

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: P367563

Luminaire Tested: **MSA-SA2D-730-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367563
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-730-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9198 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

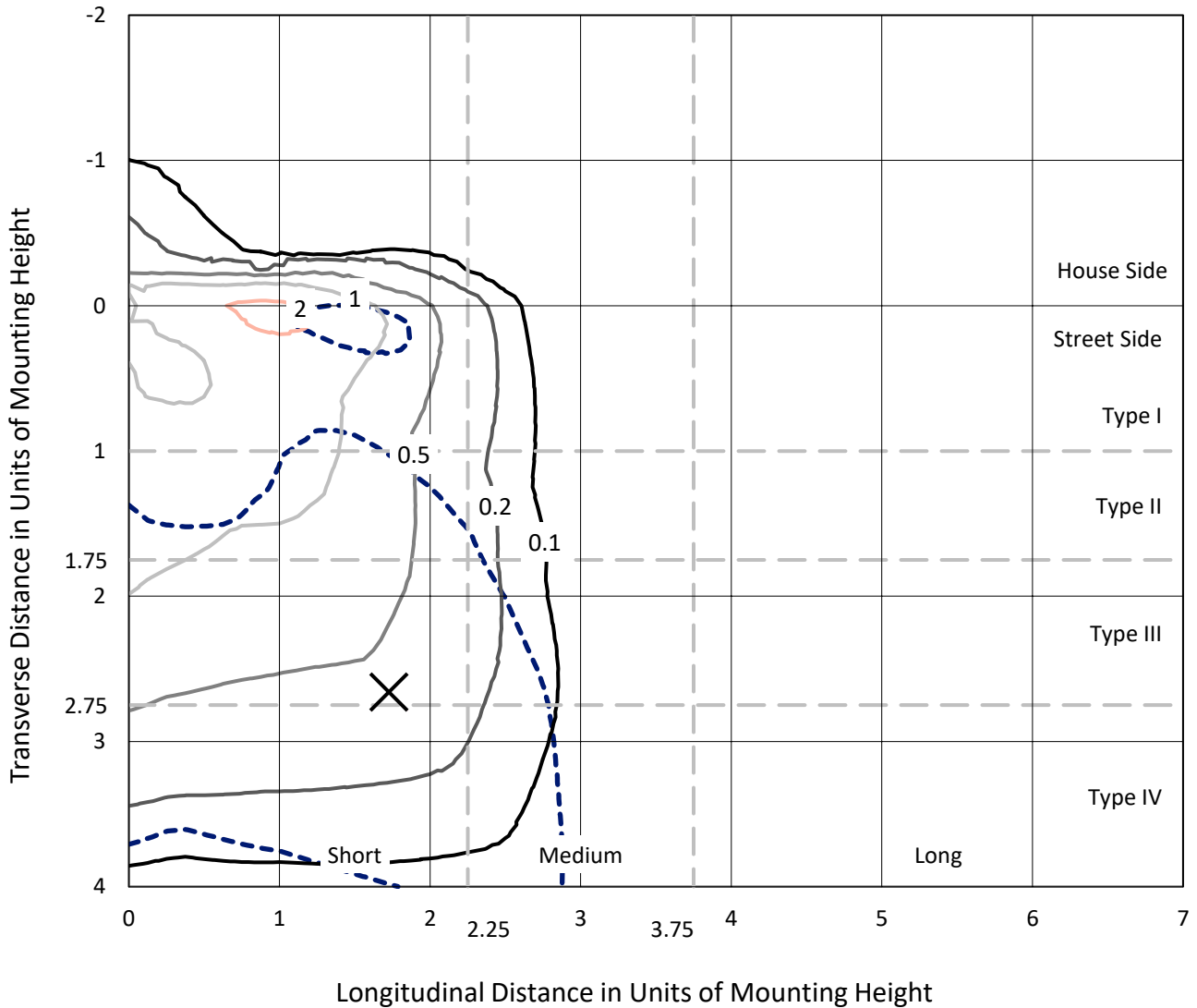
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

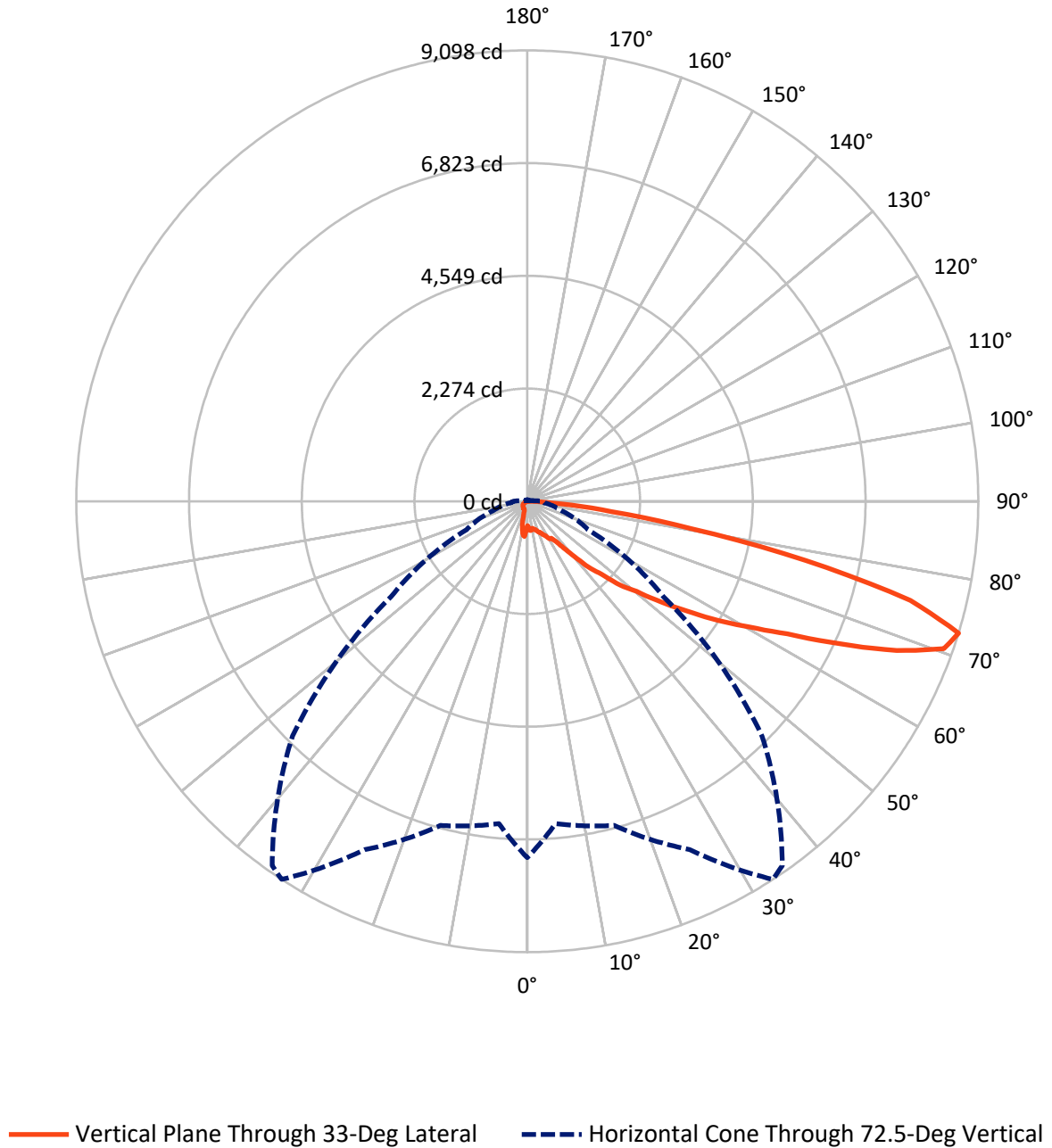
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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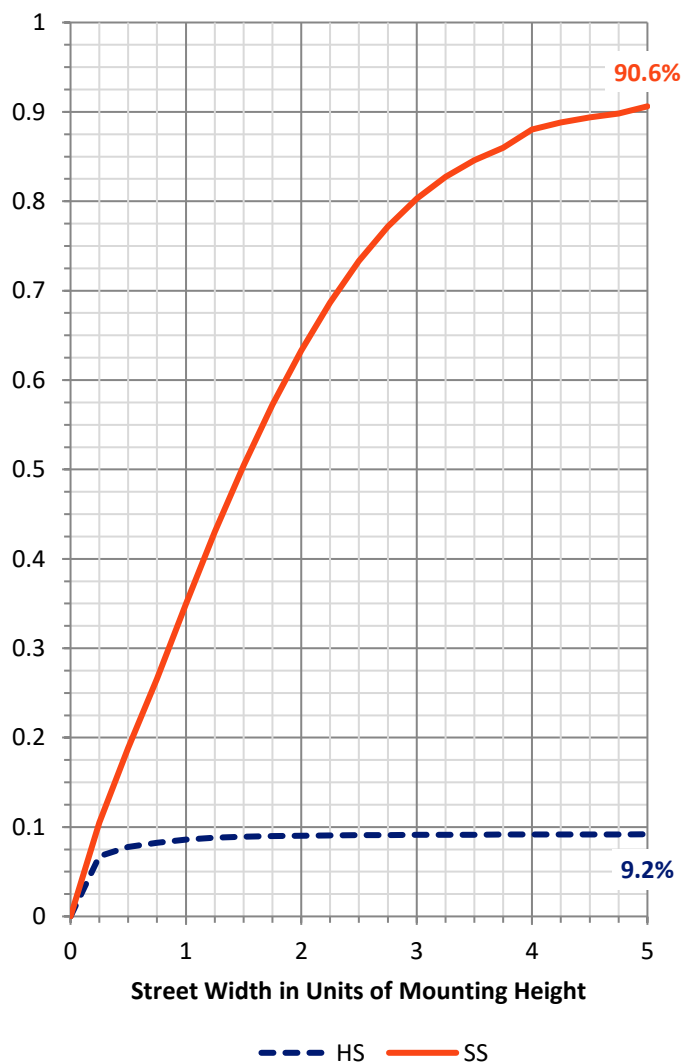
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	850.5	0.0	850.5
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	8347.5	0.0	8347.5
	% Fixture	90.8	0.0	90.8
Total	Lumens	9198.0	0.0	9198.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.3	0.7
10°-20°	188.7	2.1
20°-30°	320.0	3.5
30°-40°	585.6	6.4
40°-50°	1236.0	13.4
50°-60°	2067.9	22.5
60°-70°	2768.0	30.1
70°-80°	1808.1	19.7
80°-90°	160.3	1.7
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°	9198.0	100.0
0°-180°	9198.0	100.0

