

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: P368081

Luminaire Tested: **MSA-SA3D-730-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368081
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-730-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14992 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

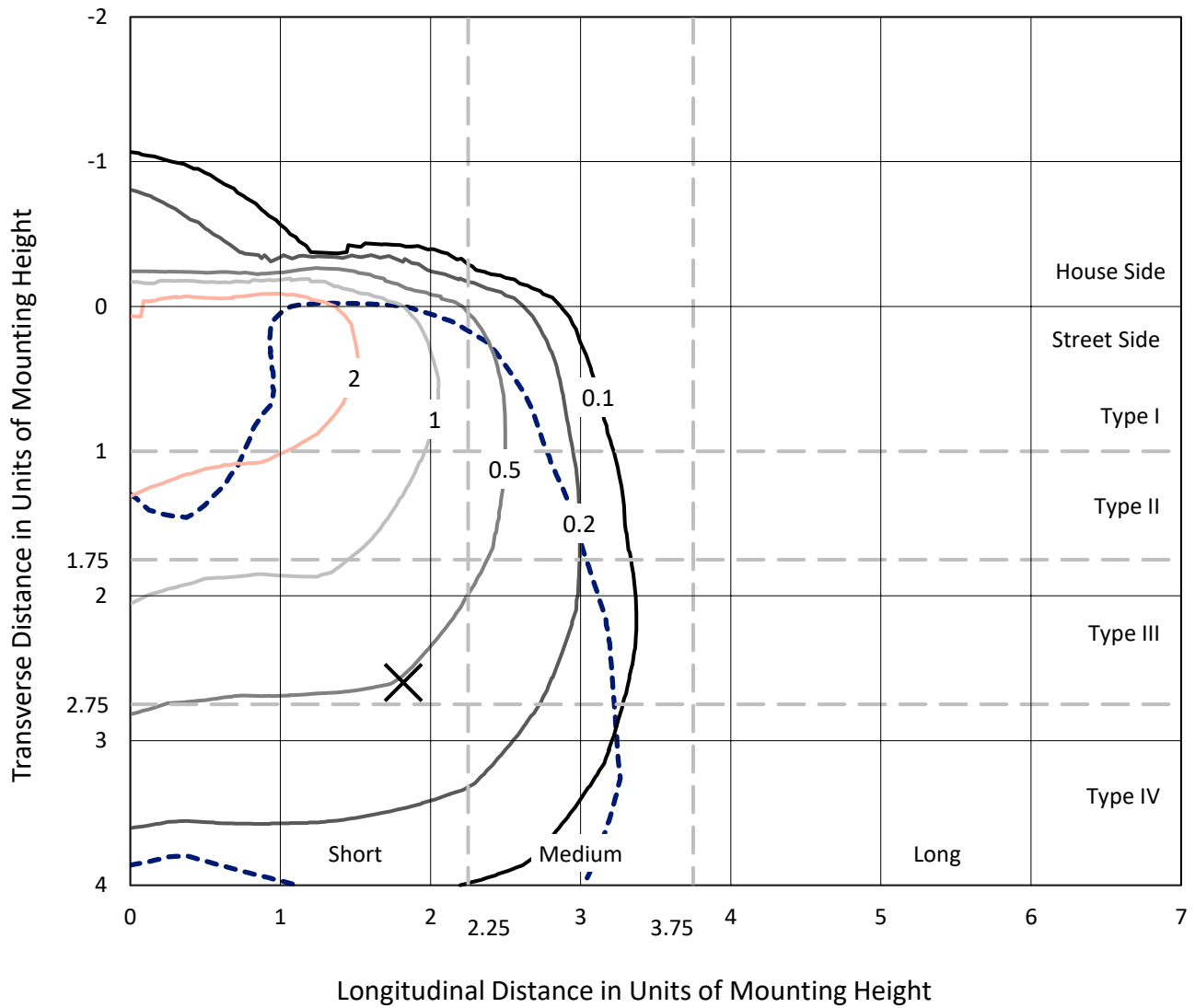
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

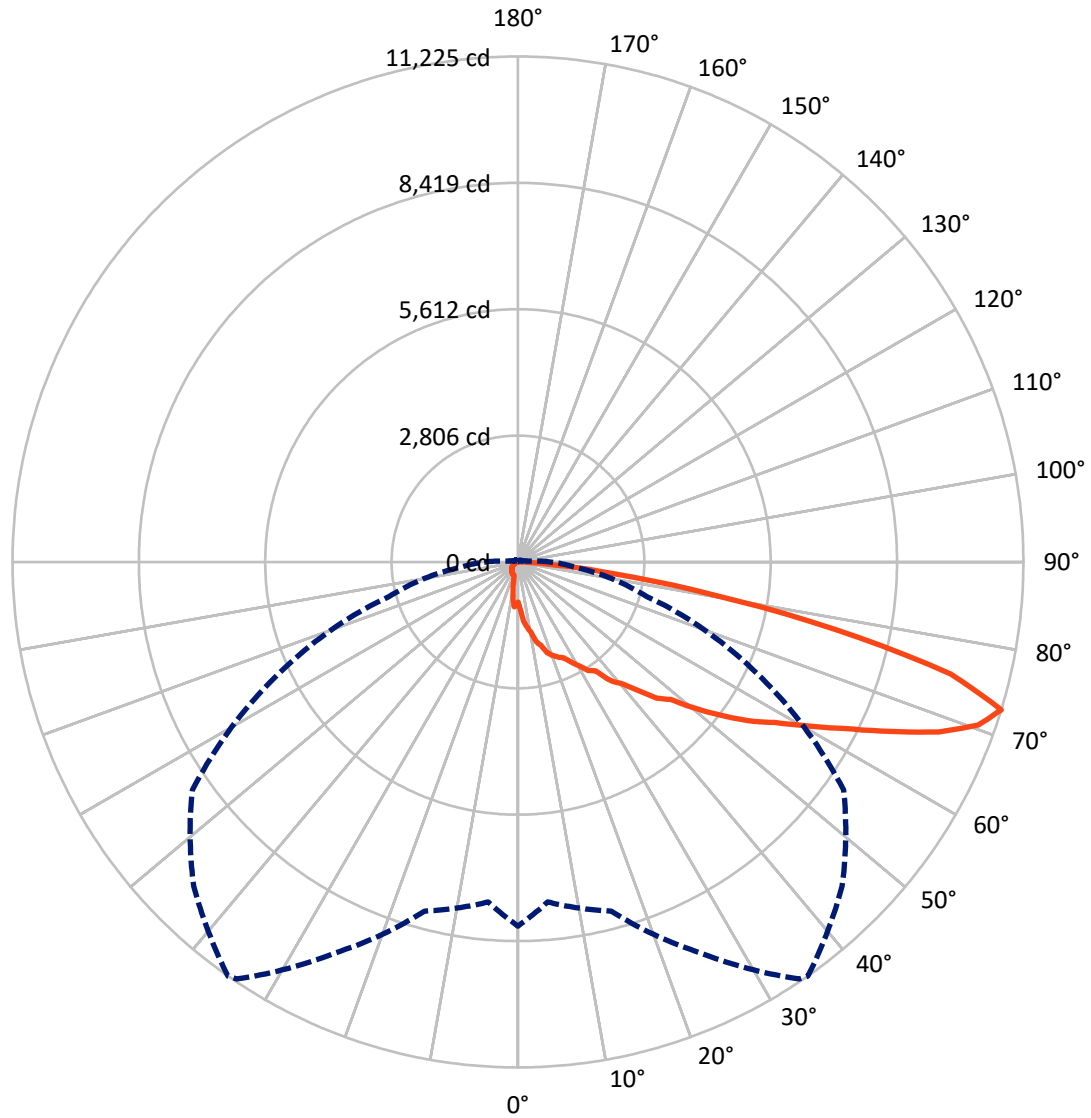
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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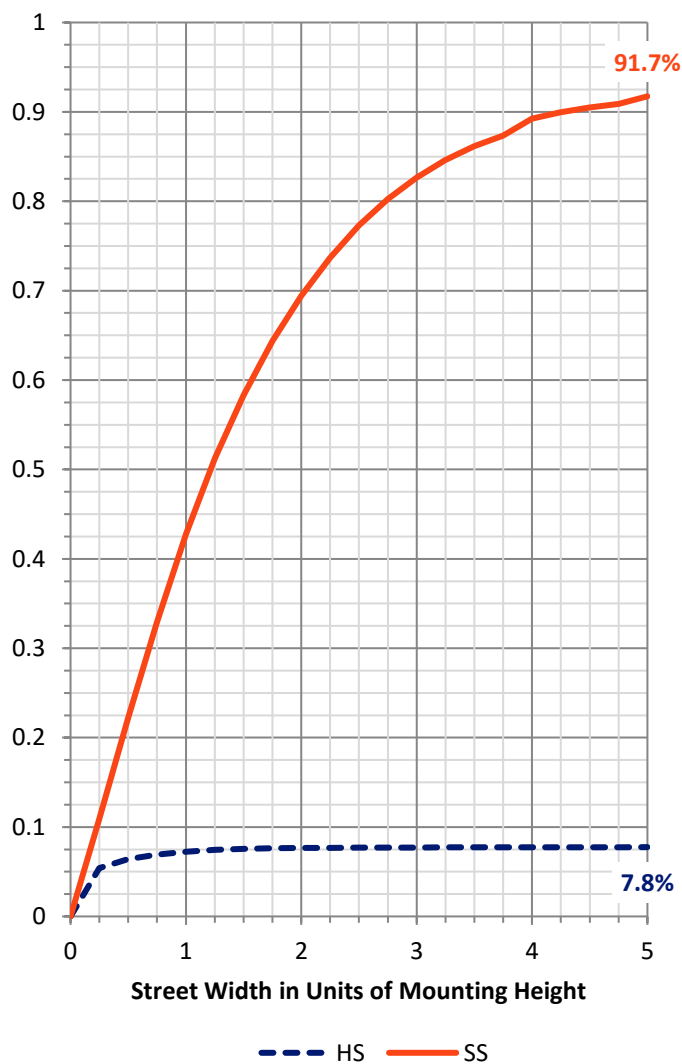
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1169.4	0.0	1169.4
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	13822.6	0.0	13822.6
	% Fixture	92.2	0.0	92.2
Total	Lumens	14992.0	0.0	14992.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.9	0.8
10°-20°	383.7	2.6
20°-30°	698.7	4.7
30°-40°	1205.2	8.0
40°-50°	2142.4	14.3
50°-60°	3196.9	21.3
60°-70°	4084.4	27.2
70°-80°	2841.7	19.0
80°-90°	325.1	2.2
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°	14992.0	100.0
0°-180°	14992.0	100.0

Coefficient of Utilization



