

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: P367549

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

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367549  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
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-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10067 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

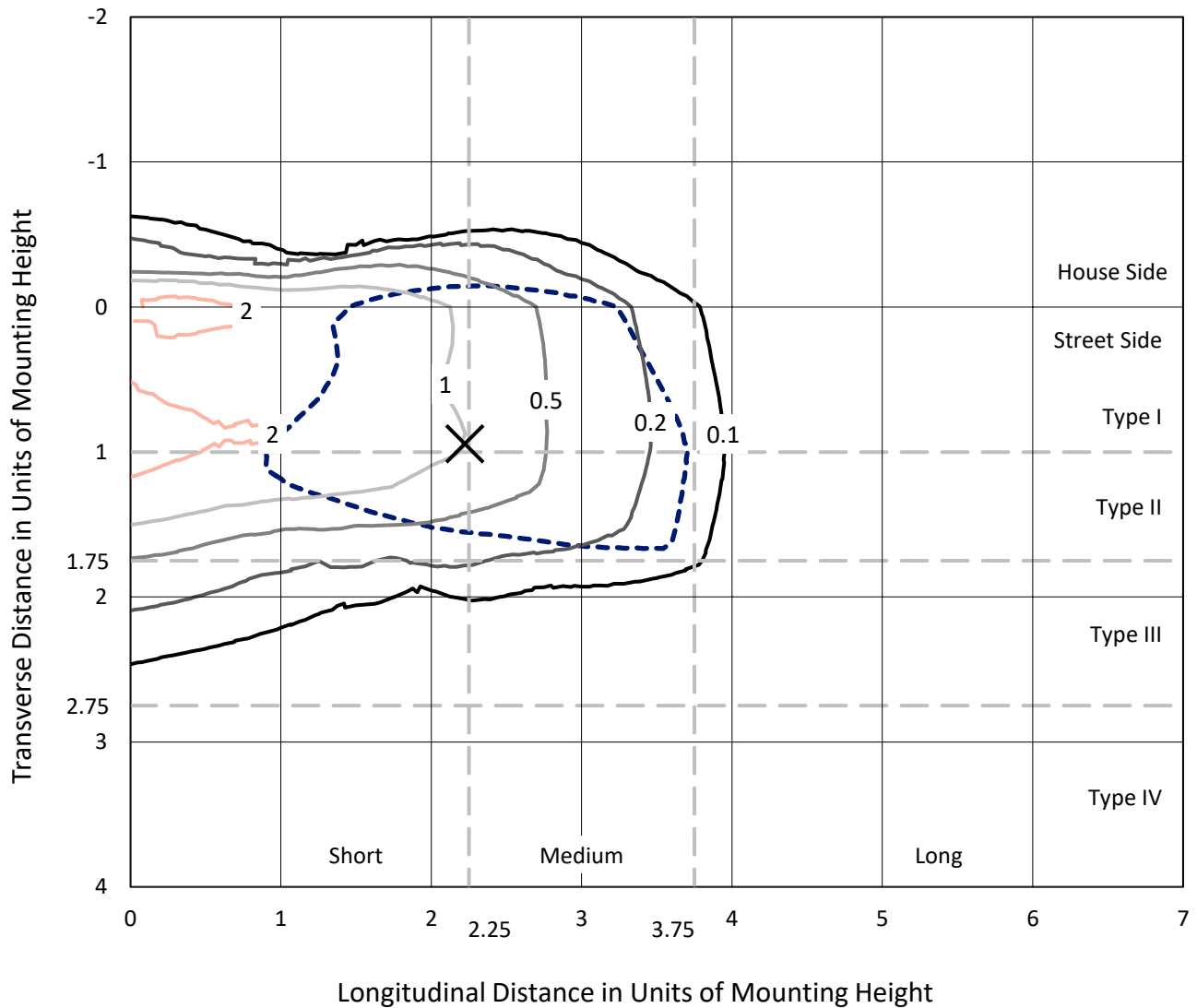
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

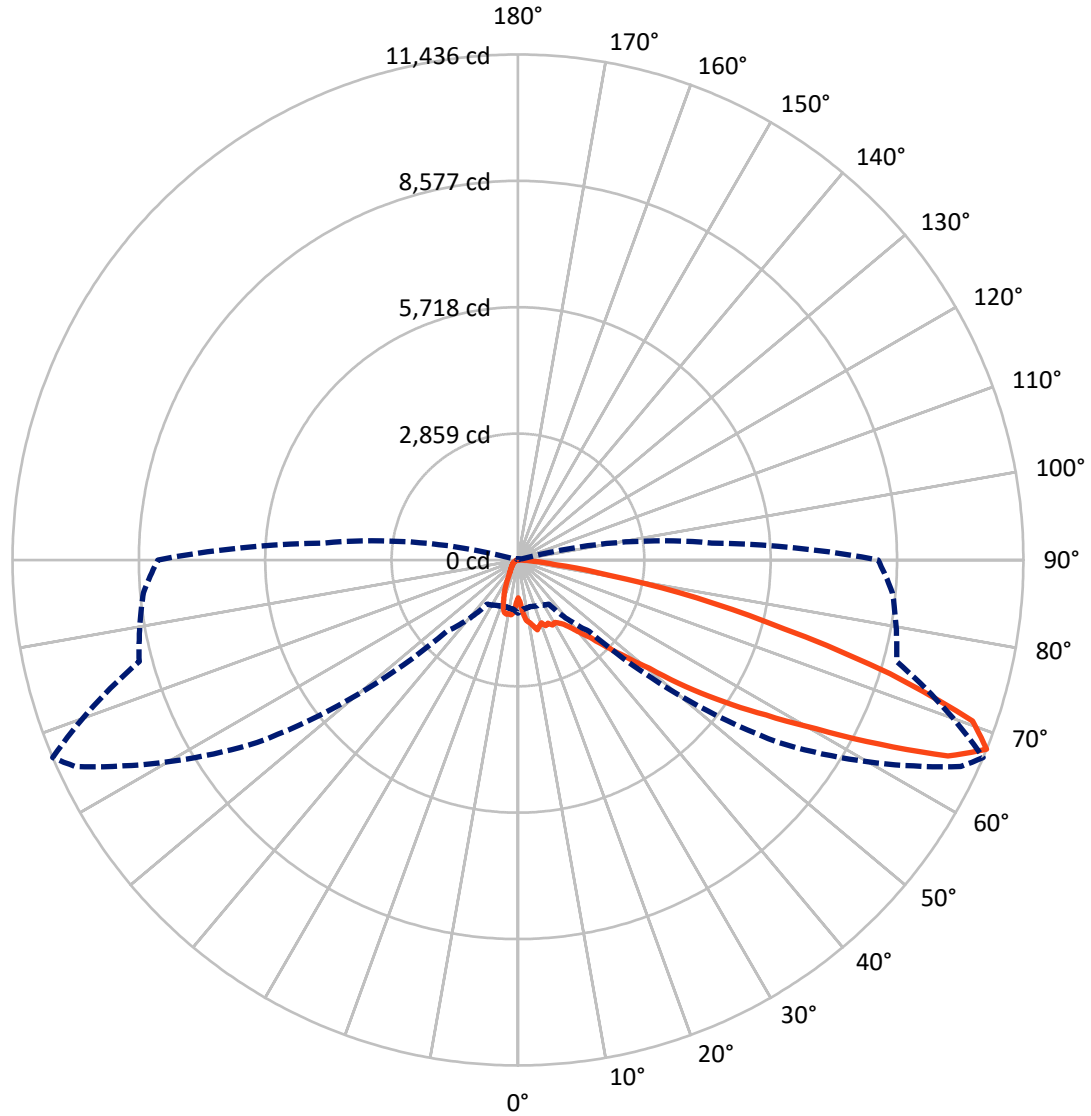
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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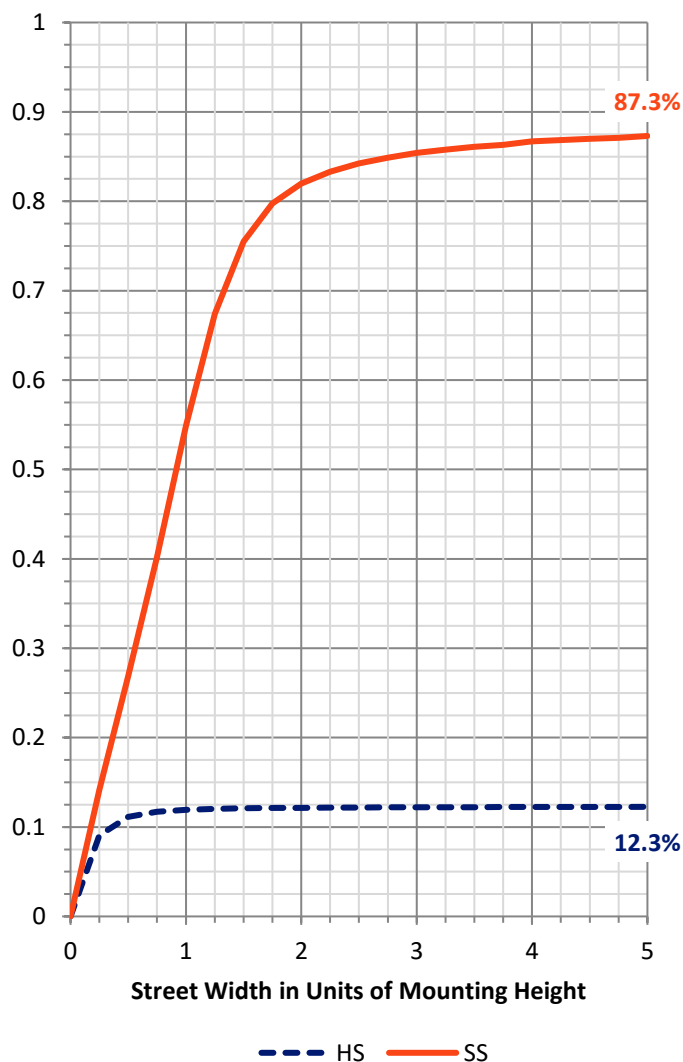
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1245.0	0.0	1245.0
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	8822.0	0.0	8822.0
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	10067.0	0.0	10067.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.6	1.1
10°-20°	318.5	3.2
20°-30°	499.1	5.0
30°-40°	804.7	8.0
40°-50°	1478.7	14.7
50°-60°	2497.3	24.8
60°-70°	2760.9	27.4
70°-80°	1445.0	14.4
80°-90°	155.2	1.5
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°	10067.0	100.0
