

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: HALO COMMERCIAL

Report Number: P776013

Luminaire Tested: HCDJBL51525CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776013
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B009)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL51525CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K
Description: 4 INCH SQUARE MEDIUM LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2241.3 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.14 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

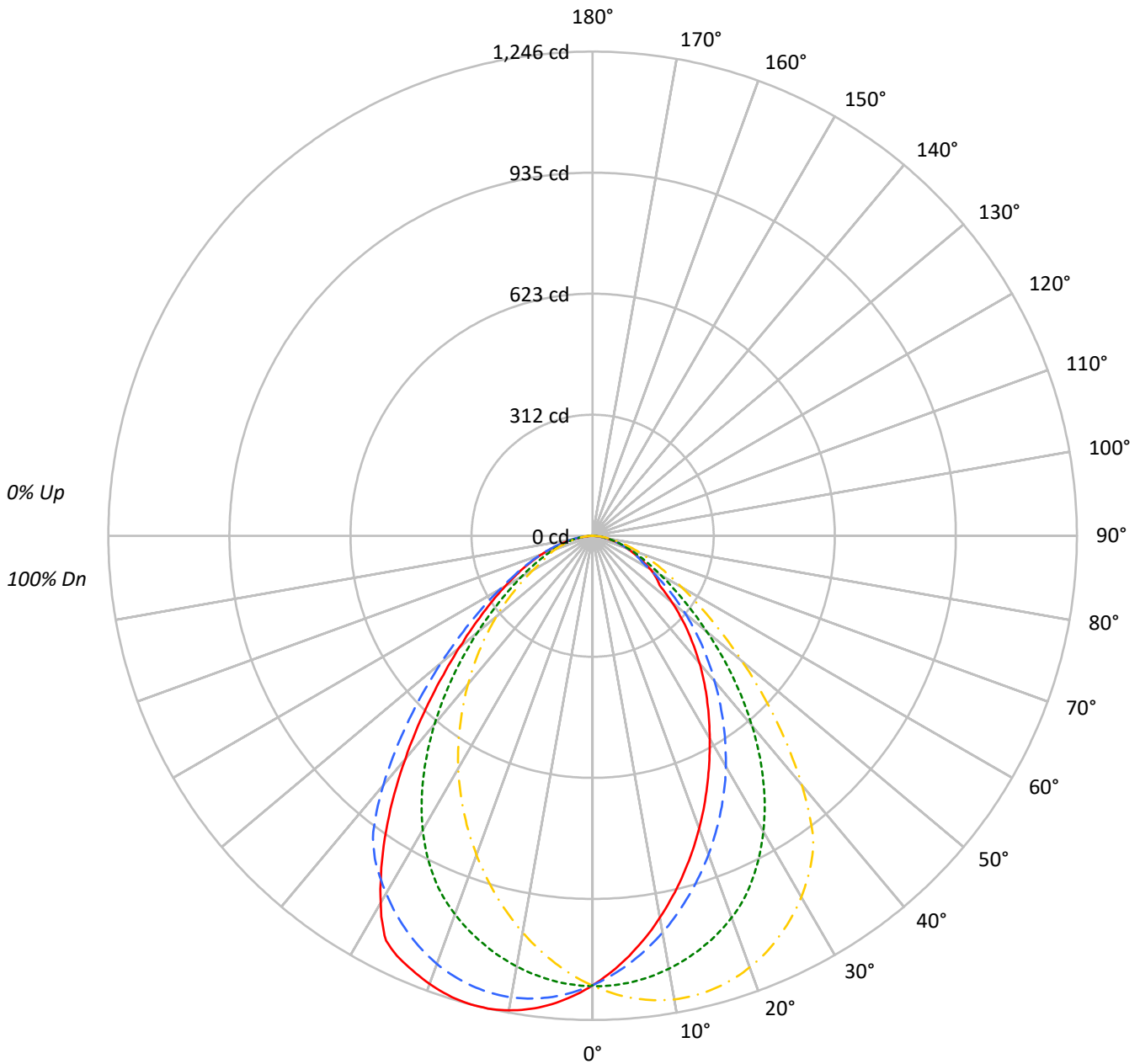
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL51525CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88								
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76								
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66								
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58								
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52								
6	75	63	55	50	74	62	55	49	61	54	49	59	53	49	58	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	145671	145671	145671	145671
5°	137043	145646	152873	145267
10°	127510	144570	158474	143816
15°	117482	142719	162275	141624
20°	107342	140034	164355	138775
25°	97174	135263	165563	134347
30°	87613	127663	158528	127038
35°	78799	117546	142357	116685
40°	70265	104814	123115	103845
45°	61509	90288	104082	89737
50°	52217	75124	87713	75633
55°	45133	61589	75039	63213
60°	42940	51145	65417	53511
65°	38474	43149	57860	46187
70°	34441	37127	50999	40512
75°	30439	32044	43762	35836
80°	23989	26743	33918	31309
85°	11696	19494	16172	25703

