

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: P776131

Luminaire Tested: HCDJBL51525CSD-HCD81TRH-2500lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776131
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B043-HCD81TRH)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL51525CSD-HCD81TRH-2500lm-3000K
Description: 8 INCH ROUND SHALLOW-WIDE HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

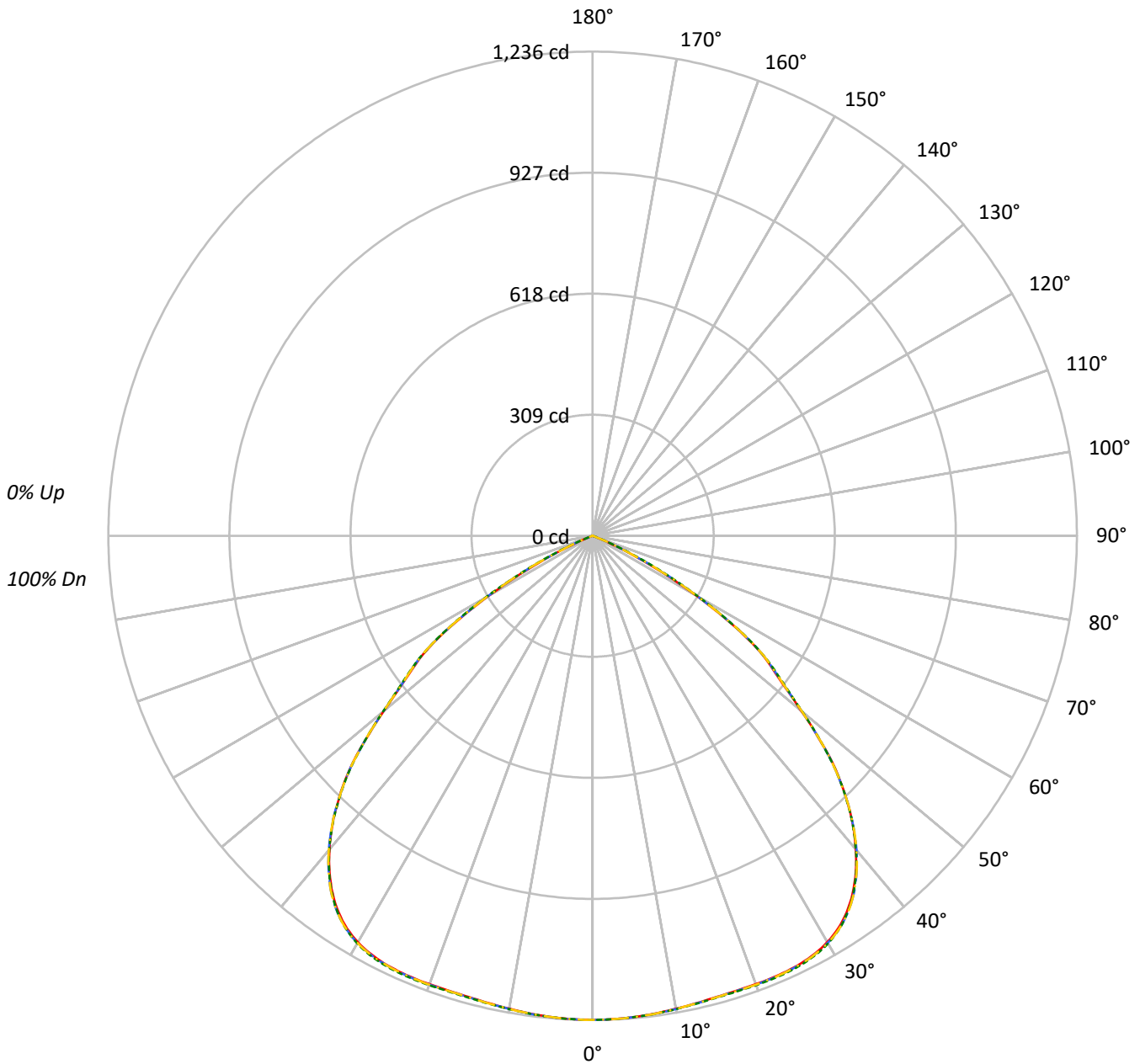
Lumens per Lamp: N/A
Luminaire Lumens: 3001.5 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.43
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 25
Input Voltage (V): NR
Input Current (A_{in}): 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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Luminous Intensity Polar Plot





