

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: P597098

Luminaire Tested: **MSA-SA4A-835-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597098  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-835-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 12541 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

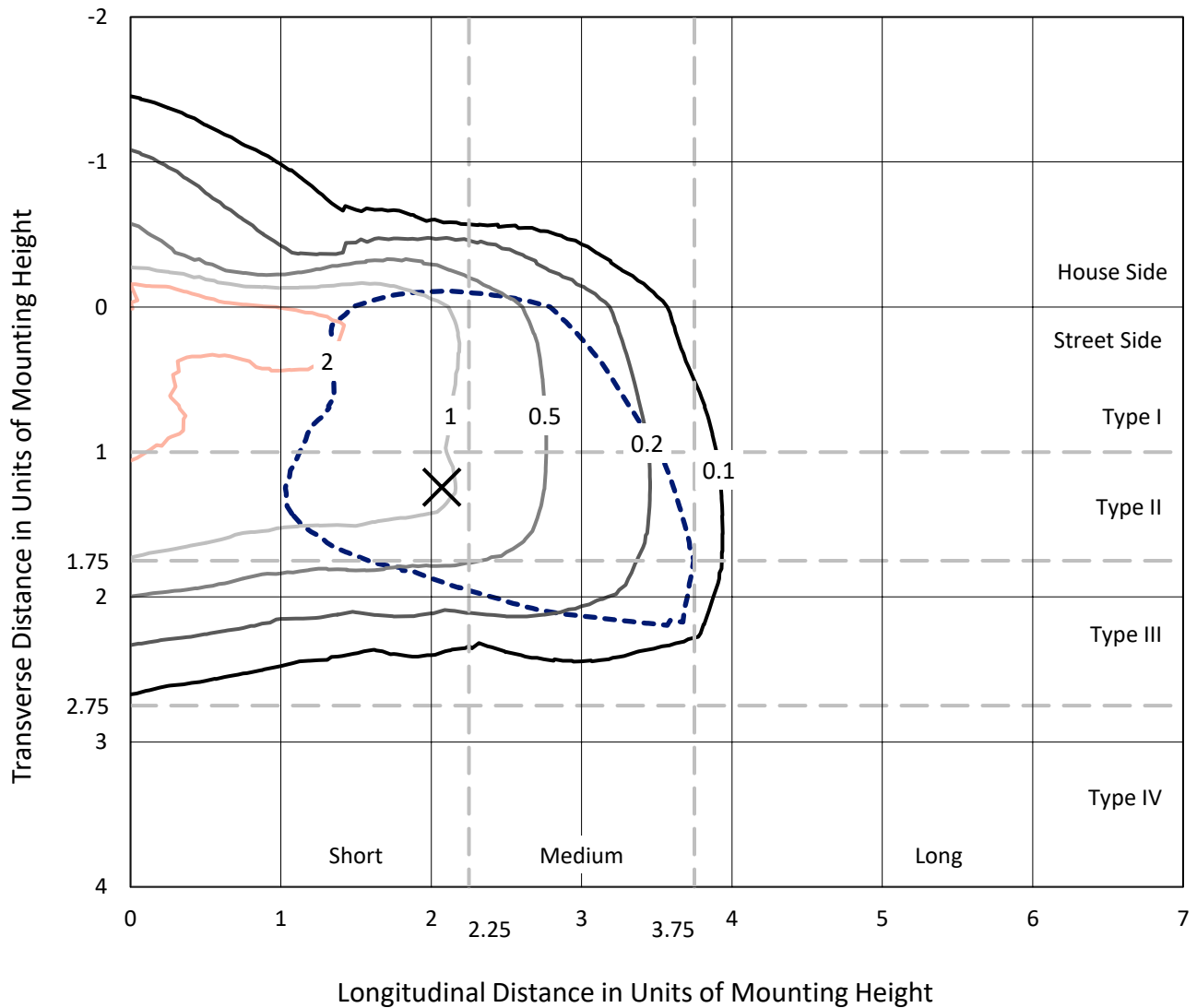
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

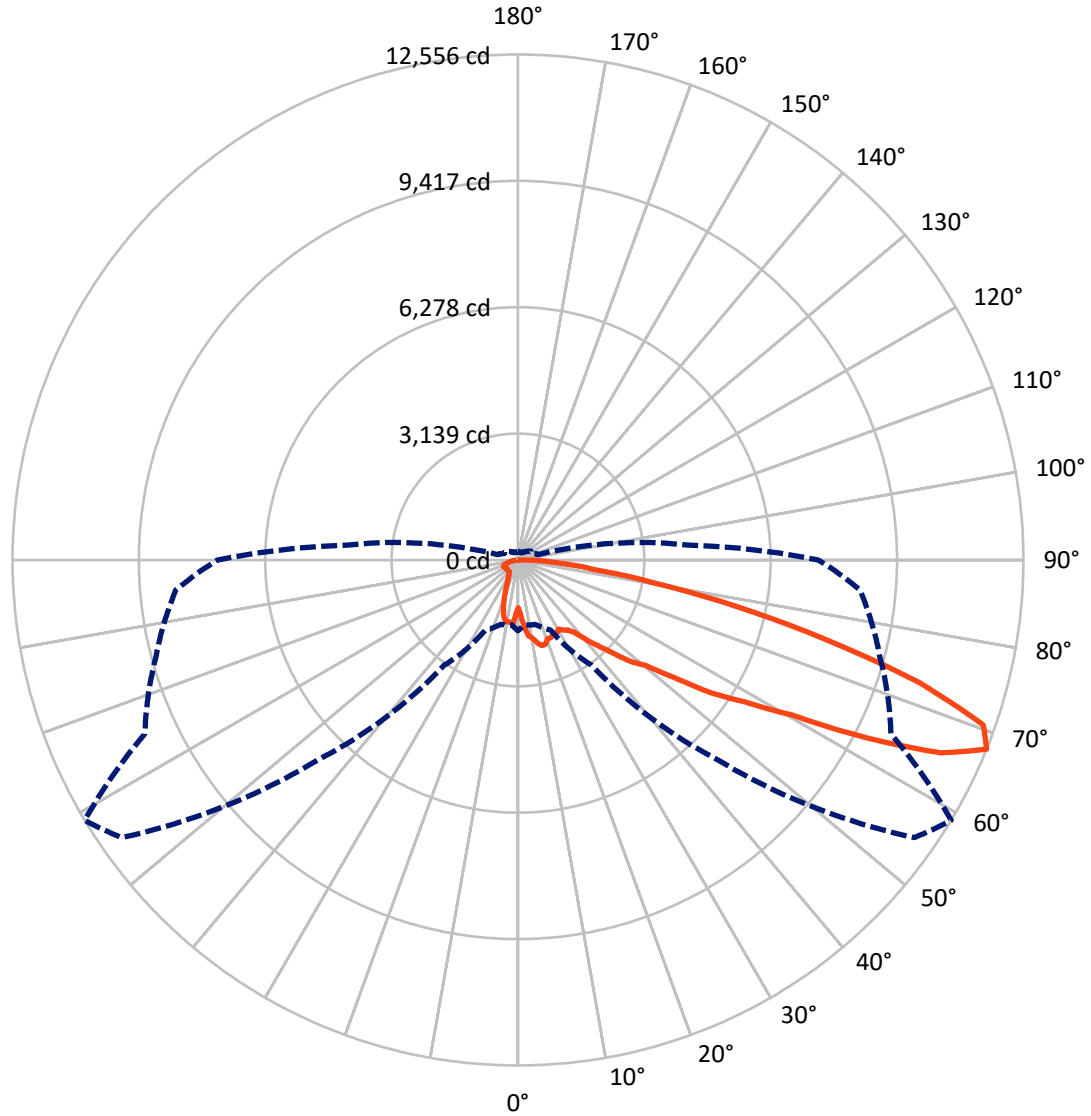
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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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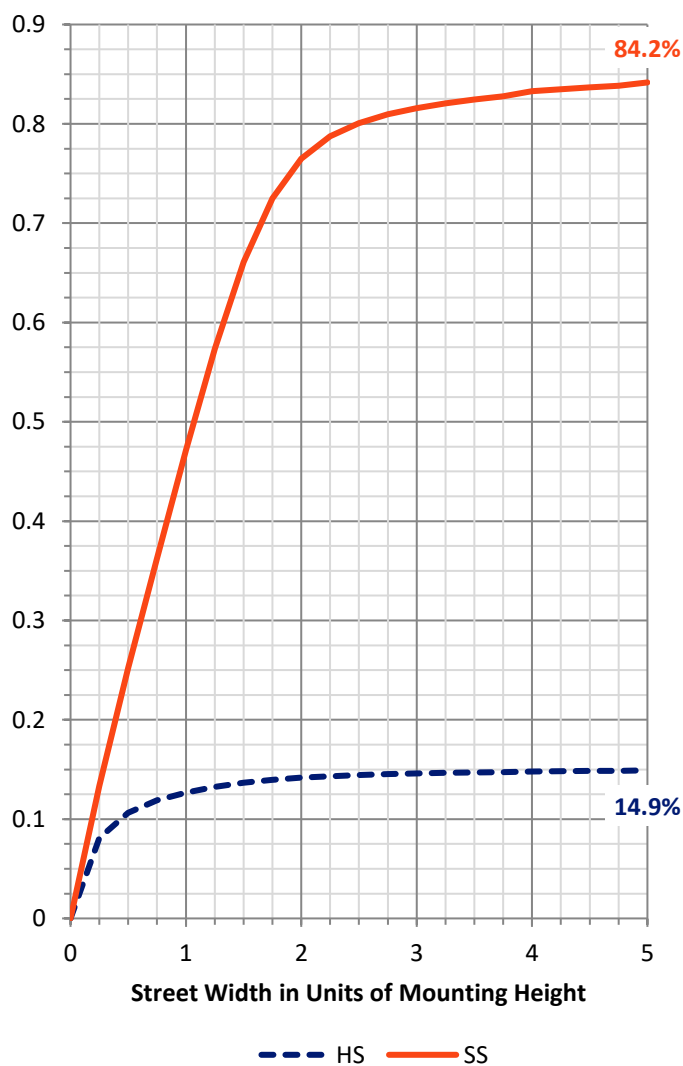
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1887.7	0.0	1887.7
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	10653.3	0.0	10653.3
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	12541.0	0.0	12541.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.0	1.2
10°-20°	458.6	3.7
20°-30°	655.0	5.2
30°-40°	965.2	7.7
40°-50°	1630.7	13.0
50°-60°	2837.7	22.6
60°-70°	3616.1	28.8
70°-80°	1914.8	15.3
80°-90°	308.0	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°	12541.0	100.0
0°-180°	12541.0	100.0

