

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: P367902

Luminaire Tested: **MSA-SA3B-830-U-SL2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367902  
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-SA3B-830-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 11604 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3

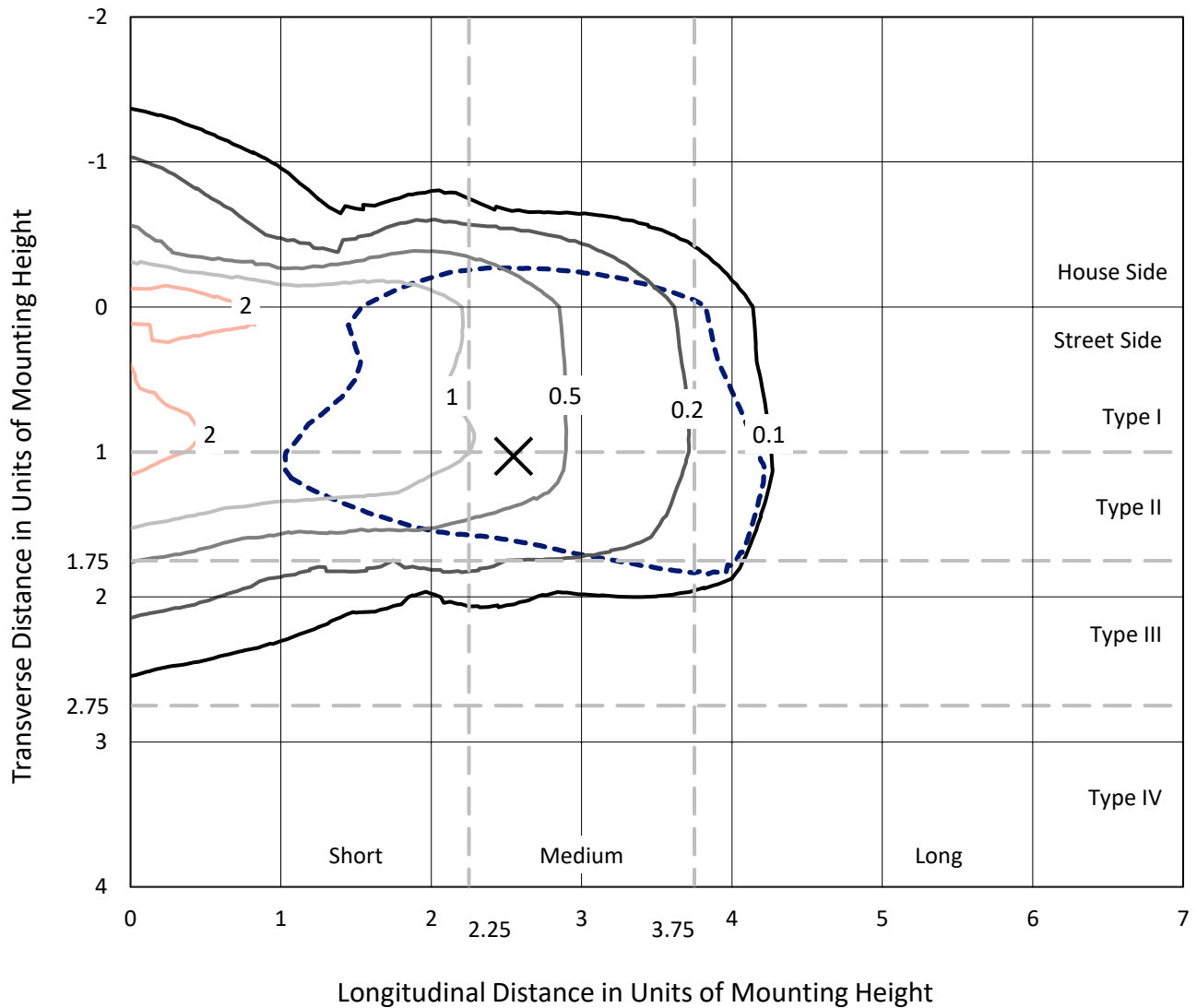
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

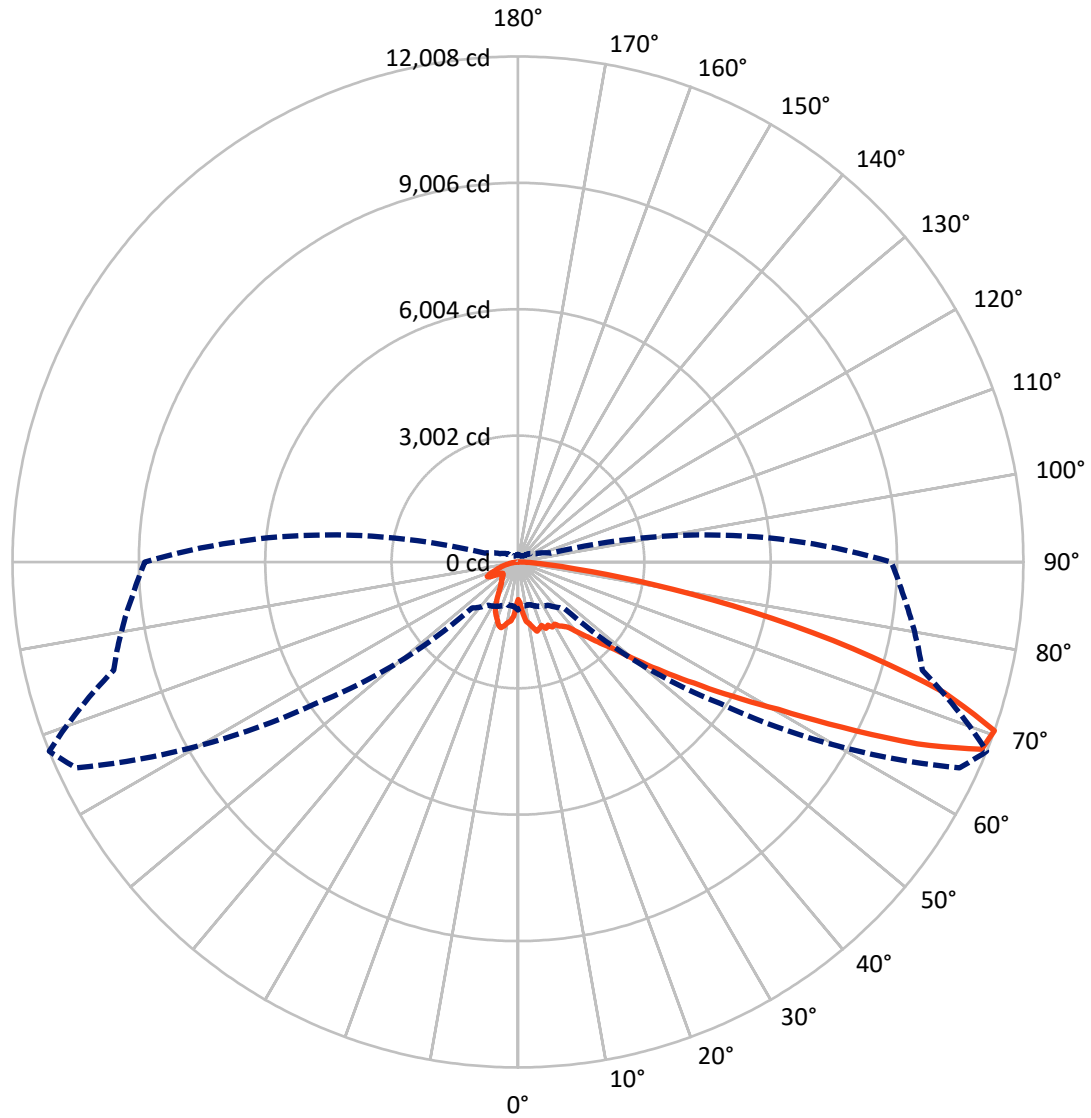
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 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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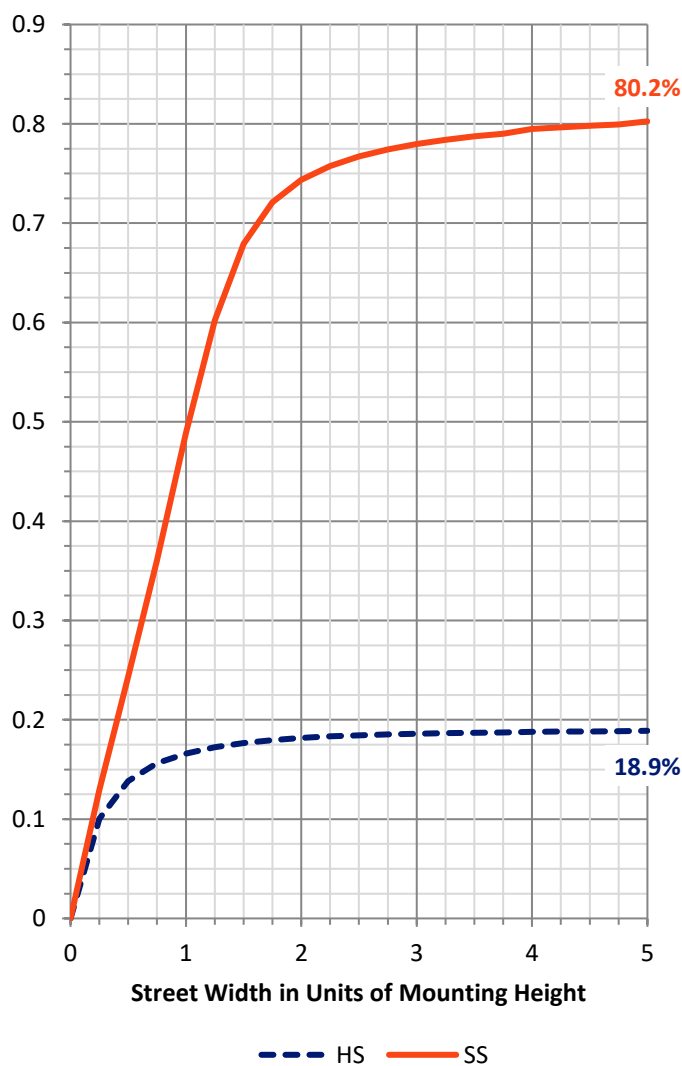
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2215.5	0.0	2215.5
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	9388.5	0.0	9388.5
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	11604.0	0.0	11604.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.8	1.0
10°-20°	387.3	3.3
20°-30°	589.1	5.1
30°-40°	899.9	7.8
40°-50°	1547.3	13.3
50°-60°	2561.1	22.1
60°-70°	3157.5	27.2
70°-80°	2028.3	17.5
80°-90°	314.6	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°	11604.0	100.0
0°-180°	11604.0	100.0