Coefficient of Utilization

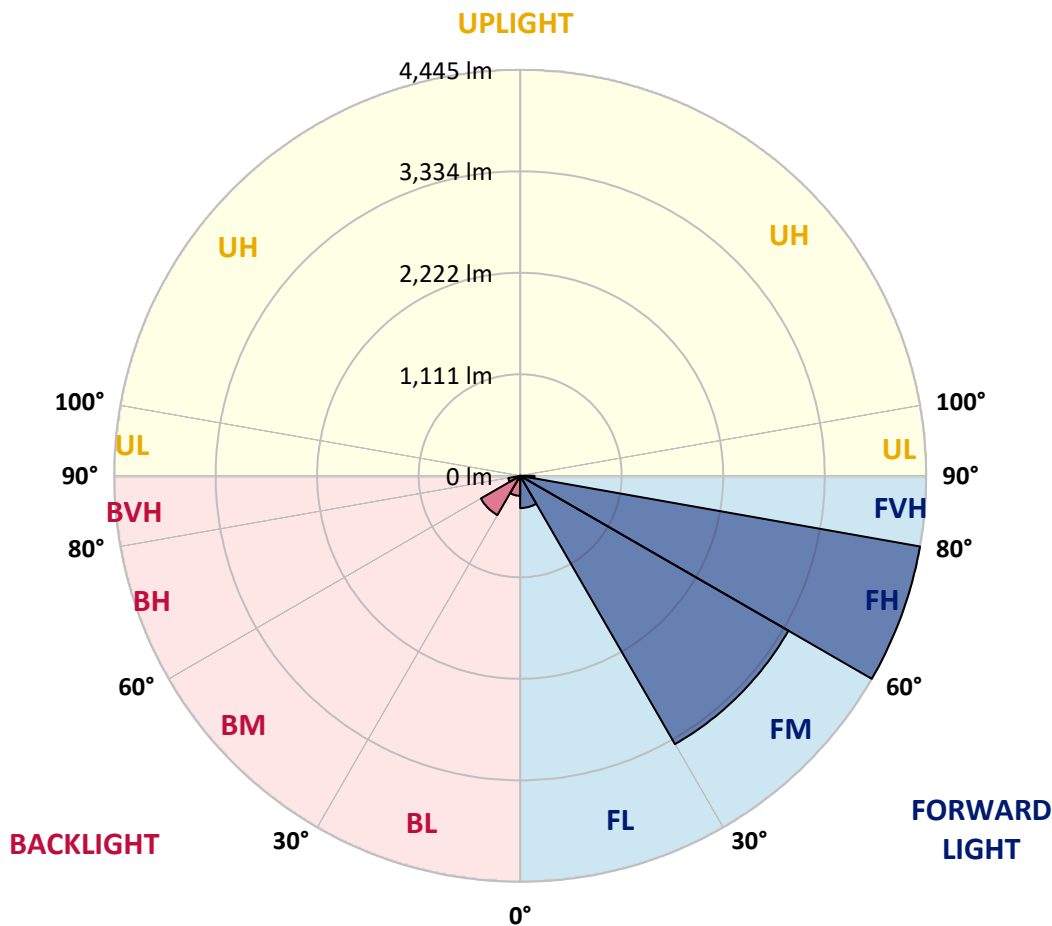


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	353.1	3.8			
FM (30°-60°)	3392.4	36.9			
FH (60°-80°)	4444.9	48.3			G2/5000
FVH (80°-90°)	157.2	1.7			G2/225
BL (0°-30°)	218.9	2.4	B1/500		
BM (30°-60°)	497.2	5.4	B1/1000		
BH (60°-80°)	131.3	1.4	B1/500		G1/500
BVH (80°-90°)	3.1	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2
2.5°	583.2	560.7	528.0	530.1	535.7	540.3	552.6	547.4	537.7	537.2	583.2
5°	617.9	592.9	590.9	593.9	592.4	600.6	590.3	623.5	651.6	685.3	739.5
7.5°	601.1	589.3	574.5	589.8	589.3	585.2	591.9	659.3	727.2	770.1	859.5
10°	552.6	539.3	550.5	555.6	552.0	569.9	614.3	669.5	750.7	840.6	884.0
12.5°	538.8	546.9	551.0	551.0	585.2	594.4	662.3	714.4	811.0	881.9	1008.1
15°	592.4	608.2	580.1	574.0	584.7	589.8	665.4	728.2	851.8	981.5	1087.2
17.5°	677.7	676.6	633.2	609.2	626.1	638.3	680.2	753.8	826.3	1059.7	1212.9
20°	736.4	737.4	659.3	609.2	664.9	672.0	718.5	777.2	834.4	1099.0	1295.1
22.5°	812.0	784.9	698.6	650.1	687.9	694.5	745.6	792.1	876.3	1094.4	1400.3
25°	873.8	856.4	747.6	713.9	747.6	738.4	784.9	854.9	921.3	1167.4	1462.1