0°-180°	10067.0	100.0

**Coefficient of Utilization**

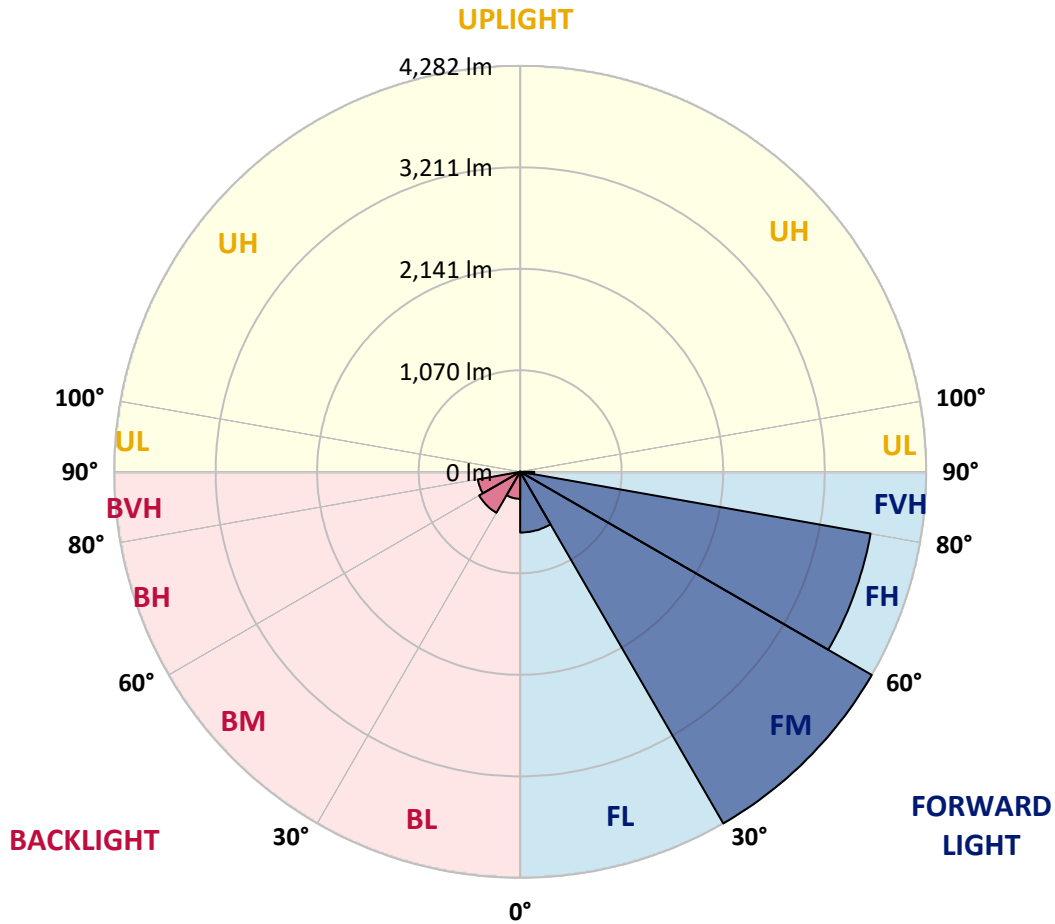


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	640.1	6.4			
FM (30°-60°)	4281.5	42.5			
FH (60°-80°)	3751.8	37.3			G2/5000
FVH (80°-90°)	148.6	1.5			G2/225
BL (0°-30°)	285.1	2.8	B1/500		
BM (30°-60°)	499.2	5.0	B1/1000		
BH (60°-80°)	454.1	4.5	B1/500		G1/500
BVH (80°-90°)	6.6	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4
2.5°	1012.2	977.9	919.7	936.6	970.3	998.4	985.1	959.1	959.6	933.0	1028.5
5°	1177.6	1131.7	1098.0	1109.7	1108.2	1107.1	1170.0	1194.0	1204.2	1248.1	1312.9
7.5°	1225.1	1208.8	1173.5	1184.3	1149.0	1151.6	1261.9	1366.1	1382.4	1409.5	1524.9
10°	1206.7	1175.1	1187.8	1187.8	1188.3	1245.5	1319.6	1419.2	1439.1	1543.3	1555.5
12.5°	1186.8	1188.3	1238.9	1229.7	1299.2	1401.8	1426.8	1538.7	1529.0	1619.4	1753.7
15°	1260.9	1299.7	1267.0	1279.8	1286.4	1406.9	1447.3	1595.9	1638.8	1753.2	1840.5
17.5°	1388.0	1393.1	1325.2	1306.8	1354.8	1389.0	1470.2	1541.7	1570.3	1870.6	1994.2
20°	1411.0	1443.7	1374.7	1268.5	1370.1	1417.1	1473.8	1508.0	1520.3	1906.9	2081.0
22.5°	1549.4	1513.1	1402.8	1322.1	1351.3	1402.3	1437.6	1540.7	1614.2	1838.4	2164.2
