

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: P596737

Luminaire Tested: **MSA-SA3D-827-U-T4W-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596737
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11031 lumens
Efficiency: N/A
Efficacy: 57.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

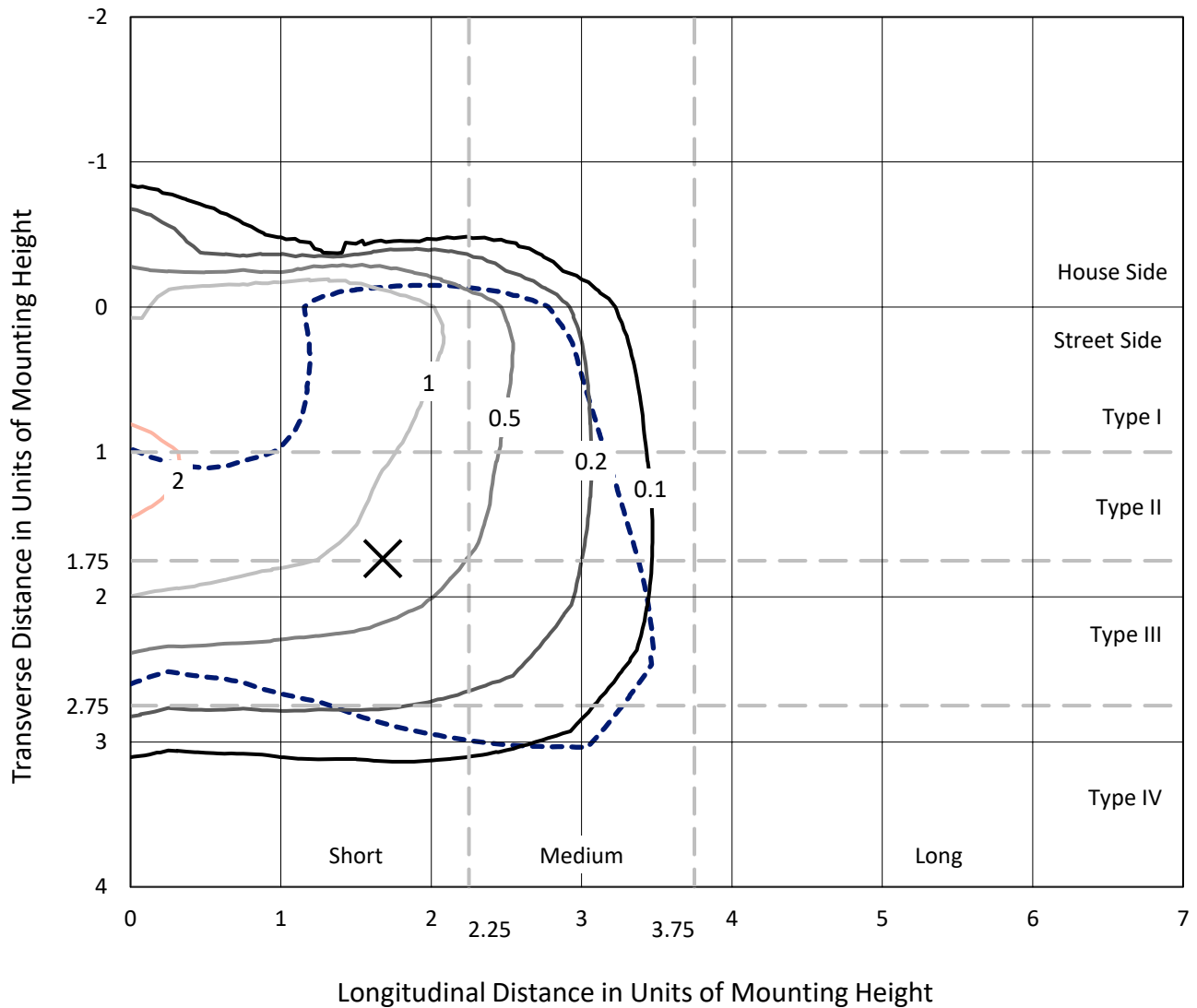
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

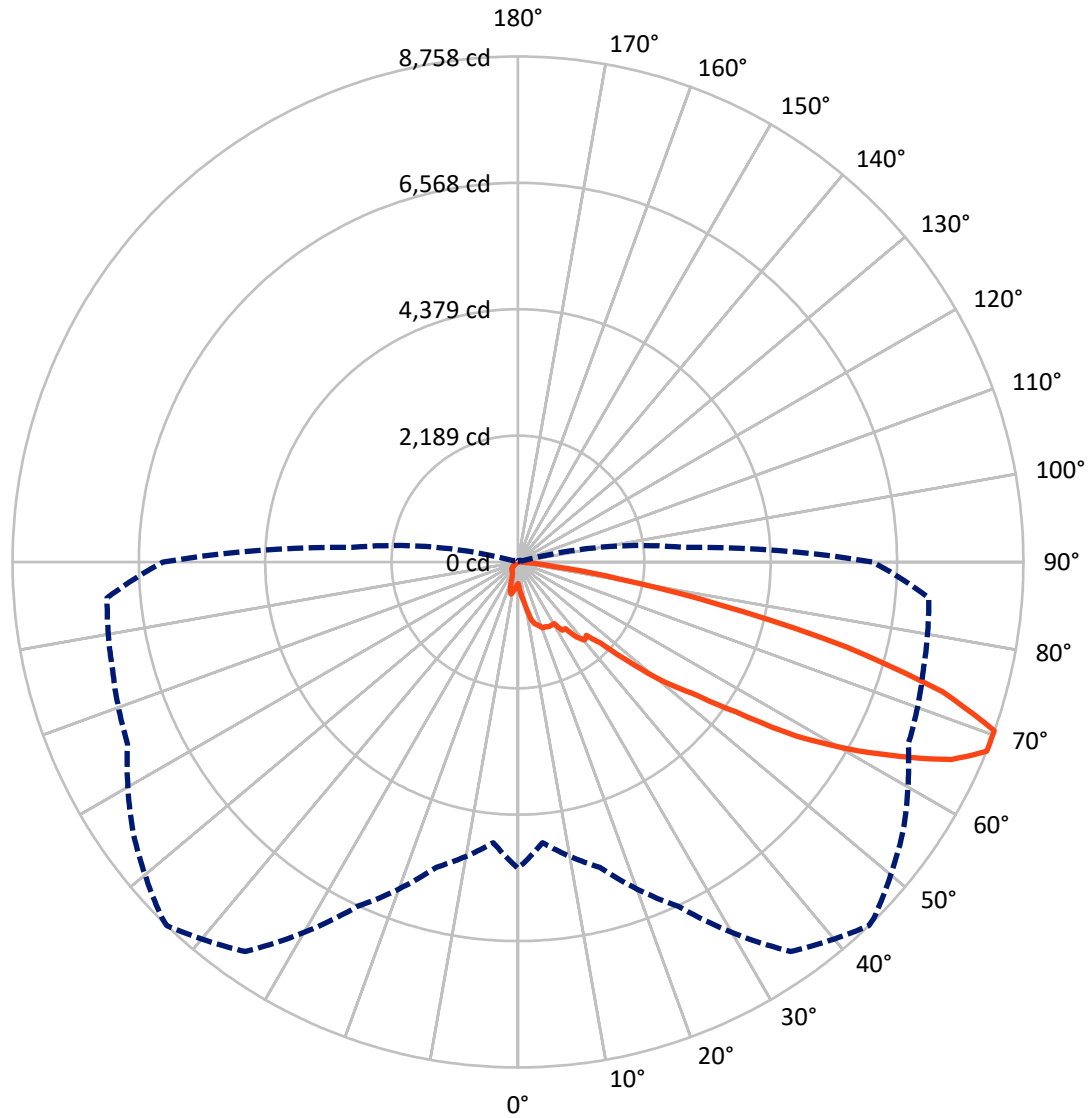
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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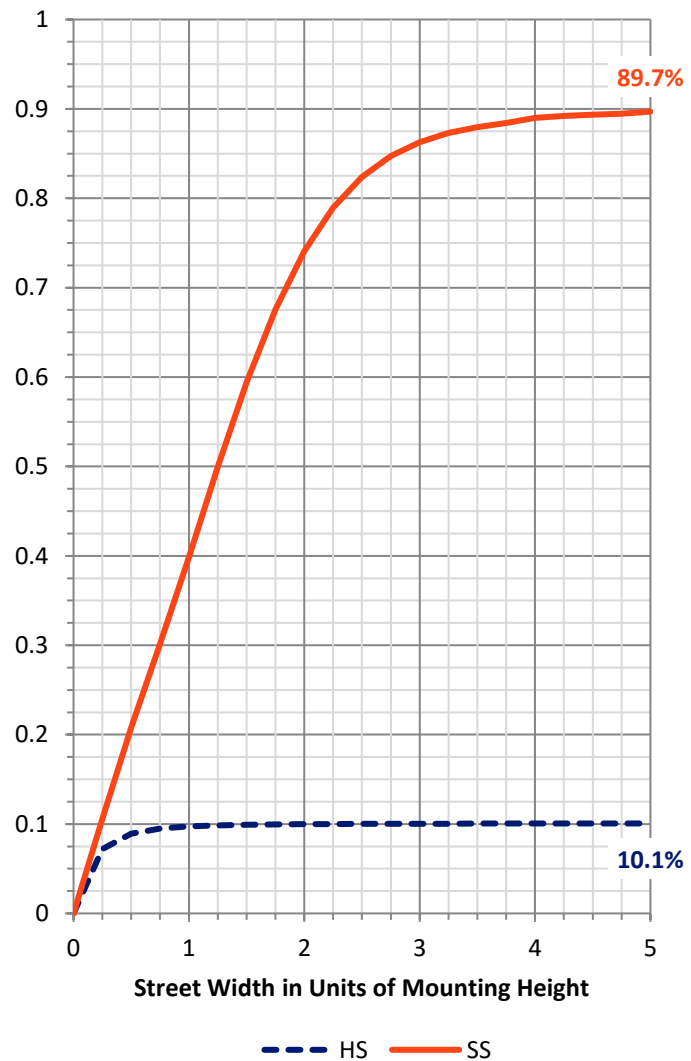
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1120.5	0.0	1120.5
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	9910.5	0.0	9910.5
	% Fixture	89.8	0.0	89.8
Total	Lumens	11031.0	0.0	11031.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.1	0.5
10°-20°	230.6	2.1
20°-30°	408.5	3.7
30°-40°	664.0	6.0
40°-50°	1328.8	12.0
50°-60°	2726.1	24.7
60°-70°	3744.9	33.9
70°-80°	1760.1	16.0
80°-90°	112.7	1.0
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°	11031.0	100.0
0°-180°	11031.0	100.0