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CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRH-2500lm-3000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78																			
3	96	87	80	75	93	85	79	74	82	77	73	80	75	72	77	74	70	68																			
4	88	78	70	65	86	77	70	64	74	68	63	72	67	63	70	66	62	60																			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33																			
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	37729	37729	37729	37729
5°	37781	37797	37781	37797
10°	38004	38035	38004	38035
15°	38539	38592	38539	38592
20°	39572	39660	39572	39660
25°	40956	41074	40956	41074
30°	42233	42357	42233	42357
35°	42679	42772	42679	42772
40°	41640	41660	41640	41660
45°	38837	38785	38837	38785
50°	32958	33191	32958	33191
55°	28174	28333	28174	28333
60°	18532	19252	18532	19252
65°	6531	7874	6531	7874
70°	107	598	107	598
75°	24	24	24	24
80°	0	35	0	35
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 38837 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.5	3.9
10°-20°	346.0	11.5
20°-30°	562.1	18.7
30°-40°	713.7	23.8
40°-50°	684.5	22.8
50°-60°	460.7	15.3
60°-70°	116.5	3.9
70°-80°	0.5	0.0
80°-90°	0.0	0.0
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°	1025.6	34.2
0°-40°	1739.4	57.9
0°-60°	2884.5	96.1
0°-90°	3001.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3001.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1236	1236	1236	1236	1236	
5°	1233	1233	1233	1233	1233	117
15°	1219	1221	1219	1221	1219	346
25°	1216	1219	1216	1219	1216	561
35°	1145	1148	1145	1148	1145	712
45°	900	898	900	898	900	684
55°	529	532	529	532	529	458
65°	90	109	90	109	90	108
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8
0.5°	1235.6	1235.6	1235.8	1236.1	1235.8	1236.1	1235.8	1235.6	1235.6	1235.6	1235.8
1°	1235.6	1235.6	1235.8	1236.1	1235.6	1236.1	1235.8	1235.6	1235.6	1235.6	1235.8
1.5°	1235.3	1235.3	1235.6	1235.8	1235.6	1235.8	1235.6	1235.3	1235.3	1235.3	1235.6
2°	1235.1	1235.1	1235.6	1235.6	1235.3	1235.6	1235.6	1235.1	1235.1	1235.1	1235.6
2.5°	1234.8	1235.1	1235.3	1235.6	1235.1	1235.6	1235.3	1235.1	1234.8	1235.1	1235.3
3°	1234.6	1234.6	1235.1	1235.1	1234.8	1235.1	1235.1	1234.6	1234.6	1234.6	1235.1
3.5°	1234.1	1234.3	1234.6	1234.8	1234.6	1234.8	1234.6	1234.3	1234.1	1234.3	1234.6
4°	1233.8	1233.8	1234.1	1234.6	1234.1	1234.6	1234.1	1233.8	1233.8	1233.8	1234.1
4.5°	1233.3	1233.6	1233.8	1234.1	1233.8	1234.1	1233.8	1233.6	1233.3	1233.6	1233.8
5°	1232.8	1233.1	1233.3	1233.6	1233.3	1233.6	1233.3	1233.1	1232.8	1233.1	1233.3
5.5°	1232.3	1232.3	1232.8	1233.1	1232.8	1233.1	1232.8	1232.3	1232.3	1232.3	1232.8