25°	1620.4	1610.7	1505.5	1436.5	1406.9	1402.8	1483.5	1561.6	1585.1	1909.4	2184.7
27.5°	1790.4	1768.5	1564.7	1556.0	1458.5	1372.7	1485.0	1625.5	1669.4	1842.5	2261.3
30°	2021.8	2013.6	1742.4	1736.8	1581.6	1427.3	1567.8	1664.8	1638.3	1876.7	2312.3
32.5°	2254.6	2321.0	2043.7	1885.4	1769.0	1628.0	1544.3	1652.5	1700.0	1960.0	2406.3
35°	2536.0	2584.0	2301.6	2186.7	1927.8	1722.0	1700.0	1769.5	1789.9	2059.0	2513.0
37.5°	3028.3	2955.8	2715.3	2519.7	2383.8	2057.5	1949.3	1894.1	1941.6	2193.4	2731.1
40°	3391.9	3346.0	3049.8	2932.8	2620.3	2429.3	2146.4	2094.8	2147.9	2331.2	2882.8
42.5°	3830.6	3735.1	3456.3	3377.1	3055.4	2687.2	2400.2	2418.1	2384.9	2603.4	3148.8
45°	4227.4	4011.9	3856.6	3874.5	3702.9	3205.5	2823.5	2814.8	2787.3	2997.7	3428.7
47.5°	4494.5	4306.0	4154.9	4105.3	4084.9	4117.1	3435.3	3281.1	3260.7	3411.8	3869.4
50°	4638.0	4431.7	4244.7	4255.0	4669.6	4981.7	4066.5	3847.4	3855.1	4012.9	4472.0
52.5°	4541.4	4308.1	4110.9	4302.5	5123.1	5558.2	5111.4	4587.4	4765.1	4724.8	5280.4
55°	4095.6	3892.9	3753.0	4095.6	5172.6	6178.7	6397.8	5701.2	5661.4	5569.4	6104.6
57.5°	3345.4	3170.8	3084.5	3446.0	4630.8	6678.6	7689.8	6960.0	6620.4	6235.4	6788.9