**Coefficient of Utilization**



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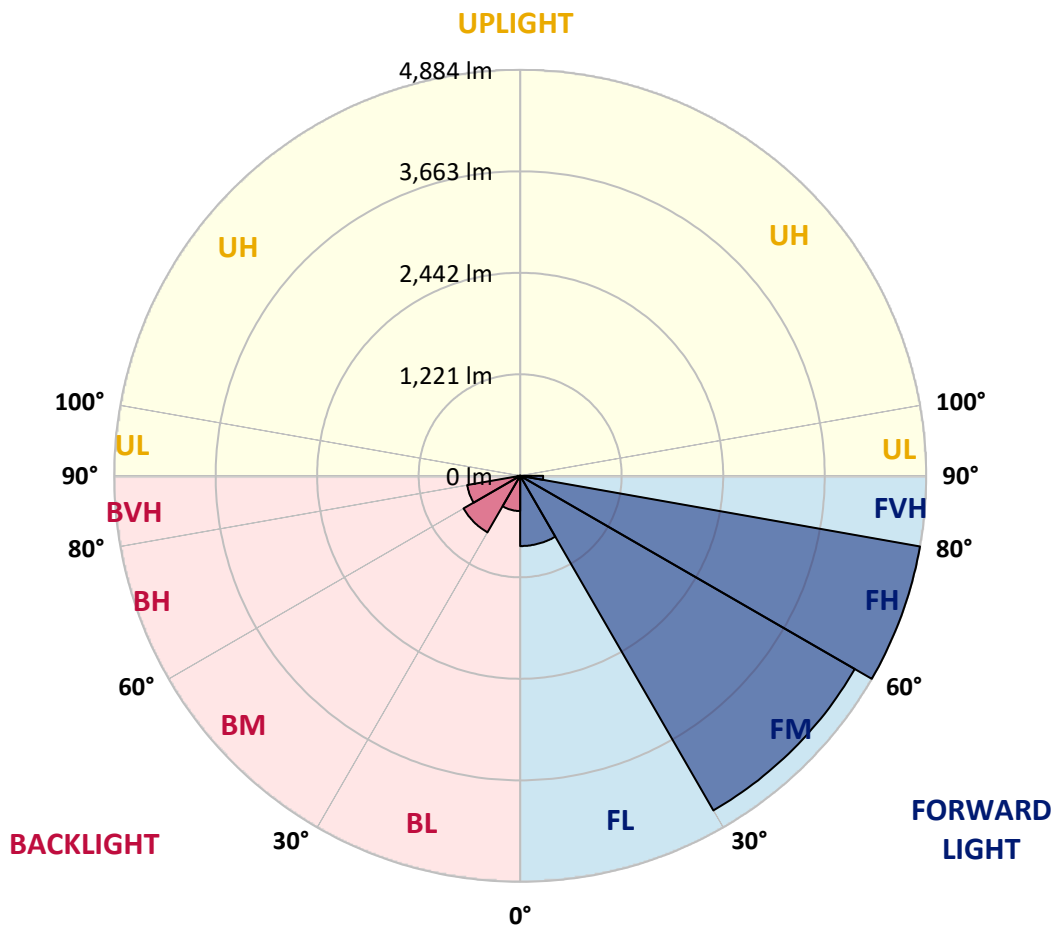
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	845.3	6.7			
FM (30°-60°)	4647.5	37.1			
FH (60°-80°)	4883.8	38.9			G2/5000
FVH (80°-90°)	276.7	2.2			G3/500
BL (0°-30°)	423.3	3.4	B1/500		
BM (30°-60°)	786.0	6.3	B1/1000		
BH (60°-80°)	647.0	5.2	B2/1000		G2/1000
BVH (80°-90°)	31.4	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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7
2.5°	1481.7	1412.6	1339.2	1360.0	1401.9	1421.1	1400.3	1380.2	1354.1	1323.3	1428.5
5°	1796.8	1694.2	1679.4	1678.8	1663.9	1604.4	1680.9	1675.6	1706.5	1738.3	1820.2
7.5°	1886.6	1848.4	1806.9	1826.6	1751.6	1748.4	1867.5	1901.5	1961.0	1941.4	2051.4
10°	1840.4	1797.3	1819.1	1811.2	1818.1	1896.7	1969.5	1971.6	2035.4	2098.1	2027.4
12.5°	1759.1	1762.3	1848.9	1845.7	1957.3	2103.4	2125.2	2108.2	2212.4	2169.9	2230.5
15°	1817.0	1855.8	1834.0	1852.6	1896.7	2082.7	2143.3	2205.0	2303.8	2342.1	2281.5
17.5°	1909.5	1930.2	1832.4	1822.3	1913.2	2001.4	2151.8	2204.4	2219.8	2492.5	2406.9
20°	1870.1	1912.1	1816.5	1693.7	1844.6	1961.6	2109.8	2093.9	2168.8	2504.2	2432.9
22.5°	1981.7	1912.1	1790.4	1703.3	1756.4	1863.8	1989.7	2094.4	2183.2	2435.6	2470.7
