

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: P367531

Luminaire Tested: **MSA-SA2D-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367531
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-SA2D-727-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 9329 lumens
Efficiency: N/A
Efficacy: 72.3 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

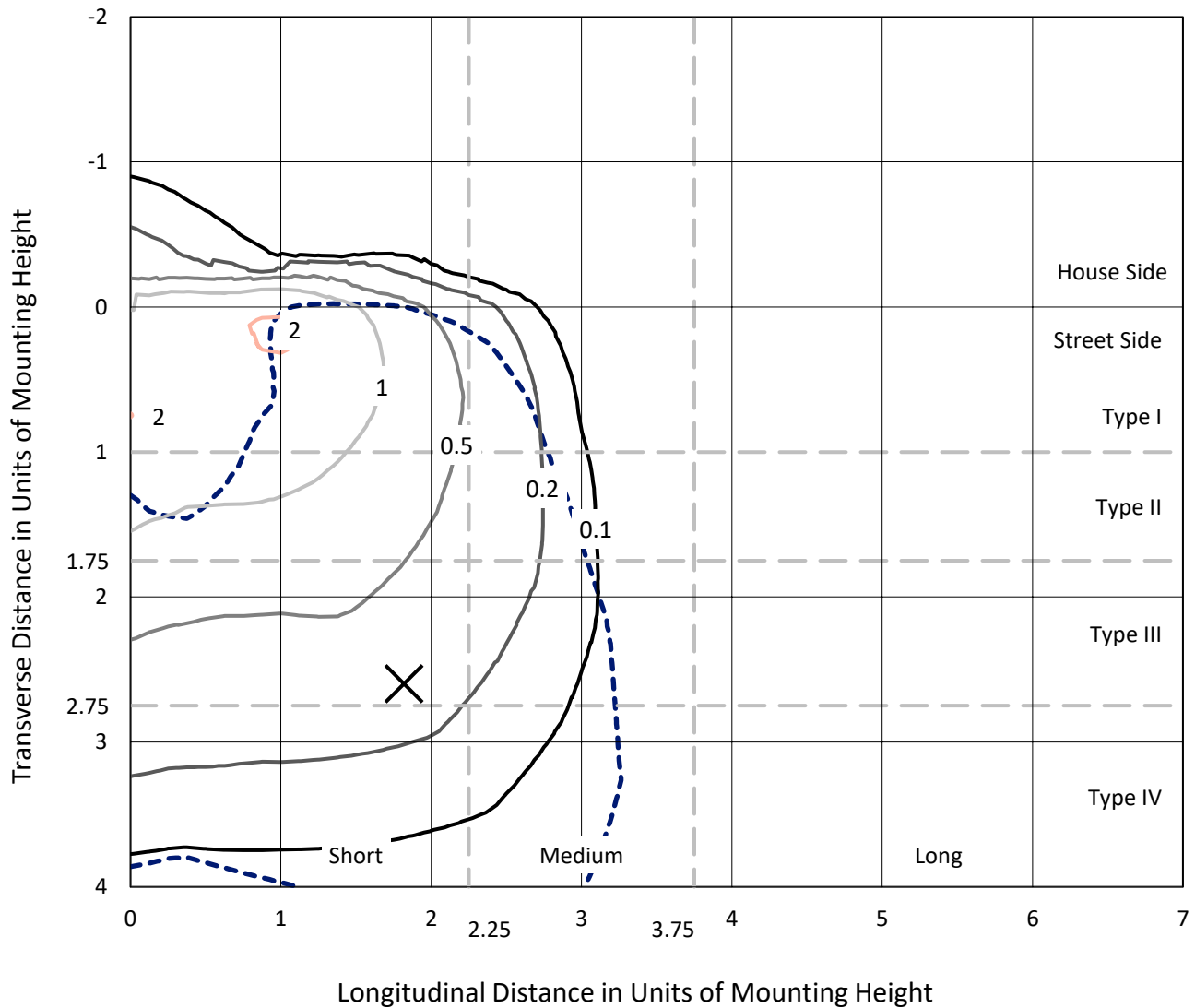


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Iso-Footcandle Lines of Horizontal Illumination

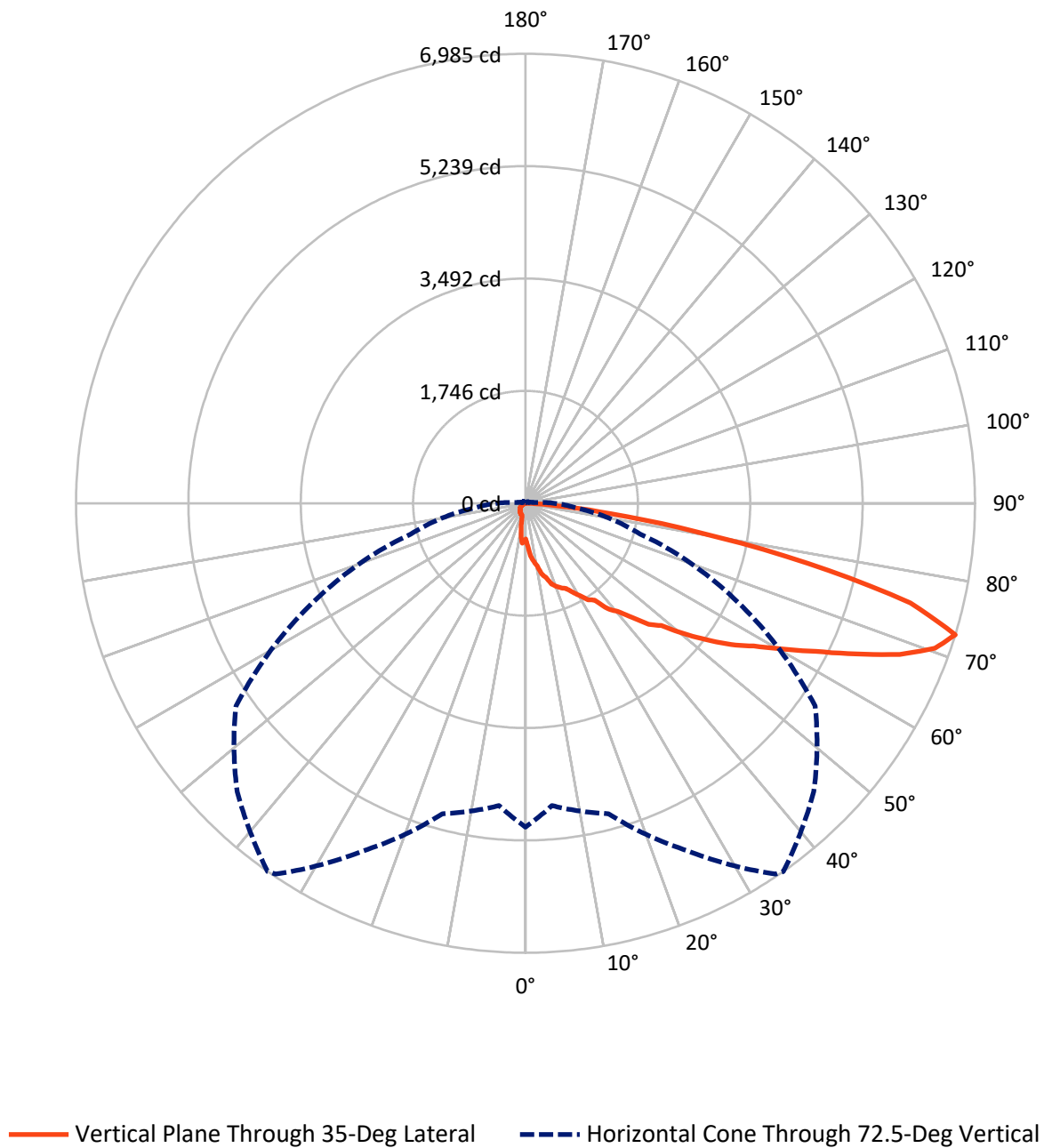
× Max cd
 --- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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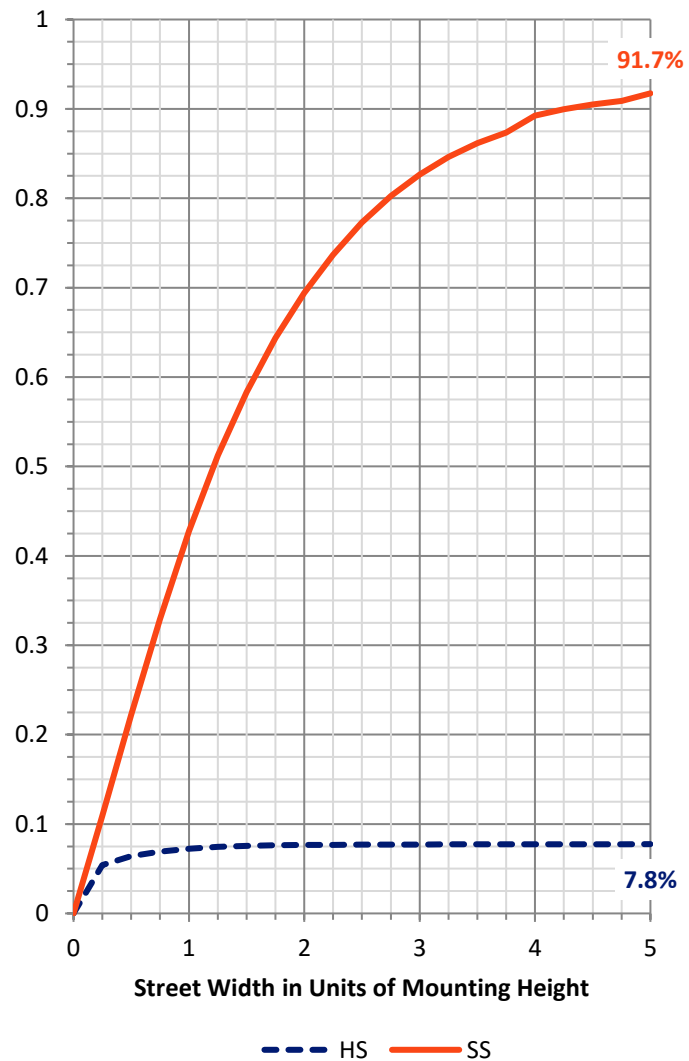
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	727.6	0.0	727.6
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	8601.3	0.0	8601.3
	% Fixture	92.2	0.0	92.2
Total	Lumens	9329.0	0.0	9329.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	0.8
10°-20°	238.7	2.6
20°-30°	434.8	4.7
30°-40°	749.9	8.0
40°-50°	1333.1	14.3
50°-60°	1989.4	21.3
60°-70°	2541.6	27.2
70°-80°	1768.3	19.0
80°-90°	202.3	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°	9329.0	100.0