60°	2492.6	2363.9	2274.0	2465.0	3648.8	6193.0	8536.0	8146.3	7753.1	6877.3	7403.8
62.5°	1846.1	1741.4	1645.9	1663.3	2512.5	5326.4	8860.7	9403.1	9177.4	7554.9	7983.9
65°	1473.3	1377.8	1310.9	1272.6	1556.0	4007.3	8408.8	10433.1	10693.6	8193.3	8402.7
67.5°	1203.2	1122.5	1089.3	1133.2	1220.5	2284.3	7201.6	11058.2	11436.1	8870.5	8505.8
70°	979.0	912.6	909.0	1027.5	1124.0	1392.6	5297.2	10626.7	10911.1	8985.9	7887.4
72.5°	682.3	653.2	699.6	867.6	1113.8	1159.7	3042.1	8793.9	8804.1	7936.4	6487.6
75°	386.1	381.5	455.0	692.0	1084.7	1148.0	1696.0	6214.4	6219.0	6002.5	4494.5
77.5°	212.4	198.7	265.0	467.8	931.5	1121.4	1093.9	4243.2	4134.4	3340.3	2052.9
80°	98.0	92.4	143.5	299.8	681.2	1060.7	876.8	2332.3	2103.0	1088.3	501.0
82.5°	40.3	38.3	65.9	192.5	430.5	854.4	738.9	1034.6	830.4	206.8	154.7
85°	7.1	7.7	27.1	116.4	241.0	393.7	599.0	491.3	361.0	57.2	84.8
87.5°	0.0	0.0	5.6	28.1	58.2	107.8	243.1	137.4	94.5	16.9	25.0
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°	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4	857.4
2.5°	1047.4	1038.7	950.9	955.0	961.1	955.5	954.5	929.9	907.5	981.5	980.5