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 225°
 Vertical Angle: 45°
 Luminance: 118658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.8	4.9
10°-20°	304.4	13.6
20°-30°	439.7	19.6
30°-40°	473.0	21.1
40°-50°	392.5	17.5
50°-60°	264.1	11.8
60°-70°	159.8	7.1
70°-80°	80.8	3.6
80°-90°	18.2	0.8
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°-30°	852.9	38.1
0°-40°	1325.9	59.2
0°-60°	1982.5	88.5
0°-90°	2241.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2241.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1158	1158	1158	1158	1158	
5°	1085	1153	1210	1150	1085	101
15°	902	1095	1246	1087	902	252
25°	700	974	1192	968	700	321
35°	513	765	927	760	513	320
45°	346	507	585	504	346	266
55°	206	281	342	288	206	188
65°	129	145	194	155	129	129
75°	63	66	90	74	63	66
85°	8	14	11	18	8	12
90°	0	0	0	0	0	



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL5125CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5
0.5°	1150.6	1150.6	1151.9	1154.4	1159.3	1161.0	1162.6	1163.3	1163.3	1162.3	1160.8
1°	1144.0	1144.5	1147.3	1151.9	1159.3	1163.3	1166.9	1168.9	1169.4	1167.9	1164.9
1.5°	1137.1	1138.2	1142.5	1149.1	1159.0	1165.4	1171.0	1174.3	1175.3	1173.0	1168.7
2°	1130.3	1131.8	1137.4	1146.0	1158.5	1167.4	1174.8	1179.6	1180.9	1178.1	1172.7
2.5°	1122.9	1124.9	1132.1	1143.0	1158.0	1169.2	1178.6	1184.4	1186.2	1183.2	1176.3
3°	1115.8	1118.3	1127.0	1139.7	1157.2	1171.0	1182.1	1189.3	1191.6	1187.7	1179.6
3.5°	1108.2	1111.2	1121.4	1136.4	1156.5	1172.2	1185.5	1194.1	1196.4	1192.3	1182.9
4°	1100.5	1104.3	1115.5	1132.8	1155.2	1173.8	1188.8	1198.4	1201.2	1196.6	1186.0
4.5°	1092.6	1096.7	1109.7	1129.0	1154.2	1174.8	1191.8	1202.5	1205.8	1200.7	1188.5
5°	1084.8	1089.6	1103.8	1125.2	1152.9	1175.8	1194.6	1206.6	1210.1	1204.5	1191.3
5.5°	1076.4	1082.0	1097.5	1121.1	1151.4	1176.6	1197.2	1210.4	1214.2	1208.1	1193.6
6°	1068.2	1074.1	1091.4	1117.1	1149.9	1177.3	1199.4	1213.9	1218.0	1211.6	1195.9
6.5°	1060.1	1065.9	1085.0	1112.7	1148.1	1177.6	1201.7	1217.0	1221.6	1214.7	1197.9
7°	1051.4	1058.3	1078.4	1108.7	1146.0	1177.8	1203.8	1220.0	1225.1	1217.5	1199.7
7.5°	1042.5	1049.9	1071.5	1103.8	1144.0	1177.8	1205.5	1222.8	1228.2	1220.3	1201.2
8°	1034.2	1041.8	1064.9	1099.3	1141.7	1177.8	1207.1	1225.6	1231.0	1222.8	1202.5
8.5°	1025.3	1033.4	1058.1	1094.4	1139.2	1177.6	1208.3	1227.9	1233.8	1224.9	1203.5
9°	1016.1	1025.0	1050.9	1089.6	1136.6	1177.1	1209.6	1230.0	1236.1	1226.9	1204.5
9.5°	1007.0	1016.1	1043.6	1084.3	1134.1	1176.3	1210.6	1231.7	1238.1	1228.7	1205.3
10°	997.8	1007.5	1036.4	1079.2	1131.3	1175.5	1211.4	1233.5	1240.1	1230.2	1205.8
10.5°	988.4	998.8	1029.1	1073.8	1128.2	1174.5	1211.9	1235.0	1241.7	1231.5	1206.3
11°	979.2	989.9	1021.7	1068.5	1125.2	1173.5	1212.2	1236.1	1243.2	1232.5	1206.3
11.5°	969.8	981.0	1014.1	1062.6	1121.9	1172.2	1212.2	1237.1	1244.2	1233.3	1206.1
12°	959.9	972.1	1006.2	1057.0	1118.6	1170.7	1212.2	1237.8	1245.2	1233.8	1205.8
12.5°	950.5	962.7	998.6	1051.2	1115.0	1169.2	1211.9	1238.1	1246.0	1234.3	1205.3
13°	941.1	953.6	990.7	1045.3	1111.5	1167.4	1211.1	1238.3	1246.2	1234.3	1204.5
13.5°	931.2	944.4	982.8	1039.5	1107.6	1165.4	1210.4	1238.3	1246.5	1234.0	1203.5
14°	921.5	935.2	974.4	1033.4	1103.8	1163.1	1209.4	1238.1	1246.5	1233.5	1202.2
14.5°	911.6	925.8	966.3	1027.0	1099.8	1161.0	1208.3	1237.6	1246.0	1232.8	1200.7
15°	901.7	915.9	958.1	1020.7	1095.4	1158.5	1206.8	1236.8	1245.5	1232.0	1199.2
15.5°	891.8	906.5	950.0	1014.3	1091.1	1156.0	1205.3	1235.8	1244.7	1231.0	1197.4
16°	881.8	897.1	941.6	1008.0	1086.8	1152.9	1203.5	1234.5	1243.7	1229.7	1195.4
16.5°	872.2	887.4	933.0	1001.4	1082.2	1150.1	1201.5	1233.3	1242.4	1228.2	1193.1
17°	862.0	878.0	924.6	994.5	1077.4	1146.8	1199.4	1231.7	1240.9	1226.1	1190.8
17.5°	852.1	867.9	915.9	987.6	1072.3	1143.5	1196.9	1229.7	1239.1	1224.1	1188.0