0°-180°	9329.0	100.0

Coefficient of Utilization



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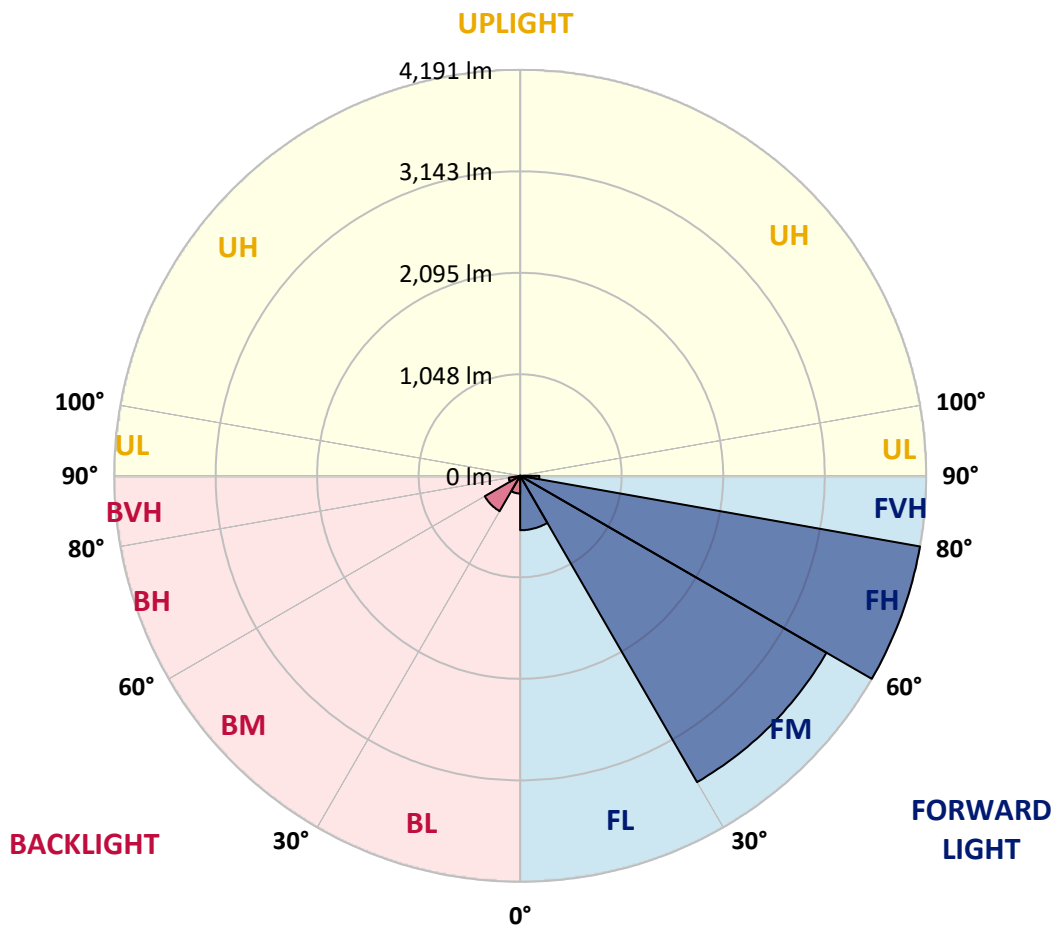
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	561.4	6.0			
FM	(30°-60°)	3650.5	39.1			
FH	(60°-80°)	4190.6	44.9			G2/5000
FVH	(80°-90°)	198.9	2.1			G2/225
BL	(0°-30°)	183.0	2.0	B1/500		
BM	(30°-60°)	421.9	4.5	B1/1000		
BH	(60°-80°)	119.3	1.3	B1/500		G1/500
BVH	(80°-90°)	3.4	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°	34°	35°	45°	55°	65°	75°	85°
0°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	707.2	679.5	634.5	637.8	658.0	662.2	668.3	652.3	638.3	613.4	661.7
5°	906.0	866.2	840.9	832.9	821.2	822.1	793.5	803.8	801.0	819.3	841.3
7.5°	1018.1	996.1	964.2	955.3	912.1	907.5	872.3	919.6	924.3	917.8	953.9
10°	1062.7	1033.6	1037.4	1004.1	982.5	988.1	993.7	997.5	1003.6	1009.7	965.6
12.5°	1088.9	1094.1	1145.2	1110.5	1132.1	1132.1	1170.1	1129.7	1131.2	1087.1	1094.6
15°	1207.1	1235.7	1212.8	1212.3	1188.8	1194.9	1239.0	1207.1	1223.5	1210.4	1159.8
17.5°	1355.3	1360.9	1317.3	1298.1	1319.2	1319.7	1300.9	1299.5	1242.3	1338.9	1277.5
20°	1402.7	1434.6	1372.7	1297.6	1385.3	1381.1	1379.7	1357.7	1262.5	1396.6	1345.9
