

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: P367637

Luminaire Tested: **MSA-SA2D-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367637
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-830-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: 8784 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

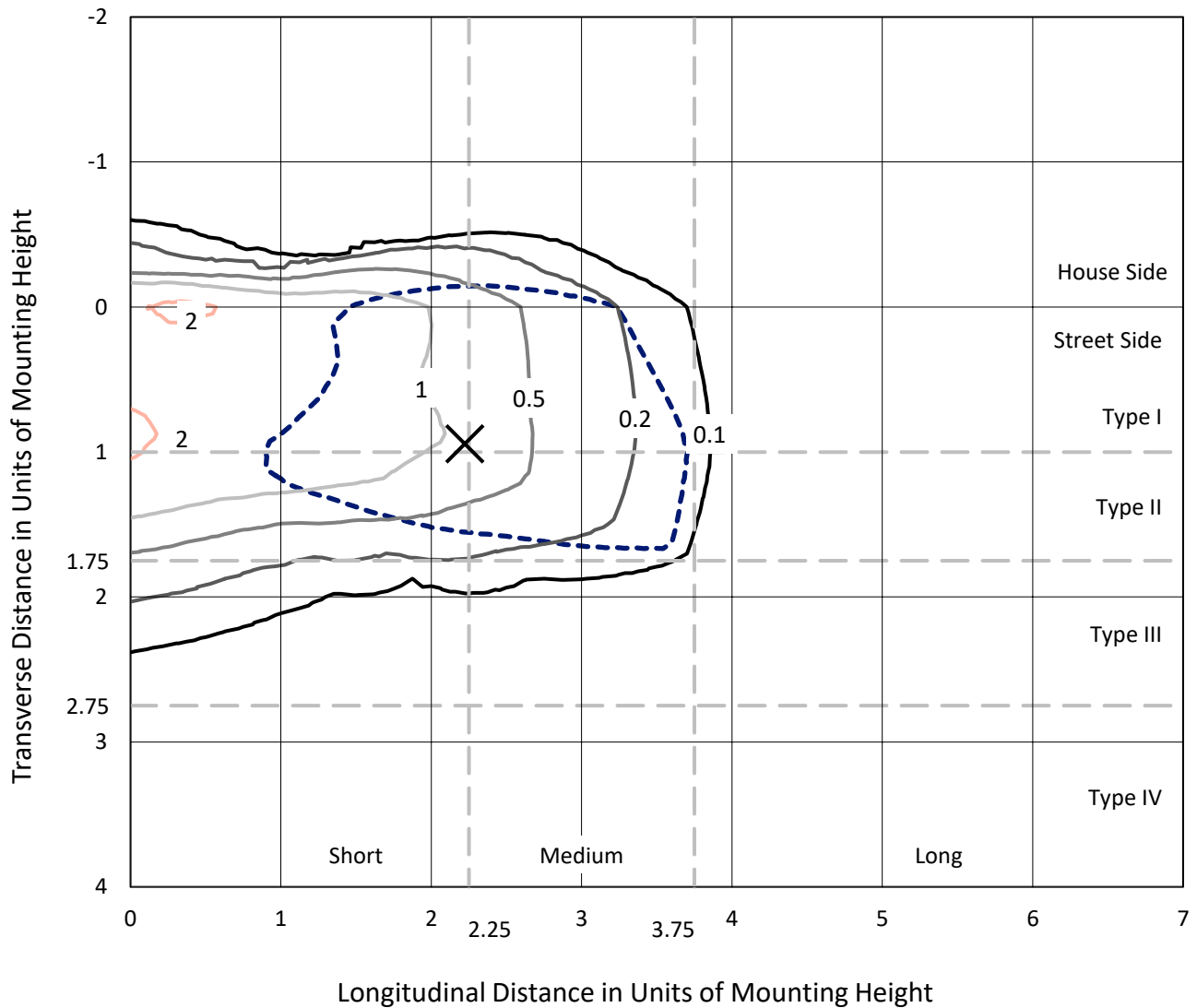
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

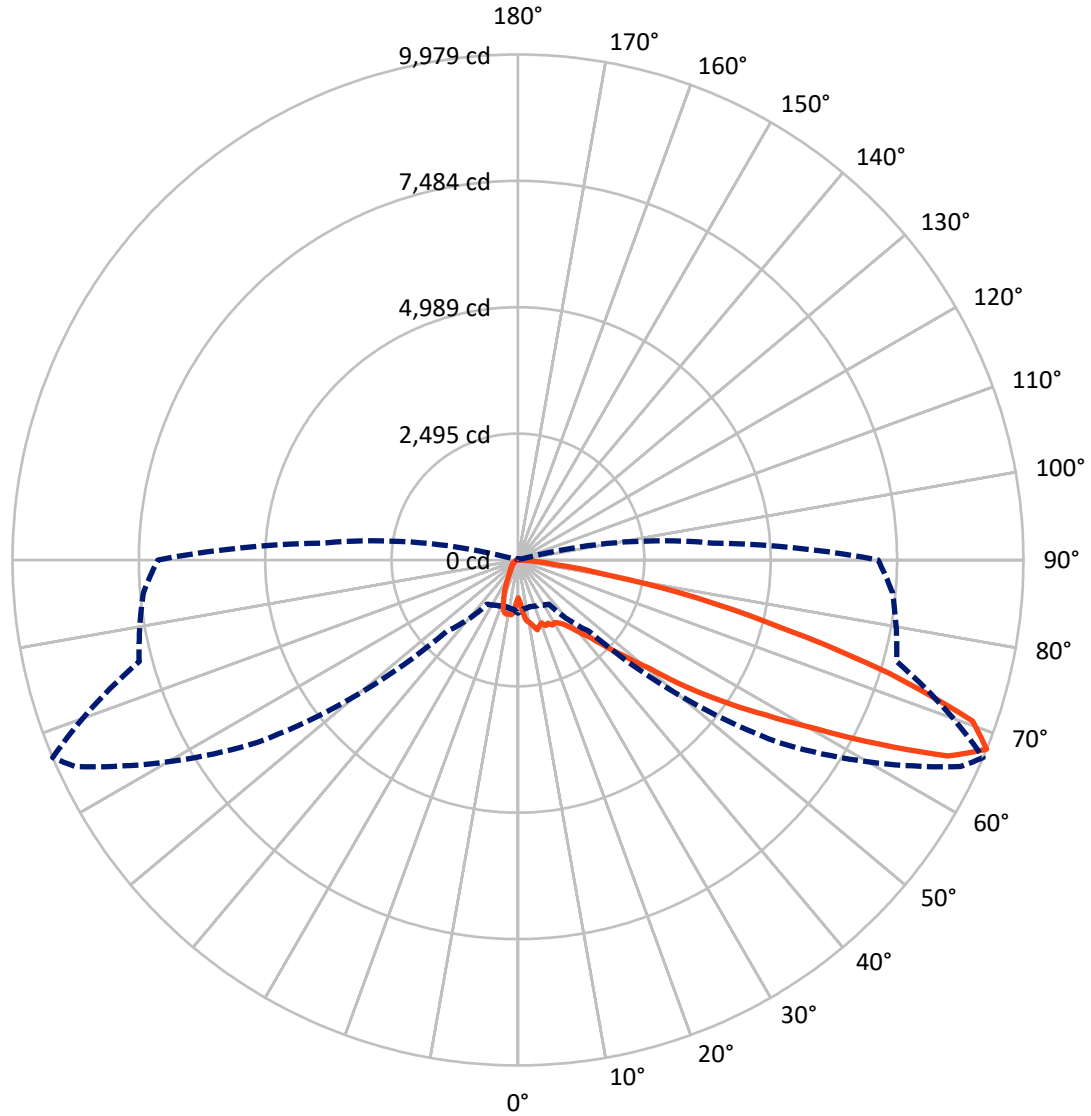
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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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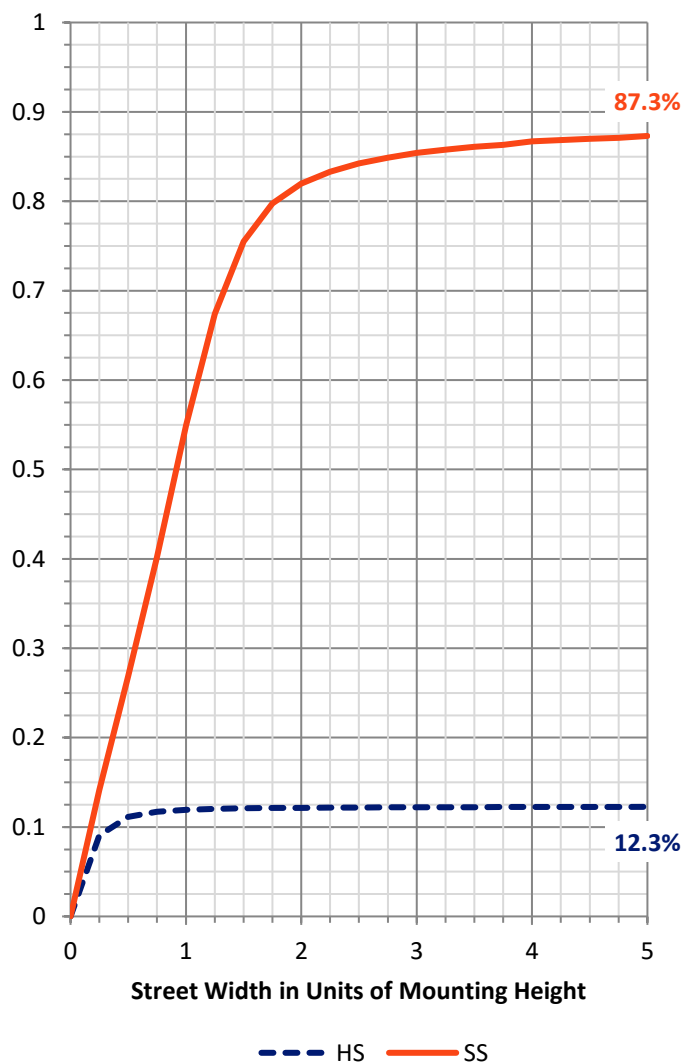
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1086.3	0.0	1086.3
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	7697.7	0.0	7697.7
	% Fixture	87.6	0.0	87.6
Total	Lumens	8784.0	0.0	8784.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.9	1.1
10°-20°	277.9	3.2
20°-30°	435.5	5.0
30°-40°	702.2	8.0
40°-50°	1290.2	14.7
50°-60°	2179.1	24.8
60°-70°	2409.0	27.4
70°-80°	1260.9	14.4
80°-90°	135.4	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°	8784.0	100.0