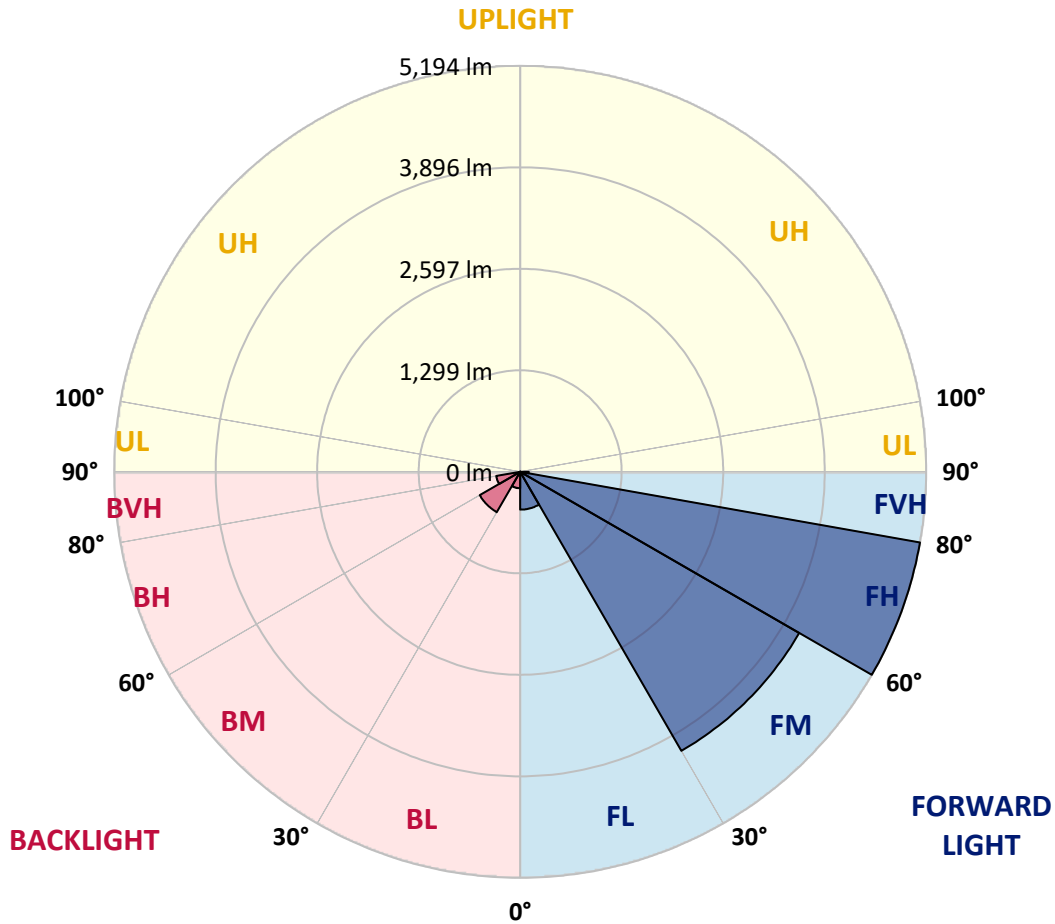
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	483.8	4.4			
FM (30°-60°)	4122.1	37.4			
FH (60°-80°)	5194.1	47.1			G3/7500
FVH (80°-90°)	110.4	1.0			G2/225
BL (0°-30°)	210.4	1.9	B1/500		
BM (30°-60°)	596.9	5.4	B1/1000		
BH (60°-80°)	310.9	2.8	B1/500		G1/500
BVH (80°-90°)	2.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7
2.5°	472.6	457.4	435.5	440.4	442.8	449.5	450.1	441.6	417.3	410.6	440.4
5°	662.4	625.3	618.6	604.6	576.6	561.4	557.8	573.0	553.5	547.4	555.4
7.5°	846.1	814.5	779.8	761.0	702.6	666.7	664.8	670.9	674.6	653.3	664.2
10°	968.4	933.7	926.4	882.0	831.5	823.0	819.3	796.2	777.4	761.6	708.6
12.5°	1079.1	1078.5	1091.9	1028.0	1020.1	1028.6	1025.6	942.8	924.0	857.7	842.5
15°	1226.3	1262.8	1205.0	1151.5	1083.3	1112.5	1104.6	1051.7	1038.9	993.9	928.8
17.5°	1379.0	1388.7	1292.0	1209.9	1192.2	1153.9	1161.8	1142.9	1078.5	1114.4	1049.9
20°	1382.6	1403.9	1300.5	1164.8	1219.0	1217.2	1217.8	1199.5	1114.4	1198.3	1139.3
22.5°	1433.7	1381.4	1285.3	1198.9	1208.6	1217.8	1227.5	1205.0	1186.7	1207.4	1218.4
25°	1413.0	1392.3	1299.9	1242.7	1233.6	1240.9	1243.3	1271.9	1260.3	1310.2	1282.9
