

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: LUMARK

Report Number: P1197174

Luminaire Tested: AWPS28S-BZ-MID-4000K-POSITION 45

Issue Date: 10/29/2025

Test Information

Test Method: LM-79-2019
Report Number: P1197174
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (LDS)
Test Lab: INNOVATION CENTER
Issue Date: 10/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: LUMARK
Catalog Number: AWPS28S-BZ-MID-4000K-POSITION 45
Description: AWP Architectural Wall Pack Series - Wall Mount Luminaire
Light Source: 80 CRI, 4000K
Ballast/Driver: -

Summary

Lumens per Lamp: 3422 (1 lamp)
Luminaire Lumens: 3384.8 lumens
Efficiency: 98.9%
Efficacy: 132.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.4' x L: 0.56' x H: 0.69')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U3 - G3

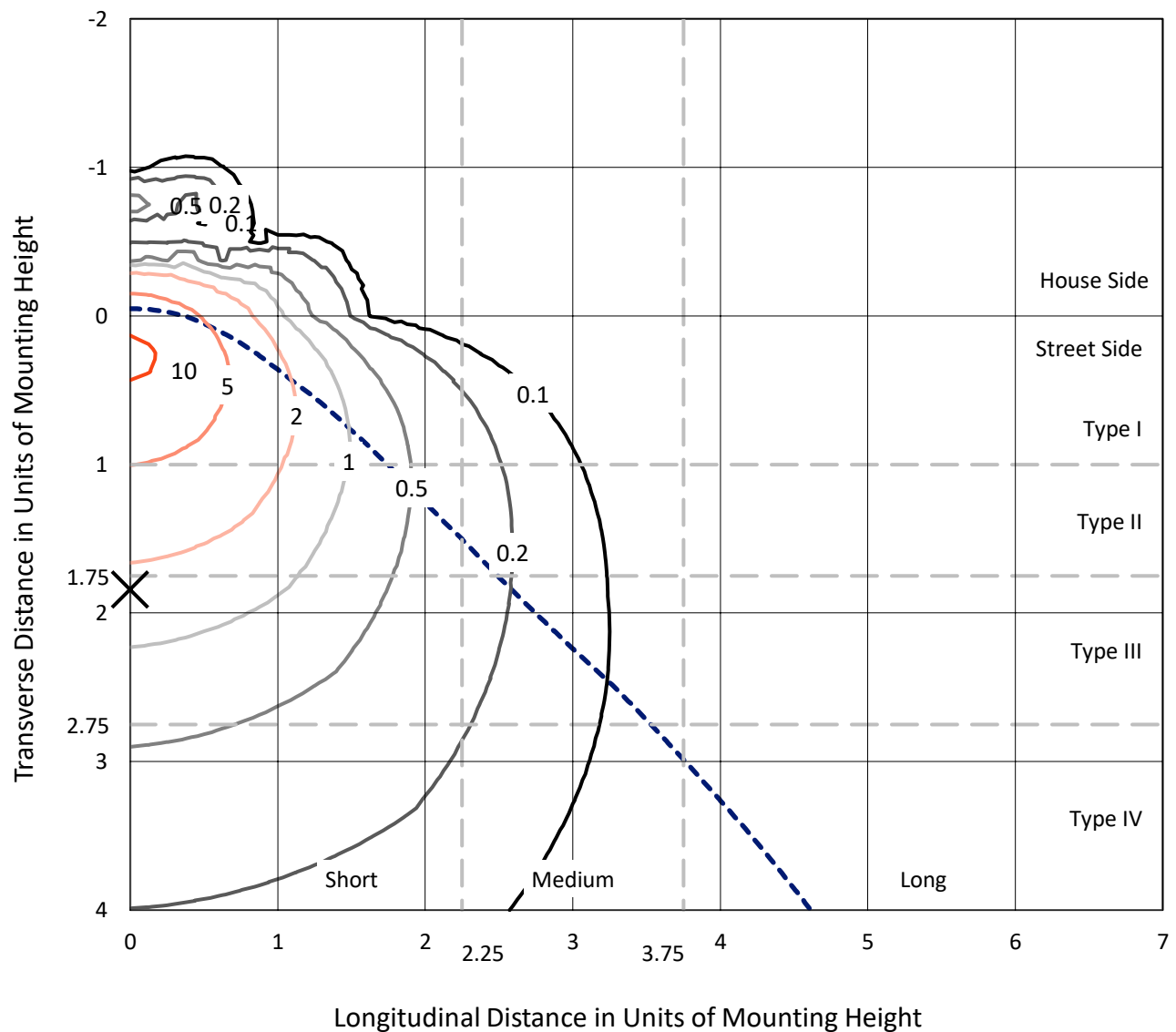
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