25°	2003.0	1970.1	1856.3	1769.7	1751.6	1789.9	1969.5	2038.1	2187.9	2529.1	2450.5
27.5°	2132.7	2083.3	1851.5	1854.2	1764.4	1696.9	1905.7	2049.8	2242.2	2471.2	2499.9
30°	2293.7	2256.0	1965.3	1975.9	1851.5	1727.2	1949.3	1992.9	2273.5	2561.5	2562.1
32.5°	2414.3	2480.8	2189.0	2044.5	2000.3	1907.3	1882.4	2078.5	2236.8	2725.2	2668.4
35°	2631.7	2683.2	2361.2	2245.3	2096.0	1991.3	2064.1	2134.8	2389.4	2940.5	2826.2
37.5°	3034.0	2974.5	2681.1	2498.8	2443.0	2292.1	2332.5	2283.1	2555.2	3182.3	3135.5
40°	3266.8	3215.2	2906.5	2805.5	2584.4	2603.5	2553.0	2589.2	2776.8	3439.5	3424.6
42.5°	3496.4	3427.3	3166.3	3096.2	2875.6	2782.1	2791.1	2908.0	3118.5	3855.1	3805.7
45°	3723.3	3546.3	3432.1	3450.7	3344.4	3152.5	3165.8	3275.8	3491.6	4330.2	4216.5
47.5°	3897.1	3750.9	3661.6	3638.8	3586.2	3842.9	3728.1	3772.7	3867.8	4753.2	4710.2
50°	4226.0	4055.4	3939.0	3906.1	4084.7	4441.8	4208.0	4111.8	4314.2	5300.1	5277.7
52.5°	4752.7	4540.1	4346.1	4344.0	4602.3	4834.0	4998.7	4832.9	4907.3	5860.2	5924.0
55°	5212.4	4966.3	4792.0	4888.2	5256.0	5397.9	5957.5	5827.8	5765.1	6425.7	6607.9
57.5°	5384.0	5096.5	4982.8	5124.7	5666.8	6395.9	6987.4	6646.2	6585.1	7065.5	7447.6