22.5°	1531.6	1486.2	1444.0	1394.7	1428.9	1428.9	1423.8	1375.5	1338.4	1391.4	1413.0
25°	1572.0	1577.6	1522.7	1506.8	1507.7	1465.5	1461.8	1441.1	1405.5	1496.0	1452.9
27.5°	1710.8	1708.5	1576.7	1621.2	1564.5	1564.9	1461.3	1507.7	1513.8	1501.2	1549.5
30°	1847.3	1885.3	1686.4	1742.7	1683.1	1665.3	1564.0	1605.3	1616.1	1601.5	1662.5
32.5°	2021.3	2077.1	1883.8	1828.5	1737.5	1788.2	1718.3	1620.8	1674.2	1804.1	1838.4
35°	2205.6	2232.8	2026.9	1949.5	1846.8	1846.3	1844.0	1852.0	1911.0	2057.4	2086.4
37.5°	2536.6	2472.4	2286.2	2108.9	2131.9	2080.8	2045.2	2082.7	2144.1	2385.2	2509.4
40°	2721.4	2675.0	2412.8	2307.8	2193.8	2212.6	2309.2	2305.0	2468.6	2721.0	2907.1
42.5°	2901.0	2857.0	2599.0	2514.1	2367.8	2418.9	2461.1	2514.6	2849.9	3257.0	3359.2
45°	3061.0	2931.5	2749.6	2752.8	2676.9	2683.0	2757.5	2806.8	3291.7	3709.1	3780.8
47.5°	3157.6	3051.1	2876.7	2873.4	2868.7	2840.1	3191.3	3236.3	3643.9	4139.6	4146.1
50°	3293.6	3160.4	3007.5	3010.3	3118.6	3179.1	3598.4	3593.7	3983.9	4498.8	4347.3
52.5°	3462.9	3300.1	3131.8	3257.0	3424.4	3522.9	3863.4	4002.2	4349.2	4724.4	4426.1
55°	3679.5	3476.0	3313.7	3474.1	3839.4	3877.4	4122.7	4415.8	4747.4	4954.6	4451.4