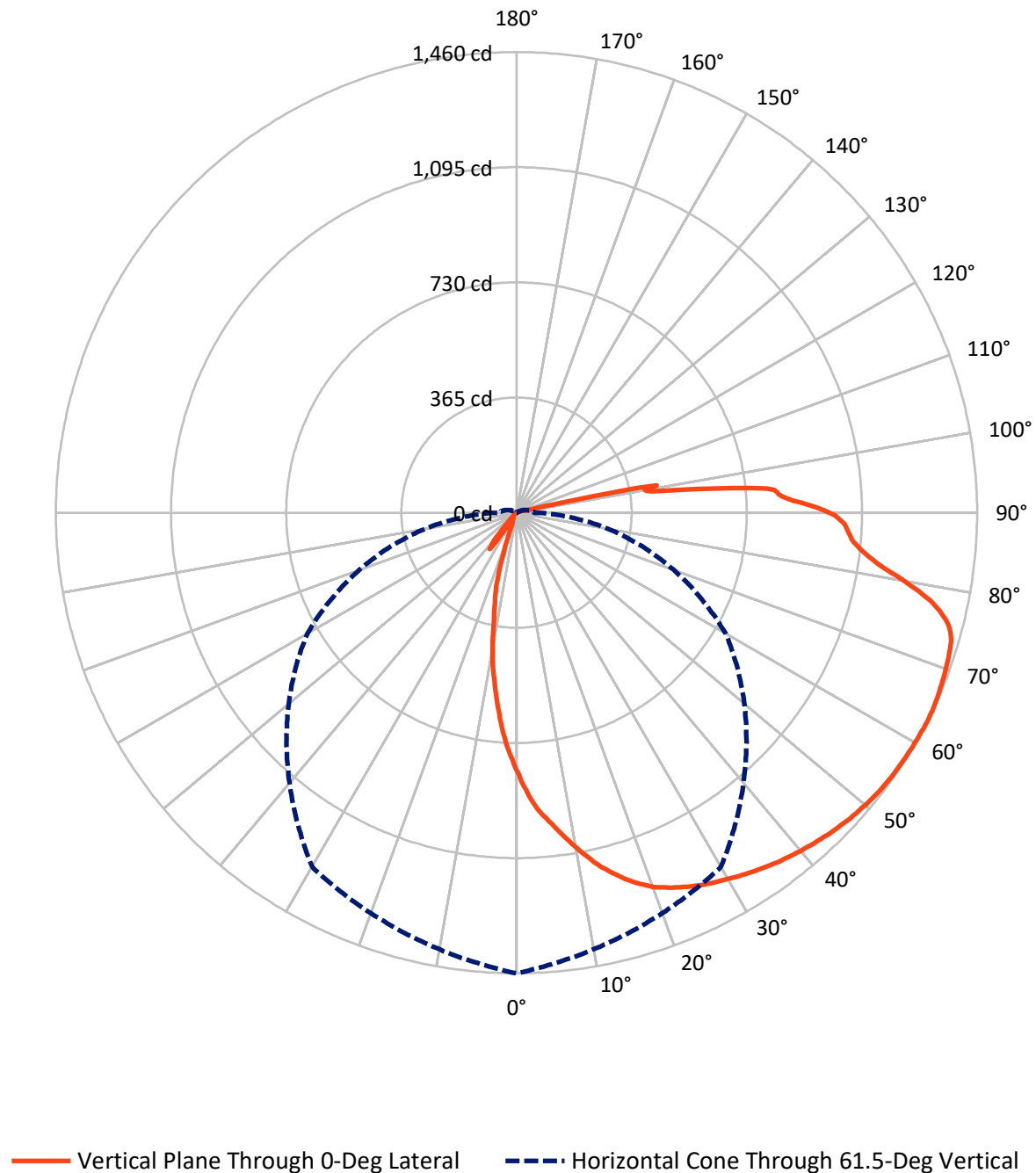


Based on 10 foot mounting height. Maximum calculated value = 10.7 fc
Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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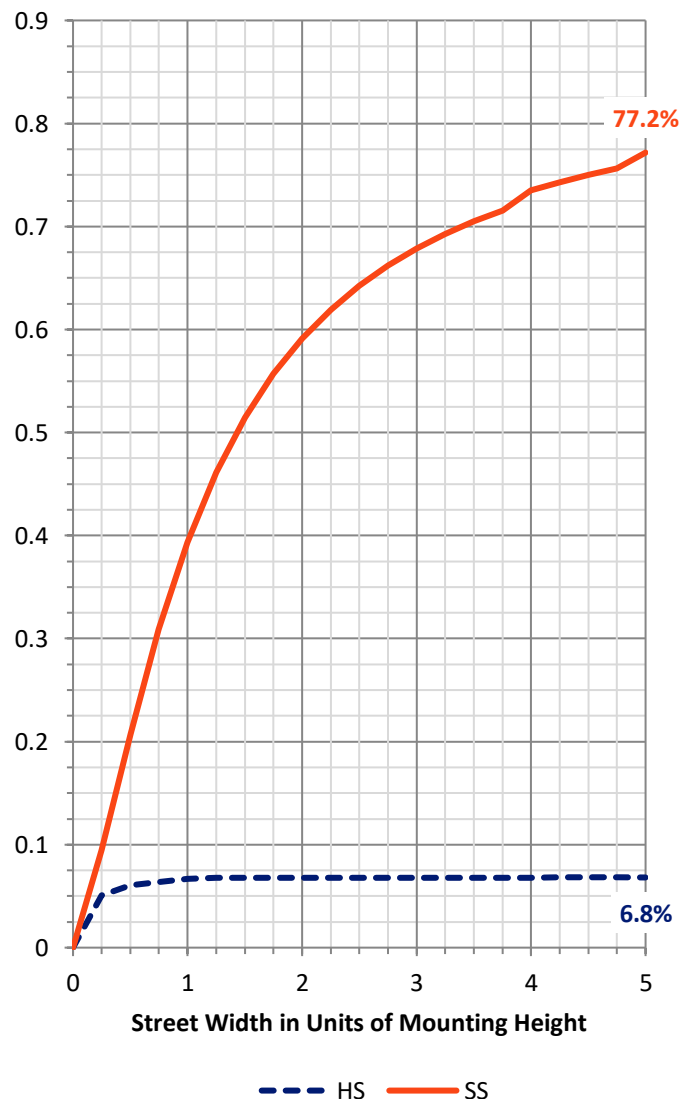
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	236.0	7.9	244.0
	% Lamp	6.9	0.2	7.1
Street Side	Lumens	2904.6	236.3	3140.9
	% Lamp	84.9	6.9	91.8
Total	Lumens	3140.6	244.2	3384.8
	% Lamp	91.8	7.1	98.9