27.5°	1466.6	1436.7	1271.3	1281.6	1249.4	1240.9	1226.3	1321.8	1355.8	1316.3	1389.3
30°	1558.4	1554.1	1320.6	1335.8	1310.8	1236.0	1274.9	1399.6	1442.2	1417.9	1506.7
32.5°	1702.0	1716.6	1464.7	1366.2	1379.0	1412.4	1397.8	1399.6	1507.3	1561.4	1632.0
35°	1905.7	1897.8	1605.2	1481.8	1414.8	1420.3	1441.0	1540.2	1679.4	1675.8	1750.6
37.5°	2306.0	2219.6	1854.0	1599.8	1619.8	1647.2	1632.0	1765.2	1778.6	1783.5	1962.3
40°	2896.0	2781.0	2246.4	1848.5	1655.1	1776.2	1768.9	1801.7	1891.1	1924.6	2185.5
42.5°	3673.4	3518.9	2936.8	2306.0	1825.4	1742.1	1787.1	1849.2	2149.6	2245.1	2531.0
45°	4532.3	4219.6	3625.3	2958.0	2252.4	1993.9	2028.0	2143.6	2560.2	2718.4	3034.1
47.5°	5088.8	4813.9	4307.2	3535.9	2697.7	2562.1	2565.1	2590.0	3042.6	3335.8	3759.1
50°	5572.4	5279.8	4809.6	4139.9	3485.4	3228.7	3170.3	3055.4	3657.0	4057.8	4527.4
52.5°	6254.9	5913.0	5312.1	4848.6	4383.8	3779.2	3758.5	3797.5	4381.4	4802.9	5315.1
55°	6870.5	6455.0	5881.4	5589.4	5408.2	4588.2	4605.9	4670.9	5311.5	5534.7	6015.8
57.5°	7142.4	6692.2	6397.2	6265.8	6169.1	5693.5	5633.8	5594.9	6045.0	6130.2	6750.0
60°	7320.6	6892.4	6758.5	6789.0	7082.1	6577.3	6523.1	6296.9	6652.1	6722.0	7408.2