6°	1231.6	1231.9	1232.1	1232.6	1232.3	1232.6	1232.1	1231.9	1231.6	1231.9	1232.1
6.5°	1231.1	1231.4	1231.6	1232.1	1231.6	1232.1	1231.6	1231.4	1231.1	1231.4	1231.6
7°	1230.4	1230.6	1231.1	1231.4	1231.1	1231.4	1231.1	1230.6	1230.4	1230.6	1231.1
7.5°	1229.6	1229.9	1230.4	1230.6	1230.4	1230.6	1230.4	1229.9	1229.6	1229.9	1230.4
8°	1229.1	1229.1	1229.6	1230.1	1229.9	1230.1	1229.6	1229.1	1229.1	1229.1	1229.6
8.5°	1228.4	1228.4	1228.9	1229.1	1229.1	1229.1	1228.9	1228.4	1228.4	1228.4	1228.9
9°	1227.4	1227.7	1228.1	1228.6	1228.4	1228.6	1228.1	1227.7	1227.4	1227.7	1228.1
9.5°	1226.7	1226.9	1227.4	1227.9	1227.7	1227.9	1227.4	1226.9	1226.7	1226.9	1227.4
10°	1225.9	1226.2	1226.7	1227.2	1226.9	1227.2	1226.7	1226.2	1225.9	1226.2	1226.7
10.5°	1225.2	1225.4	1225.7	1226.4	1226.2	1226.4	1225.7	1225.4	1225.2	1225.4	1225.7
11°	1224.4	1224.4	1224.9	1225.7	1225.4	1225.7	1224.9	1224.4	1224.4	1224.4	1224.9
11.5°	1223.7	1223.7	1224.2	1224.9	1224.7	1224.9	1224.2	1223.7	1223.7	1223.7	1224.2
12°	1223.0	1223.0	1223.5	1224.2	1224.2	1224.2	1223.5	1223.0	1223.0	1223.0	1223.5
12.5°	1222.2	1222.2	1223.0	1223.5	1223.5	1223.5	1223.0	1222.2	1222.2	1222.2	1223.0
13°	1221.5	1221.7	1222.2	1222.7	1223.0	1222.7	1222.2	1221.7	1221.5	1221.7	1222.2
13.5°	1220.7	1221.0	1221.7	1222.2	1222.2	1222.2	1221.7	1221.0	1220.7	1221.0	1221.7
14°	1220.2	1220.5	1221.0	1221.7	1221.7	1221.7	1221.0	1220.5	1220.2	1220.5	1221.0
14.5°	1219.7	1220.0	1220.5	1221.2	1221.5	1221.2	1220.5	1220.0	1219.7	1220.0	1220.5
15°	1219.3	1219.5	1220.0	1221.0	1221.0	1221.0	1220.0	1219.5	1219.3	1219.5	1220.0
15.5°	1218.8	1219.0	1219.7	1220.5	1220.7	1220.5	1219.7	1219.0	1218.8	1219.0	1219.7
16°	1218.5	1218.8	1219.3	1220.2	1220.5	1220.2	1219.3	1218.8	1218.5	1218.8	1219.3
16.5°	1218.3	1218.5	1219.0	1220.0	1220.2	1220.0	1219.0	1218.5	1218.3	1218.5	1219.0
17°	1218.0	1218.3	1219.0	1220.0	1220.2	1220.0	1219.0	1218.3	1218.0	1218.3	1219.0
17.5°	1218.0	1218.3	1218.8	1220.0	1220.2	1220.0	1218.8	1218.3	1218.0	1218.3	1218.8
18°	1217.8	1218.0	1218.8	1220.0	1220.2	1220.0	1218.8	1218.0	1217.8	1218.0	1218.8
18.5°	1217.8	1218.0	1218.8	1220.0	1220.2	1220.0	1218.8	1218.0	1217.8	1218.0	1218.8
19°	1218.0	1218.0	1218.8	1220.2	1220.5	1220.2	1218.8	1218.0	1218.0	1218.0	1218.8
19.5°	1218.0	1218.3	1219.0	1220.2	1220.7	1220.2	1219.0	1218.3	1218.0	1218.3	1219.0
20°	1218.0	1218.3	1219.0	1220.5	1220.7	1220.5	1219.0	1218.3	1218.0	1218.3	1219.0
20.5°	1218.3	1218.3	1219.3	1220.5	1221.0	1220.5	1219.3	1218.3	1218.3	1218.3	1219.3
21°	1218.3	1218.5	1219.3	1220.7	1221.0	1220.7	1219.3	1218.5	1218.3	1218.5	1219.3



