

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: P367816

Luminaire Tested: **MSA-SA3B-730-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367816  
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-SA3B-730-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

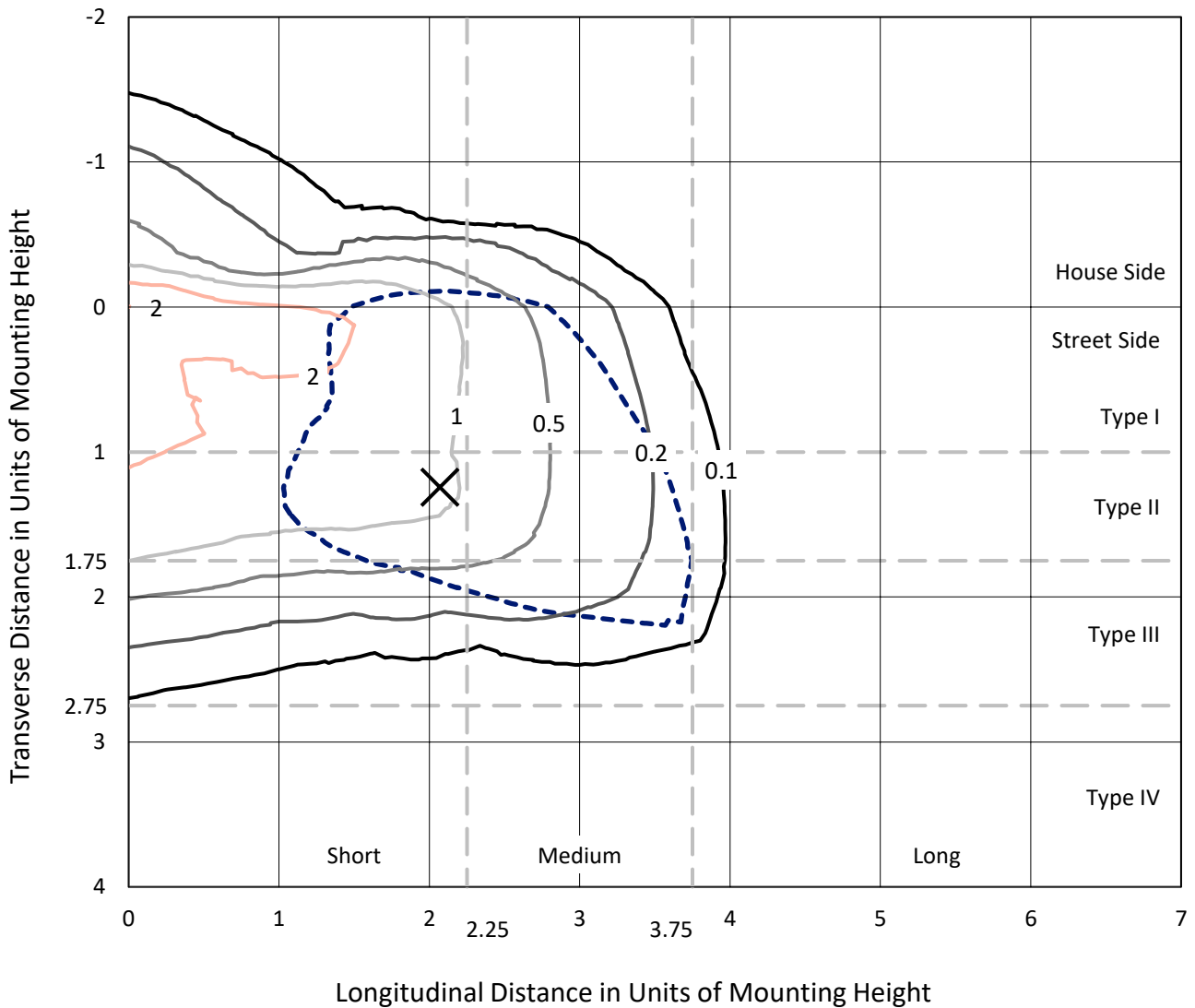
Lumens per Lamp: N/A  
Luminaire Lumens: 13136 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

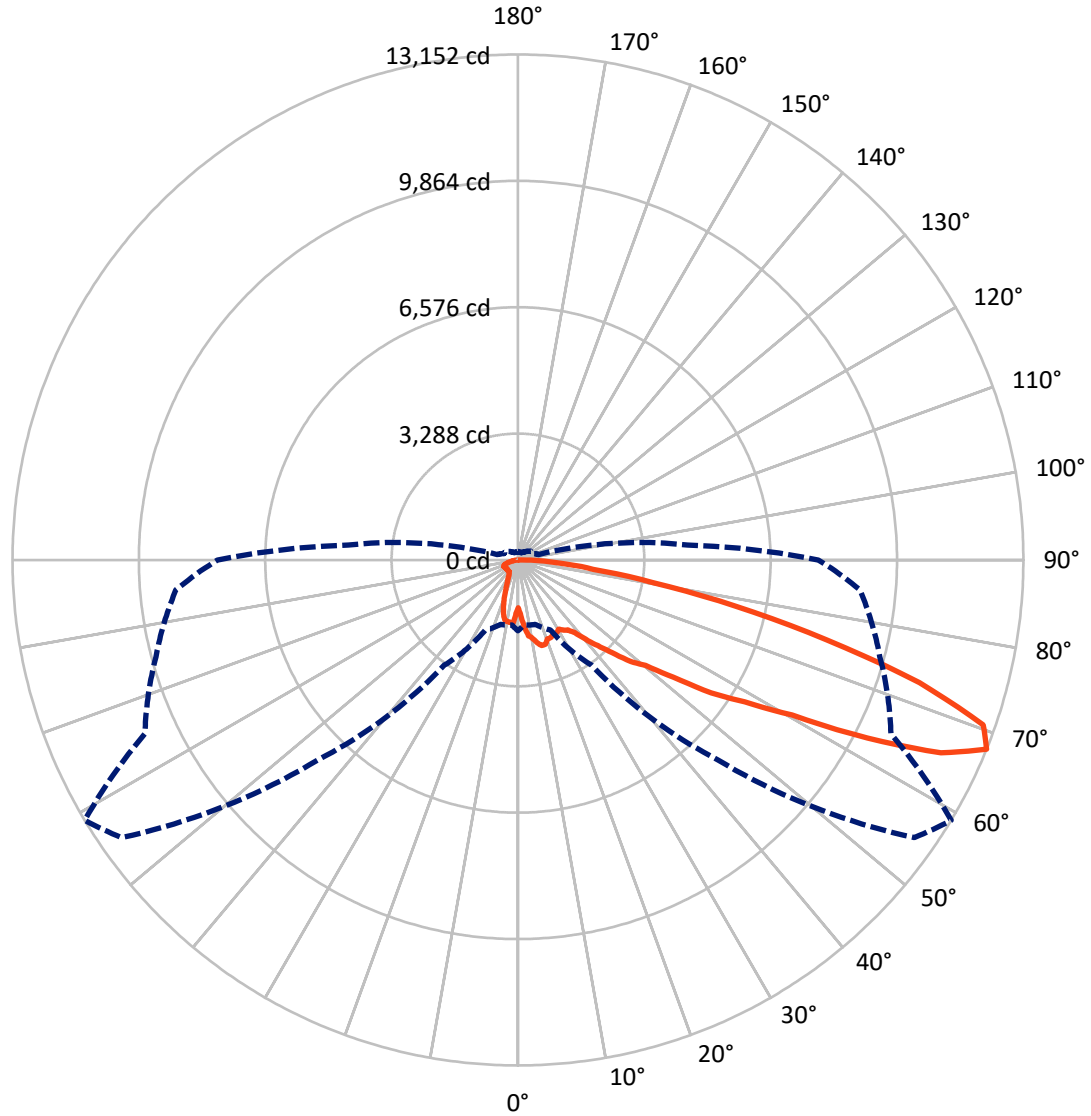
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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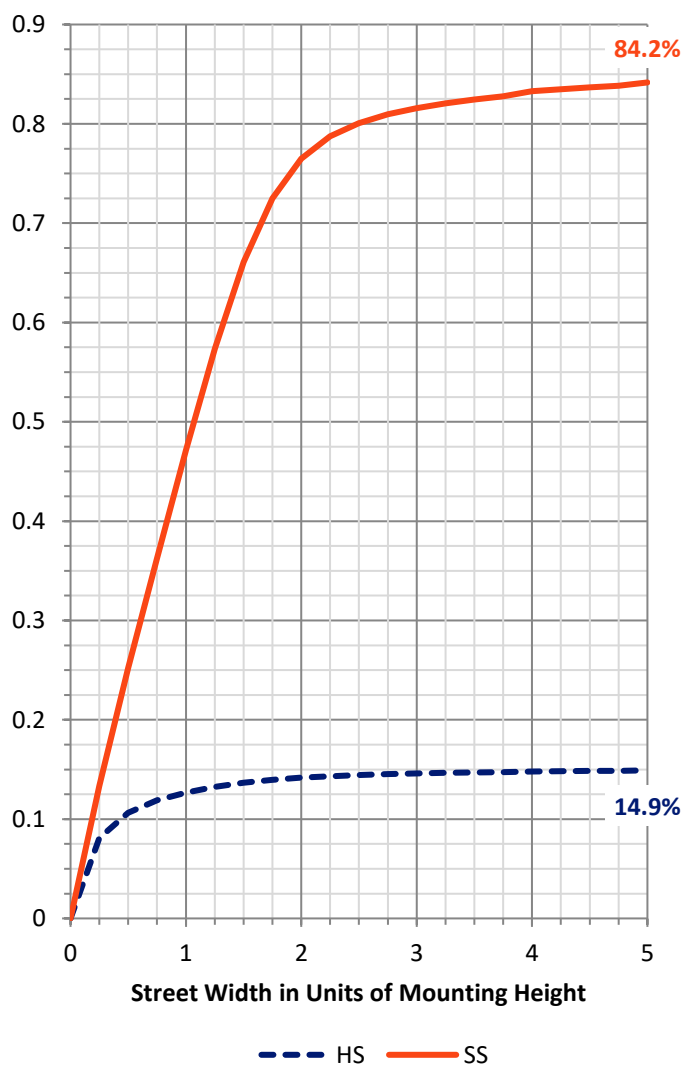
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1977.2	0.0	1977.2
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	11158.8	0.0	11158.8
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	13136.0	0.0	13136.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.3	1.2
10°-20°	480.4	3.7
20°-30°	686.1	5.2
30°-40°	1011.0	7.7
40°-50°	1708.0	13.0
50°-60°	2972.3	22.6
60°-70°	3787.6	28.8
70°-80°	2005.6	15.3
80°-90°	322.6	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°	13136.0	100.0
0°-180°	13136.0	100.0

**Coefficient of Utilization**



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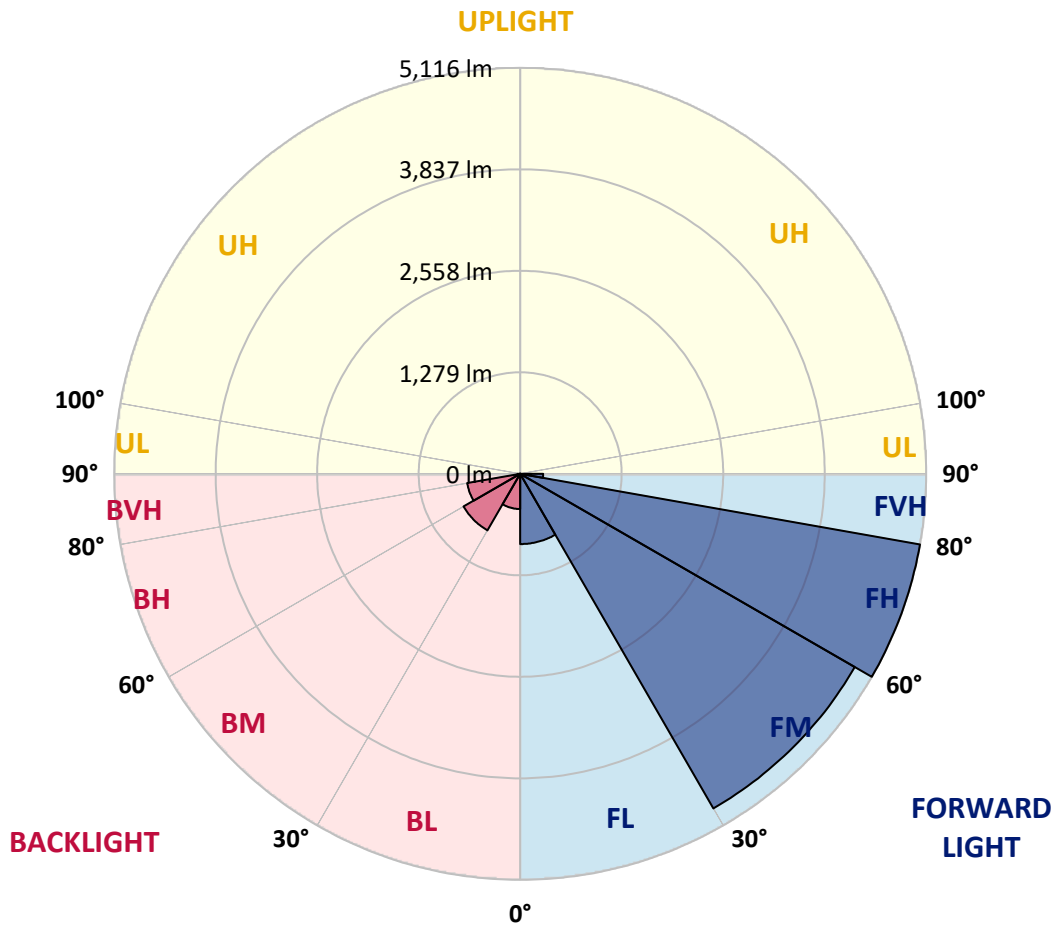