62.5°	7208.1	6817.5	6846.1	7099.8	7750.6	7418.5	7262.2	6883.8	7148.4	7205.0	7880.8
65°	6499.4	6092.5	6459.9	7073.6	8260.4	8252.5	8180.1	7425.8	7423.4	7495.8	7917.3
67.5°	5309.0	4882.0	5476.3	6583.4	8239.1	8757.9	8723.9	8144.8	7462.9	7269.5	7144.8
70°	3691.0	3320.6	3994.5	5436.8	7504.9	8754.3	8699.6	8627.8	7150.3	6257.3	5539.6
72.5°	1917.9	1714.1	2341.9	3746.4	5982.4	7691.6	7872.3	7754.3	6105.3	4546.2	3262.2
75°	651.5	584.6	965.9	1988.5	3976.9	5873.5	6085.2	5965.4	4146.6	2439.2	1290.2
77.5°	252.4	234.8	346.1	807.2	1995.1	3579.1	3809.0	3686.8	2223.9	893.6	303.5
80°	143.6	138.7	191.0	363.7	879.6	1780.4	1942.2	1761.6	801.7	301.1	79.1
82.5°	60.8	62.7	106.4	196.5	442.2	628.3	700.7	639.3	335.8	206.2	29.2
85°	13.4	16.4	50.5	109.5	185.5	179.4	188.0	208.6	206.2	151.5	12.8
87.5°	0.0	0.0	15.8	29.8	44.4	29.2	23.1	40.8	63.3	60.8	5.5
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°	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7	371.7
2.5°	445.9	439.8	401.5	399.0	401.5	394.8	394.2	380.2	381.4	413.0	415.5
5°	555.4	524.9	492.1	481.8	472.0	450.1	462.3	462.3	462.3	482.4	488.4