18°	841.9	858.2	907.5	980.8	1067.2	1139.7	1194.4	1227.4	1237.1	1221.8	1185.2
18.5°	832.0	848.5	898.9	973.6	1062.1	1136.1	1191.6	1225.1	1234.8	1219.3	1182.1
19°	821.8	838.6	890.0	966.3	1056.8	1132.3	1188.5	1222.6	1232.5	1216.7	1179.1
19.5°	811.4	828.7	881.3	959.1	1051.2	1128.0	1185.2	1219.8	1230.0	1213.7	1175.8
20°	801.5	819.0	872.2	951.8	1045.6	1123.9	1181.9	1216.7	1227.2	1210.6	1172.2
20.5°	791.3	809.1	863.5	944.1	1039.8	1119.3	1178.3	1213.4	1224.1	1207.3	1168.2
21°	781.1	799.2	854.6	936.5	1033.6	1114.8	1174.5	1210.1	1221.1	1203.8	1164.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	750.6	769.5	827.4	913.1	1013.6	1099.8	1162.1	1198.7	1210.6	1192.1	1151.1
23°	740.2	759.3	818.0	904.7	1006.4	1093.9	1157.5	1194.6	1207.1	1188.0	1146.5
23.5°	730.3	749.6	809.1	896.6	998.6	1088.1	1152.7	1190.3	1203.3	1183.7	1141.7
24°	720.1	739.4	799.7	887.4	990.7	1081.7	1147.3	1186.2	1199.7	1179.4	1136.6
24.5°	709.7	729.5	790.6	878.8	982.5	1074.8	1142.2	1181.6	1196.1	1174.5	1131.3
25°	699.8	719.6	780.9	869.6	974.1	1067.7	1136.9	1177.1	1192.3	1169.9	1126.0
25.5°	689.9	709.4	771.7	860.5	965.8	1060.3	1131.5	1172.7	1187.2	1165.4	1120.1
26°	679.9	699.5	762.3	850.8	956.9	1053.0	1125.7	1168.4	1181.6	1161.0	1114.5
26.5°	670.0	689.9	752.9	841.7	947.7	1044.8	1119.9	1163.8	1175.8	1156.2	1108.4
27°	660.1	679.7	743.5	832.0	938.3	1036.4	1113.7	1159.0	1169.7	1151.4	1102.3
27.5°	650.4	670.0	734.1	822.3	928.6	1028.1	1107.6	1152.7	1160.0	1145.0	1096.2
28°	640.5	660.1	724.4	812.4	919.0	1019.2	1101.3	1146.3	1146.8	1138.4	1089.8
28.5°	631.1	650.4	715.0	802.5	909.1	1010.0	1094.7	1139.9	1133.3	1131.8	1083.2
29°	621.7	640.5	705.1	792.3	899.1	1000.6	1087.8	1132.8	1120.9	1124.7	1076.4
29.5°	612.1	631.4	695.5	782.4	888.7	990.7	1080.7	1121.9	1105.9	1113.7	1069.5
30°	602.9	622.0	685.5	772.0	878.5	980.5	1073.6	1108.2	1090.9	1100.5	1062.6
30.5°	593.5	612.3	675.6	761.8	867.6	970.6	1065.9	1094.9	1075.9	1087.0	1055.5
31°	584.3	602.1	665.7	751.4	857.2	960.4	1058.1	1082.2	1060.6	1074.1	1048.4
31.5°	575.2	593.5	655.5	741.0	846.0	949.5	1049.9	1067.2	1043.8	1059.6	1041.0
32°	566.0	584.1	645.6	730.5	835.1	938.8	1042.0	1052.2	1027.8	1044.8	1033.6
32.5°	557.1	575.2	635.7	720.1	823.9	927.6	1034.2	1037.0	1011.8	1030.3	1026.3
33°	548.2	566.0	625.8	709.4	812.4	916.4	1025.8	1022.2	995.0	1015.1	1018.6
33.5°	539.3	557.1	615.9	699.0	800.5	905.0	1017.1	1006.2	978.0	999.8	1010.8
34°	530.7	548.2	605.7	688.1	789.3	893.3	1008.0	990.4	960.7	983.6	1001.9
34.5°	521.5	539.1	595.5	677.4	777.1	880.8	997.8	973.9	943.6	968.0	992.2
35°	512.9	529.7	585.6	666.5	765.1	869.1	987.6	958.1	926.6	952.0	982.0
35.5°	504.2	521.5	575.7	655.8	752.9	856.4	976.7	941.3	909.1	936.3	972.1
36°	495.8	512.6	566.0	644.9	740.2	844.0	965.5	924.8	891.3	919.7	961.7
36.5°	487.2	504.0	555.9	634.2	727.8	831.2	951.8	907.8	874.2	903.2	949.0
37°	478.6	495.3	546.2	623.2	715.5	818.0	935.8	891.3	856.4	887.2	933.5
37.5°	469.9	486.4	536.3	612.1	702.6	804.5	919.7	874.2	838.4	870.7	918.5
38°	461.3	477.8	526.6	601.1	689.6	791.1	904.2	857.2	820.1	853.9	903.2
38.5°	452.9	469.1	517.2	589.9	676.6	777.6	888.2	839.4	803.3	836.8	887.9
39°	444.7	460.8	507.5	579.0	663.9	763.9	871.2	823.4	785.7	820.8	871.2
39.5°	436.1	452.4	497.9	567.8	651.0	749.9	854.1	805.8	767.7	804.3	854.6
40°	427.7	443.5	488.5	556.6	638.0	735.6	837.1	788.3	749.4	787.3	837.6
40.5°	419.3	435.1	479.1	545.7	624.5	721.6	820.1	771.0	733.6	770.0	820.8
41°	410.9	426.7	469.9	534.5	611.5	707.4	802.5	755.0	716.6	754.4	804.0
41.5°	402.8	418.3	460.5	523.6	598.3	693.2	785.2	737.9	698.5	737.9	786.2
42°	394.4	409.9	451.3	512.4	585.4	678.9	767.7	720.1	682.0	720.6	769.2
42.5°	386.3	401.5	442.2	501.7	572.4	664.2	750.6	704.1	666.2	704.9	751.7
43°	378.1	393.1	433.0	490.8	559.2	649.9	733.3	688.1	649.7	689.1	734.9
43.5°	369.7	385.0	423.9	479.8	545.9	635.4	716.1	670.8	631.4	672.6	717.3



