

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: P367550

Luminaire Tested: **MSA-SA2D-730-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-730-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 12202 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

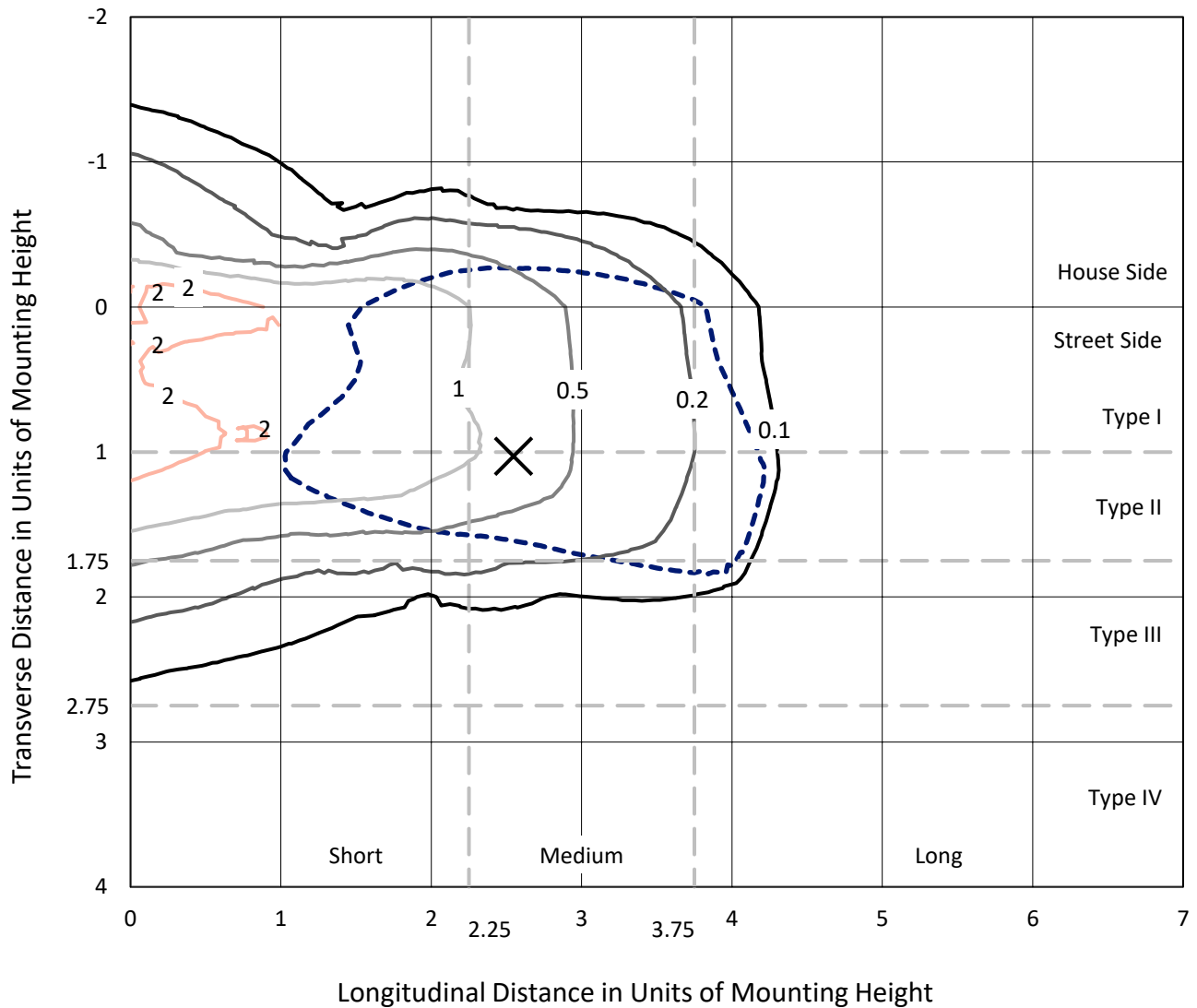
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

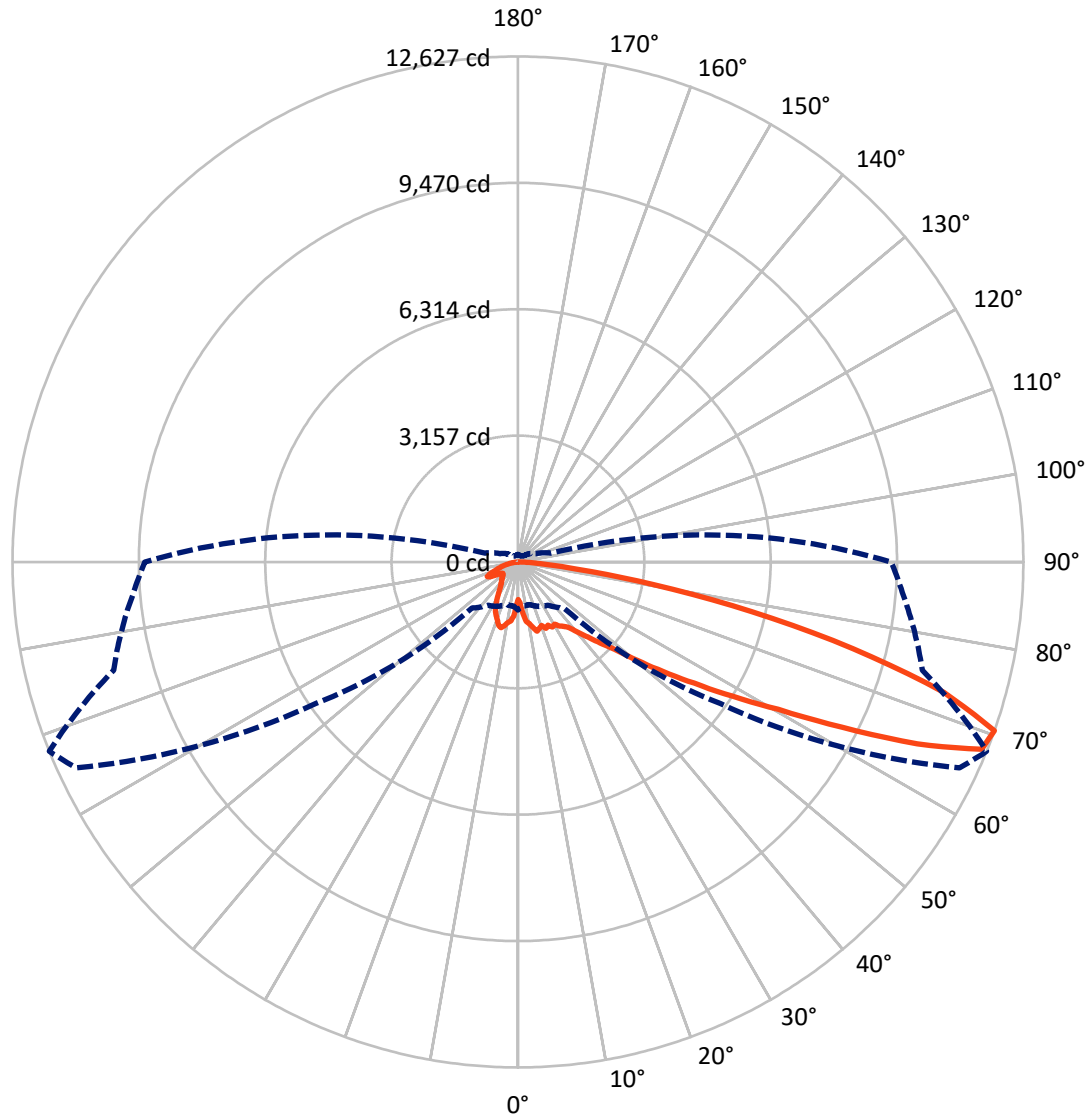
× Max cd
 - - - 1/2 Max cd



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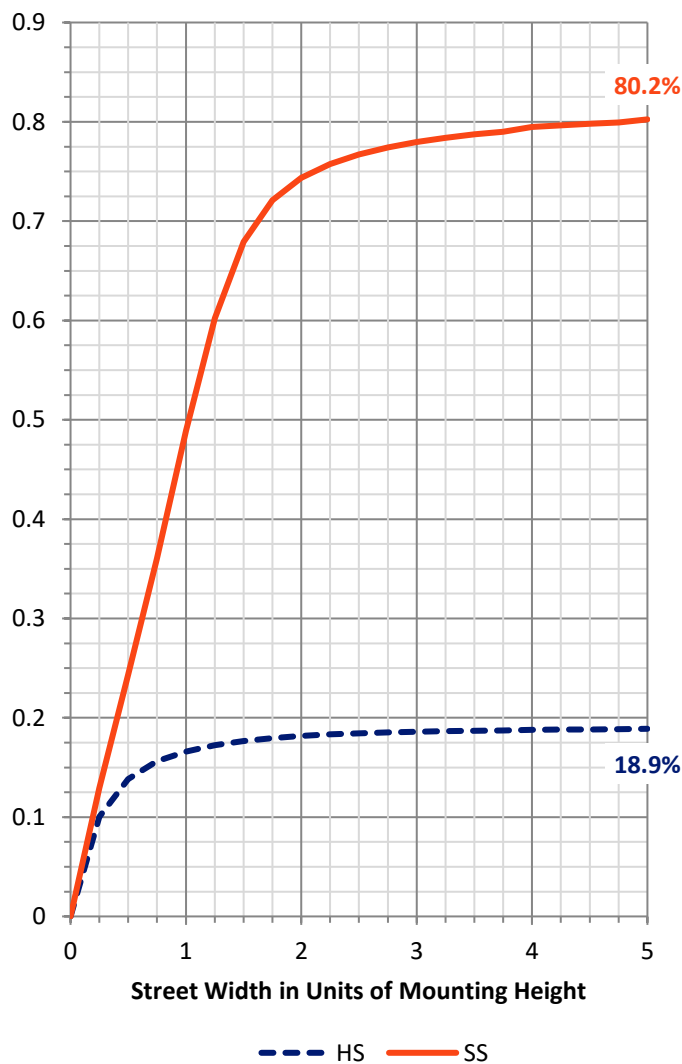
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2329.7	0.0	2329.7
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	9872.3	0.0	9872.3
	% Fixture	80.9	0.0	80.9
Total	Lumens	12202.0	0.0	12202.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.9	1.0
10°-20°	407.3	3.3
20°-30°	619.5	5.1
30°-40°	946.3	7.8
40°-50°	1627.0	13.3
50°-60°	2693.1	22.1
60°-70°	3320.2	27.2
70°-80°	2132.8	17.5
80°-90°	330.8	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°	12202.0	100.0
0°-180°	12202.0	100.0

Coefficient of Utilization



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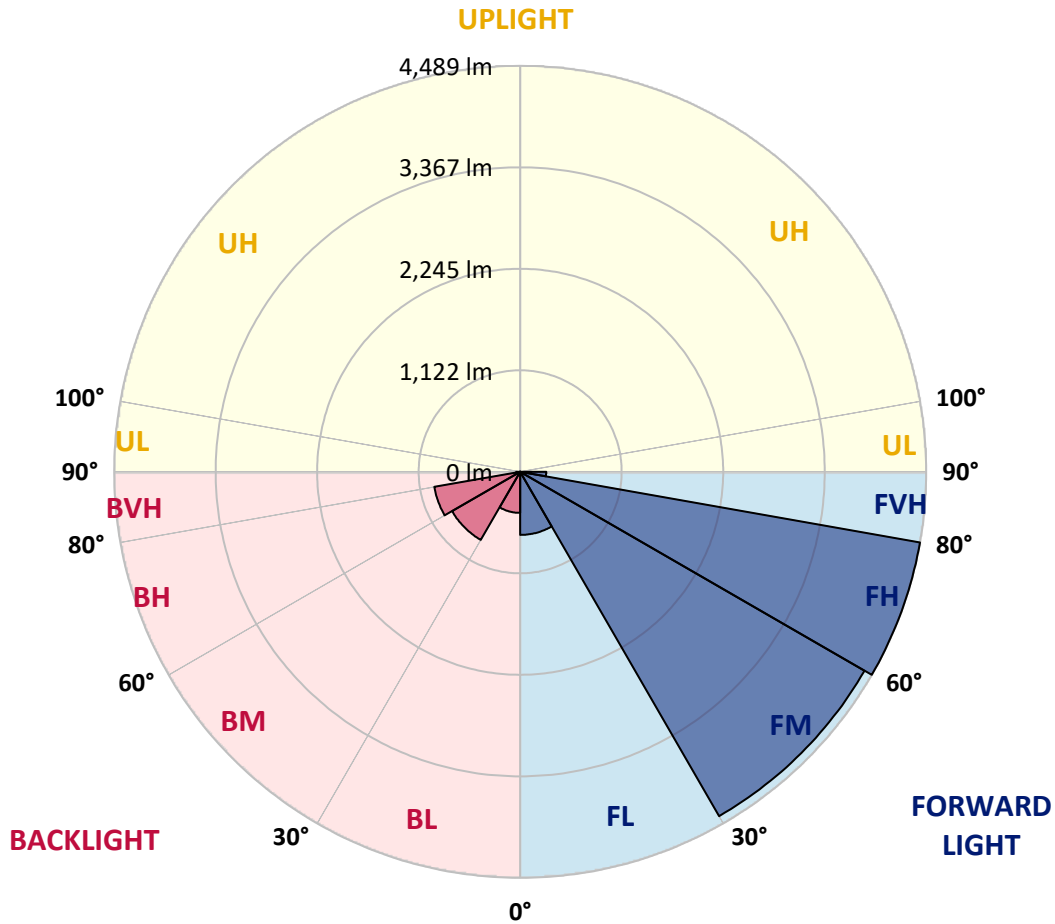