**Coefficient of Utilization**



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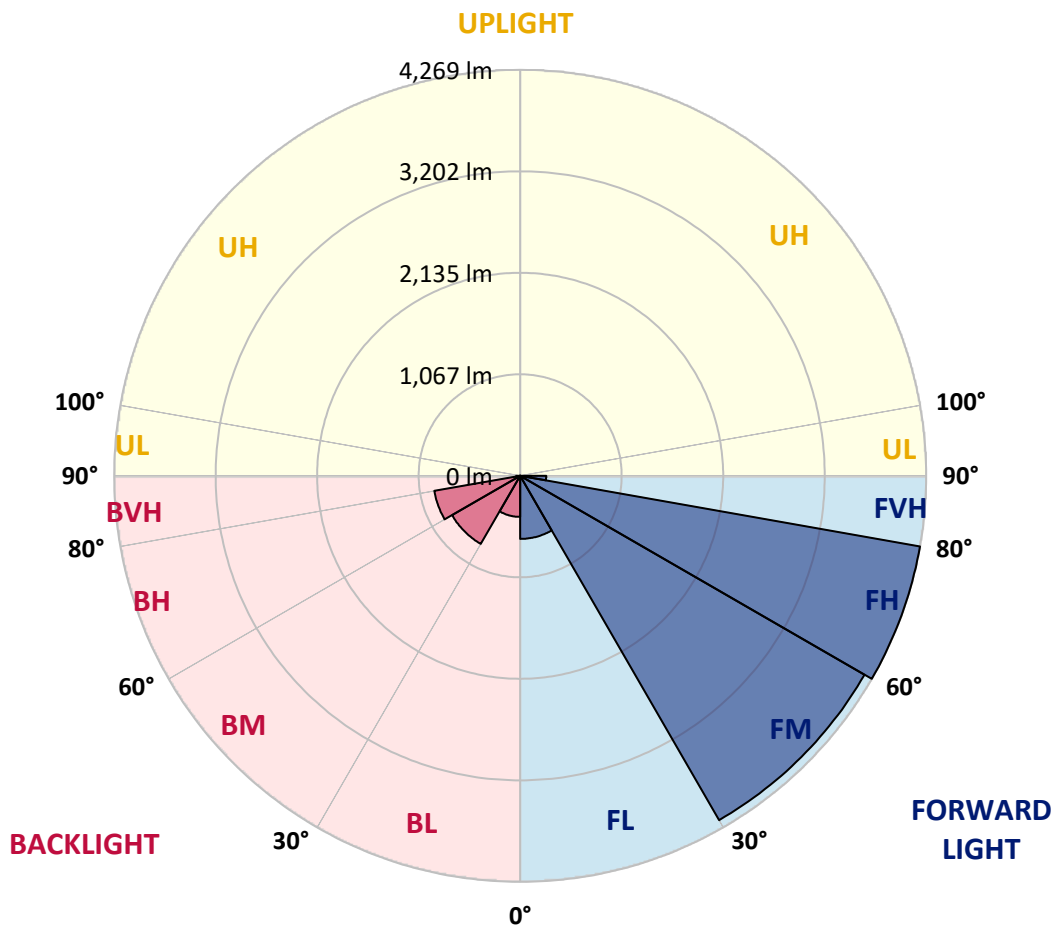
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	663.5	5.7			
FM (30°-60°)	4181.4	36.0			
FH (60°-80°)	4269.4	36.8			G2/5000
FVH (80°-90°)	274.2	2.4			G3/500
BL (0°-30°)	431.7	3.7	B1/500		
BM (30°-60°)	827.0	7.1	B1/1000		
BH (60°-80°)	916.4	7.9	B2/1000		G2/1000
BVH (80°-90°)	40.4	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°	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7
2.5°	1022.3	981.0	939.3	959.7	992.2	1020.8	1015.0	1018.4	979.1	973.7	1077.2
5°	1204.4	1133.5	1132.1	1133.0	1135.9	1102.9	1183.5	1225.3	1234.5	1277.3	1378.8
7.5°	1267.6	1238.9	1209.8	1224.3	1187.4	1190.8	1289.9	1398.7	1424.4	1455.5	1594.4
10°	1254.4	1227.2	1236.0	1238.4	1245.2	1300.1	1363.7	1468.1	1490.0	1589.1	1625.0
12.5°	1256.4	1251.5	1292.3	1293.8	1366.6	1465.2	1490.5	1586.6	1595.4	1668.2	1818.3
15°	1322.9	1356.4	1333.6	1345.7	1359.8	1477.8	1514.3	1652.2	1704.6	1798.4	1911.1
17.5°	1452.6	1462.3	1393.8	1375.9	1422.0	1457.9	1541.0	1600.7	1655.6	1917.4	2072.8
20°	1482.7	1508.9	1427.3	1334.6	1432.2	1482.2	1540.0	1567.2	1609.9	1934.8	2155.3
22.5°	1611.9	1557.5	1458.9	1378.3	1410.3	1458.9	1500.7	1603.1	1715.3	1884.8	2237.9