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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°	1218.0	1218.3	1219.3	1220.7	1221.2	1220.7	1219.3	1218.3	1218.0	1218.3	1219.3
23°	1217.8	1218.0	1219.0	1220.5	1221.0	1220.5	1219.0	1218.0	1217.8	1218.0	1219.0
23.5°	1217.5	1217.8	1218.8	1220.2	1220.7	1220.2	1218.8	1217.8	1217.5	1217.8	1218.8
24°	1217.3	1217.3	1218.3	1220.0	1220.5	1220.0	1218.3	1217.3	1217.3	1217.3	1218.3
24.5°	1216.5	1216.8	1217.8	1219.5	1220.0	1219.5	1217.8	1216.8	1216.5	1216.8	1217.8
25°	1215.8	1216.0	1217.3	1219.0	1219.3	1219.0	1217.3	1216.0	1215.8	1216.0	1217.3
25.5°	1215.1	1215.3	1216.5	1218.3	1218.5	1218.3	1216.5	1215.3	1215.1	1215.3	1216.5
26°	1214.1	1214.3	1215.5	1217.3	1217.8	1217.3	1215.5	1214.3	1214.1	1214.3	1215.5
26.5°	1212.8	1213.1	1214.6	1216.3	1216.5	1216.3	1214.6	1213.1	1212.8	1213.1	1214.6
27°	1211.6	1211.8	1213.1	1214.8	1215.1	1214.8	1213.1	1211.8	1211.6	1211.8	1213.1
27.5°	1209.9	1210.4	1211.6	1213.3	1213.6	1213.3	1211.6	1210.4	1209.9	1210.4	1211.6
28°	1208.1	1208.4	1209.9	1211.6	1211.8	1211.6	1209.9	1208.4	1208.1	1208.4	1209.9
28.5°	1206.2	1206.4	1207.9	1209.6	1209.6	1209.6	1207.9	1206.4	1206.2	1206.4	1207.9
29°	1203.7	1204.2	1205.7	1207.1	1207.4	1207.1	1205.7	1204.2	1203.7	1204.2	1205.7
29.5°	1201.0	1201.5	1203.2	1204.7	1204.7	1204.7	1203.2	1201.5	1201.0	1201.5	1203.2
30°	1198.0	1198.5	1200.2	1201.7	1201.5	1201.7	1200.2	1198.5	1198.0	1198.5	1200.2
30.5°	1194.8	1195.3	1197.0	1198.5	1198.2	1198.5	1197.0	1195.3	1194.8	1195.3	1197.0
31°	1191.1	1191.6	1193.6	1194.8	1194.3	1194.8	1193.6	1191.6	1191.1	1191.6	1193.6
31.5°	1186.9	1187.6	1189.6	1190.6	1190.1	1190.6	1189.6	1187.6	1186.9	1187.6	1189.6
32°	1182.2	1183.2	1185.2	1186.1	1185.6	1186.1	1185.2	1183.2	1182.2	1183.2	1185.2
32.5°	1177.2	1178.2	1180.2	1181.0	1180.5	1181.0	1180.2	1178.2	1177.2	1178.2	1180.2
33°	1171.8	1172.8	1175.0	1175.5	1174.8	1175.5	1175.0	1172.8	1171.8	1172.8	1175.0
33.5°	1165.6	1166.9	1169.1	1169.6	1168.8	1169.6	1169.1	1166.9	1165.6	1166.9	1169.1
34°	1159.5	1160.7	1162.9	1163.2	1162.2	1163.2	1162.9	1160.7	1159.5	1160.7	1162.9
34.5°	1152.3	1153.8	1156.0	1156.0	1155.0	1156.0	1156.0	1153.8	1152.3	1153.8	1156.0
35°	1145.1	1146.4	1148.8	1148.6	1147.6	1148.6	1148.8	1146.4	1145.1	1146.4	1148.8
35.5°	1137.2	1138.4	1140.9	1140.7	1139.7	1140.7	1140.9	1138.4	1137.2	1138.4	1140.9
36°	1128.8	1130.3	1132.8	1132.3	1131.0	1132.3	1132.8	1130.3	1128.8	1130.3	1132.8
36.5°	1120.2	1121.4	1123.9	1123.4	1121.9	1123.4	1123.9	1121.4	1120.2	1121.4	1123.9
37°	1110.5	1112.0	1114.2	1114.0	1112.5	1114.0	1114.2	1112.0	1110.5	1112.0	1114.2
37.5°	1100.9	1102.1	1104.6	1103.9	1102.4	1103.9	1104.6	1102.1	1100.9	1102.1	1104.6
38°	1090.5	1092.0	1094.2	1093.5	1091.7	1093.5	1094.2	1092.0	1090.5	1092.0	1094.2
38.5°	1079.6	1081.1	1083.3	1082.4	1080.9	1082.4	1083.3	1081.1	1079.6	1081.1	1083.3
39°	1068.8	1070.0	1072.0	1071.2	1069.5	1071.2	1072.0	1070.0	1068.8	1070.0	1072.0
39.5°	1057.1	1058.1	1060.1	1059.4	1057.6	1059.4	1060.1	1058.1	1057.1	1058.1	1060.1
40°	1044.8	1045.8	1047.8	1047.0	1045.3	1047.0	1047.8	1045.8	1044.8	1045.8	1047.8
40.5°	1032.4	1033.2	1034.9	1034.2	1032.4	1034.2	1034.9	1033.2	1032.4	1033.2	1034.9
41°	1019.3	1020.1	1021.6	1021.1	1019.3	1021.1	1021.6	1020.1	1019.3	1020.1	1021.6
41.5°	1006.0	1006.5	1008.0	1007.0	1005.7	1007.0	1008.0	1006.5	1006.0	1006.5	1008.0