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	77.1	2.3	2.3
10°-20°	209.3	6.2	6.1
20°-30°	303.5	9.0	8.9
30°-40°	381.1	11.3	11.1
40°-50°	439.7	13.0	12.8
50°-60°	455.5	13.5	13.3
60°-70°	461.1	13.6	13.5
70°-80°	447.9	13.2	13.1
80°-90°	365.5	10.8	10.7
90°-100°	218.2	6.4	6.4
100°-110°	18.5	0.5	0.5
110°-120°	2.1	0.1	0.1
120°-130°	1.4	0.0	0.0
130°-140°	1.3	0.0	0.0
140°-150°	1.1	0.0	0.0
150°-160°	0.9	0.0	0.0
160°-170°	0.6	0.0	0.0
170°-180°	0.2	0.0	0.0
0°-90°	3140.6	92.8	91.8
0°-180°	3384.8	100.0	98.9

Coefficient of Utilization



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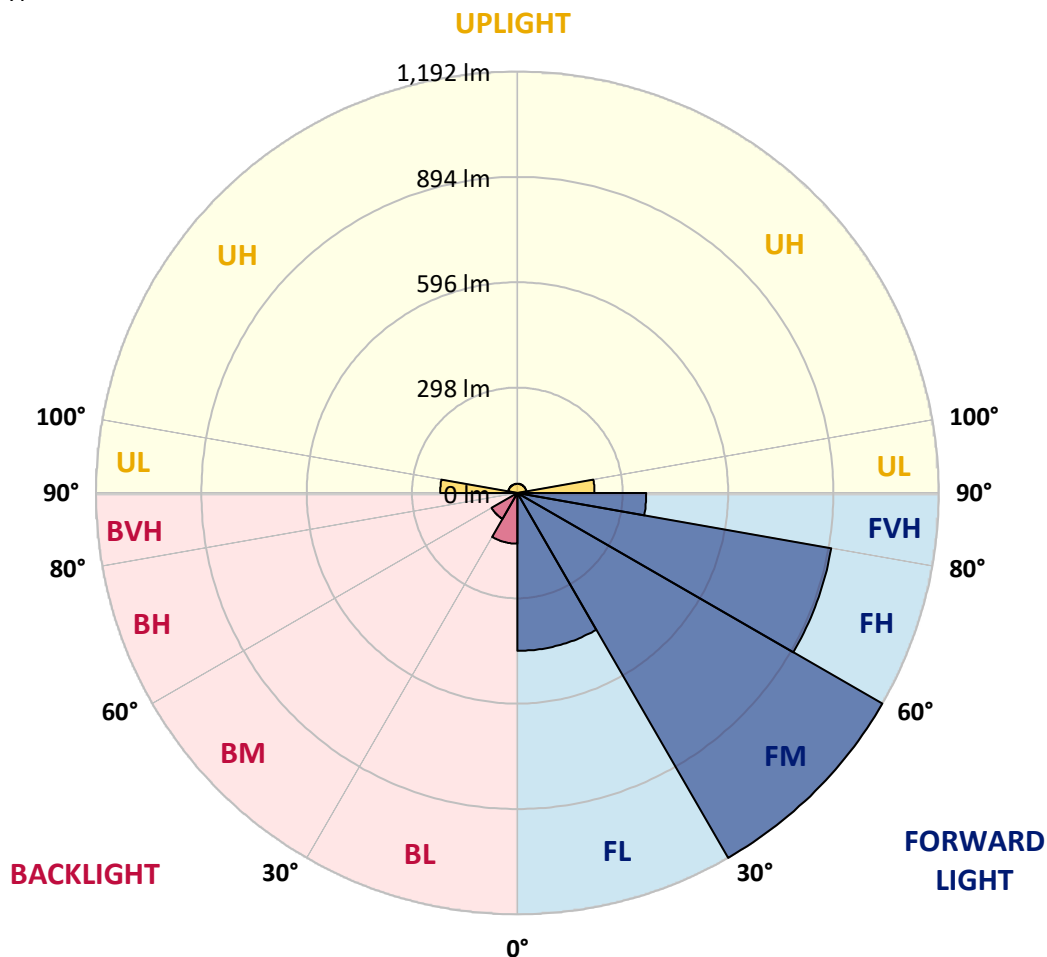
CATALOG NUMBER: AWPS28S-BZ-MID-4000K-POSITION 45

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	446.5	13.0			
FM	(30°-60°)	1192.0	34.8			
FH	(60°-80°)	901.6	26.3			G1/1800
FVH	(80°-90°)	364.5	10.7			G3/500
BL	(0°-30°)	143.4	4.2	B1/500		
BM	(30°-60°)	84.3	2.5	B0/220		
BH	(60°-80°)	7.4	0.2	B0/110		G0/110
BVH	(80°-90°)	1.0	0.0			G0/10
UL	(90°-100°)	218.2	6.4		U3/500	
UH	(100°-180°)	26.0	0.8		U2/50	
Trapped Light		37.2	1.1			