57.5°	3933.7	3690.8	3559.5	3817.9	4182.3	4183.2	4500.2	4856.6	4991.7	5048.4	4422.8
60°	4207.6	3924.3	3792.1	4024.7	4560.2	4598.7	4919.9	5100.0	5239.8	5095.8	4371.7
62.5°	4448.6	4135.8	4033.1	4306.5	4974.8	5065.8	5285.7	5259.9	5418.9	5155.4	4241.8
65°	4735.6	4409.7	4342.2	4746.0	5516.0	5641.2	5696.6	5543.7	5479.0	5109.4	3903.7
67.5°	5019.8	4715.0	4713.1	5233.2	6225.6	6268.7	6210.5	5943.7	5409.1	4704.2	3284.2
70°	5220.1	4892.7	5016.1	5766.9	6870.4	6749.4	6504.6	6132.7	4904.5	3605.4	2145.5
72.5°	5032.0	4716.4	4994.5	5956.8	6950.1	6984.8	6334.4	5493.5	3643.9	1844.0	776.6
75°	3824.0	3630.8	4336.5	5284.8	6170.7	6178.7	5287.1	3874.6	1794.3	500.9	214.8
77.5°	1926.1	1864.6	2744.9	3751.7	4502.1	4489.0	3632.6	2075.7	577.3	166.5	108.3
80°	975.0	925.7	1168.2	2024.1	2673.6	2693.3	2074.2	929.5	291.2	90.5	75.0
82.5°	598.9	568.4	639.2	915.9	1297.6	1329.1	786.9	588.6	180.6	53.5	68.5
85°	115.8	121.9	367.2	458.7	518.2	506.0	233.1	484.4	54.4	31.9	49.7
87.5°	0.0	1.9	84.9	149.6	150.1	133.2	53.0	107.4	7.5	8.9	6.1
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°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	669.7	662.7	604.0	597.5	598.9	589.0	585.7	565.1	559.9	591.8	597.5