0°-180°	8784.0	100.0

Coefficient of Utilization

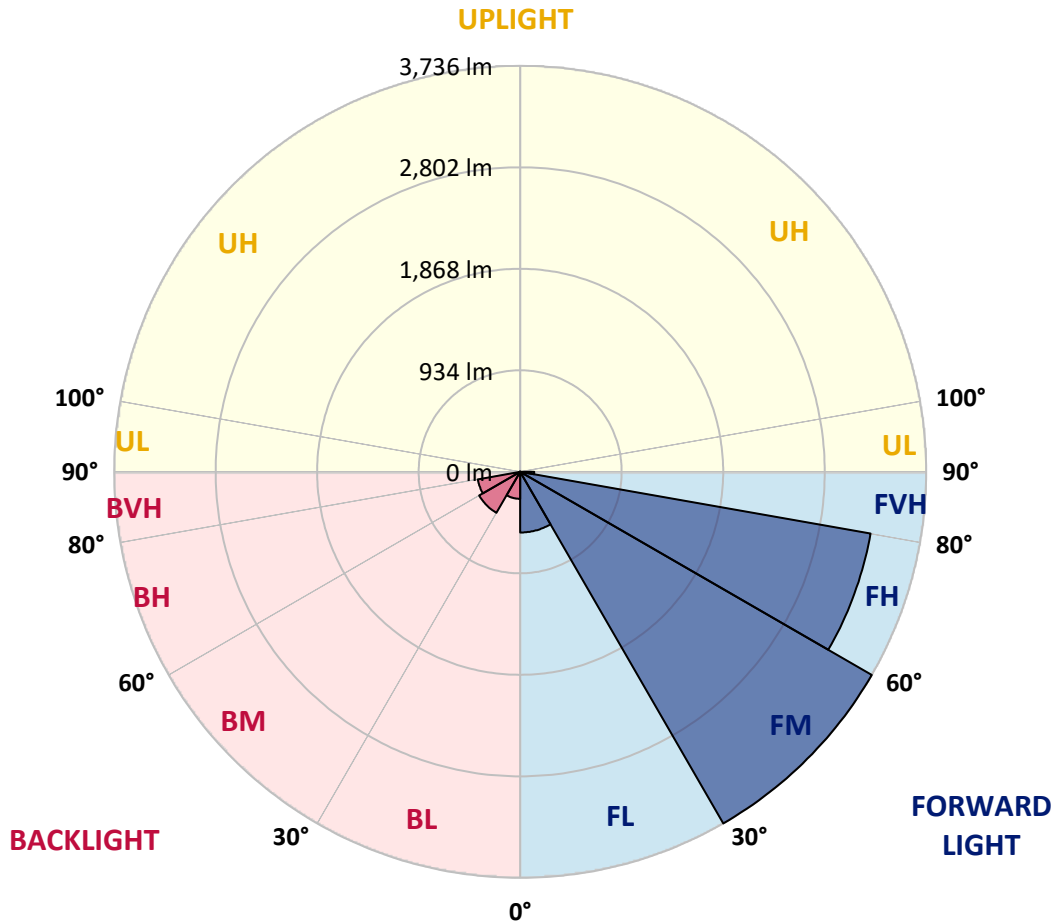


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	558.5	6.4			
FM (30°-60°)	3735.9	42.5			
FH (60°-80°)	3273.6	37.3			G2/5000
FVH (80°-90°)	129.6	1.5			G2/225
BL (0°-30°)	248.7	2.8	B1/500		
BM (30°-60°)	435.6	5.0	B1/1000		
BH (60°-80°)	396.3	4.5	B1/500		G1/500
BVH (80°-90°)	5.8	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°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	883.2	853.3	802.5	817.2	846.6	871.1	859.5	836.8	837.3	814.1	897.4
5°	1027.5	987.4	958.0	968.3	966.9	966.0	1020.9	1041.8	1050.7	1089.0	1145.6
7.5°	1069.0	1054.7	1024.0	1033.3	1002.6	1004.8	1101.1	1192.0	1206.2	1229.8	1330.5
10°	1052.9	1025.3	1036.4	1036.4	1036.9	1086.8	1151.4	1238.3	1255.7	1346.6	1357.3
12.5°	1035.6	1036.9	1081.0	1073.0	1133.6	1223.2	1245.0	1342.6	1334.1	1413.0	1530.2
15°	1100.2	1134.0	1105.5	1116.7	1122.4	1227.6	1262.8	1392.5	1429.9	1529.7	1605.9
17.5°	1211.1	1215.6	1156.3	1140.3	1182.2	1212.0	1282.9	1345.2	1370.2	1632.2	1740.0
20°	1231.2	1259.7	1199.5	1106.9	1195.5	1236.5	1286.0	1315.8	1326.5	1663.8	1815.8
22.5°	1351.9	1320.3	1224.0	1153.6	1179.0	1223.6	1254.3	1344.4	1408.5	1604.1	1888.4