42°	992.2	992.7	993.6	993.1	991.9	993.1	993.6	992.7	992.2	992.7	993.6
42.5°	978.1	978.1	979.1	978.6	977.3	978.6	979.1	978.1	978.1	978.1	979.1
43°	963.2	963.2	964.0	963.5	962.3	963.5	964.0	963.2	963.2	963.2	964.0
43.5°	947.9	947.9	948.2	947.7	946.9	947.7	948.2	947.9	947.9	947.9	948.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	899.5	898.7	898.7	898.5	898.3	898.5	898.7	898.7	899.5	898.7	898.7
45.5°	882.2	881.5	881.2	881.0	880.7	881.0	881.2	881.5	882.2	881.5	881.2
46°	864.4	863.4	863.2	863.2	862.9	863.2	863.2	863.4	864.4	863.4	863.2
46.5°	845.9	844.9	844.6	844.4	844.1	844.4	844.6	844.9	845.9	844.9	844.6
47°	826.1	825.1	824.4	823.9	823.4	823.9	824.4	825.1	826.1	825.1	824.4
47.5°	804.6	803.6	802.6	802.9	802.6	802.9	802.6	803.6	804.6	803.6	802.6
48°	781.9	781.6	782.1	782.4	782.6	782.4	782.1	781.6	781.9	781.6	782.1
48.5°	760.1	760.1	761.1	761.4	761.4	761.4	761.1	760.1	760.1	760.1	761.1
49°	739.1	738.9	739.6	739.9	740.1	739.9	739.6	738.9	739.1	738.9	739.6
49.5°	716.4	716.6	718.1	719.1	719.3	719.1	718.1	716.6	716.4	716.6	718.1
50°	693.9	694.9	696.9	698.1	698.8	698.1	696.9	694.9	693.9	694.9	696.9
50.5°	673.1	674.4	676.3	677.6	678.1	677.6	676.3	674.4	673.1	674.4	676.3
51°	654.1	654.8	656.8	657.8	658.3	657.8	656.8	654.8	654.1	654.8	656.8
51.5°	635.8	636.3	638.5	640.3	641.0	640.3	638.5	636.3	635.8	636.3	638.5
52°	617.8	618.8	621.0	623.2	624.2	623.2	621.0	618.8	617.8	618.8	621.0
52.5°	601.5	602.5	604.9	607.2	608.6	607.2	604.9	602.5	601.5	602.5	604.9
53°	586.4	587.4	590.1	592.3	593.3	592.3	590.1	587.4	586.4	587.4	590.1
53.5°	572.3	573.3	575.8	577.7	578.7	577.7	575.8	573.3	572.3	573.3	575.8
54°	559.0	559.7	561.9	563.2	563.7	563.2	561.9	559.7	559.0	559.7	561.9
54.5°	544.9	545.6	547.4	548.8	549.1	548.8	547.4	545.6	544.9	545.6	547.4
55°	529.3	530.1	531.8	532.8	532.3	532.8	531.8	530.1	529.3	530.1	531.8
55.5°	511.3	512.0	514.0	515.0	514.7	515.0	514.0	512.0	511.3	512.0	514.0
56°	491.3	492.2	494.7	496.0	495.7	496.0	494.7	492.2	491.3	492.2	494.7
56.5°	470.0	471.5	473.7	475.7	475.4	475.7	473.7	471.5	470.0	471.5	473.7
57°	447.8	449.0	452.2	453.5	453.7	453.5	452.2	449.0	447.8	449.0	452.2
57.5°	424.5	426.0	429.5	431.0	431.2	431.0	429.5	426.0	424.5	426.0	429.5
58°	401.1	402.5	406.0	408.2	408.7	408.2	406.0	402.5	401.1	402.5	406.0
58.5°	377.1	378.3	382.0	384.8	385.5	384.8	382.0	378.3	377.1	378.3	382.0
59°	352.9	354.1	357.6	361.3	362.3	361.3	357.6	354.1	352.9	354.1	357.6
59.5°	328.2	329.6	333.6	337.8	338.8	337.8	333.6	329.6	328.2	329.6	333.6
60°	303.5	305.7	309.6	314.8	315.3	314.8	309.6	305.7	303.5	305.7	309.6
60.5°	279.2	281.2	286.7	291.3	292.3	291.3	286.7	281.2	279.2	281.2	286.7
61°	255.5	258.0	263.9	268.4	269.6	268.4	263.9	258.0	255.5	258.0	263.9
61.5°	232.8	235.0	241.4	245.4	247.6	245.4	241.4	235.0	232.8	235.0	241.4
62°	210.3	212.5	219.2	223.1	225.6	223.1	219.2	212.5	210.3	212.5	219.2
62.5°	187.8	190.8	197.7	201.6	204.4	201.6	197.7	190.8	187.8	190.8	197.7
63°	165.8	169.5	176.7	180.9	184.1	180.9	176.7	169.5	165.8	169.5	176.7
63.5°	145.5	148.8	156.4	160.9	164.1	160.9	156.4	148.8	145.5	148.8	156.4
64°	126.3	129.7	136.7	141.8	144.8	141.8	136.7	129.7	126.3	129.7	136.7
64.5°	108.0	111.2	117.9	123.8	126.8	123.8	117.9	111.2	108.0	111.2	117.9
65°	90.4	94.9	100.6	106.3	109.0	106.3	100.6	94.9	90.4	94.9	100.6
65.5°	75.1	79.3	84.3	89.9	92.4	89.9	84.3	79.3	75.1	79.3	84.3
66°	60.5	64.7	69.7	75.1	76.4	75.1	69.7	64.7	60.5	64.7	69.7



