

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: P368377

Luminaire Tested: **MSA-SA4B-740-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368377
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-SA4B-740-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 14549 lumens
Efficiency: N/A
Efficacy: 85.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

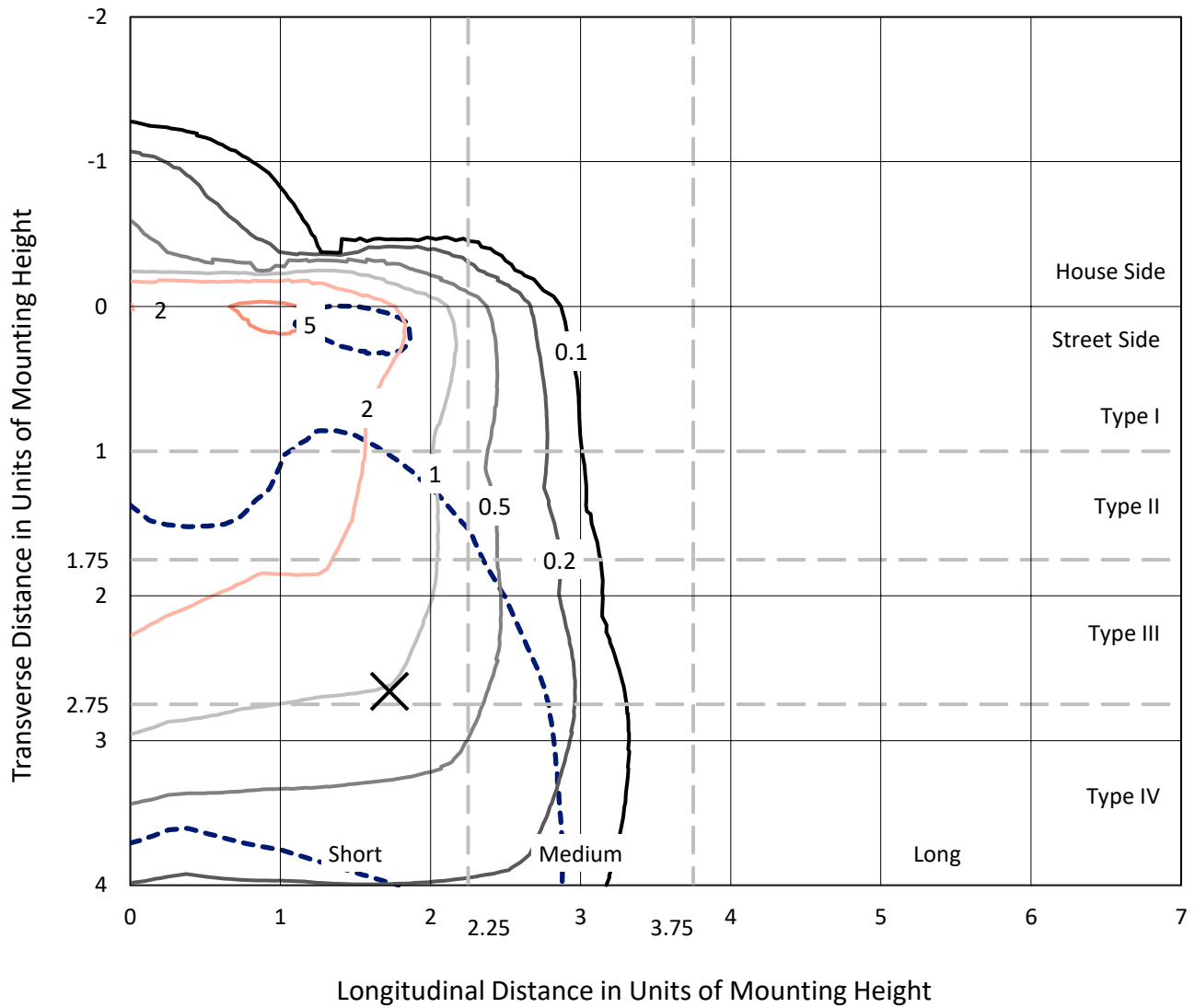
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

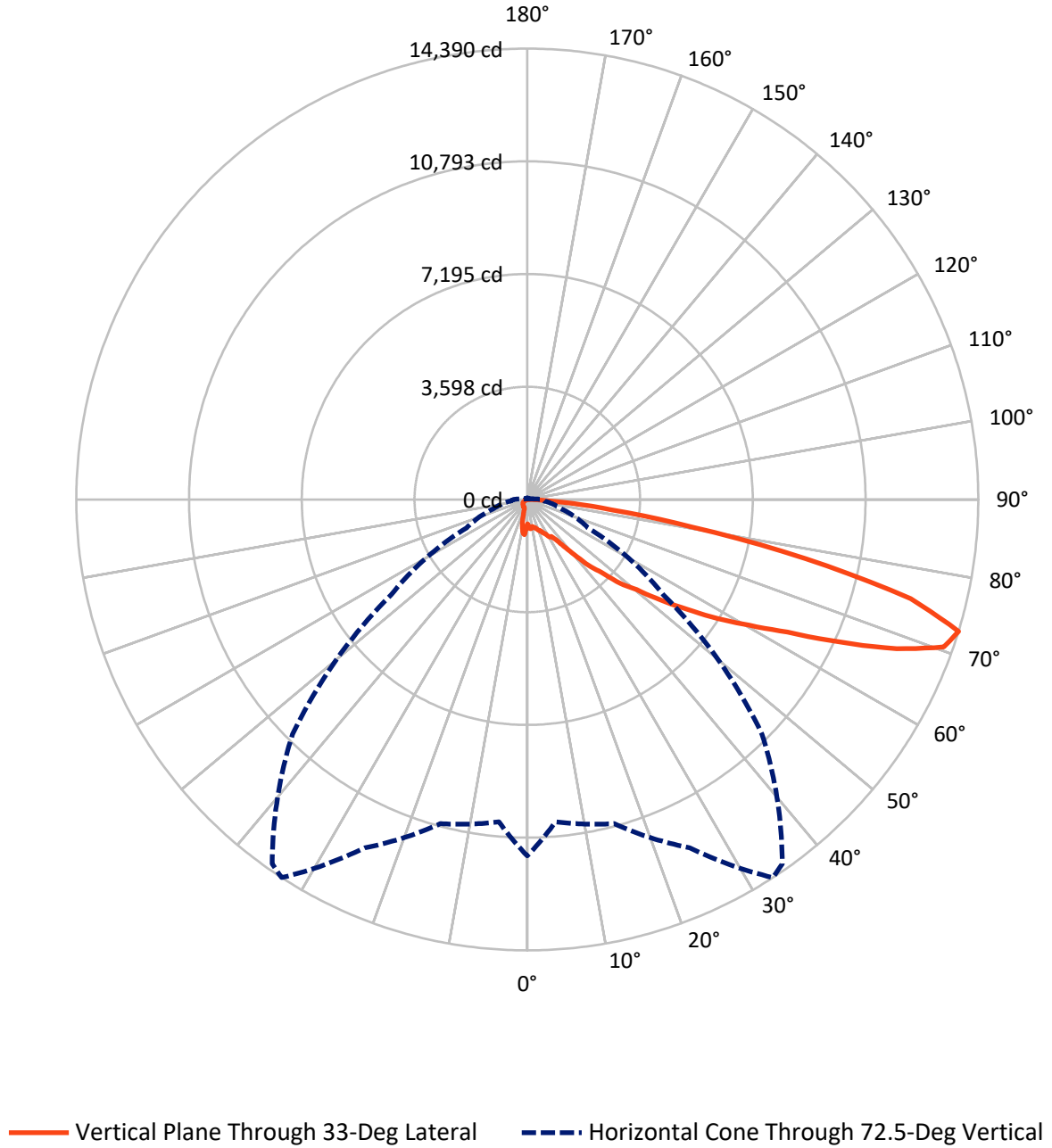
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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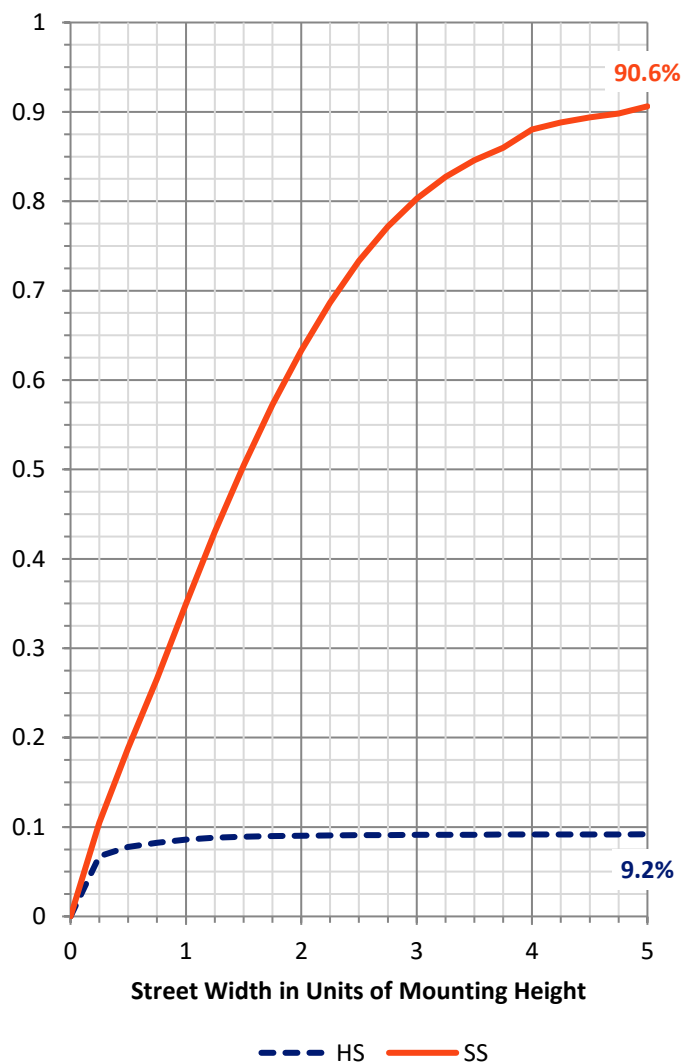
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1345.3	0.0	1345.3
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	13203.7	0.0	13203.7
	% Fixture	90.8	0.0	90.8
Total	Lumens	14549.0	0.0	14549.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	0.7
10°-20°	298.5	2.1
20°-30°	506.1	3.5
30°-40°	926.3	6.4
40°-50°	1955.1	13.4
50°-60°	3271.0	22.5
60°-70°	4378.4	30.1
70°-80°	2860.0	19.7
80°-90°	253.6	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°	14549.0	100.0
0°-180°	14549.0	100.0

Coefficient of Utilization