BUG Rating: B1-U3-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°
0°	830.1	830.1	830.1	830.1	830.1	830.1	830.1
0.5°	849.9	852.6	842.6	831.7	817.9	802.0	816.1
1°	865.8	866.1	851.0	831.5	809.7	787.8	799.6
1.5°	881.1	879.4	859.1	831.2	801.0	773.0	782.8
2°	896.7	893.0	865.9	830.7	792.4	758.6	766.1
2.5°	912.6	906.2	873.3	830.2	783.8	744.7	750.1
3°	926.3	918.5	880.7	829.4	774.7	730.4	733.4
3.5°	940.1	930.8	888.1	828.7	765.8	715.3	715.7
4°	952.0	941.4	895.3	828.0	757.2	699.5	697.2
4.5°	962.5	951.3	902.6	827.2	748.4	682.7	677.2
5°	972.8	960.0	908.8	826.1	739.5	665.0	657.7
5.5°	983.1	968.4	914.9	825.0	730.7	648.0	637.5
6°	994.0	977.2	920.9	823.5	721.4	630.4	617.2
6.5°	1005.0	986.4	926.6	822.1	711.7	612.4	597.7
7°	1016.6	995.9	932.0	820.6	701.8	595.1	577.4
7.5°	1028.3	1005.0	936.9	818.9	691.2	577.2	557.2
8°	1040.3	1014.6	941.2	817.2	680.8	559.4	537.4
8.5°	1052.1	1024.4	945.1	815.3	669.8	542.2	518.6
9°	1063.7	1034.2	948.9	813.3	658.7	524.4	499.6
9.5°	1075.7	1044.4	952.5	811.3	647.1	507.7	479.6
10°	1087.5	1053.9	956.0	808.9	635.2	491.2	459.2
10.5°	1099.1	1063.8	959.8	806.3	623.4	474.1	439.1
11°	1110.6	1073.5	963.5	803.7	611.7	456.0	413.2
11.5°	1122.0	1083.0	966.9	800.9	599.6	438.7	388.6
12°	1133.7	1092.2	970.6	798.3	587.3	419.2	365.2
12.5°	1144.5	1101.6	974.2	795.4	573.9	397.4	344.6
13°	1155.1	1110.9	977.8	792.3	560.5	374.6	326.1
13.5°	1164.8	1119.9	981.5	789.0	547.2	354.0	309.2
14°	1174.2	1129.1	984.8	785.7	533.9	335.5	294.7
14.5°	1184.1	1137.6	988.6	782.1	520.6	318.8	280.5
15°	1192.9	1145.7	992.4	778.2	508.4	303.4	266.4
15.5°	1202.0	1153.8	996.3	774.1	495.6	288.7	252.3
16°	1210.6	1161.6	999.8	770.2	483.6	276.7	238.3
16.5°	1219.3	1169.5	1003.4	766.2	471.5	264.7	216.6
17°	1227.2	1177.1	1007.0	762.2	459.3	252.7	190.8
17.5°	1234.6	1183.9	1010.3	758.1	447.4	240.6	164.8
18°	1242.0	1190.8	1013.3	753.1	435.2	224.9	143.8
18.5°	1248.9	1197.6	1016.0	748.0	422.3	205.6	125.4
19°	1255.5	1204.1	1018.8	742.7	409.3	182.4	109.8
19.5°	1261.5	1210.2	1021.5	737.3	396.2	160.0	91.1
20°	1267.3	1216.2	1023.9	731.7	383.5	139.8	70.3
20.5°	1272.4	1221.4	1026.2	726.2	371.4	123.3	51.7
21°	1277.1	1226.7	1028.7	720.8	357.9	108.8	41.3
21.5°	1282.0	1231.6	1031.0	715.2	343.1	94.0	37.0
22°	1286.4	1236.0	1033.0	709.4	328.3	77.2	35.1

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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
22.5°	1290.6	1240.4	1035.2	704.1	314.1	59.6	34.0
23°	1295.0	1244.3	1037.2	698.2	300.7	45.3	32.9
23.5°	1298.9	1247.4	1039.2	692.3	288.6	37.3	31.9
24°	1302.8	1250.8	1040.8	686.3	277.7	33.9	31.1
24.5°	1306.5	1253.7	1042.4	680.1	266.9	32.4	30.1
25°	1310.6	1256.4	1043.8	674.0	256.7	31.5	29.1
25.5°	1314.2	1259.1	1044.7	667.6	246.8	30.8	28.0
26°	1318.0	1261.8	1045.7	661.4	236.7	30.3	26.8
26.5°	1321.2	1264.1	1046.5	655.3	226.4	29.9	25.8
27°	1324.7	1266.3	1047.2	648.8	217.2	29.5	25.2
27.5°	1328.2	1268.3	1047.4	642.1	207.2	29.1	24.8
28°	1331.8	1270.1	1047.6	635.2	195.4	28.6	24.6
28.5°	1334.7	1271.9	1047.7	628.2	180.7	28.1	24.3
29°	1337.6	1273.3	1047.7	620.8	163.8	27.4	23.9
29.5°	1340.8	1274.8	1047.9	613.2	145.1	26.5	23.4
30°	1343.8	1276.4	1047.9	605.9	126.7	25.8	22.8
30.5°	1347.0	1277.9	1047.2	598.2	109.8	25.0	22.4
31°	1350.3	1279.1	1046.8	590.3	94.7	24.1	21.8
31.5°	1353.4	1280.9	1046.5	582.3	82.1	23.3	21.3
32°	1356.8	1282.1	1045.9	574.0	71.4	22.6	20.8
32.5°	1360.0	1283.3	1045.2	566.0	63.4	21.9	20.5
33°	1363.1	1284.6	1044.8	557.9	56.6	21.4	20.5
33.5°	1366.1	1285.7	1044.3	549.9	51.5	20.9	21.3
34°	1369.2	1286.8	1043.7	541.4	47.3	20.5	24.6
34.5°	1372.4	1288.1	1042.7	532.6	43.4	20.2	40.5
35°	1375.4	1289.6	1041.5	523.6	39.2	19.8	66.8
35.5°	1378.1	1290.9	1039.8	514.5	35.8	19.5	89.2
36°	1381.2	1292.4	1038.2	505.3	33.5	19.1	107.7
36.5°	1383.9	1294.0	1036.4	495.9	31.9	19.0	140.7
37°	1386.9	1295.4	1034.4	486.6	30.7	18.7	142.9
37.5°	1389.3	1297.0	1032.4	476.9	29.8	18.3	132.6
38°	1392.0	1298.0	1030.0	467.4	28.9	18.0	128.9
38.5°	1394.8	1299.4	1027.6	457.6	28.1	17.8	125.0
39°	1397.6	1301.0	1025.0	447.9	27.2	17.8	118.9
39.5°	1400.2	1302.3	1022.0	437.9	26.4	18.3	109.7
40°	1402.5	1303.3	1018.7	427.7	25.7	21.3	97.4
40.5°	1405.1	1304.4	1015.2	417.5	25.1	31.4	85.3
41°	1407.4	1305.5	1011.9	406.8	24.8	47.8	71.0
41.5°	1409.7	1306.2	1008.5	396.5	24.4	59.9	56.8
42°	1412.2	1307.1	1004.7	385.6	24.0	64.7	45.3
42.5°	1414.6	1307.6	1000.6	374.1	23.6	80.8	37.8
43°	1416.8	1308.0	996.6	363.5	23.0	91.3	32.4
43.5°	1419.4	1308.3	992.3	352.6	22.3	82.0	27.7
44°	1421.8	1308.6	987.4	342.2	21.7	77.0	23.5
44.5°	1423.9	1308.7	982.9	331.5	21.0	74.2	19.5