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	885.4	6.7			
FM (30°-60°)	4868.0	37.1			
FH (60°-80°)	5115.6	38.9			G3/7500
FVH (80°-90°)	289.8	2.2			G3/500
BL (0°-30°)	443.4	3.4	B1/500		
BM (30°-60°)	823.3	6.3	B1/1000		
BH (60°-80°)	677.7	5.2	B2/1000		G2/1000
BVH (80°-90°)	32.8	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°	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0
2.5°	1552.0	1479.6	1402.8	1424.5	1468.5	1488.5	1466.8	1445.6	1418.4	1386.1	1496.3
5°	1882.1	1774.6	1759.0	1758.5	1742.9	1680.5	1760.7	1755.1	1787.4	1820.8	1906.5
7.5°	1976.1	1936.0	1892.6	1913.2	1834.7	1831.4	1956.1	1991.7	2054.1	2033.5	2148.7
10°	1927.7	1882.6	1905.4	1897.1	1904.3	1986.7	2063.0	2065.2	2132.0	2197.7	2123.6
12.5°	1842.5	1845.9	1936.6	1933.3	2050.2	2203.2	2226.1	2208.3	2317.4	2272.8	2336.3
15°	1903.2	1943.8	1921.0	1940.5	1986.7	2181.5	2245.0	2309.6	2413.1	2453.2	2389.7
17.5°	2000.1	2021.8	1919.3	1908.8	2004.0	2096.4	2253.9	2309.0	2325.2	2610.7	2521.1
20°	1958.9	2002.8	1902.6	1774.1	1932.2	2054.6	2209.9	2193.2	2271.7	2623.0	2548.4
22.5°	2075.8	2002.8	1875.4	1784.1	1839.7	1952.2	2084.1	2193.8	2286.7	2551.2	2587.9