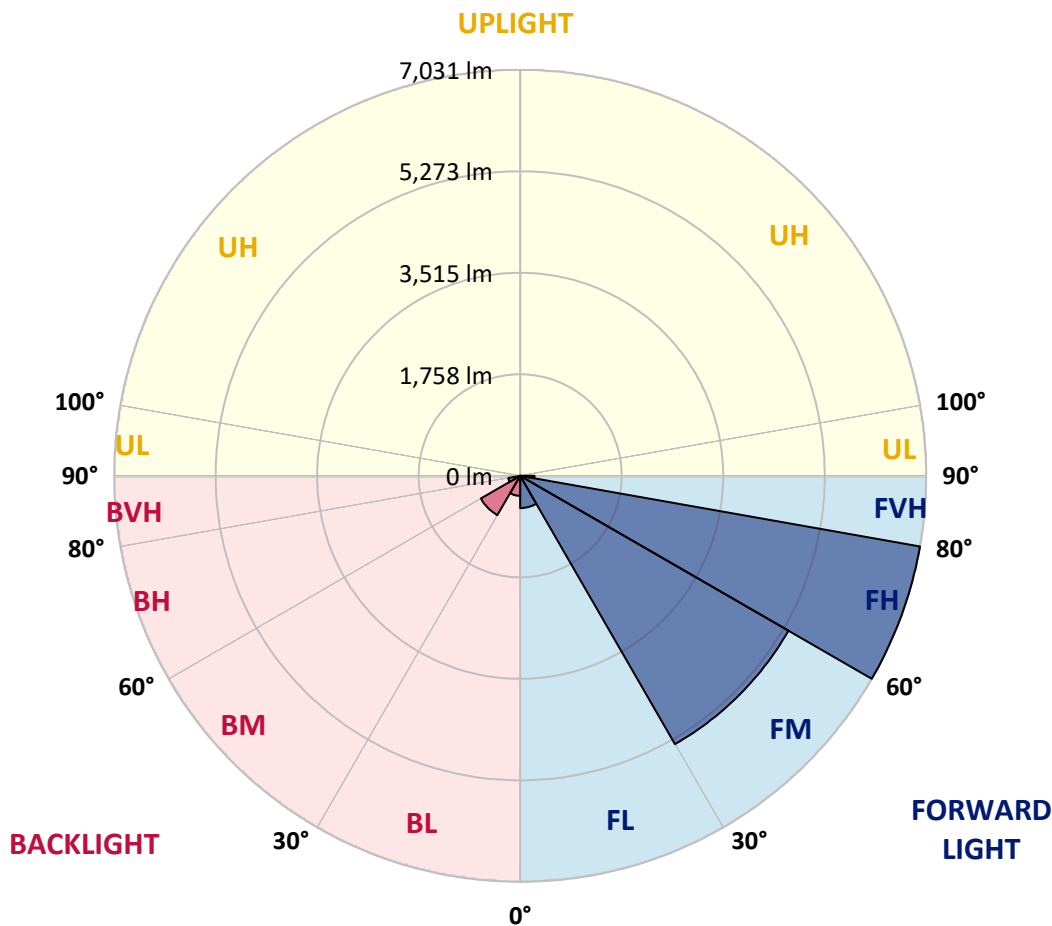


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	558.5	3.8			
FM (30°-60°)	5365.9	36.9			
FH (60°-80°)	7030.7	48.3			G3/7500
FVH (80°-90°)	248.7	1.7			G3/500
BL (0°-30°)	346.3	2.4	B1/500		
BM (30°-60°)	786.5	5.4	B1/1000		
BH (60°-80°)	207.6	1.4	B1/500		G1/500
BVH (80°-90°)	4.9	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°	33°	35°	45°	55°	65°	75°	85°
0°	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8
2.5°	922.5	886.9	835.2	838.5	847.3	854.6	874.0	865.9	850.6	849.8	922.5
5°	977.4	937.8	934.6	939.4	937.0	949.9	933.8	986.3	1030.7	1084.0	1169.6
7.5°	950.7	932.2	908.7	933.0	932.2	925.7	936.2	1042.8	1150.3	1218.1	1359.5
10°	874.0	853.0	870.8	878.8	873.2	901.5	971.7	1059.0	1187.4	1329.6	1398.2
12.5°	852.2	865.1	871.6	871.6	925.7	940.2	1047.7	1130.1	1282.7	1395.0	1594.5
15°	937.0	962.0	917.6	907.9	924.9	933.0	1052.5	1151.9	1347.4	1552.5	1719.7
17.5°	1071.9	1070.3	1001.6	963.7	990.3	1009.7	1075.9	1192.3	1307.0	1676.1	1918.4
20°	1164.8	1166.4	1042.8	963.7	1051.7	1063.0	1136.5	1229.4	1319.9	1738.3	2048.5
22.5°	1284.3	1241.5	1105.0	1028.3	1088.1	1098.6	1179.3	1252.8	1386.1	1731.0	2214.9