5°	1324.7	1262.9	1202.1	1178.6	1128.1	1061.7	1062.2	1041.3	1019.8	1050.0	1050.0
7.5°	1522.3	1437.0	1359.9	1222.6	1088.8	967.7	957.0	928.4	895.7	935.0	942.7
10°	1568.3	1494.2	1394.7	1192.9	1066.3	948.3	818.6	711.9	662.3	639.4	635.3
12.5°	1709.7	1654.6	1431.9	1208.8	1026.5	826.8	614.3	487.7	401.4	394.8	385.6
15°	1804.2	1765.4	1468.7	1169.4	857.9	594.4	386.1	296.2	261.5	258.4	253.8
17.5°	1950.8	1883.4	1433.5	1044.3	671.0	392.2	259.4	233.9	238.0	247.2	240.0
20°	2010.5	1878.8	1356.9	863.0	471.4	263.0	225.2	211.4	222.1	230.8	226.7
22.5°	2071.8	1892.1	1288.9	711.4	307.9	217.5	200.7	193.5	194.6	203.2	203.8
25°	2071.3	1928.8	1210.3	554.1	229.3	193.5	181.3	172.1	168.5	174.7	173.1
27.5°	2171.9	1886.4	1066.8	411.1	201.7	173.1	161.4	150.1	137.4	143.5	143.5
30°	2172.4	1955.4	966.7	295.2	184.9	154.2	144.0	126.6	111.8	116.9	117.5
32.5°	2230.1	1895.6	874.3	225.7	171.6	143.0	120.5	104.7	96.0	99.1	99.1
35°	2296.0	1946.7	732.3	199.2	158.3	127.2	103.2	90.4	83.8	86.3	86.3
37.5°	2513.6	1936.0	633.7	185.4	149.6	114.9	94.0	79.7	76.6	78.1	80.2
40°	2592.2	2012.1	500.0	177.2	135.3	103.7	82.7	72.0	67.9	68.9	69.5
42.5°	2792.4	2028.9	399.3	170.6	122.6	89.9	73.5	65.9	60.8	60.8	62.3