27.5°	969.8	940.2	782.4	788.5	786.4	793.1	803.8	911.0	1000.4	1171.0	1605.1
30°	1059.1	1041.8	860.0	860.0	879.9	867.1	874.8	1004.5	1077.0	1253.7	1765.9
32.5°	1151.6	1152.6	951.4	902.9	887.0	939.6	991.2	1049.9	1169.4	1395.7	2012.1
35°	1396.2	1375.8	1126.5	1005.5	992.8	989.7	1072.4	1231.2	1333.4	1580.5	2343.5
37.5°	1889.0	1818.0	1503.4	1238.4	1190.4	1174.0	1268.0	1430.9	1532.5	1852.2	2891.4
40°	2394.6	2264.3	1915.0	1616.3	1460.5	1390.1	1499.3	1637.7	1818.5	2152.5	3398.5
42.5°	2838.3	2677.5	2225.0	2023.8	1821.1	1790.4	1687.8	1913.0	2227.1	2589.6	3895.4
45°	3270.9	2954.3	2500.8	2341.4	2095.3	2112.7	2077.9	2273.0	2651.4	3068.6	4336.1
47.5°	3568.6	3284.2	2838.8	2632.0	2533.5	2431.8	2707.6	2910.3	3029.3	3373.0	4717.1
50°	3889.3	3601.3	3129.4	2984.9	2855.2	2957.8	3315.8	3342.9	3333.2	3656.9	4976.5
52.5°	4303.5	3963.9	3462.9	3299.5	3373.0	3475.1	3888.3	3893.4	3603.3	3895.9	5163.4
55°	4686.5	4310.1	3907.2	3753.0	3906.7	3993.0	4451.0	4283.0	3760.6	4058.3	5255.4
57.5°	5226.2	4790.6	4498.0	4226.3	4537.9	4455.1	4945.9	4696.2	3937.3	4166.1	5221.7
60°	5908.5	5395.8	5102.7	4815.2	5149.1	5205.3	5429.0	4902.5	4005.7	4201.3	5018.9