25°	1382.1	1354.6	1182.6	1129.3	1182.6	1168.0	1241.5	1352.2	1457.2	1846.5	2312.6
27.5°	1533.9	1487.1	1237.5	1247.2	1244.0	1254.5	1271.4	1441.1	1582.4	1852.2	2538.8
30°	1675.3	1647.8	1360.3	1360.3	1391.8	1371.6	1383.7	1588.9	1703.6	1983.1	2793.2
32.5°	1821.5	1823.1	1504.9	1428.1	1403.1	1486.3	1567.9	1660.8	1849.8	2207.6	3182.6
35°	2208.4	2176.1	1781.9	1590.5	1570.3	1565.4	1696.3	1947.5	2109.1	2500.0	3706.8
37.5°	2987.9	2875.6	2378.1	1958.8	1882.9	1857.0	2005.7	2263.4	2424.1	2929.8	4573.6
40°	3787.6	3581.6	3029.1	2556.6	2310.2	2198.7	2371.6	2590.5	2876.4	3404.7	5375.7
42.5°	4489.6	4235.1	3519.4	3201.2	2880.5	2832.0	2669.7	3025.9	3522.7	4096.2	6161.6
45°	5173.7	4672.9	3955.6	3703.6	3314.3	3341.7	3286.8	3595.4	4193.9	4853.9	6858.7
47.5°	5644.7	5194.7	4490.4	4163.2	4007.3	3846.6	4282.8	4603.4	4791.7	5335.3	7461.3
50°	6151.9	5696.4	4950.0	4721.4	4516.2	4678.6	5244.8	5287.6	5272.3	5784.4	7871.7
52.5°	6807.0	6269.9	5477.4	5219.0	5335.3	5496.8	6150.3	6158.4	5699.6	6162.4	8167.3
55°	7412.8	6817.5	6180.2	5936.3	6179.4	6315.9	7040.5	6774.7	5948.4	6419.3	8312.7
57.5°	8266.7	7577.6	7114.8	6685.1	7177.8	7046.9	7823.2	7428.2	6227.9	6589.7	8259.4