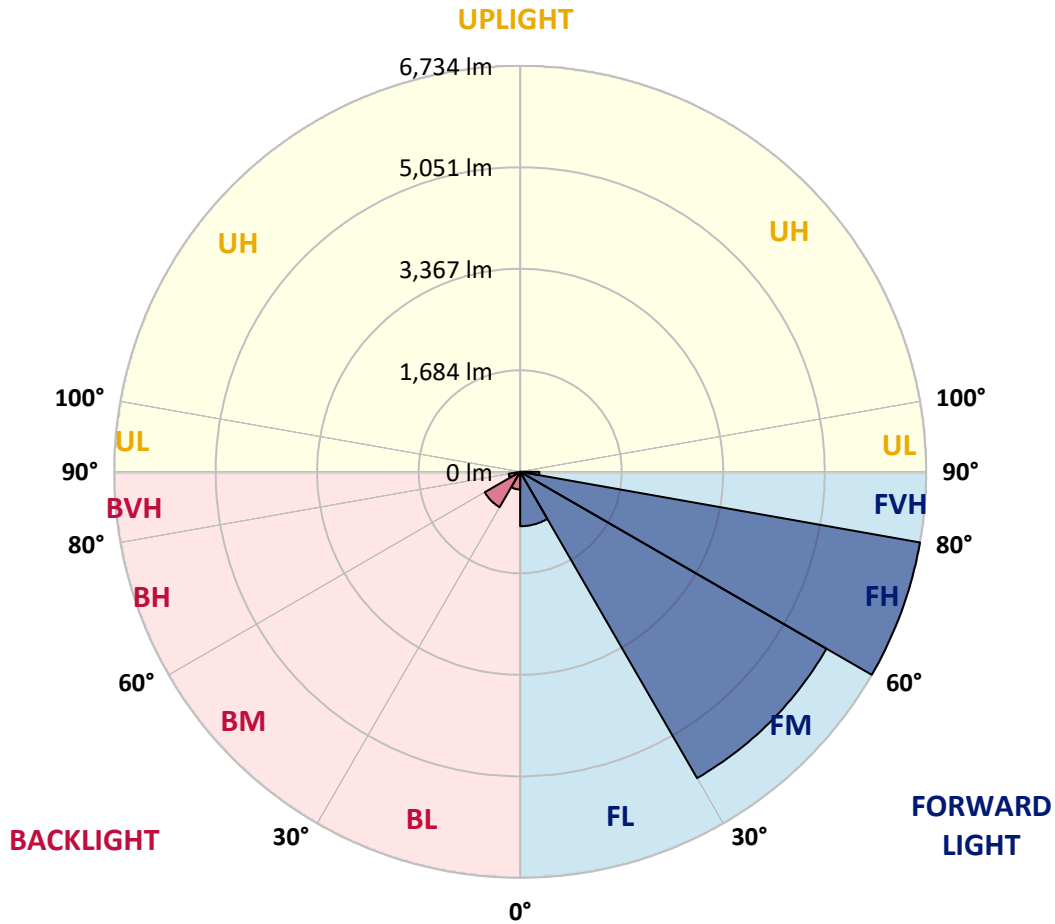
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	902.2	6.0			
FM (30°-60°)	5866.4	39.1			
FH (60°-80°)	6734.4	44.9			G3/7500
FVH (80°-90°)	319.6	2.1			G3/500
BL (0°-30°)	294.1	2.0	B1/500		
BM (30°-60°)	678.1	4.5	B1/1000		
BH (60°-80°)	191.7	1.3	B1/500		G1/500
BVH (80°-90°)	5.5	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°	34°	35°	45°	55°	65°	75°	85°
0°	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1
2.5°	1136.5	1092.0	1019.7	1025.0	1057.4	1064.1	1073.9	1048.3	1025.7	985.8	1063.4
5°	1456.0	1392.0	1351.3	1338.5	1319.6	1321.1	1275.2	1291.8	1287.2	1316.6	1352.0
7.5°	1636.2	1600.7	1549.5	1535.2	1465.8	1458.3	1401.8	1477.9	1485.4	1474.9	1532.9
10°	1707.8	1661.0	1667.1	1613.6	1578.9	1587.9	1597.0	1603.0	1612.8	1622.6	1551.8
12.5°	1750.0	1758.3	1840.4	1784.6	1819.3	1819.3	1880.3	1815.5	1817.8	1747.0	1759.0
15°	1939.9	1985.9	1948.9	1948.2	1910.5	1920.3	1991.1	1939.9	1966.3	1945.2	1863.8
17.5°	2178.0	2187.1	2117.0	2086.1	2120.0	2120.8	2090.6	2088.4	1996.4	2151.7	2052.9
20°	2254.2	2305.4	2205.9	2085.3	2226.3	2219.5	2217.2	2181.8	2028.8	2244.4	2163.0
22.5°	2461.4	2388.3	2320.5	2241.3	2296.4	2296.4	2288.1	2210.4	2150.9	2236.1	2270.7