60°	5007.2	4703.3	4710.2	4977.5	5916.5	7128.8	8113.5	7823.9	7465.7	7862.1	8235.2
62.5°	3933.7	3659.0	3838.1	4244.6	5707.2	7840.9	9622.8	9745.0	8471.7	8522.7	8672.1
65°	2673.7	2483.4	2645.0	3043.0	4628.9	8229.4	11060.4	11550.4	9387.9	8955.3	8860.7
67.5°	1759.6	1625.1	1656.5	1921.2	3186.5	7015.6	12021.7	12555.8	10225.5	9310.3	8528.0
70°	1362.6	1254.2	1240.4	1379.1	1889.8	4873.9	11452.0	12264.1	10735.7	8977.6	7433.3
72.5°	1069.3	986.9	994.3	1127.7	1463.6	2704.0	8861.8	10429.0	9967.2	7742.6	5710.9
75°	833.8	766.3	804.1	956.6	1353.6	1680.4	6114.2	7915.3	7705.9	5733.2	3257.2
77.5°	605.3	561.7	615.4	814.7	1272.3	1441.8	3806.2	5522.2	4936.6	2943.7	1117.6
80°	397.0	372.5	416.7	664.3	1153.8	1387.6	2352.2	3383.7	2439.3	826.9	423.0
82.5°	233.8	223.2	259.9	449.6	927.4	1300.4	1568.8	1880.2	998.0	349.7	224.8
85°	122.8	114.8	154.1	258.3	639.3	1187.2	1235.1	1125.6	482.0	152.0	107.4
87.5°	40.9	39.9	65.4	99.9	241.8	630.3	659.0	534.6	198.8	44.1	23.4
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7	1186.7
2.5°	1442.9	1421.6	1299.4	1316.4	1332.3	1324.4	1319.6	1264.3	1259.0	1337.6	1331.3
5°	1818.1	1729.8	1625.7	1620.9	1552.3	1482.2	1496.0	1473.7	1480.1	1512.5	1515.7
7.5°	2016.3	1906.3	1806.9	1645.3	1508.2	1397.2	1414.7	1409.4	1395.0	1468.4	1488.0