25°	1685.2	1653.7	1565.8	1479.3	1452.1	1453.6	1534.2	1626.0	1664.8	1958.2	2254.4
27.5°	1862.5	1812.0	1614.3	1597.8	1495.3	1415.7	1539.5	1682.3	1750.3	1900.9	2335.0
30°	2084.4	2046.1	1786.7	1764.9	1608.5	1469.6	1607.5	1724.1	1714.4	1938.2	2390.9
32.5°	2264.1	2328.2	2066.5	1894.1	1782.8	1649.8	1586.1	1716.8	1813.4	2025.2	2485.6
35°	2520.5	2580.8	2284.5	2168.0	1926.6	1733.3	1735.2	1816.8	1876.6	2126.7	2591.5
37.5°	2964.4	2911.5	2673.0	2489.0	2334.5	2046.1	1959.6	1931.0	1979.0	2251.0	2798.8
40°	3284.5	3239.8	2959.1	2854.2	2553.6	2386.0	2149.0	2121.8	2206.8	2379.2	2968.3
42.5°	3663.8	3584.1	3322.9	3236.4	2922.2	2620.1	2381.2	2396.7	2438.0	2621.1	3197.6
45°	4049.9	3856.6	3708.5	3701.7	3491.9	3074.7	2753.7	2741.0	2742.5	2977.1	3454.9
47.5°	4356.3	4182.5	4013.0	3932.3	3826.5	3861.0	3294.7	3146.6	3101.9	3335.5	3841.0
50°	4563.7	4363.6	4171.8	4152.8	4435.5	4621.5	3802.7	3644.4	3672.0	3848.3	4355.8
52.5°	4568.1	4330.6	4130.5	4263.1	4928.9	5195.1	4677.8	4235.4	4323.8	4443.7	5027.5
55°	4250.5	4004.2	3874.1	4176.1	5121.7	5875.5	5907.5	5182.4	5080.4	5124.6	5830.3
57.5°	3580.7	3332.1	3256.3	3618.1	4756.0	6531.6	7392.6	6314.0	6014.8	5830.3	6653.0
60°	2695.4	2480.2	2433.1	2663.8	3943.0	6338.8	8595.1	7722.4	7112.9	6618.5	7478.1