25°	2526.2	2535.3	2447.1	2421.5	2423.0	2355.1	2349.1	2316.0	2258.7	2404.1	2334.8
27.5°	2749.3	2745.5	2533.8	2605.4	2514.2	2514.9	2348.4	2423.0	2432.8	2412.4	2490.0
30°	2968.6	3029.7	2710.1	2800.6	2704.8	2676.2	2513.4	2579.7	2597.1	2573.7	2671.7
32.5°	3248.2	3337.9	3027.4	2938.5	2792.3	2873.7	2761.4	2604.6	2690.5	2899.3	2954.3
35°	3544.4	3588.1	3257.3	3132.9	2967.9	2967.1	2963.3	2976.2	3071.1	3306.2	3353.0
37.5°	4076.5	3973.2	3674.0	3389.1	3426.1	3343.9	3286.7	3346.9	3445.7	3833.0	4032.8
40°	4373.4	4298.8	3877.5	3708.7	3525.6	3555.7	3711.0	3704.2	3967.2	4372.7	4671.9
42.5°	4662.1	4591.2	4176.7	4040.3	3805.2	3887.3	3955.1	4041.1	4579.9	5234.1	5398.4
45°	4919.1	4711.0	4418.6	4423.9	4301.8	4311.6	4431.4	4510.6	5289.8	5960.6	6075.9
47.5°	5074.3	4903.2	4622.9	4617.6	4610.1	4564.1	5128.6	5200.9	5855.8	6652.4	6663.0
50°	5292.9	5078.8	4833.1	4837.7	5011.8	5109.0	5782.7	5775.2	6402.2	7229.7	6986.3
52.5°	5564.9	5303.4	5032.9	5234.1	5503.1	5661.4	6208.5	6431.6	6989.3	7592.2	7112.9
55°	5913.1	5586.0	5325.3	5583.0	6170.1	6231.2	6625.3	7096.3	7629.2	7962.3	7153.6
57.5°	6321.6	5931.2	5720.2	6135.4	6721.0	6722.5	7232.0	7804.8	8021.8	8113.0	7107.6