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	697.7	5.7			
FM (30°-60°)	4396.9	36.0			
FH (60°-80°)	4489.4	36.8			G2/5000
FVH (80°-90°)	288.4	2.4			G3/500
BL (0°-30°)	454.0	3.7	B1/500		
BM (30°-60°)	869.6	7.1	B1/1000		
BH (60°-80°)	963.7	7.9	B2/1000		G2/1000
BVH (80°-90°)	42.5	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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6
2.5°	1075.0	1031.6	987.7	1009.1	1043.3	1073.5	1067.3	1070.9	1029.5	1023.9	1132.7
5°	1266.5	1191.9	1190.4	1191.4	1194.5	1159.8	1244.5	1288.5	1298.2	1343.1	1449.8
7.5°	1332.9	1302.8	1272.1	1287.4	1248.6	1252.2	1356.4	1470.8	1497.8	1530.5	1676.6
10°	1319.1	1290.5	1299.7	1302.2	1309.4	1367.1	1434.0	1543.8	1566.8	1671.0	1708.7
12.5°	1321.1	1316.0	1358.9	1360.5	1437.1	1540.7	1567.3	1668.4	1677.6	1754.2	1912.0
15°	1391.1	1426.3	1402.3	1415.1	1429.9	1554.0	1592.3	1737.3	1792.5	1891.1	2009.5
17.5°	1527.5	1537.7	1465.7	1446.8	1495.3	1533.1	1620.4	1683.2	1740.9	2016.2	2179.6
20°	1559.1	1586.7	1500.9	1403.4	1506.0	1558.6	1619.4	1648.0	1692.9	2034.6	2266.4
22.5°	1695.0	1637.8	1534.1	1449.3	1483.0	1534.1	1578.0	1685.8	1803.7	1982.0	2353.2
25°	1772.1	1738.9	1646.4	1555.5	1526.9	1528.5	1613.2	1709.8	1750.6	2059.1	2370.6