25°	2098.0	2063.5	1944.4	1853.7	1834.7	1874.8	2063.0	2134.8	2291.8	2649.1	2566.7
27.5°	2233.9	2182.1	1939.4	1942.2	1848.1	1777.4	1996.2	2147.0	2348.5	2588.4	2618.5
30°	2402.5	2363.0	2058.5	2069.6	1939.4	1809.1	2041.8	2087.5	2381.4	2683.1	2683.6
32.5°	2528.9	2598.5	2292.9	2141.5	2095.3	1997.8	1971.7	2177.1	2343.0	2854.5	2795.0
35°	2756.6	2810.6	2473.2	2351.9	2195.4	2085.8	2162.1	2236.1	2502.7	3080.0	2960.3
37.5°	3177.9	3115.6	2808.3	2617.4	2558.9	2400.9	2443.2	2391.4	2676.4	3333.3	3284.3
40°	3421.8	3367.8	3044.3	2938.6	2707.0	2727.1	2674.2	2712.0	2908.5	3602.7	3587.1
42.5°	3662.2	3589.9	3316.6	3243.1	3012.1	2914.1	2923.6	3046.0	3266.5	4038.0	3986.2
45°	3899.9	3714.6	3594.9	3614.4	3503.0	3302.1	3316.0	3431.2	3657.2	4535.6	4416.5
47.5°	4082.0	3928.9	3835.4	3811.4	3756.3	4025.2	3904.9	3951.7	4051.3	4978.7	4933.6
50°	4426.5	4247.8	4125.9	4091.4	4278.5	4652.5	4407.6	4306.8	4518.9	5551.5	5528.1
52.5°	4978.2	4755.5	4552.3	4550.1	4820.6	5063.3	5235.9	5062.2	5140.2	6138.2	6205.0
55°	5459.7	5201.9	5019.4	5120.1	5505.3	5654.0	6240.1	6104.3	6038.6	6730.5	6921.5
57.5°	5639.5	5338.3	5219.2	5367.8	5935.6	6699.3	7318.9	6961.5	6897.5	7400.7	7801.0
60°	5244.8	4926.4	4933.6	5213.6	6197.2	7467.0	8498.5	8195.1	7819.9	8235.2	8625.9