62.5°	6602.5	6086.7	5701.2	5506.1	5885.0	6069.9	5876.3	5005.1	3923.5	4132.4	4559.8
65°	7463.5	6803.2	6352.8	6238.4	6940.6	7212.3	6405.4	5030.1	3764.7	3753.0	3666.1
67.5°	8053.3	7410.4	6997.3	7188.8	8037.0	8059.0	6880.3	5037.8	3230.0	2938.4	2406.3
70°	8193.3	7504.9	7320.0	7883.8	8911.8	8635.5	7033.5	4649.7	2395.6	1744.0	1100.0
72.5°	7192.3	6529.5	6770.0	7752.6	9097.7	8971.0	6695.0	3354.6	1348.7	697.6	337.6
75°	4411.7	4010.8	5078.7	6572.9	7985.9	7904.2	5223.2	1733.2	543.4	278.8	126.1
77.5°	1918.6	1781.7	2650.4	4361.2	5738.5	5665.4	3060.5	638.3	280.9	196.1	63.8
80°	634.8	615.9	1004.0	2065.2	3361.3	3296.9	1289.5	265.6	200.2	157.3	35.7
82.5°	150.6	149.6	350.3	950.4	1712.3	1658.7	395.8	146.6	145.0	124.1	18.9
85°	37.8	38.8	97.0	388.6	695.5	613.3	103.2	73.0	102.1	84.3	9.7
87.5°	0.0	0.0	25.0	55.7	105.2	65.9	11.2	19.4	28.6	30.1	5.1
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°	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2
2.5°	593.4	587.8	541.8	553.1	570.4	568.9	580.1	571.4	563.8	601.6	598.0
5°	754.8	724.1	709.8	729.8	719.0	694.0	714.9	711.4	705.2	718.0	727.7