27.5°	1958.5	1905.4	1697.5	1680.1	1572.4	1488.6	1618.9	1769.0	1840.5	1998.8	2455.4
30°	2191.8	2151.5	1878.8	1855.8	1691.4	1545.3	1690.4	1812.9	1802.7	2038.1	2514.1
32.5°	2380.8	2448.2	2173.0	1991.7	1874.7	1734.8	1667.9	1805.3	1906.9	2129.5	2613.7
35°	2650.4	2713.8	2402.3	2279.7	2025.9	1822.6	1824.7	1910.5	1973.3	2236.3	2725.0
37.5°	3117.2	3061.5	2810.8	2617.2	2454.9	2151.5	2060.6	2030.5	2081.0	2367.0	2943.1
40°	3453.7	3406.8	3111.6	3001.3	2685.2	2509.0	2259.8	2231.2	2320.5	2501.8	3121.3
42.5°	3852.6	3768.8	3494.1	3403.2	3072.8	2755.1	2503.9	2520.2	2563.6	2756.2	3362.3
45°	4258.6	4055.3	3899.6	3892.4	3671.8	3233.1	2895.6	2882.3	2883.8	3130.5	3633.0
47.5°	4580.8	4398.0	4219.8	4135.0	4023.7	4059.9	3464.5	3308.7	3261.7	3507.4	4039.0
50°	4798.9	4588.5	4386.8	4366.8	4664.1	4859.7	3998.6	3832.2	3861.3	4046.6	4580.3
52.5°	4803.5	4553.8	4343.4	4482.8	5182.9	5462.8	4918.9	4453.7	4546.6	4672.7	5286.6
55°	4469.5	4210.6	4073.7	4391.4	5385.7	6178.2	6211.9	5449.5	5342.3	5388.7	6130.7
57.5°	3765.3	3503.8	3424.1	3804.6	5001.1	6868.2	7773.6	6639.4	6324.8	6130.7	6995.8
60°	2834.3	2608.1	2558.5	2801.1	4146.2	6665.4	9038.1	8120.4	7479.5	6959.6	7863.5
62.5°	2125.5	1963.1	1888.5	1923.2	2869.0	6006.1	9868.4	9991.5	9084.0	7864.5	8711.2