TEST NUMBER: P776131

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	24.2	30.9	33.4	38.1	38.3	38.1	33.4	30.9	24.2	30.9	33.4
68°	14.8	21.7	24.2	28.9	28.4	28.9	24.2	21.7	14.8	21.7	24.2
68.5°	6.4	14.1	17.1	20.5	22.7	20.5	17.1	14.1	6.4	14.1	17.1
69°	3.5	8.6	11.1	13.3	17.5	13.3	11.1	8.6	3.5	8.6	11.1
69.5°	2.2	4.2	6.2	7.9	12.1	7.9	6.2	4.2	2.2	4.2	6.2
70°	1.2	2.5	3.0	3.5	6.7	3.5	3.0	2.5	1.2	2.5	3.0
70.5°	0.5	1.2	1.7	1.5	2.0	1.5	1.7	1.2	0.5	1.2	1.7
71°	0.5	0.7	1.0	0.7	0.7	0.7	1.0	0.7	0.5	0.7	1.0
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5
73.5°	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.5
74°	0.2	0.2	0.2	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
77°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
77.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
78°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
78.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
79°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
79.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
80°	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.2
80.5°	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.2
81°	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776131

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776131

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1235.8	1235.8	1235.8	1235.8	1235.8	1235.8
0.5°	1236.1	1235.8	1236.1	1235.8	1235.6	1235.6
1°	1236.1	1235.6	1236.1	1235.8	1235.6	1235.6
1.5°	1235.8	1235.6	1235.8	1235.6	1235.3	1235.3
2°	1235.6	1235.3	1235.6	1235.6	1235.1	1235.1
2.5°	1235.6	1235.1	1235.6	1235.3	1235.1	1234.8
3°	1235.1	1234.8	1235.1	1235.1	1234.6	1234.6
3.5°	1234.8	1234.6	1234.8	1234.6	1234.3	1234.1
4°	1234.6	1234.1	1234.6	1234.1	1233.8	1233.8
4.5°	1234.1	1233.8	1234.1	1233.8	1233.6	1233.3
5°	1233.6	1233.3	1233.6	1233.3	1233.1	1232.8
5.5°	1233.1	1232.8	1233.1	1232.8	1232.3	1232.3
6°	1232.6	1232.3	1232.6	1232.1	1231.9	1231.6
6.5°	1232.1	1231.6	1232.1	1231.6	1231.4	1231.1
7°	1231.4	1231.1	1231.4	1231.1	1230.6	1230.4
7.5°	1230.6	1230.4	1230.6	1230.4	1229.9	1229.6
8°	1230.1	1229.9	1230.1	1229.6	1229.1	1229.1
8.5°	1229.1	1229.1	1229.1	1228.9	1228.4	1228.4
9°	1228.6	1228.4	1228.6	1228.1	1227.7	1227.4
9.5°	1227.9	1227.7	1227.9	1227.4	1226.9	1226.7
10°	1227.2	1226.9	1227.2	1226.7	1226.2	1225.9
10.5°	1226.4	1226.2	1226.4	1225.7	1225.4	1225.2
11°	1225.7	1225.4	1225.7	1224.9	1224.4	1224.4
11.5°	1224.9	1224.7	1224.9	1224.2	1223.7	1223.7
12°	1224.2	1224.2	1224.2	1223.5	1223.0	1223.0
12.5°	1223.5	1223.5	1223.5	1223.0	1222.2	1222.2
13°	1222.7	1223.0	1222.7	1222.2	1221.7	1221.5
13.5°	1222.2	1222.2	1222.2	1221.7	1221.0	1220.7
14°	1221.7	1221.7	1221.7	1221.0	1220.5	1220.2
14.5°	1221.2	1221.5	1221.2	1220.5	1220.0	1219.7
15°	1221.0	1221.0	1221.0	1220.0	1219.5	1219.3
15.5°	1220.5	1220.7	1220.5	1219.7	1219.0	1218.8
16°	1220.2	1220.5	1220.2	1219.3	1218.8	1218.5
16.5°	1220.0	1220.2	1220.0	1219.0	1218.5	1218.3
17°	1220.0	1220.2	1220.0	1219.0	1218.3	1218.0
17.5°	1220.0	1220.2	1220.0	1218.8	1218.3	1218.0
18°	1220.0	1220.2	1220.0	1218.8	1218.0	1217.8
18.5°	1220.0	1220.2	1220.0	1218.8	1218.0	1217.8
19°	1220.2	1220.5	1220.2	1218.8	1218.0	1218.0
19.5°	1220.2	1220.7	1220.2	1219.0	1218.3	1218.0
20°	1220.5	1220.7	1220.5	1219.0	1218.3	1218.0
20.5°	1220.5	1221.0	1220.5	1219.3	1218.3	1218.3
21°	1220.7	1221.0	1220.7	1219.3	1218.5	1218.3