62.5°	4120.4	3832.6	4020.2	4446.0	5977.9	8212.9	10079.4	10207.4	8873.6	8927.1	9083.5
65°	2800.5	2601.3	2770.5	3187.4	4848.5	8619.8	11585.1	12098.4	9833.3	9380.2	9281.1
67.5°	1843.1	1702.3	1735.1	2012.3	3337.7	7348.4	12592.1	13151.5	10710.6	9752.0	8932.7
70°	1427.3	1313.7	1299.2	1444.5	1979.5	5105.1	11995.4	12845.9	11245.0	9403.6	7785.9
72.5°	1120.0	1033.7	1041.5	1181.2	1533.0	2832.3	9282.2	10923.8	10440.1	8109.9	5981.8
75°	873.4	802.7	842.2	1002.0	1417.8	1760.1	6404.3	8290.8	8071.5	6005.2	3411.7
77.5°	634.0	588.4	644.6	853.4	1332.6	1510.2	3986.8	5784.2	5170.8	3083.3	1170.6
80°	415.8	390.2	436.4	695.8	1208.5	1453.4	2463.8	3544.2	2555.0	866.2	443.1
82.5°	244.9	233.8	272.2	470.9	971.4	1362.1	1643.2	1969.4	1045.4	366.3	235.5
85°	128.6	120.2	161.4	270.5	669.7	1243.6	1293.7	1179.0	504.9	159.2	112.4
87.5°	42.9	41.7	68.5	104.7	253.3	660.2	690.3	560.0	208.2	46.2	24.5
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°	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0	1243.0
2.5°	1511.3	1489.1	1361.0	1378.8	1395.5	1387.2	1382.2	1324.3	1318.7	1401.1	1394.4
5°	1904.3	1811.9	1702.8	1697.8	1626.0	1552.5	1567.0	1543.6	1550.3	1584.2	1587.6
7.5°	2112.0	1996.7	1892.6	1723.4	1579.8	1463.4	1481.8	1476.3	1461.2	1538.0	1558.6