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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
45°	1425.9	1309.1	978.0	320.3	20.4	71.8	16.2
45.5°	1428.2	1309.2	973.0	309.1	20.0	69.7	13.8
46°	1430.1	1309.4	967.9	297.8	19.5	66.9	12.0
46.5°	1432.1	1309.7	962.2	286.3	19.1	63.7	10.5
47°	1433.9	1309.6	956.9	275.3	18.7	60.4	9.5
47.5°	1435.5	1309.9	951.4	264.3	18.3	57.1	8.6
48°	1437.5	1309.9	945.5	253.3	17.9	53.9	8.0
48.5°	1439.3	1310.3	939.9	242.3	17.4	50.4	7.5
49°	1440.9	1310.4	934.3	232.4	16.9	46.0	6.9
49.5°	1442.5	1310.0	928.3	222.4	16.3	41.6	6.4
50°	1444.0	1309.9	922.7	213.1	15.7	37.2	5.9
50.5°	1445.9	1310.0	916.9	204.9	15.2	32.6	5.3
51°	1447.4	1309.8	911.1	197.4	14.7	28.8	4.6
51.5°	1448.5	1309.5	905.5	190.5	14.2	25.5	3.9
52°	1450.1	1309.3	899.3	184.5	13.7	22.6	3.3
52.5°	1451.0	1308.7	893.4	178.9	13.3	20.0	3.0
53°	1451.7	1308.0	887.7	172.9	12.7	17.5	2.9
53.5°	1452.7	1307.2	881.4	166.5	12.3	15.2	2.8
54°	1453.4	1306.5	875.2	160.4	11.8	13.1	2.7
54.5°	1454.2	1305.2	868.9	154.2	11.4	10.0	2.6
55°	1454.9	1304.4	862.7	146.6	11.0	5.7	2.3
55.5°	1455.1	1303.7	856.2	136.1	10.5	3.1	2.0
56°	1455.7	1302.7	849.5	122.4	10.2	2.3	1.8
56.5°	1456.0	1302.2	842.3	106.1	9.8	2.0	1.8
57°	1456.3	1301.6	834.9	90.0	9.4	2.0	1.5
57.5°	1456.9	1301.4	827.4	78.2	9.0	2.0	1.2
58°	1457.1	1301.2	819.7	71.0	8.5	1.9	1.1
58.5°	1457.5	1300.5	812.2	66.6	8.1	1.8	0.9
59°	1458.0	1300.2	804.8	63.8	7.6	1.6	0.8
59.5°	1458.7	1299.5	796.8	62.1	7.2	1.4	0.7
60°	1459.2	1298.9	788.9	61.1	6.7	1.2	0.7
60.5°	1459.4	1298.1	780.9	60.2	6.3	0.9	0.6
61°	1459.6	1297.4	773.0	59.2	5.9	0.8	0.6
61.5°	1460.1	1296.4	765.1	58.1	5.5	0.7	0.6
62°	1460.0	1295.5	757.6	57.1	5.1	0.7	0.6
62.5°	1460.1	1294.7	750.7	56.1	4.7	0.6	0.6
63°	1460.1	1294.4	743.3	55.1	4.3	0.6	0.6
63.5°	1460.0	1293.9	735.9	53.9	3.9	0.6	0.6
64°	1459.8	1293.2	728.3	52.6	3.6	0.6	0.6
64.5°	1459.3	1292.6	721.1	51.3	3.3	0.6	0.6
65°	1458.2	1291.9	714.0	50.0	3.0	0.6	0.6
65.5°	1457.7	1291.4	706.9	48.6	2.8	0.6	0.7
66°	1456.9	1291.0	700.1	46.9	2.5	0.6	0.7
66.5°	1455.8	1290.0	693.0	45.4	2.3	0.6	0.7
67°	1454.4	1289.2	686.6	44.0	2.0	0.6	0.8