60°	6761.7	6306.5	6094.0	6467.8	7328.5	7390.3	7906.5	8195.9	8420.5	8189.1	7025.5
62.5°	7149.1	6646.4	6481.4	6920.7	7994.7	8140.9	8494.4	8452.9	8708.4	8284.8	6816.7
65°	7610.3	7086.5	6978.0	7626.9	8864.4	9065.6	9154.5	8908.9	8804.9	8211.0	6273.4
67.5°	8067.0	7577.2	7574.1	8409.9	10004.7	10074.0	9980.5	9551.7	8692.6	7559.8	5277.8
70°	8388.8	7862.8	8061.0	9267.6	11040.9	10846.5	10453.1	9855.4	7881.6	5794.0	3447.9
72.5°	8086.6	7579.4	8026.3	9572.8	11169.0	11224.8	10179.5	8828.2	5855.8	2963.3	1248.0
75°	6145.2	5834.7	6969.0	8492.8	9916.5	9929.3	8496.6	6226.6	2883.5	804.9	345.2
77.5°	3095.2	2996.5	4411.1	6029.2	7235.0	7213.9	5837.7	3335.6	927.7	267.5	174.1
80°	1566.8	1487.7	1877.3	3252.7	4296.5	4328.2	3333.4	1493.7	468.0	145.5	120.6
82.5°	962.4	913.4	1027.2	1471.9	2085.3	2135.8	1264.6	945.8	290.2	85.9	110.0
85°	186.2	195.9	590.1	737.1	832.8	813.2	374.6	778.5	87.4	51.2	79.9
87.5°	0.0	3.0	136.4	240.4	241.2	214.0	85.2	172.6	12.1	14.3	9.8
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°	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1	893.1
2.5°	1076.2	1064.9	970.7	960.1	962.4	946.6	941.3	908.1	899.9	951.1	960.1
5°	1337.0	1261.6	1174.2	1142.5	1093.5	1010.6	998.6	977.5	954.1	963.2	956.4