10°	2108.1	2005.6	1888.2	1683.3	1586.5	1491.8	1378.3	1270.8	1239.1	1201.3	1204.6
12.5°	2247.2	2156.5	1900.4	1691.7	1560.3	1397.2	1184.6	1067.1	954.7	952.4	924.0
15°	2290.6	2223.8	1926.6	1643.8	1377.2	1143.4	923.5	796.0	714.7	698.6	674.7
17.5°	2400.3	2295.6	1847.0	1489.1	1164.5	894.0	694.1	605.1	598.4	609.5	597.3
20°	2407.5	2237.8	1703.4	1260.3	935.7	677.4	566.1	521.6	545.5	572.8	571.7
22.5°	2401.4	2164.8	1579.2	1065.4	703.1	544.4	496.0	486.0	508.2	548.9	553.9
25°	2339.1	2140.9	1423.9	875.1	570.6	466.5	453.1	459.2	487.1	534.9	534.9
27.5°	2404.2	2043.5	1229.1	712.0	479.8	415.3	424.7	440.3	460.9	515.5	525.5
30°	2383.0	2075.8	1072.1	573.4	423.1	379.6	400.8	416.4	439.8	496.5	501.5
32.5°	2439.8	1989.5	940.2	482.1	385.8	365.7	370.7	391.9	422.5	467.0	475.9
35°	2526.7	2021.2	788.8	433.6	367.4	349.6	359.0	375.7	406.4	449.8	457.0
37.5°	2803.9	2019.5	684.1	406.9	364.1	346.2	350.7	362.4	398.0	437.5	454.2
40°	2982.0	2135.3	588.9	400.8	360.2	344.6	340.7	353.5	381.9	428.6	440.3
42.5°	3316.6	2206.0	547.7	398.6	359.6	335.1	331.2	346.2	374.1	417.5	435.3
45°	3670.0	2306.8	514.9	397.5	357.9	333.4	321.7	340.7	364.1	405.8	426.4
47.5°	4085.9	2520.0	496.5	393.6	354.6	335.7	318.4	327.9	354.0	395.8	416.4