60°	9345.8	8534.8	8071.2	7616.4	8144.7	8233.5	8587.3	7754.5	6336.1	6645.5	7938.7
62.5°	10443.6	9627.7	9017.9	8709.3	9308.7	9601.1	9294.9	7916.9	6206.1	6536.4	7212.5
65°	11805.5	10761.0	10048.6	9867.6	10978.3	11408.0	10131.8	7956.5	5954.8	5936.3	5798.9
67.5°	12738.4	11721.5	11068.0	11370.9	12712.6	12747.3	10883.0	7968.6	5109.1	4647.9	3806.2
70°	12959.8	11870.9	11578.5	12470.3	14096.3	13659.3	11125.3	7354.7	3789.2	2758.5	1739.9
72.5°	11376.5	10328.1	10708.5	12262.7	14390.3	14190.0	10589.8	5306.2	2133.3	1103.4	533.9
75°	6978.3	6344.2	8033.2	10396.7	12631.8	12502.6	8261.8	2741.6	859.5	441.0	199.5
77.5°	3034.8	2818.3	4192.3	6898.3	9076.8	8961.3	4840.9	1009.7	444.3	310.2	101.0
80°	1004.1	974.2	1588.1	3266.6	5316.7	5214.9	2039.6	420.0	316.6	248.8	56.5
82.5°	238.3	236.7	554.1	1503.2	2708.4	2623.6	626.0	231.8	229.4	196.3	29.9
85°	59.8	61.4	153.5	614.7	1100.2	970.1	163.2	115.5	161.6	133.3	15.3
87.5°	0.0	0.0	39.6	88.0	166.4	104.2	17.8	30.7	45.2	47.7	8.1
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°	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8
2.5°	938.6	929.7	857.0	874.8	902.3	899.8	917.6	903.9	891.8	951.5	945.9
5°	1193.9	1145.4	1122.8	1154.3	1137.3	1097.8	1130.9	1125.2	1115.5	1135.7	1151.1