7.5°	1496.7	1396.5	1303.1	1136.5	998.6	878.0	858.4	822.2	786.1	786.8	810.2
10°	1522.4	1438.0	1309.1	1106.4	948.8	798.1	667.0	572.0	529.1	490.6	501.9
12.5°	1670.8	1592.5	1355.1	1097.3	876.5	641.4	469.5	376.8	336.1	322.6	321.1
15°	1789.9	1728.1	1433.4	1069.4	716.0	451.4	336.1	309.0	301.5	314.3	310.5
17.5°	1967.0	1855.5	1425.1	954.1	545.6	342.9	309.7	306.0	315.0	322.6	324.8
20°	2044.6	1884.1	1368.6	773.2	408.5	314.3	302.2	294.7	311.3	333.9	329.3
22.5°	2123.0	1933.1	1302.3	633.1	328.6	300.7	293.9	287.9	300.7	322.6	327.8
25°	2158.4	2011.5	1228.4	494.4	305.2	284.9	280.4	282.6	293.2	312.8	310.5
27.5°	2337.1	2020.5	1087.5	390.4	295.4	273.6	273.6	278.8	278.8	305.2	303.0
30°	2448.6	2173.5	973.0	328.6	284.1	257.7	266.8	269.1	265.3	293.9	296.2
32.5°	2644.5	2215.7	861.4	301.5	266.0	255.5	254.0	255.5	258.5	286.4	287.1
35°	2946.0	2423.7	709.2	290.9	257.0	244.2	233.6	241.9	249.5	269.8	273.6
37.5°	3535.4	2637.0	578.0	282.6	252.5	233.6	229.9	228.4	241.9	265.3	272.8
40°	4012.4	3014.6	470.3	275.8	243.4	227.6	217.8	218.6	230.6	247.9	259.3
42.5°	4687.7	3287.4	398.7	265.3	230.6	214.8	203.5	210.3	215.5	233.6	241.2
45°	5251.4	3499.2	351.2	258.5	217.8	202.7	193.7	201.2	195.9	205.0	215.5