7.5°	654.5	613.7	567.5	528.6	490.9	463.5	482.4	495.7	503.7	529.8	542.0
10°	699.5	659.4	618.0	562.7	533.5	523.1	501.2	489.7	503.7	498.2	504.9
12.5°	795.6	759.1	688.0	630.8	608.9	573.6	509.1	464.1	434.3	429.4	428.2
15°	889.3	866.8	771.3	694.7	618.6	537.1	427.0	367.4	335.8	330.3	330.9
17.5°	1007.9	975.7	835.2	725.1	596.1	449.5	329.7	278.6	276.2	289.5	290.8
20°	1087.0	1034.1	867.4	700.1	521.9	340.0	257.9	245.7	265.2	289.5	287.1
22.5°	1162.4	1105.2	910.0	678.2	404.5	257.9	237.2	238.4	254.9	281.0	287.7
25°	1212.3	1191.6	962.3	627.1	308.4	223.2	226.9	236.0	250.0	274.9	274.9
27.5°	1362.5	1265.8	956.2	528.0	237.2	208.0	216.5	228.1	235.4	265.2	268.2
30°	1453.8	1422.1	987.8	427.0	208.0	188.6	205.0	215.3	220.2	254.3	255.5
32.5°	1565.7	1495.7	1026.2	315.1	193.4	187.3	183.7	191.6	205.6	235.4	237.2
35°	1702.0	1681.3	971.4	247.6	188.6	175.2	167.9	172.1	181.3	201.3	205.6
37.5°	1979.9	1857.1	938.6	212.3	188.6	170.9	163.0	152.1	153.3	167.3	175.2
40°	2214.1	2176.4	846.7	206.2	180.0	164.8	145.4	132.0	122.9	127.1	130.2
42.5°	2644.2	2469.6	728.1	203.2	172.1	149.0	123.5	109.5	95.5	96.7	101.6
45°	3166.1	2789.5	622.3	200.1	166.7	133.2	104.0	87.6	73.0	73.6	78.5