45°	3013.5	2071.3	317.6	164.9	111.8	80.7	66.4	60.3	52.6	51.6	53.6
47.5°	3333.7	2233.7	258.9	153.7	99.1	75.1	61.3	52.1	46.0	43.9	46.0
50°	3869.4	2509.5	228.8	139.9	89.9	70.5	54.1	44.4	39.8	37.3	38.8
52.5°	4625.2	2985.9	213.0	127.2	81.7	63.3	48.5	38.8	34.2	32.2	33.2
55°	5464.8	3532.3	205.3	114.4	74.6	55.7	42.4	34.2	30.1	27.6	28.1
57.5°	6241.0	4046.1	197.6	102.1	67.4	49.5	37.3	30.1	26.0	23.5	24.0
60°	7006.0	4456.2	179.2	87.8	60.8	44.4	32.7	26.0	23.5	20.4	20.4
62.5°	7682.6	4701.3	152.7	76.1	54.6	39.3	29.1	23.5	21.4	18.4	18.4
65°	8143.2	4712.5	123.1	65.4	48.0	33.7	25.5	22.0	19.9	16.3	15.8
67.5°	8149.9	4406.1	98.6	58.2	42.4	29.6	23.0	20.9	18.4	15.3	14.3
70°	7294.5	3640.1	82.2	51.1	36.8	26.0	19.9	19.9	17.9	14.8	13.3
72.5°	5835.0	2781.7	68.9	44.4	32.7	22.5	18.4	18.9	17.4	14.8	13.3
75°	3922.0	1595.4	57.2	37.8	28.6	18.9	17.9	18.4	17.9	14.8	12.8
77.5°	1806.3	508.1	44.4	31.2	24.5	15.8	17.4	17.4	16.3	13.3	11.2
80°	407.0	125.1	32.2	23.0	19.9	11.7	15.8	14.3	12.8	9.2	6.6
82.5°	148.1	38.3	19.4	14.3	12.3	4.6	10.2	10.2	9.2	6.6	4.1
85°	84.8	19.9	10.7	9.2	6.6	2.0	5.6	6.1	5.1	4.6	2.0
87.5°	27.6	4.6	5.1	5.6	5.1	1.0	2.0	2.0	1.5	1.0	0.0
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)