10°	2012.6	1914.8	1802.7	1607.1	1514.6	1424.3	1315.8	1213.3	1183.0	1146.9	1150.0
12.5°	2145.4	2058.8	1814.3	1615.1	1489.6	1333.9	1130.9	1018.8	911.4	909.3	882.2
15°	2186.9	2123.1	1839.3	1569.3	1314.8	1091.6	881.7	760.0	682.4	667.0	644.1
17.5°	2291.6	2191.7	1763.3	1421.6	1111.8	853.5	662.7	577.7	571.3	581.9	570.2
20°	2298.5	2136.4	1626.2	1203.2	893.4	646.8	540.5	498.0	520.8	546.9	545.8
22.5°	2292.6	2066.8	1507.7	1017.2	671.2	519.7	473.5	463.9	485.2	524.0	528.8
25°	2233.1	2043.9	1359.4	835.4	544.7	445.3	432.6	438.4	465.0	510.7	510.7
27.5°	2295.3	1950.9	1173.4	679.7	458.1	396.5	405.5	420.4	440.0	492.1	501.7
30°	2275.1	1981.7	1023.6	547.4	403.9	362.4	382.6	397.5	419.8	474.0	478.8
32.5°	2329.3	1899.4	897.6	460.2	368.3	349.2	353.9	374.1	403.4	445.9	454.4
35°	2412.2	1929.7	753.1	414.0	350.8	333.7	342.8	358.7	388.0	429.4	436.3
37.5°	2676.9	1928.1	653.1	388.5	347.6	330.6	334.8	346.0	380.0	417.7	433.7
40°	2846.9	2038.6	562.3	382.6	343.8	329.0	325.2	337.5	364.6	409.2	420.4
42.5°	3166.3	2106.1	522.9	380.5	343.3	319.9	316.2	330.6	357.1	398.6	415.6
45°	3503.8	2202.3	491.6	379.4	341.7	318.3	307.2	325.2	347.6	387.4	407.1
47.5°	3900.8	2405.8	474.0	375.7	338.5	320.5	304.0	313.0	338.0	377.9	397.5