65°	1727.1	1595.9	1529.5	1484.6	1784.3	4644.1	9718.3	11566.5	10958.2	8814.9	9371.0
67.5°	1442.7	1326.2	1295.6	1339.5	1410.5	2694.4	8543.7	12447.4	12488.7	9752.5	9756.6
70°	1197.6	1111.2	1100.0	1224.6	1318.1	1626.0	6171.1	12170.6	12627.1	10455.7	9666.2
72.5°	925.4	878.9	877.4	1072.9	1309.4	1386.0	3674.9	10513.9	11127.3	10231.0	8781.7
75°	641.9	609.8	634.3	881.9	1279.3	1405.9	2097.4	8189.3	8648.4	8706.1	7034.7
77.5°	441.7	414.7	441.2	637.8	1142.4	1439.6	1467.2	5921.4	5972.4	5838.1	4029.3
80°	307.4	288.5	309.0	451.4	889.1	1424.8	1249.1	3728.0	3420.6	2605.5	1290.0
82.5°	190.5	184.9	207.3	321.7	626.1	1296.1	1183.8	1923.7	1468.7	719.0	460.6
85°	100.1	91.9	120.5	209.9	391.7	1017.3	1109.2	877.9	566.9	255.3	184.9
87.5°	29.6	26.6	46.5	84.8	166.0	456.0	634.8	372.3	211.4	75.1	57.7
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°	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6	935.6
2.5°	1140.4	1134.7	1059.2	1068.9	1085.2	1089.3	1088.8	1061.2	1032.1	1113.3	1110.7
5°	1452.4	1401.8	1364.0	1355.9	1309.4	1262.9	1279.3	1273.6	1266.5	1303.3	1307.9
7.5°	1677.1	1607.1	1563.2	1450.3	1343.1	1250.2	1279.8	1289.0	1270.6	1337.0	1356.9