TEST NUMBER: P776013

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	345.6	360.3	397.2	447.5	507.3	592.0	664.4	623.2	584.8	626.3	666.7
45.5°	337.4	352.2	388.3	436.9	494.3	577.7	646.9	605.7	569.8	609.5	649.9
46°	329.8	344.3	379.6	426.4	481.6	563.5	629.9	590.7	556.4	593.7	633.2
46.5°	321.4	336.2	370.7	415.7	468.9	549.0	613.6	576.5	541.1	580.8	617.4
47°	313.5	328.0	362.1	405.6	456.2	534.8	597.1	560.4	524.6	565.5	600.9
47.5°	305.6	319.9	353.2	395.2	443.7	520.5	580.3	543.7	512.9	549.0	584.8
48°	298.0	312.0	345.1	385.0	431.3	506.5	563.5	531.2	500.2	536.0	568.8
48.5°	289.9	303.9	336.4	374.8	419.3	492.8	548.5	517.0	485.2	523.1	554.3
49°	282.3	296.2	328.0	365.1	407.4	479.1	533.0	500.9	471.9	508.1	538.8
49.5°	274.6	288.4	319.6	355.2	395.7	465.6	517.0	486.9	460.8	493.3	523.6
50°	266.7	280.5	311.2	345.3	383.7	451.6	501.4	474.5	448.0	481.6	508.3
50.5°	258.9	272.6	303.1	335.7	372.5	438.6	487.5	460.5	433.8	468.6	495.1
51°	251.5	265.0	295.0	326.5	361.3	425.2	472.5	445.5	424.1	453.1	480.6
51.5°	243.9	257.3	286.8	317.1	350.7	412.7	457.7	435.1	413.7	442.7	466.4
52°	236.5	249.7	278.9	307.9	339.7	399.5	444.7	422.9	400.2	431.0	452.6
52.5°	229.1	242.1	271.1	299.0	329.0	387.3	431.3	408.4	390.6	417.8	440.9
53°	222.2	234.4	263.4	290.1	318.9	374.6	417.0	397.9	381.2	405.3	426.7
53.5°	215.6	227.1	255.6	281.5	309.2	362.6	404.1	387.5	370.2	395.7	413.5
54°	211.6	220.0	247.9	272.8	299.3	350.4	391.8	375.3	359.6	384.0	401.8
54.5°	208.8	212.8	240.5	264.5	289.9	338.7	379.4	364.1	351.4	371.5	390.3
55°	205.7	206.2	233.2	256.6	280.7	327.5	366.7	355.0	342.0	362.9	377.6
55.5°	202.9	199.9	226.1	248.7	271.8	316.1	356.0	344.5	331.6	352.9	366.2
56°	199.6	196.6	218.7	241.1	263.2	305.4	344.3	333.6	324.2	341.0	355.5
56.5°	196.3	193.8	211.6	233.4	254.8	295.2	332.6	325.2	315.8	332.6	344.3
57°	193.3	190.7	204.7	226.1	246.4	285.0	322.4	315.8	306.2	324.0	333.1
57.5°	189.7	187.7	197.8	218.7	238.8	275.1	312.3	305.6	299.3	313.5	324.0
58°	186.4	184.4	191.5	211.8	230.9	266.0	301.3	298.3	291.7	305.1	313.5
58.5°	182.6	181.3	184.9	205.2	223.8	256.8	292.2	289.9	282.8	297.5	303.4
59°	178.5	177.7	178.5	198.6	216.9	248.2	282.8	280.2	275.4	288.4	294.5
59.5°	174.7	174.4	172.1	192.0	210.0	239.5	273.1	273.4	267.5	280.2	285.3
60°	170.6	170.9	166.3	185.9	203.2	231.4	264.5	265.7	259.9	273.1	275.6
60.5°	166.3	167.1	160.2	179.5	196.3	223.5	256.1	257.1	252.8	264.5	267.5
61°	162.2	163.2	154.6	173.9	189.4	216.1	247.2	250.5	245.4	256.8	259.4
61.5°	158.2	159.4	149.8	168.1	183.3	209.0	239.5	242.8	238.5	249.7	250.7
62°	153.8	155.4	144.9	162.5	177.5	201.6	231.9	235.0	231.6	241.8	243.1
62.5°	149.8	151.3	142.1	157.1	171.6	194.3	223.8	228.3	225.3	235.0	235.7
63°	145.7	147.5	139.1	151.8	165.8	187.9	216.9	221.5	219.2	228.3	227.6
63.5°	141.6	143.4	136.3	146.7	160.5	181.6	210.0	214.6	212.8	220.7	221.0
64°	137.3	139.6	133.5	141.9	155.1	175.5	203.4	208.0	206.7	214.4	214.4
64.5°	133.2	135.5	130.4	136.8	149.8	169.4	196.6	201.4	200.4	208.0	207.5
65°	129.2	131.7	127.4	132.2	144.9	163.8	189.7	194.8	194.3	201.6	200.9
65.5°	125.1	127.6	124.3	127.9	139.9	158.2	183.3	189.4	188.2	195.3	194.0
66°	121.0	123.8	121.3	123.3	135.0	152.6	177.2	182.8	182.3	189.2	187.7