50°	4630.3	2802.2	500.4	388.0	359.6	336.2	313.4	317.9	341.8	382.4	403.6
52.5°	5292.1	3239.2	525.5	390.2	362.9	333.4	311.2	308.9	329.5	365.2	386.3
55°	6089.8	3859.3	600.6	400.8	362.9	332.9	307.8	297.8	313.4	342.3	362.9
57.5°	7052.3	4577.4	747.6	405.8	360.2	329.5	300.6	282.8	292.2	316.2	335.7
60°	7878.9	5156.9	899.0	409.1	365.7	321.7	286.1	263.9	270.0	288.3	305.6
62.5°	8300.3	5319.4	944.6	406.4	380.8	316.7	268.9	243.8	244.4	260.0	275.5
65°	8379.3	5102.9	761.5	403.6	400.2	316.2	256.6	226.6	222.7	233.8	247.2
67.5°	7816.0	4429.3	549.4	397.5	402.5	312.8	248.3	212.6	202.6	210.4	221.5
70°	6636.4	3567.0	461.5	385.2	375.7	296.1	233.8	198.2	184.8	190.4	198.7
72.5°	4947.6	2639.1	402.5	359.0	327.3	253.3	211.5	182.0	168.1	172.0	178.1
75°	2748.8	1407.8	336.8	312.3	267.2	204.8	180.4	161.4	149.2	150.9	157.5
77.5°	912.9	519.4	247.2	247.7	202.1	158.1	148.6	138.1	128.6	129.1	134.7
80°	413.6	287.2	177.0	178.1	140.8	114.7	114.1	110.8	104.7	103.0	106.9
82.5°	239.9	174.2	121.4	115.8	90.7	74.6	82.9	81.3	79.6	73.5	74.6
85°	118.0	93.5	63.5	60.1	50.1	37.3	44.5	46.2	44.5	37.9	37.3
87.5°	28.9	30.6	15.6	14.5	8.3	3.9	6.7	6.7	8.3	5.6	2.8
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)