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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
67.5°	1453.3	1288.2	680.0	42.6	1.8	0.5	0.8
68°	1451.8	1286.9	673.4	41.2	1.5	0.5	0.8
68.5°	1450.6	1285.7	666.8	40.1	1.3	0.5	0.8
69°	1449.2	1284.0	660.2	39.1	1.1	0.5	0.8
69.5°	1447.5	1281.9	653.6	38.5	1.1	0.5	0.9
70°	1446.2	1279.8	646.6	38.3	1.1	0.5	0.9
70.5°	1444.9	1277.4	639.3	38.4	1.0	0.5	0.9
71°	1444.1	1275.2	631.9	38.4	0.9	0.6	0.9
71.5°	1442.5	1272.3	624.2	38.3	0.8	0.6	1.0
72°	1440.8	1269.6	616.8	37.9	0.7	0.6	1.0
72.5°	1439.0	1267.5	609.9	37.1	0.7	0.6	1.1
73°	1436.9	1265.2	603.1	35.9	0.7	0.6	1.1
73.5°	1433.0	1262.7	596.1	33.9	0.6	0.6	1.2
74°	1427.7	1260.3	590.1	31.3	0.6	0.6	1.2
74.5°	1421.6	1257.7	583.7	28.8	0.6	0.7	1.3
75°	1413.1	1255.9	578.0	25.3	0.6	0.7	1.3
75.5°	1401.9	1252.4	572.9	22.2	0.6	0.7	1.4
76°	1389.2	1248.2	568.4	20.2	0.6	0.8	1.4
76.5°	1375.2	1241.8	563.7	18.6	0.6	0.8	1.4
77°	1359.5	1233.4	557.2	17.1	0.6	0.8	1.5
77.5°	1340.8	1223.0	550.7	15.8	0.6	0.9	1.5
78°	1319.5	1210.0	544.3	14.5	0.6	0.9	1.6
78.5°	1297.2	1196.6	537.8	13.1	0.6	0.9	1.6
79°	1272.9	1180.7	531.4	12.0	0.6	1.0	1.7
79.5°	1247.4	1162.7	526.6	11.1	0.6	1.0	1.7
80°	1222.8	1141.4	521.0	9.8	0.6	1.0	1.8
80.5°	1199.0	1118.7	515.4	8.8	0.7	1.1	1.8
81°	1175.6	1093.4	509.9	7.8	0.7	1.1	1.9
81.5°	1155.9	1067.6	504.9	7.1	0.7	1.2	1.9
82°	1137.7	1043.7	500.4	6.4	0.7	1.2	2.0
82.5°	1122.2	1021.9	496.5	5.8	0.8	1.2	2.0
83°	1107.7	1003.2	493.0	5.2	0.8	1.3	2.1
83.5°	1094.8	986.7	489.7	4.6	0.8	1.3	2.1
84°	1083.1	973.9	485.5	4.2	0.8	1.3	2.2
84.5°	1072.8	963.7	480.4	3.8	0.9	1.4	2.2
85°	1065.7	957.0	474.1	3.3	0.9	1.4	2.3
85.5°	1060.3	951.0	466.1	2.9	0.9	1.5	2.3
86°	1054.8	947.1	457.1	2.6	0.9	1.5	2.3
86.5°	1050.1	946.8	447.9	2.3	1.0	1.5	2.4
87°	1046.0	948.5	438.4	2.0	1.0	1.6	2.4
87.5°	1040.5	952.0	429.6	1.7	1.0	1.6	2.5
88°	1032.1	958.1	421.7	1.5	1.1	1.7	2.5
88.5°	1021.3	966.0	416.3	1.2	1.1	1.7	2.6
89°	1008.2	977.0	413.9	1.1	1.1	1.7	2.6
89.5°	992.9	990.1	411.0	1.0	1.1	1.8	2.6

REPORT NUMBER: P1197174

CATALOG NUMBER: AWPS28S-BZ-MID-4000K-POSITION 45

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
90°	973.3	999.5	408.3	0.7	1.2	1.8	2.7
90.5°	950.1	1003.7	409.1	0.6	1.2	1.8	2.7
91°	926.2	999.9	405.0	0.6	1.2	1.9	2.8
91.5°	901.8	978.4	397.8	0.6	1.2	1.9	2.8
92°	877.9	941.8	390.4	0.6	1.3	2.0	2.8
92.5°	858.3	886.2	376.0	0.6	1.3	2.0	2.9
93°	844.6	812.7	348.8	0.6	1.3	2.0	2.9
93.5°	832.8	734.3	311.7	0.6	1.3	2.1	2.9
94°	828.5	649.6	268.0	0.6	1.4	2.1	2.9
94.5°	820.8	573.3	224.7	0.6	1.4	2.1	3.0
95°	797.8	515.2	187.1	0.6	1.4	2.2	3.0
95.5°	749.7	474.2	153.5	0.5	1.5	2.2	3.0
96°	691.9	432.9	127.7	0.5	1.5	2.3	3.1
96.5°	634.1	378.3	107.1	0.6	1.5	2.3	3.1
97°	576.7	372.3	88.3	0.6	1.5	2.3	3.1
97.5°	519.8	412.9	70.9	0.6	1.6	2.4	3.2
98°	464.3	460.0	60.7	0.6	1.6	2.4	3.2
98.5°	435.4	464.4	61.0	0.6	1.6	2.4	3.2
99°	417.1	395.9	64.1	0.6	1.6	2.5	3.2
99.5°	413.5	277.1	63.3	0.6	1.7	2.5	3.3
100°	434.2	212.7	65.3	0.6	1.7	2.5	3.3
100.5°	453.2	151.5	59.8	0.6	1.7	2.6	3.3
101°	388.1	90.2	47.9	0.6	1.7	2.6	3.3
101.5°	252.5	28.9	32.4	0.6	1.7	2.6	3.3
102°	155.6	21.0	24.3	0.6	1.8	2.6	3.4
102.5°	82.3	19.5	21.0	0.6	1.8	2.7	3.4
103°	37.4	19.2	18.0	0.6	1.8	2.7	3.4
103.5°	25.2	19.5	14.9	0.6	1.8	2.7	3.4
104°	24.5	21.3	12.0	0.6	1.9	2.8	3.4
104.5°	23.7	24.1	9.5	0.6	1.9	2.8	3.5
105°	23.9	23.5	7.7	0.6	1.9	2.8	3.5
105.5°	25.1	21.5	6.6	0.6	1.9	2.8	3.5
106°	27.7	20.5	5.7	0.6	2.0	2.9	3.5
106.5°	29.1	20.2	4.8	0.6	2.0	2.9	3.5
107°	27.0	18.8	3.9	0.6	2.0	2.9	3.5
107.5°	24.1	16.9	3.2	0.6	2.0	2.9	3.5
108°	22.8	14.4	2.8	0.6	2.0	2.9	3.5
108.5°	21.5	11.6	2.4	0.6	2.1	2.9	3.6
109°	18.9	9.1	2.1	0.6	2.1	3.0	3.6
109.5°	15.6	7.1	1.9	0.7	2.1	3.0	3.6
110°	12.8	5.6	1.6	0.7	2.1	3.0	3.6
110.5°	10.6	5.0	1.4	0.7	2.2	3.0	3.6
111°	9.4	4.7	1.2	0.7	2.2	3.1	3.6
111.5°	8.7	4.3	1.0	0.7	2.2	3.1	3.6
112°	7.8	3.9	0.9	0.7	2.2	3.1	3.6