7.5°	875.8	847.7	835.0	793.1	732.3	684.3	692.0	674.1	657.2	677.2	697.6
10°	915.6	900.3	898.8	817.1	759.9	690.4	608.2	537.2	518.3	493.3	504.5
12.5°	1023.9	1033.1	975.4	879.9	769.6	636.3	490.2	389.6	348.8	322.2	323.8
15°	1112.8	1144.9	1061.2	889.6	677.2	485.1	326.3	235.9	210.4	203.8	201.7
17.5°	1245.0	1276.2	1087.7	820.7	545.9	328.9	209.9	183.8	185.4	190.0	188.9
20°	1343.1	1338.5	1064.8	698.6	402.4	215.5	175.7	172.1	180.3	193.5	190.5
22.5°	1437.6	1405.9	1050.5	585.7	260.4	173.1	169.5	169.0	176.7	189.5	193.0
25°	1505.0	1510.1	1026.5	458.6	189.5	160.9	163.9	168.5	176.2	190.0	187.9
27.5°	1698.0	1555.0	926.4	333.0	159.8	154.2	161.9	171.1	173.6	191.0	191.5
30°	1823.1	1724.5	861.0	224.2	147.6	142.5	157.8	170.1	173.1	195.6	197.1
32.5°	2041.2	1797.6	785.4	166.5	137.4	138.9	148.6	164.9	179.2	203.2	204.3
35°	2312.3	2032.0	648.6	149.6	133.8	131.2	135.8	154.7	178.2	204.3	209.4
37.5°	2828.6	2172.4	514.2	145.0	133.8	129.2	133.8	145.0	175.2	214.5	225.2
40°	3174.4	2458.4	370.8	144.0	131.2	127.2	128.7	139.9	166.5	208.4	224.2
42.5°	3600.3	2578.9	273.2	141.5	128.7	122.6	123.6	137.9	157.8	195.6	207.3
45°	3949.1	2666.7	215.0	140.4	122.6	120.5	122.6	136.4	149.6	168.0	178.7