7.5°	1385.3	1340.9	1320.7	1254.5	1158.3	1082.4	1094.5	1066.2	1039.6	1071.1	1103.4
10°	1448.3	1424.1	1421.7	1292.4	1202.0	1092.1	962.0	849.8	819.9	780.3	798.1
12.5°	1619.6	1634.1	1542.8	1391.8	1217.3	1006.5	775.5	616.3	551.7	509.7	512.1
15°	1760.1	1811.0	1678.5	1407.1	1071.1	767.4	516.2	373.2	332.8	322.3	319.1
17.5°	1969.3	2018.6	1720.5	1298.1	863.5	520.2	332.0	290.8	293.2	300.5	298.9
20°	2124.4	2117.1	1684.2	1105.0	636.5	340.9	277.9	272.2	285.1	306.1	301.3
22.5°	2273.9	2223.8	1661.6	926.5	412.0	273.8	268.2	267.4	279.5	299.7	305.3
25°	2380.5	2388.6	1623.6	725.4	299.7	254.4	259.3	266.6	278.7	300.5	297.3
27.5°	2685.8	2459.6	1465.3	526.7	252.8	243.9	256.1	270.6	274.6	302.1	302.9
30°	2883.7	2727.8	1361.9	354.6	233.4	225.4	249.6	269.0	273.8	309.4	311.8
32.5°	3228.6	2843.3	1242.3	263.3	217.3	219.7	235.1	260.9	283.5	321.5	323.1
35°	3657.6	3214.1	1025.9	236.7	211.6	207.6	214.9	244.8	281.9	323.1	331.2
37.5°	4474.2	3436.2	813.4	229.4	211.6	204.4	211.6	229.4	277.1	339.3	356.2
40°	5021.1	3888.6	586.4	227.8	207.6	201.1	203.6	221.3	263.3	329.6	354.6
42.5°	5694.7	4079.2	432.2	223.8	203.6	193.9	195.5	218.1	249.6	309.4	328.0