REPORT NUMBER: P1197174

CATALOG NUMBER: AWPS28S-BZ-MID-4000K-POSITION 45

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
112.5°	6.6	3.4	0.8	0.7	2.2	3.1	3.6
113°	5.6	2.7	0.7	0.7	2.2	3.2	3.7
113.5°	4.8	2.1	0.6	0.8	2.3	3.2	3.7
114°	4.3	1.7	0.5	0.8	2.3	3.2	3.7
114.5°	3.7	1.3	0.4	0.8	2.3	3.2	3.7
115°	2.8	1.1	0.3	0.8	2.3	3.2	3.7
115.5°	2.1	0.9	0.2	0.8	2.3	3.2	3.7
116°	1.7	0.8	0.2	0.8	2.4	3.2	3.7
116.5°	1.3	0.6	0.1	0.8	2.4	3.3	3.8
117°	1.1	0.4	0.1	0.9	2.4	3.3	3.8
117.5°	0.9	0.2	0.1	0.9	2.4	3.3	3.8
118°	0.7	0.1	0.1	0.9	2.4	3.3	3.8
118.5°	0.5	0.0	0.0	0.9	2.4	3.3	3.8
119°	0.3	0.0	0.0	0.9	2.4	3.3	3.8
119.5°	0.1	0.0	0.1	1.0	2.4	3.3	3.8
120°	0.0	0.0	0.0	1.0	2.4	3.3	3.8
120.5°	0.0	0.0	0.0	1.0	2.5	3.3	3.8
121°	0.0	0.0	0.1	1.0	2.5	3.4	3.8
121.5°	0.0	0.0	0.1	1.0	2.5	3.4	3.8
122°	0.0	0.0	0.1	1.0	2.5	3.4	3.8
122.5°	0.0	0.0	0.1	1.0	2.5	3.4	3.8
123°	0.0	0.0	0.1	1.1	2.5	3.4	3.8
123.5°	0.0	0.0	0.1	1.1	2.5	3.4	3.8
124°	0.0	0.0	0.1	1.1	2.5	3.4	3.8
124.5°	0.0	0.0	0.1	1.1	2.5	3.4	3.8
125°	0.0	0.0	0.1	1.1	2.6	3.4	3.8
125.5°	0.0	0.0	0.2	1.1	2.6	3.4	3.8
126°	0.0	0.0	0.2	1.1	2.6	3.4	3.8
126.5°	0.0	0.0	0.2	1.2	2.6	3.4	3.8
127°	0.0	0.0	0.2	1.2	2.6	3.4	3.8
127.5°	0.0	0.0	0.2	1.2	2.6	3.4	3.8
128°	0.0	0.0	0.2	1.2	2.6	3.5	3.8
128.5°	0.0	0.0	0.2	1.3	2.6	3.5	3.8
129°	0.0	0.0	0.3	1.3	2.6	3.5	3.8
129.5°	0.0	0.0	0.3	1.3	2.6	3.5	3.8
130°	0.0	0.0	0.3	1.3	2.6	3.5	3.8
130.5°	0.0	0.0	0.3	1.3	2.6	3.5	3.8
131°	0.0	0.0	0.3	1.3	2.6	3.5	3.8
131.5°	0.0	0.0	0.4	1.3	2.6	3.5	3.8
132°	0.0	0.0	0.4	1.3	2.7	3.5	3.8
132.5°	0.0	0.0	0.4	1.4	2.7	3.5	3.8
133°	0.0	0.0	0.4	1.4	2.7	3.5	3.8
133.5°	0.0	0.0	0.4	1.4	2.7	3.5	3.8
134°	0.0	0.0	0.5	1.4	2.7	3.5	3.8
134.5°	0.0	0.0	0.5	1.4	2.7	3.5	3.8