25°	1413.9	1405.4	1313.6	1253.5	1227.6	1224.0	1294.4	1362.6	1383.1	1666.1	1906.2
27.5°	1562.2	1543.1	1365.3	1357.7	1272.6	1197.8	1295.8	1418.3	1456.6	1607.7	1973.1
30°	1764.1	1757.0	1520.4	1515.5	1380.0	1245.4	1368.0	1452.6	1429.5	1637.6	2017.6
32.5°	1967.3	2025.2	1783.3	1645.1	1543.5	1420.5	1347.5	1441.9	1483.4	1710.2	2099.6
35°	2212.8	2254.7	2008.3	1908.0	1682.1	1502.5	1483.4	1544.0	1561.8	1796.6	2192.8
37.5°	2642.4	2579.1	2369.2	2198.6	2080.0	1795.3	1700.8	1652.7	1694.1	1913.8	2383.0
40°	2959.6	2919.5	2661.1	2559.0	2286.3	2119.7	1872.8	1827.8	1874.2	2034.1	2515.4
42.5°	3342.4	3259.1	3015.8	2946.7	2666.0	2344.7	2094.3	2109.9	2080.9	2271.6	2747.5
45°	3688.6	3500.6	3365.1	3380.7	3231.0	2797.0	2463.7	2456.1	2432.0	2615.6	2991.7
47.5°	3921.7	3757.2	3625.3	3582.1	3564.3	3592.4	2997.5	2862.9	2845.1	2977.0	3376.3
50°	4046.9	3866.9	3703.8	3712.7	4074.5	4346.8	3548.3	3357.1	3363.8	3501.5	3902.1
52.5°	3962.7	3759.0	3587.0	3754.1	4470.2	4849.8	4459.9	4002.8	4157.8	4122.6	4607.4
55°	3573.7	3396.8	3274.7	3573.7	4513.4	5391.2	5582.4	4974.6	4939.8	4859.6	5326.6
57.5°	2919.1	2766.7	2691.4	3006.9	4040.6	5827.5	6709.7	6073.0	5776.7	5440.7	5923.7