TEST NUMBER: P776131

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1220.7	1221.2	1220.7	1219.3	1218.3	1218.0
23°	1220.5	1221.0	1220.5	1219.0	1218.0	1217.8
23.5°	1220.2	1220.7	1220.2	1218.8	1217.8	1217.5
24°	1220.0	1220.5	1220.0	1218.3	1217.3	1217.3
24.5°	1219.5	1220.0	1219.5	1217.8	1216.8	1216.5
25°	1219.0	1219.3	1219.0	1217.3	1216.0	1215.8
25.5°	1218.3	1218.5	1218.3	1216.5	1215.3	1215.1
26°	1217.3	1217.8	1217.3	1215.5	1214.3	1214.1
26.5°	1216.3	1216.5	1216.3	1214.6	1213.1	1212.8
27°	1214.8	1215.1	1214.8	1213.1	1211.8	1211.6
27.5°	1213.3	1213.6	1213.3	1211.6	1210.4	1209.9
28°	1211.6	1211.8	1211.6	1209.9	1208.4	1208.1
28.5°	1209.6	1209.6	1209.6	1207.9	1206.4	1206.2
29°	1207.1	1207.4	1207.1	1205.7	1204.2	1203.7
29.5°	1204.7	1204.7	1204.7	1203.2	1201.5	1201.0
30°	1201.7	1201.5	1201.7	1200.2	1198.5	1198.0
30.5°	1198.5	1198.2	1198.5	1197.0	1195.3	1194.8
31°	1194.8	1194.3	1194.8	1193.6	1191.6	1191.1
31.5°	1190.6	1190.1	1190.6	1189.6	1187.6	1186.9
32°	1186.1	1185.6	1186.1	1185.2	1183.2	1182.2
32.5°	1181.0	1180.5	1181.0	1180.2	1178.2	1177.2
33°	1175.5	1174.8	1175.5	1175.0	1172.8	1171.8
33.5°	1169.6	1168.8	1169.6	1169.1	1166.9	1165.6
34°	1163.2	1162.2	1163.2	1162.9	1160.7	1159.5
34.5°	1156.0	1155.0	1156.0	1156.0	1153.8	1152.3
35°	1148.6	1147.6	1148.6	1148.8	1146.4	1145.1
35.5°	1140.7	1139.7	1140.7	1140.9	1138.4	1137.2
36°	1132.3	1131.0	1132.3	1132.8	1130.3	1128.8
36.5°	1123.4	1121.9	1123.4	1123.9	1121.4	1120.2
37°	1114.0	1112.5	1114.0	1114.2	1112.0	1110.5
37.5°	1103.9	1102.4	1103.9	1104.6	1102.1	1100.9
38°	1093.5	1091.7	1093.5	1094.2	1092.0	1090.5
38.5°	1082.4	1080.9	1082.4	1083.3	1081.1	1079.6
39°	1071.2	1069.5	1071.2	1072.0	1070.0	1068.8
39.5°	1059.4	1057.6	1059.4	1060.1	1058.1	1057.1
40°	1047.0	1045.3	1047.0	1047.8	1045.8	1044.8
40.5°	1034.2	1032.4	1034.2	1034.9	1033.2	1032.4
41°	1021.1	1019.3	1021.1	1021.6	1020.1	1019.3
41.5°	1007.0	1005.7	1007.0	1008.0	1006.5	1006.0
42°	993.1	991.9	993.1	993.6	992.7	992.2
42.5°	978.6	977.3	978.6	979.1	978.1	978.1
43°	963.5	962.3	963.5	964.0	963.2	963.2
43.5°	947.7	946.9	947.7	948.2	947.9	947.9