REPORT NUMBER: P1197174

CATALOG NUMBER: AWPS28S-BZ-MID-4000K-POSITION 45

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
135°	0.0	0.0	0.5	1.4	2.7	3.5	3.8
135.5°	0.0	0.0	0.5	1.4	2.7	3.5	3.8
136°	0.0	0.0	0.5	1.5	2.7	3.5	3.8
136.5°	0.0	0.0	0.6	1.5	2.7	3.5	3.8
137°	0.0	0.0	0.6	1.5	2.7	3.5	3.8
137.5°	0.0	0.0	0.6	1.5	2.7	3.5	3.8
138°	0.0	0.0	0.6	1.5	2.7	3.5	3.8
138.5°	0.0	0.0	0.6	1.6	2.7	3.5	3.7
139°	0.0	0.0	0.6	1.6	2.7	3.5	3.7
139.5°	0.0	0.0	0.7	1.6	2.7	3.5	3.7
140°	0.0	0.0	0.7	1.6	2.7	3.5	3.7
140.5°	0.0	0.0	0.7	1.6	2.7	3.5	3.7
141°	0.0	0.0	0.7	1.6	2.7	3.5	3.7
141.5°	0.0	0.0	0.8	1.6	2.7	3.5	3.7
142°	0.0	0.0	0.8	1.6	2.8	3.5	3.6
142.5°	0.0	0.0	0.8	1.7	2.8	3.4	3.6
143°	0.0	0.0	0.8	1.7	2.8	3.4	3.6
143.5°	0.0	0.0	0.9	1.7	2.8	3.4	3.6
144°	0.0	0.0	0.9	1.7	2.8	3.4	3.6
144.5°	0.0	0.1	0.9	1.7	2.8	3.4	3.6
145°	0.0	0.1	0.9	1.7	2.8	3.4	3.5
145.5°	0.0	0.1	1.0	1.7	2.8	3.4	3.5
146°	0.0	0.1	1.0	1.8	2.8	3.4	3.5
146.5°	0.0	0.1	1.0	1.8	2.8	3.4	3.5
147°	0.0	0.1	1.0	1.8	2.8	3.4	3.5
147.5°	0.0	0.2	1.0	1.8	2.8	3.4	3.5
148°	0.0	0.2	1.1	1.8	2.8	3.4	3.4
148.5°	0.0	0.2	1.1	1.8	2.8	3.3	3.4
149°	0.1	0.2	1.1	1.8	2.8	3.3	3.4
149.5°	0.1	0.3	1.1	1.9	2.8	3.3	3.4
150°	0.1	0.3	1.1	1.9	2.8	3.3	3.4
150.5°	0.1	0.4	1.2	1.9	2.8	3.3	3.4
151°	0.1	0.4	1.2	1.9	2.8	3.3	3.3
151.5°	0.1	0.4	1.2	1.9	2.8	3.3	3.3
152°	0.2	0.4	1.2	1.9	2.8	3.3	3.3
152.5°	0.2	0.4	1.2	1.9	2.8	3.3	3.3
153°	0.2	0.4	1.3	1.9	2.8	3.3	3.2
153.5°	0.2	0.4	1.3	2.0	2.8	3.3	3.2
154°	0.2	0.5	1.3	2.0	2.8	3.3	3.2
154.5°	0.2	0.5	1.3	2.0	2.8	3.3	3.2
155°	0.3	0.5	1.4	2.0	2.8	3.3	3.1
155.5°	0.3	0.5	1.4	2.0	2.8	3.2	3.1
156°	0.3	0.6	1.4	2.0	2.8	3.2	3.1
156.5°	0.3	0.6	1.4	2.0	2.8	3.2	3.1
157°	0.3	0.6	1.4	2.0	2.8	3.2	3.1

REPORT NUMBER: P1197174

CATALOG NUMBER: AWPS28S-BZ-MID-4000K-POSITION 45

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
157.5°	0.4	0.7	1.5	2.0	2.7	3.2	3.0
158°	0.4	0.7	1.5	2.0	2.7	3.2	3.0
158.5°	0.4	0.7	1.5	2.1	2.7	3.2	3.0
159°	0.4	0.7	1.5	2.1	2.7	3.1	3.0
159.5°	0.5	0.8	1.5	2.1	2.7	3.1	3.0
160°	0.5	0.8	1.6	2.1	2.7	3.1	2.9
160.5°	0.5	0.8	1.6	2.1	2.7	3.1	2.9
161°	0.5	0.8	1.6	2.2	2.7	3.1	2.9
161.5°	0.6	0.9	1.6	2.1	2.7	3.1	2.9
162°	0.6	0.9	1.6	2.1	2.7	3.0	2.8
162.5°	0.6	0.9	1.7	2.2	2.7	3.0	2.8
163°	0.6	1.0	1.7	2.2	2.7	3.0	2.8
163.5°	0.6	1.0	1.7	2.2	2.7	3.0	2.7
164°	0.7	1.0	1.7	2.2	2.7	3.0	2.7
164.5°	0.7	1.0	1.7	2.2	2.7	3.0	2.7
165°	0.7	1.1	1.8	2.2	2.7	3.0	2.6
165.5°	0.8	1.1	1.8	2.2	2.7	3.0	2.6
166°	0.8	1.1	1.8	2.2	2.7	2.9	2.6
166.5°	0.8	1.2	1.8	2.2	2.7	2.9	2.6
167°	0.8	1.2	1.8	2.3	2.7	2.9	2.5
167.5°	0.8	1.2	1.8	2.3	2.7	2.9	2.5
168°	0.9	1.3	1.9	2.3	2.7	2.9	2.4
168.5°	0.9	1.3	1.9	2.3	2.6	2.9	2.4
169°	0.9	1.3	1.9	2.3	2.6	2.9	2.4
169.5°	1.0	1.3	1.9	2.3	2.6	2.9	2.4
170°	1.0	1.4	1.9	2.3	2.6	2.9	2.3
170.5°	1.0	1.4	2.0	2.3	2.6	2.8	2.3
171°	1.0	1.4	2.0	2.3	2.6	2.8	2.3
171.5°	1.1	1.4	2.0	2.3	2.6	2.8	2.2
172°	1.1	1.5	2.0	2.3	2.6	2.7	2.2
172.5°	1.1	1.5	2.0	2.3	2.6	2.7	2.1
173°	1.1	1.5	2.1	2.3	2.6	2.7	2.1
173.5°	1.2	1.6	2.1	2.3	2.6	2.7	2.1
174°	1.2	1.6	2.1	2.3	2.6	2.7	2.0
174.5°	1.2	1.6	2.1	2.3	2.6	2.7	2.0
175°	1.3	1.6	2.1	2.4	2.6	2.6	2.0
175.5°	1.3	1.7	2.1	2.4	2.6	2.6	1.9
176°	1.3	1.7	2.2	2.4	2.6	2.6	1.9
176.5°	1.4	1.7	2.2	2.4	2.5	2.6	1.9
177°	1.4	1.7	2.2	2.4	2.5	2.6	1.8
177.5°	1.4	1.8	2.2	2.4	2.5	2.5	1.8
178°	1.5	1.8	2.2	2.4	2.5	2.5	1.7
178.5°	1.5	1.9	2.2	2.4	2.5	2.5	1.7
179°	1.5	1.9	2.2	2.4	2.5	2.5	1.7
179.5°	1.5	1.9	2.2	2.4	2.5	2.4	1.6



REPORT NUMBER: P1197174
CATALOG NUMBER: AWPS28S-BZ-MID-4000K-POSITION 45

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°
180°	1.6	1.6	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)