60°	2174.9	2062.6	1984.2	2150.9	3183.8	5403.7	7448.1	7108.1	6765.0	6000.8	6460.2
62.5°	1610.8	1519.5	1436.1	1451.3	2192.3	4647.5	7731.5	8204.7	8007.7	6592.1	6966.4
65°	1285.5	1202.2	1143.8	1110.4	1357.7	3496.6	7337.1	9103.5	9330.7	7149.1	7331.8
67.5°	1049.8	979.4	950.4	988.8	1065.0	1993.1	6283.8	9648.9	9978.6	7739.9	7421.8
70°	854.2	796.3	793.2	896.5	980.7	1215.1	4622.1	9272.3	9520.5	7840.7	6882.2
72.5°	595.3	569.9	610.5	757.1	971.8	1011.9	2654.4	7673.1	7682.0	6925.0	5660.8
75°	336.9	332.9	397.0	603.8	946.4	1001.7	1479.8	5422.4	5426.4	5237.5	3921.7
77.5°	185.4	173.3	231.3	408.2	812.8	978.5	954.5	3702.4	3607.5	2914.6	1791.3
80°	85.6	80.7	125.2	261.6	594.4	925.5	765.1	2035.0	1835.0	949.6	437.1
82.5°	35.2	33.4	57.5	168.0	375.6	745.5	644.8	902.8	724.5	180.5	135.0
85°	6.2	6.7	23.6	101.6	210.3	343.6	522.7	428.7	315.0	49.9	74.0
87.5°	0.0	0.0	4.9	24.5	50.8	94.0	212.1	119.9	82.4	14.7	21.8
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°	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2	748.2
2.5°	913.9	906.3	829.7	833.3	838.6	833.7	832.8	811.4	791.8	856.4	855.5