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL5125CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	110.4	112.1	111.4	110.9	121.5	137.1	159.2	165.8	165.3	171.6	169.6
68°	106.8	108.6	107.8	107.1	117.2	132.2	153.6	160.2	159.9	165.8	163.8
68.5°	103.5	105.0	104.5	103.2	112.9	127.6	148.0	154.6	154.3	160.2	157.9
69°	100.2	101.5	101.5	99.4	108.8	123.1	142.4	149.3	149.3	154.6	152.3
69.5°	96.9	98.2	98.2	95.9	104.8	118.2	137.3	143.9	143.9	149.3	146.7
70°	93.6	94.8	94.6	92.6	100.9	113.9	132.0	138.6	138.6	143.9	141.6
70.5°	90.5	91.0	91.5	89.3	96.9	109.6	126.9	133.8	133.8	138.6	136.3
71°	87.5	88.2	88.5	86.2	93.3	105.5	122.1	128.4	128.7	133.8	131.2
71.5°	84.4	85.2	85.2	82.9	89.5	101.2	117.0	123.6	123.6	128.4	126.1
72°	81.1	82.1	81.9	79.8	85.9	97.1	112.1	118.5	118.5	123.3	121.3
72.5°	78.1	79.1	78.8	76.5	82.4	93.3	107.6	113.7	113.7	118.2	116.2
73°	75.0	76.0	75.5	73.7	79.1	89.3	103.0	109.1	108.8	113.7	111.6
73.5°	71.7	73.0	72.5	70.9	75.5	85.4	98.4	104.3	104.0	108.6	106.8
74°	68.7	69.7	69.2	68.4	72.2	81.9	93.8	99.4	99.2	103.7	102.2
74.5°	65.6	66.6	66.4	66.1	68.9	78.1	89.5	94.8	94.6	99.2	97.6
75°	62.6	63.6	63.6	63.6	65.9	74.5	85.2	90.5	90.0	94.6	93.3
75.5°	59.5	60.5	60.5	61.0	62.6	71.2	80.9	85.9	85.4	89.8	88.7
76°	56.5	57.5	57.5	58.2	59.5	67.6	77.0	81.4	80.9	85.4	84.4
76.5°	53.4	54.4	54.7	55.7	56.5	64.1	72.7	76.8	76.3	80.9	80.1
77°	50.6	51.4	51.9	53.1	53.7	60.8	68.9	72.7	72.2	76.5	76.0
77.5°	47.6	48.3	49.1	50.3	50.6	57.5	64.8	68.4	67.6	72.0	72.0
78°	44.8	45.3	46.3	47.8	47.8	54.2	61.0	64.3	63.3	67.9	67.9
78.5°	41.7	42.5	43.5	45.3	45.0	50.9	57.2	60.0	59.2	63.6	64.1
79°	38.9	39.4	40.9	42.5	42.2	47.8	53.7	55.9	54.9	59.2	60.0
79.5°	35.9	36.4	38.1	39.9	39.7	44.8	50.1	51.6	50.9	55.2	56.2
80°	33.1	33.3	35.3	37.4	36.9	41.7	46.5	47.6	46.8	51.1	52.6
80.5°	30.3	30.5	32.8	34.8	34.3	38.7	43.0	43.7	42.7	47.0	48.8
81°	27.5	27.5	30.3	32.3	31.8	35.9	39.7	39.7	38.7	43.0	45.3
81.5°	24.7	24.7	27.7	29.8	29.5	33.1	36.4	35.9	34.8	39.2	42.0
82°	21.9	21.9	25.4	27.5	27.0	30.3	33.1	32.5	31.0	35.3	38.4
82.5°	19.1	19.6	22.9	24.9	24.7	27.7	30.0	29.0	27.5	31.8	35.3
83°	16.5	17.0	20.6	22.6	22.4	24.9	27.2	25.9	23.9	28.2	32.0
83.5°	13.7	14.7	18.6	20.3	20.1	22.6	24.4	23.1	20.3	25.4	29.0
84°	11.2	12.7	16.3	17.8	17.8	20.1	21.9	20.1	16.8	22.4	26.2
84.5°	9.2	10.7	14.2	15.5	15.5	17.5	19.1	17.0	13.2	19.6	23.6
85°	8.1	9.2	12.2	13.2	13.5	15.0	16.5	14.0	11.2	16.8	20.9
85.5°	6.9	7.9	10.2	10.9	11.2	12.5	13.7	12.0	9.7	13.7	18.3
86°	5.6	6.4	8.4	8.6	9.2	10.2	11.4	9.9	8.1	11.7	15.5
86.5°	4.6	5.1	6.4	6.6	7.1	7.9	8.9	8.1	6.9	9.9	13.0
87°	3.3	3.6	4.6	4.6	5.1	5.6	6.6	6.1	5.3	8.1	10.4
87.5°	2.3	2.3	2.5	2.8	3.1	3.6	4.3	4.3	4.1	6.1	8.1
88°	1.3	1.0	1.0	0.8	1.3	1.8	2.3	2.8	2.8	4.3	5.8
88.5°	0.5	0.3	0.3	0.3	0.3	0.5	0.8	1.3	1.3	2.5	3.6