45°	6246.4	4218.1	340.1	222.1	193.9	190.6	193.9	215.7	236.7	265.8	282.7
47.5°	6665.7	4379.7	273.0	211.6	191.4	190.6	186.6	201.9	214.9	222.1	233.4
50°	6972.6	4343.3	226.2	195.5	183.4	188.2	180.9	183.4	186.6	182.6	195.5
52.5°	7160.8	4212.5	188.2	176.1	173.7	177.7	168.8	161.6	155.9	152.7	160.7
55°	7229.5	3950.0	159.9	151.1	156.7	158.3	151.1	138.1	128.4	123.6	130.0
57.5°	7099.4	3550.1	138.9	125.2	138.1	138.1	128.4	114.7	103.4	95.3	101.8
60°	6769.9	3108.3	123.6	104.2	117.9	118.7	107.4	92.9	84.0	75.9	80.0
62.5°	6156.0	2626.8	108.2	90.5	101.8	102.6	88.9	75.1	68.7	59.8	63.0
65°	4928.2	2008.9	92.1	80.0	88.0	85.6	73.5	63.8	55.7	47.7	49.3
67.5°	3198.7	1239.9	80.0	72.7	74.3	71.9	62.2	55.7	46.9	40.4	41.2
70°	1432.2	533.9	70.3	65.4	64.6	60.6	52.5	51.7	46.0	40.4	40.4
72.5°	441.8	201.1	60.6	59.0	55.7	50.9	46.0	49.3	45.2	38.8	38.0
75°	174.5	92.1	50.1	50.1	48.5	42.0	41.2	44.4	42.0	35.5	33.9
77.5°	91.3	58.2	41.2	42.8	42.0	32.3	37.2	40.4	38.8	29.9	25.0
80°	54.1	35.5	30.7	34.7	33.9	22.6	28.3	25.8	18.6	8.9	2.4
82.5°	29.9	16.2	13.7	20.2	20.2	8.1	14.5	12.9	7.3	0.0	0.0
85°	14.5	11.3	10.5	11.3	8.1	2.4	7.3	7.3	4.0	0.0	0.0
87.5°	7.3	6.5	4.8	4.0	3.2	0.0	2.4	3.2	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)