5°	1155.9	1102.0	1048.9	1028.4	984.3	926.4	926.8	908.6	889.8	916.1	916.1
7.5°	1328.3	1253.9	1186.6	1066.7	950.0	844.4	835.0	810.1	781.6	815.9	822.6
10°	1368.4	1303.8	1216.9	1040.9	930.4	827.5	714.3	621.2	577.9	557.9	554.3
12.5°	1491.8	1443.7	1249.4	1054.7	895.6	721.4	536.0	425.5	350.2	344.4	336.4
15°	1574.3	1540.4	1281.5	1020.4	748.6	518.7	336.9	258.4	228.1	225.5	221.5
17.5°	1702.2	1643.3	1250.8	911.2	585.5	342.2	226.4	204.1	207.6	215.7	209.4
20°	1754.3	1639.3	1183.9	753.1	411.3	229.5	196.5	184.5	193.8	201.4	197.8
22.5°	1807.8	1650.9	1124.7	620.7	268.7	189.8	175.1	168.9	169.8	177.3	177.8
25°	1807.3	1683.0	1056.1	483.5	200.1	168.9	158.2	150.2	147.0	152.4	151.1
27.5°	1895.1	1646.0	930.8	358.7	176.0	151.1	140.8	131.0	119.9	125.2	125.2
30°	1895.6	1706.2	843.5	257.6	161.3	134.6	125.7	110.5	97.6	102.0	102.5
32.5°	1945.9	1654.0	762.9	197.0	149.7	124.8	105.2	91.3	83.8	86.4	86.4
35°	2003.4	1698.6	639.0	173.8	138.1	111.0	90.0	78.9	73.1	75.3	75.3
37.5°	2193.2	1689.2	553.0	161.8	130.6	100.3	82.0	69.5	66.8	68.2	70.0
40°	2261.8	1755.6	436.2	154.6	118.1	90.5	72.2	62.8	59.3	60.2	60.6
42.5°	2436.5	1770.3	348.5	148.8	106.9	78.4	64.2	57.5	53.0	53.0	54.4