10°	1736.3	1681.2	1633.7	1488.6	1429.4	1375.3	1295.1	1203.7	1191.4	1153.1	1157.7
12.5°	1889.0	1881.4	1719.5	1591.8	1514.7	1406.9	1233.8	1123.0	1028.0	1032.6	1005.0
15°	2009.5	2013.6	1819.1	1640.3	1433.5	1269.0	1065.3	927.4	829.9	810.5	790.5
17.5°	2171.4	2163.3	1827.2	1582.1	1320.1	1079.1	829.3	692.5	676.1	687.4	670.0
20°	2241.9	2169.9	1775.1	1437.6	1142.9	819.6	626.6	554.1	585.8	630.7	631.7
22.5°	2305.2	2182.1	1748.1	1321.1	907.0	596.0	503.0	489.7	527.0	587.8	592.9
25°	2302.7	2238.8	1699.6	1203.7	703.2	465.2	437.1	446.8	491.3	554.6	558.2
27.5°	2418.6	2195.4	1573.4	1049.5	529.6	398.3	405.5	423.4	444.3	504.6	516.3
30°	2417.6	2276.1	1510.1	862.0	425.4	365.1	383.5	398.8	416.2	471.4	478.0
32.5°	2474.8	2223.5	1471.8	670.5	381.5	357.0	361.6	376.9	401.9	439.2	443.8
35°	2543.7	2283.3	1349.2	532.6	365.1	349.8	353.4	362.1	385.1	419.3	423.9
37.5°	2764.8	2294.5	1300.7	448.9	364.1	346.8	346.2	350.8	376.9	408.0	421.8
40°	2851.1	2397.1	1159.2	419.3	360.5	346.8	339.6	342.2	363.6	403.4	414.2
42.5°	3058.0	2431.4	1054.6	409.1	360.5	340.6	329.4	333.5	358.5	393.7	410.6
45°	3270.9	2479.9	930.0	407.0	360.0	340.1	318.7	327.9	348.3	377.9	396.3
47.5°	3574.3	2654.5	805.3	400.9	355.9	342.7	316.1	315.6	333.5	359.0	376.4