50°	4420.5	2675.3	477.8	370.4	343.3	321.0	299.2	303.5	326.3	365.1	385.3
52.5°	5052.4	3092.5	501.7	372.5	346.5	318.3	297.1	295.0	314.6	348.6	368.8
55°	5814.0	3684.5	573.4	382.6	346.5	317.8	293.9	284.3	299.2	326.8	346.5
57.5°	6732.8	4370.0	713.7	387.4	343.8	314.6	287.0	270.0	279.0	301.9	320.5
60°	7522.0	4923.3	858.3	390.6	349.2	307.2	273.2	251.9	257.7	275.3	291.8
62.5°	7924.3	5078.5	901.9	388.0	363.5	302.4	256.7	232.8	233.3	248.2	263.1
65°	7999.8	4871.7	727.0	385.3	382.1	301.9	245.0	216.3	212.6	223.2	236.0
67.5°	7462.0	4228.7	524.5	379.4	384.2	298.7	237.0	203.0	193.4	200.9	211.5
70°	6335.8	3405.5	440.6	367.8	358.7	282.7	223.2	189.2	176.4	181.8	189.7
72.5°	4723.5	2519.6	384.2	342.8	312.5	241.8	201.9	173.8	160.5	164.2	170.1
75°	2624.3	1344.0	321.5	298.1	255.1	195.6	172.2	154.1	142.4	144.0	150.4
77.5°	871.6	495.8	236.0	236.5	192.9	150.9	141.9	131.8	122.8	123.3	128.6
80°	394.9	274.2	169.0	170.1	134.5	109.5	108.9	105.8	99.9	98.3	102.0
82.5°	229.1	166.3	115.9	110.5	86.6	71.2	79.2	77.6	76.0	70.2	71.2
85°	112.7	89.3	60.6	57.4	47.8	35.6	42.5	44.1	42.5	36.1	35.6
87.5°	27.6	29.2	14.9	13.8	8.0	3.7	6.4	6.4	8.0	5.3	2.7
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)