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL51525CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL5125CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1157.5	1157.5	1157.5	1157.5	1157.5	1157.5
0.5°	1159.3	1158.8	1156.0	1153.4	1151.6	1150.6
1°	1161.3	1158.5	1153.2	1148.6	1145.5	1144.0
1.5°	1163.3	1158.0	1150.4	1143.5	1139.2	1137.1
2°	1165.1	1157.2	1147.1	1138.7	1132.6	1130.3
2.5°	1166.6	1156.5	1143.8	1133.1	1125.7	1122.9
3°	1168.2	1155.4	1140.4	1127.7	1119.1	1115.8
3.5°	1169.4	1154.2	1136.9	1122.1	1112.2	1108.2
4°	1170.5	1152.9	1133.1	1116.5	1104.8	1100.5
4.5°	1171.2	1151.4	1129.3	1110.2	1097.5	1092.6
5°	1172.0	1149.9	1125.4	1104.3	1089.8	1084.8
5.5°	1172.5	1147.8	1121.4	1098.0	1082.5	1076.4
6°	1173.0	1146.0	1117.1	1091.6	1074.6	1068.2
6.5°	1173.2	1144.0	1112.5	1085.0	1066.7	1060.1
7°	1173.2	1141.7	1107.9	1078.9	1058.8	1051.4
7.5°	1173.0	1139.4	1103.3	1072.0	1050.7	1042.5
8°	1172.7	1136.9	1098.5	1065.2	1042.3	1034.2
8.5°	1172.2	1134.1	1093.7	1058.3	1033.9	1025.3
9°	1171.5	1131.3	1088.6	1051.2	1025.3	1016.1
9.5°	1170.7	1128.5	1083.2	1043.8	1016.9	1007.0
10°	1169.7	1125.4	1077.9	1036.4	1008.2	997.8
10.5°	1168.4	1122.1	1072.6	1029.3	999.6	988.4
11°	1167.1	1118.8	1067.0	1021.7	990.7	979.2
11.5°	1165.6	1115.3	1061.4	1014.1	981.5	969.8
12°	1163.8	1111.5	1055.5	1006.4	972.6	959.9
12.5°	1162.1	1107.9	1049.7	998.6	963.5	950.5
13°	1160.0	1104.1	1043.8	990.7	954.3	941.1
13.5°	1157.5	1100.0	1037.7	982.8	945.2	931.2
14°	1155.4	1095.9	1031.9	974.9	935.8	921.5
14.5°	1152.9	1091.6	1025.5	966.8	926.3	911.6
15°	1150.1	1087.0	1019.2	958.4	916.9	901.7
15.5°	1147.3	1082.7	1012.8	950.2	907.3	891.8
16°	1144.3	1078.1	1006.4	941.9	897.9	881.8
16.5°	1141.2	1073.3	999.8	933.7	888.5	872.2
17°	1137.7	1068.5	993.2	925.3	878.8	862.0
17.5°	1134.1	1063.4	986.4	916.7	869.1	852.1
18°	1130.5	1058.3	979.7	908.0	859.5	841.9
18.5°	1126.7	1053.0	972.6	899.6	849.6	832.0
19°	1122.6	1047.4	965.5	890.7	839.9	821.8
19.5°	1118.6	1042.0	958.4	882.4	830.5	811.4
20°	1114.3	1036.2	951.3	873.7	820.6	801.5
20.5°	1109.4	1030.3	943.9	864.8	810.9	791.3
21°	1104.8	1024.2	936.3	855.9	801.0	781.1

TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL5125CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1089.6	1005.2	913.4	829.5	771.5	750.6
23°	1084.3	998.3	905.2	820.6	761.3	740.2
23.5°	1078.4	991.2	897.6	811.7	751.9	730.3
24°	1072.6	983.3	889.5	802.5	742.0	720.1
24.5°	1066.5	975.9	881.1	793.6	732.1	709.7
25°	1060.1	967.5	872.4	784.5	721.9	699.8
25.5°	1053.5	959.4	864.0	775.3	712.5	689.9
26°	1046.4	950.5	855.1	766.1	702.6	679.9
26.5°	1039.0	941.9	846.0	757.0	692.7	670.0
27°	1031.4	933.2	836.8	747.8	683.0	660.1
27.5°	1023.2	923.8	827.4	738.4	673.3	650.4
28°	1014.6	913.9	817.8	729.0	663.4	640.5
28.5°	1005.9	904.7	808.4	719.9	653.8	631.1
29°	997.0	894.8	798.7	710.7	644.3	621.7
29.5°	987.6	884.6	789.0	701.3	634.9	612.1
30°	978.5	874.2	778.9	691.6	625.5	602.9
30.5°	968.8	863.5	769.2	682.2	616.1	593.5
31°	958.6	852.6	758.8	672.6	606.7	584.3
31.5°	948.0	841.4	748.6	662.9	597.3	575.2
32°	937.3	830.5	738.2	653.5	588.4	566.0
32.5°	926.3	819.0	728.0	643.6	579.3	557.1
33°	914.9	807.1	717.3	633.9	570.1	548.2
33.5°	903.5	795.4	706.6	624.3	561.2	539.3
34°	891.3	783.7	696.0	614.3	552.3	530.7
34.5°	879.3	771.5	685.3	604.4	543.7	521.5
35°	867.1	759.5	674.4	594.5	534.8	512.9
35.5°	854.6	746.8	663.7	584.8	526.1	504.2
36°	841.9	734.9	652.7	575.4	517.2	495.8
36.5°	828.7	722.4	641.8	565.8	508.8	487.2
37°	815.7	709.4	630.9	556.1	500.2	478.6
37.5°	802.5	697.0	619.9	546.2	491.8	469.9
38°	789.0	683.8	609.0	536.5	482.9	461.3
38.5°	775.3	671.0	597.8	527.1	474.5	452.9
39°	761.8	658.1	586.9	517.7	466.4	444.7
39.5°	748.1	645.4	575.9	508.6	458.0	436.1
40°	734.1	632.1	565.0	498.9	449.1	427.7
40.5°	719.9	619.2	553.8	489.5	440.9	419.3
41°	705.6	606.2	542.9	480.3	432.8	410.9
41.5°	691.6	593.2	531.7	470.9	424.1	402.8
42°	677.1	580.5	520.8	461.8	416.0	394.4
42.5°	663.4	567.6	509.8	452.6	407.6	386.3
43°	648.9	554.6	499.2	443.5	399.7	378.1
43.5°	634.4	541.9	488.2	434.3	391.1	369.7

TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL5125CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	592.2	504.2	456.4	407.6	367.2	345.6
45.5°	578.2	491.8	445.8	399.0	358.8	337.4
46°	564.0	479.6	435.8	390.3	351.2	329.8
46.5°	550.3	467.4	425.2	381.4	343.0	321.4
47°	536.3	455.4	415.0	372.8	335.1	313.5
47.5°	522.8	443.5	404.8	364.1	327.0	305.6
48°	509.1	431.8	395.2	355.7	319.4	298.0
48.5°	495.8	420.1	385.2	347.3	311.5	289.9
49°	482.4	408.9	375.3	339.0	303.6	282.3
49.5°	469.4	397.7	365.7	330.6	295.7	274.6
50°	456.2	386.3	356.5	322.2	288.1	266.7
50.5°	443.5	375.6	346.8	314.0	280.5	258.9
51°	431.0	364.9	337.7	305.9	272.6	251.5
51.5°	418.8	354.5	328.5	298.0	265.0	243.9
52°	406.3	344.3	319.6	289.9	257.6	236.5
52.5°	393.9	334.1	310.7	282.3	250.2	229.1
53°	381.9	324.5	302.3	274.4	242.6	222.2
53.5°	370.5	315.1	293.4	266.7	235.0	215.6
54°	358.8	305.6	285.0	259.1	227.8	211.6
54.5°	347.9	296.7	277.2	251.7	220.7	208.8
55°	337.2	288.1	269.0	244.4	213.8	205.7
55.5°	326.5	279.5	261.4	237.2	207.0	202.9
56°	316.3	271.3	253.5	230.1	200.6	199.6
56.5°	306.4	263.2	246.1	223.0	197.1	196.3
57°	297.0	255.3	238.8	216.1	194.3	193.3
57.5°	287.6	247.7	231.9	209.3	191.2	189.7
58°	278.7	240.3	225.0	202.7	188.2	186.4
58.5°	270.0	233.2	218.2	196.3	184.9	182.6
59°	261.4	226.3	211.6	189.9	181.6	178.5
59.5°	253.3	219.4	205.2	183.6	178.5	174.7
60°	245.4	212.6	198.8	177.5	174.9	170.6
60.5°	237.8	206.2	192.7	171.6	171.4	166.3
61°	230.4	199.9	186.6	165.8	167.8	162.2
61.5°	223.0	194.0	181.0	160.5	164.0	158.2
62°	216.4	187.9	175.5	155.1	159.9	153.8
62.5°	209.8	182.1	170.1	150.0	156.1	149.8
63°	203.2	176.5	164.5	145.4	152.3	145.7
63.5°	196.6	170.9	159.4	141.9	148.5	141.6
64°	189.9	165.3	154.1	139.1	144.4	137.3
64.5°	183.6	160.2	149.3	136.3	140.6	133.2
65°	177.7	155.1	144.4	133.5	136.8	129.2
65.5°	171.9	150.3	139.9	130.4	133.0	125.1
66°	166.3	145.2	135.3	127.4	128.9	121.0