47.5°	4214.1	2768.9	172.6	133.8	121.0	120.5	118.0	127.7	135.8	140.4	147.6
50°	4408.1	2745.9	143.0	123.6	115.9	119.0	114.4	115.9	118.0	115.4	123.6
52.5°	4527.1	2663.2	119.0	111.3	109.8	112.3	106.7	102.1	98.6	96.5	101.6
55°	4570.5	2497.2	101.1	95.5	99.1	100.1	95.5	87.3	81.2	78.1	82.2
57.5°	4488.3	2244.4	87.8	79.2	87.3	87.3	81.2	72.5	65.4	60.3	64.3
60°	4280.0	1965.1	78.1	65.9	74.6	75.1	67.9	58.7	53.1	48.0	50.6
62.5°	3891.9	1660.7	68.4	57.2	64.3	64.9	56.2	47.5	43.4	37.8	39.8
65°	3115.6	1270.0	58.2	50.6	55.7	54.1	46.5	40.3	35.2	30.1	31.2
67.5°	2022.3	783.9	50.6	46.0	47.0	45.5	39.3	35.2	29.6	25.5	26.0
70°	905.4	337.6	44.4	41.4	40.9	38.3	33.2	32.7	29.1	25.5	25.5
72.5°	279.3	127.2	38.3	37.3	35.2	32.2	29.1	31.2	28.6	24.5	24.0
75°	110.3	58.2	31.7	31.7	30.6	26.6	26.0	28.1	26.6	22.5	21.4
77.5°	57.7	36.8	26.0	27.1	26.6	20.4	23.5	25.5	24.5	18.9	15.8
80°	34.2	22.5	19.4	22.0	21.4	14.3	17.9	16.3	11.7	5.6	1.5
82.5°	18.9	10.2	8.7	12.8	12.8	5.1	9.2	8.2	4.6	0.0	0.0
85°	9.2	7.1	6.6	7.1	5.1	1.5	4.6	4.6	2.6	0.0	0.0
87.5°	4.6	4.1	3.1	2.6	2.0	0.0	1.5	2.0	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)