TEST NUMBER: P776131

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	898.5	898.3	898.5	898.7	898.7	899.5
45.5°	881.0	880.7	881.0	881.2	881.5	882.2
46°	863.2	862.9	863.2	863.2	863.4	864.4
46.5°	844.4	844.1	844.4	844.6	844.9	845.9
47°	823.9	823.4	823.9	824.4	825.1	826.1
47.5°	802.9	802.6	802.9	802.6	803.6	804.6
48°	782.4	782.6	782.4	782.1	781.6	781.9
48.5°	761.4	761.4	761.4	761.1	760.1	760.1
49°	739.9	740.1	739.9	739.6	738.9	739.1
49.5°	719.1	719.3	719.1	718.1	716.6	716.4
50°	698.1	698.8	698.1	696.9	694.9	693.9
50.5°	677.6	678.1	677.6	676.3	674.4	673.1
51°	657.8	658.3	657.8	656.8	654.8	654.1
51.5°	640.3	641.0	640.3	638.5	636.3	635.8
52°	623.2	624.2	623.2	621.0	618.8	617.8
52.5°	607.2	608.6	607.2	604.9	602.5	601.5
53°	592.3	593.3	592.3	590.1	587.4	586.4
53.5°	577.7	578.7	577.7	575.8	573.3	572.3
54°	563.2	563.7	563.2	561.9	559.7	559.0
54.5°	548.8	549.1	548.8	547.4	545.6	544.9
55°	532.8	532.3	532.8	531.8	530.1	529.3
55.5°	515.0	514.7	515.0	514.0	512.0	511.3
56°	496.0	495.7	496.0	494.7	492.2	491.3
56.5°	475.7	475.4	475.7	473.7	471.5	470.0
57°	453.5	453.7	453.5	452.2	449.0	447.8
57.5°	431.0	431.2	431.0	429.5	426.0	424.5
58°	408.2	408.7	408.2	406.0	402.5	401.1
58.5°	384.8	385.5	384.8	382.0	378.3	377.1
59°	361.3	362.3	361.3	357.6	354.1	352.9
59.5°	337.8	338.8	337.8	333.6	329.6	328.2
60°	314.8	315.3	314.8	309.6	305.7	303.5
60.5°	291.3	292.3	291.3	286.7	281.2	279.2
61°	268.4	269.6	268.4	263.9	258.0	255.5
61.5°	245.4	247.6	245.4	241.4	235.0	232.8
62°	223.1	225.6	223.1	219.2	212.5	210.3
62.5°	201.6	204.4	201.6	197.7	190.8	187.8
63°	180.9	184.1	180.9	176.7	169.5	165.8
63.5°	160.9	164.1	160.9	156.4	148.8	145.5
64°	141.8	144.8	141.8	136.7	129.7	126.3
64.5°	123.8	126.8	123.8	117.9	111.2	108.0
65°	106.3	109.0	106.3	100.6	94.9	90.4
65.5°	89.9	92.4	89.9	84.3	79.3	75.1
66°	75.1	76.4	75.1	69.7	64.7	60.5



TEST NUMBER: P776131

CATALOG NUMBER: HCDJBLS1525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	38.1	38.3	38.1	33.4	30.9	24.2
68°	28.9	28.4	28.9	24.2	21.7	14.8
68.5°	20.5	22.7	20.5	17.1	14.1	6.4
69°	13.3	17.5	13.3	11.1	8.6	3.5
69.5°	7.9	12.1	7.9	6.2	4.2	2.2
70°	3.5	6.7	3.5	3.0	2.5	1.2
70.5°	1.5	2.0	1.5	1.7	1.2	0.5
71°	0.7	0.7	0.7	1.0	0.7	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.2
73.5°	0.5	0.5	0.5	0.5	0.2	0.2
74°	0.5	0.5	0.5	0.2	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.2	0.2
77°	0.2	0.2	0.2	0.2	0.2	0.2
77.5°	0.2	0.2	0.2	0.2	0.2	0.2
78°	0.2	0.2	0.2	0.2	0.2	0.2
78.5°	0.2	0.2	0.2	0.2	0.2	0.2
79°	0.2	0.2	0.2	0.2	0.2	0.2
79.5°	0.2	0.2	0.2	0.2	0.2	0.2
80°	0.2	0.2	0.2	0.2	0.0	0.0
80.5°	0.2	0.2	0.2	0.2	0.0	0.0
81°	0.0	0.2	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776131

CATALOG NUMBER: HCDJBL51525CSD-HCD81TRH-2500lm-3000K

CANDELA DISTRIBUTION (continued):

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



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Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	1218.3	1218.5	1219.3	1220.7	1221.2	1220.7	1219.3	1218.5	1218.3	1218.5	1219.3
22°	1218.3	1218.3	1219.3	1220.7	1221.2	1220.7	1219.3	1218.3	1218.3	1218.3	1219.3



44°	932.4	931.9	932.1	931.6	931.1	931.6	932.1	931.9	932.4	931.9	932.1
44.5°	916.3	915.6	915.8	915.6	914.8	915.6	915.8	915.6	916.3	915.6	915.8



66.5°	48.4	52.4	55.8	61.0	62.5	61.0	55.8	52.4	48.4	52.4	55.8
67°	36.3	40.5	44.2	49.2	49.7	49.2	44.2	40.5	36.3	40.5	44.2



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	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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21.5°	1220.7	1221.2	1220.7	1219.3	1218.5	1218.3
22°	1220.7	1221.2	1220.7	1219.3	1218.3	1218.3



44°	931.6	931.1	931.6	932.1	931.9	932.4
44.5°	915.6	914.8	915.6	915.8	915.6	916.3

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66.5°	61.0	62.5	61.0	55.8	52.4	48.4
67°	49.2	49.7	49.2	44.2	40.5	36.3

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89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)