50°	4069.1	2927.2	708.8	393.2	356.5	340.6	311.0	303.9	315.6	338.1	354.9
52.5°	4758.0	3392.0	671.0	389.1	352.4	332.5	302.3	291.1	297.7	315.6	331.9
55°	5557.8	4019.6	708.3	389.1	344.2	319.7	290.1	276.8	280.4	292.6	308.5
57.5°	6492.3	4799.4	888.6	383.5	334.0	304.4	275.3	259.9	261.0	271.7	286.0
60°	7468.2	5670.6	1292.5	378.9	326.8	287.5	257.9	242.1	240.5	250.7	263.5
62.5°	8445.7	6474.4	1717.4	389.7	324.8	273.2	239.5	223.7	223.2	232.4	243.1
65°	9222.9	7023.9	1823.1	433.1	338.1	256.9	220.6	205.8	204.8	212.4	224.2
67.5°	9604.4	7103.6	1385.0	487.2	366.2	241.6	202.2	188.4	187.4	195.6	205.8
70°	9322.0	6559.2	854.9	492.8	364.6	223.7	183.3	171.6	169.5	178.2	185.9
72.5°	8277.1	5737.5	649.6	436.1	315.6	198.1	164.4	154.2	151.2	158.8	166.0
75°	6643.5	4555.3	520.4	351.9	248.7	167.0	145.5	135.8	132.3	139.4	145.5
77.5°	3870.0	2562.6	380.5	274.7	187.9	136.4	124.1	115.4	111.3	119.0	123.6
80°	1258.3	853.9	239.0	197.1	137.4	106.7	100.6	94.5	90.4	95.5	97.0
82.5°	452.0	317.6	132.3	121.0	91.4	76.6	76.1	72.5	67.4	69.5	69.5
85°	200.2	145.0	78.6	64.9	54.6	40.9	48.0	45.5	40.3	39.3	37.8
87.5°	56.2	48.0	28.6	22.0	17.9	6.6	15.3	13.8	11.2	10.2	7.1
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)