47.5°	3863.2	3256.1	493.9	191.0	156.9	118.6	83.9	66.9	58.4	60.2	64.5
50°	4655.1	3665.5	390.5	177.0	145.4	104.6	68.1	54.1	51.1	52.9	57.8
52.5°	5362.6	3967.2	322.4	164.2	129.0	85.2	57.2	48.1	46.8	48.1	51.7
55°	5991.5	4142.4	269.5	149.6	110.7	68.7	51.7	44.4	43.8	43.2	45.6
57.5°	6581.5	4192.8	210.5	126.5	90.0	59.6	48.1	41.4	40.1	38.3	40.1
60°	7011.6	4106.5	154.5	101.6	73.6	54.1	45.0	37.1	35.3	32.2	33.5
62.5°	7219.0	3869.8	116.8	81.5	62.7	49.3	40.1	32.2	29.8	26.2	26.8
65°	7021.9	3479.9	91.8	68.7	53.5	41.4	34.1	27.4	24.3	20.7	20.7
67.5°	6149.1	2886.9	77.9	59.6	45.0	35.3	28.0	24.9	20.1	17.0	16.4
70°	4513.4	2076.7	66.9	52.3	38.9	30.4	23.7	22.5	19.5	16.4	15.2
72.5°	2547.5	1175.2	57.2	46.2	32.8	25.5	20.1	20.7	18.9	15.2	14.0
75°	972.0	396.0	47.4	38.3	26.8	19.5	17.0	17.0	17.0	12.8	10.9
77.5°	240.9	101.0	37.7	31.0	21.3	12.8	14.0	14.6	14.6	10.9	7.9
80°	66.3	34.1	22.5	22.5	15.2	7.3	9.7	9.7	7.9	3.6	0.0
82.5°	24.3	12.8	7.9	9.7	6.7	2.4	3.6	2.4	1.8	0.0	0.0
85°	10.3	6.7	4.9	5.5	3.0	0.0	0.6	1.2	0.0	0.0	0.0
87.5°	4.3	3.0	2.4	2.4	1.2	0.0	0.0	0.0	0.0	0.0	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)