45°	2629.4	1807.3	277.2	143.9	97.6	70.4	57.9	52.6	45.9	45.0	46.8
47.5°	2908.8	1949.0	225.9	134.1	86.4	65.5	53.5	45.5	40.1	38.3	40.1
50°	3376.3	2189.6	199.6	122.1	78.4	61.5	47.2	38.8	34.8	32.5	33.9
52.5°	4035.7	2605.4	185.8	111.0	71.3	55.3	42.3	33.9	29.9	28.1	29.0
55°	4768.3	3082.2	179.1	99.8	65.1	48.6	37.0	29.9	26.3	24.1	24.5
57.5°	5445.6	3530.4	172.4	89.1	58.8	43.2	32.5	26.3	22.7	20.5	20.9
60°	6113.1	3888.2	156.4	76.6	53.0	38.8	28.5	22.7	20.5	17.8	17.8
62.5°	6703.5	4102.1	133.2	66.4	47.7	34.3	25.4	20.5	18.7	16.0	16.0
65°	7105.4	4111.9	107.4	57.0	41.9	29.4	22.3	19.2	17.4	14.3	13.8
67.5°	7111.2	3844.6	86.0	50.8	37.0	25.8	20.1	18.3	16.0	13.4	12.5
70°	6364.8	3176.2	71.7	44.6	32.1	22.7	17.4	17.4	15.6	12.9	11.6
72.5°	5091.3	2427.1	60.2	38.8	28.5	19.6	16.0	16.5	15.2	12.9	11.6
75°	3422.2	1392.0	49.9	33.0	25.0	16.5	15.6	16.0	15.6	12.9	11.1
77.5°	1576.1	443.4	38.8	27.2	21.4	13.8	15.2	15.2	14.3	11.6	9.8
80°	355.1	109.2	28.1	20.1	17.4	10.2	13.8	12.5	11.1	8.0	5.8
82.5°	129.2	33.4	16.9	12.5	10.7	4.0	8.9	8.9	8.0	5.8	3.6
85°	74.0	17.4	9.4	8.0	5.8	1.8	4.9	5.3	4.5	4.0	1.8
87.5°	24.1	4.0	4.5	4.9	4.5	0.9	1.8	1.8	1.3	0.9	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)