62.5°	2021.3	1866.9	1796.0	1829.0	2728.4	5711.8	9384.8	9501.8	8638.8	7479.1	8284.3
65°	1642.5	1517.7	1454.5	1411.8	1696.9	4416.5	9242.0	10999.6	10421.2	8382.9	8911.8
67.5°	1372.0	1261.2	1232.1	1273.9	1341.4	2562.3	8125.0	11837.4	11876.7	9274.6	9278.4
70°	1138.9	1056.8	1046.1	1164.6	1253.5	1546.3	5868.7	11574.1	12008.3	9943.3	9192.5
72.5°	880.0	835.8	834.4	1020.4	1245.2	1318.1	3494.8	9998.7	10581.9	9729.6	8351.3
75°	610.5	579.9	603.2	838.7	1216.6	1337.0	1994.6	7788.0	8224.6	8279.4	6689.9
77.5°	420.1	394.4	419.6	606.6	1086.4	1369.1	1395.3	5631.2	5679.7	5552.0	3831.8
80°	292.4	274.4	293.8	429.3	845.5	1355.0	1187.9	3545.3	3252.9	2477.8	1226.8
82.5°	181.1	175.8	197.2	306.0	595.4	1232.6	1125.7	1829.5	1396.7	683.8	438.1
85°	95.2	87.4	114.6	199.6	372.5	967.4	1054.8	834.8	539.1	242.8	175.8
87.5°	28.2	25.3	44.2	80.6	157.8	433.7	603.7	354.0	201.1	71.4	54.9
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°	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7	889.7
2.5°	1084.5	1079.1	1007.2	1016.5	1032.0	1035.9	1035.4	1009.2	981.5	1058.7	1056.3
5°	1381.2	1333.1	1297.2	1289.4	1245.2	1201.0	1216.6	1211.2	1204.4	1239.4	1243.8
7.5°	1594.9	1528.4	1486.6	1379.3	1277.3	1188.9	1217.1	1225.8	1208.3	1271.4	1290.4