5°	831.9	785.1	730.7	711.0	680.5	628.9	621.4	608.3	593.7	599.3	595.1
7.5°	931.4	869.0	810.8	707.2	621.4	546.3	534.2	511.6	489.1	489.6	504.1
10°	947.3	894.8	814.6	688.4	590.4	496.6	415.0	355.9	329.2	305.3	312.3
12.5°	1039.7	990.9	843.2	682.8	545.4	399.1	292.2	234.5	209.2	200.7	199.8
15°	1113.8	1075.3	892.0	665.5	445.5	280.9	209.2	192.3	187.6	195.6	193.2
17.5°	1224.0	1154.6	886.8	593.7	339.5	213.4	192.7	190.4	196.0	200.7	202.1
20°	1272.3	1172.4	851.6	481.2	254.2	195.6	188.1	183.4	193.7	207.8	204.9
22.5°	1321.1	1202.9	810.4	393.9	204.5	187.1	182.9	179.1	187.1	200.7	204.0
25°	1343.1	1251.7	764.4	307.6	189.9	177.3	174.5	175.9	182.4	194.6	193.2
27.5°	1454.3	1257.3	676.7	242.9	183.8	170.2	170.2	173.5	173.5	189.9	188.5
30°	1523.7	1352.5	605.4	204.5	176.8	160.4	166.0	167.4	165.1	182.9	184.3
32.5°	1645.6	1378.8	536.0	187.6	165.5	159.0	158.0	159.0	160.9	178.2	178.7
35°	1833.2	1508.2	441.3	181.0	159.9	151.9	145.4	150.5	155.2	167.9	170.2
37.5°	2199.9	1640.9	359.7	175.9	157.1	145.4	143.0	142.1	150.5	165.1	169.8
40°	2496.8	1875.9	292.6	171.6	151.5	141.6	135.5	136.0	143.5	154.3	161.3
42.5°	2917.0	2045.6	248.1	165.1	143.5	133.7	126.6	130.8	134.1	145.4	150.1