47.5°	5699.8	3683.8	315.8	241.9	209.5	195.9	184.6	182.4	173.3	175.6	185.4
50°	5946.3	3652.9	286.4	225.3	199.0	189.2	173.3	157.5	145.5	144.7	150.7
52.5°	6033.7	3487.9	262.3	211.0	186.2	174.1	156.0	134.1	122.1	118.3	123.6
55°	6057.8	3250.5	240.4	195.2	174.1	155.3	136.4	113.0	100.2	94.2	99.5
57.5°	5979.4	2885.0	219.3	180.1	159.8	137.2	116.8	92.7	80.6	73.1	77.6
60°	5785.7	2420.7	200.5	161.3	144.7	121.3	98.7	74.6	61.8	55.0	57.3
62.5°	5356.9	1897.7	180.1	143.9	128.9	106.3	82.9	58.8	46.7	40.7	41.5
65°	4704.3	1414.6	156.8	127.4	114.6	91.9	66.3	45.2	35.4	30.1	29.4
67.5°	3747.9	958.6	133.4	110.0	101.7	77.6	52.8	35.4	27.9	24.1	22.6
70°	2202.9	483.1	110.8	95.0	87.4	64.8	41.5	28.6	25.6	22.6	21.1
72.5°	726.5	208.8	86.7	78.4	72.4	52.0	32.4	26.4	24.9	21.9	20.3
75°	253.2	120.6	64.1	60.3	57.3	39.2	27.1	24.1	24.1	21.1	18.8
77.5°	165.8	93.5	47.5	43.7	43.0	28.6	23.4	22.6	21.1	17.3	14.3
80°	137.9	52.8	33.2	30.9	30.1	18.1	18.8	16.6	12.8	7.5	3.0
82.5°	127.4	31.7	17.3	18.8	17.3	6.8	10.6	9.0	6.8	3.0	0.0
85°	74.6	14.3	9.8	9.8	7.5	1.5	5.3	5.3	3.0	0.8	0.0
87.5°	8.3	6.8	5.3	5.3	3.8	0.0	2.3	1.5	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)