10°	1651.2	1598.8	1553.6	1415.7	1359.3	1307.9	1231.6	1144.7	1133.0	1096.6	1101.0
12.5°	1796.4	1789.2	1635.2	1513.8	1440.5	1338.0	1173.3	1068.0	977.6	982.0	955.8
15°	1911.1	1914.9	1729.9	1559.9	1363.2	1206.9	1013.1	881.9	789.2	770.7	751.8
17.5°	2065.0	2057.2	1737.7	1504.6	1255.4	1026.2	788.7	658.5	643.0	653.7	637.2
20°	2132.0	2063.5	1688.1	1367.1	1086.9	779.5	595.9	526.9	557.0	599.8	600.8
22.5°	2192.2	2075.2	1662.4	1256.4	862.5	566.8	478.4	465.7	501.2	559.0	563.8
25°	2189.8	2129.1	1616.3	1144.7	668.7	442.4	415.7	424.9	467.2	527.4	530.8
27.5°	2300.1	2087.8	1496.3	998.0	503.6	378.8	385.6	402.6	422.5	479.8	491.0
30°	2299.1	2164.6	1436.1	819.8	404.6	347.2	364.7	379.3	395.8	448.3	454.6
32.5°	2353.5	2114.5	1399.7	637.7	362.8	339.5	343.8	358.4	382.2	417.7	422.0
35°	2419.0	2171.4	1283.1	506.5	347.2	332.7	336.1	344.3	366.2	398.7	403.1
37.5°	2629.3	2182.0	1237.0	426.9	346.3	329.8	329.3	333.6	358.4	388.0	401.2
40°	2711.4	2279.7	1102.4	398.7	342.9	329.8	323.0	325.4	345.8	383.7	393.9
42.5°	2908.1	2312.2	1002.9	389.0	342.9	323.9	313.2	317.1	340.9	374.4	390.5
45°	3110.6	2358.3	884.4	387.1	342.4	323.4	303.0	311.8	331.2	359.4	376.9
47.5°	3399.1	2524.4	765.9	381.2	338.5	325.9	300.6	300.1	317.1	341.4	357.9