45°	3267.8	2177.4	218.5	160.9	135.5	126.2	120.5	125.2	121.9	127.6	134.1
47.5°	3546.8	2292.3	196.5	150.5	130.4	121.9	114.9	113.5	107.9	109.3	115.4
50°	3700.2	2273.1	178.2	140.2	123.8	117.7	107.9	98.0	90.5	90.0	93.8
52.5°	3754.6	2170.4	163.2	131.3	115.8	108.3	97.1	83.5	76.0	73.6	76.9
55°	3769.6	2022.7	149.6	121.5	108.3	96.6	84.9	70.3	62.4	58.6	61.9
57.5°	3720.8	1795.2	136.5	112.1	99.4	85.4	72.7	57.7	50.2	45.5	48.3
60°	3600.3	1506.3	124.7	100.4	90.0	75.5	61.4	46.4	38.5	34.2	35.6
62.5°	3333.4	1180.9	112.1	89.6	80.2	66.1	51.6	36.6	29.1	25.3	25.8
65°	2927.3	880.3	97.5	79.3	71.3	57.2	41.3	28.1	22.0	18.8	18.3
67.5°	2332.2	596.5	83.0	68.5	63.3	48.3	32.8	22.0	17.4	15.0	14.1
70°	1370.8	300.6	68.9	59.1	54.4	40.3	25.8	17.8	15.9	14.1	13.1
72.5°	452.1	129.9	53.9	48.8	45.0	32.4	20.2	16.4	15.5	13.6	12.7
75°	157.6	75.0	39.9	37.5	35.6	24.4	16.9	15.0	15.0	13.1	11.7
77.5°	103.2	58.2	29.5	27.2	26.7	17.8	14.5	14.1	13.1	10.8	8.9
80°	85.8	32.8	20.6	19.2	18.8	11.3	11.7	10.3	8.0	4.7	1.9
82.5°	79.3	19.7	10.8	11.7	10.8	4.2	6.6	5.6	4.2	1.9	0.0
85°	46.4	8.9	6.1	6.1	4.7	0.9	3.3	3.3	1.9	0.5	0.0
87.5°	5.2	4.2	3.3	3.3	2.3	0.0	1.4	0.9	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)