	34.2	40.9	42.4	40.9	34.7	34.2
87.5°	26.6	28.1	14.3	13.3	7.7	3.6	6.1	6.1	7.7	5.1	2.6
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)