50°	3869.7	2783.8	674.1	374.0	339.0	323.9	295.8	289.0	300.1	321.5	337.5
52.5°	4524.8	3225.7	638.2	370.1	335.1	316.2	287.5	276.8	283.1	300.1	315.7
55°	5285.4	3822.6	673.6	370.1	327.3	304.0	275.9	263.2	266.6	278.3	293.3
57.5°	6174.1	4564.2	845.0	364.7	317.6	289.5	261.8	247.2	248.2	258.4	272.0
60°	7102.2	5392.7	1229.2	360.4	310.8	273.4	245.3	230.2	228.7	238.5	250.6
62.5°	8031.8	6157.1	1633.3	370.6	308.9	259.8	227.8	212.7	212.2	221.0	231.2
65°	8770.9	6679.7	1733.8	411.8	321.5	244.3	209.8	195.7	194.7	202.0	213.2
67.5°	9133.7	6755.5	1317.1	463.3	348.2	229.7	192.3	179.2	178.2	186.0	195.7
70°	8865.1	6237.8	813.0	468.7	346.8	212.7	174.4	163.2	161.2	169.5	176.8
72.5°	7871.5	5456.3	617.8	414.7	300.1	188.4	156.4	146.7	143.8	151.0	157.8
75°	6317.9	4332.0	494.9	334.6	236.5	158.8	138.4	129.2	125.8	132.6	138.4
77.5°	3680.3	2437.0	361.8	261.3	178.7	129.7	118.0	109.8	105.9	113.2	117.5
80°	1196.7	812.0	227.3	187.5	130.6	101.5	95.7	89.8	86.0	90.8	92.3
82.5°	429.8	302.1	125.8	115.1	86.9	72.8	72.4	69.0	64.1	66.0	66.0
85°	190.4	137.9	74.8	61.7	52.0	38.9	45.7	43.2	38.4	37.4	35.9
87.5°	53.4	45.7	27.2	20.9	17.0	6.3	14.6	13.1	10.7	9.7	6.8
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)