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL5125CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	150.3	131.5	122.3	118.2	117.5	110.4
68°	144.9	126.9	118.2	114.9	113.7	106.8
68.5°	140.1	122.6	114.4	111.9	110.1	103.5
69°	135.3	118.2	110.4	108.6	106.5	100.2
69.5°	130.4	114.2	106.5	105.3	103.0	96.9
70°	125.9	110.1	103.0	102.0	99.7	93.6
70.5°	121.3	106.3	99.4	98.7	96.4	90.5
71°	117.0	102.2	95.6	95.4	93.1	87.5
71.5°	112.4	98.4	92.6	92.0	90.0	84.4
72°	108.3	94.6	89.3	89.0	86.7	81.1
72.5°	104.0	91.5	85.9	85.7	83.7	78.1
73°	99.9	88.0	82.9	82.6	80.4	75.0
73.5°	95.9	84.4	79.6	79.3	77.3	71.7
74°	92.0	80.6	76.5	76.3	74.0	68.7
74.5°	88.0	77.0	73.5	73.2	70.9	65.6
75°	84.2	73.7	70.7	70.2	67.6	62.6
75.5°	80.6	70.4	67.9	67.4	64.6	59.5
76°	76.8	67.1	65.4	64.3	61.3	56.5
76.5°	73.2	64.1	62.8	61.3	58.2	53.4
77°	69.7	60.8	60.3	58.5	55.2	50.6
77.5°	66.1	57.7	57.7	55.4	52.1	47.6
78°	62.8	54.7	54.9	52.6	49.1	44.8
78.5°	59.2	51.9	52.4	49.8	46.0	41.7
79°	55.9	48.8	49.6	47.0	43.0	38.9
79.5°	52.6	46.0	47.0	44.2	39.9	35.9
80°	49.3	43.2	44.2	41.4	36.9	33.1
80.5°	46.3	40.4	41.7	38.7	34.1	30.3
81°	43.2	37.6	38.9	36.1	31.0	27.5
81.5°	40.2	35.1	36.4	33.3	28.2	24.7
82°	37.1	32.5	33.8	30.8	25.7	21.9
82.5°	34.3	30.0	31.3	28.2	22.9	19.1
83°	31.5	27.5	28.7	25.9	20.3	16.5
83.5°	28.7	24.9	26.2	23.4	17.8	13.7
84°	25.9	22.6	23.9	21.1	15.5	11.2
84.5°	23.4	20.1	21.4	18.8	13.5	9.2
85°	20.9	17.8	18.8	16.5	11.4	8.1
85.5°	18.3	15.5	16.5	14.2	9.9	6.9
86°	15.8	13.5	14.0	12.2	8.4	5.6
86.5°	13.0	11.2	11.7	9.9	6.9	4.6
87°	10.7	9.2	9.4	7.9	5.3	3.3
87.5°	8.4	7.1	7.1	6.1	3.8	2.3
88°	6.1	5.1	5.1	4.1	2.5	1.3
88.5°	3.8	3.1	3.1	2.0	1.3	0.5



TEST NUMBER: P776013

CATALOG NUMBER: HCDJBL51525CSD-HCD4TQSH-HCD4TSQLWW-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.3	0.0



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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21.5°	770.7	789.3	845.5	928.9	1027.3	1109.9	1170.5	1206.3	1217.7	1199.9	1160.0
22°	760.8	779.4	836.3	921.0	1020.7	1104.8	1166.4	1202.7	1214.2	1196.1	1156.0



44°	361.8	376.8	415.0	469.1	533.0	621.0	698.0	653.5	617.1	655.3	699.8
44.5°	353.7	368.7	406.1	458.2	520.0	606.7	681.2	639.0	601.9	641.3	683.0



66.5°	117.5	120.0	117.7	119.0	130.4	147.2	170.9	177.2	176.5	183.1	181.6
67°	113.7	116.0	114.4	114.9	125.9	142.1	165.0	171.4	170.9	177.5	175.2



89°	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.3	0.3	1.0	1.5
89.5°	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.5

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21.5°	1100.0	1018.1	928.6	847.3	791.1	770.7
22°	1094.9	1011.5	921.0	838.4	781.1	760.8



44°	620.2	529.4	477.5	425.4	383.5	361.8
44.5°	606.5	516.7	466.9	416.5	375.1	353.7



66.5°	160.7	140.6	131.0	124.6	125.1	117.5
67°	155.4	135.8	126.6	121.5	121.3	113.7

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89°	1.8	1.0	1.0	0.8	0.3	0.0
89.5°	0.5	0.3	0.3	0.3	0.3	0.0

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Scaled Data Report



(END OF REPORT)