

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: P776018

Luminaire Tested: HCDJBS1525CSD-HCD4TSQMB-2500lm-4000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776018  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B006-HCD4TSQMB)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K  
Description: 4 INCH SQUARE MEDIUM MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

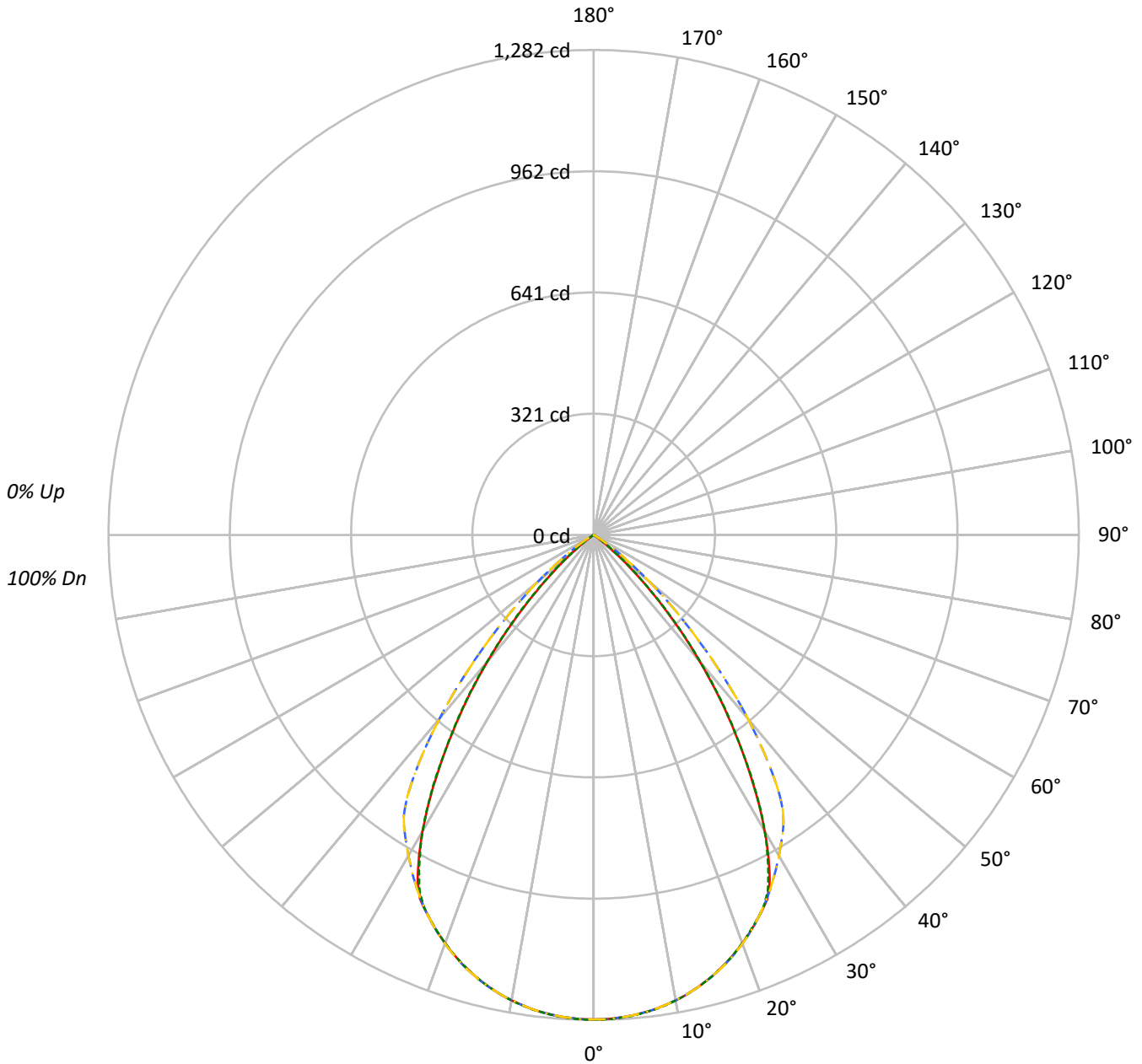
Lumens per Lamp: N/A  
Luminaire Lumens: 1695.0 lumens  
Efficiency: N/A  
Efficacy: 67.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.14  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92	92	92	92
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85	85	85	85
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	81	79	77	77	77	77
4	95	86	80	75	93	85	79	75	83	78	74	81	77	73	79	75	72	71	71	71	71
5	89	80	73	68	87	79	73	68	77	72	67	75	71	67	74	70	66	65	65	65	65
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	69	64	61	59	59	59	59
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55	55	55	55
8	74	64	57	53	73	63	57	53	62	56	52	61	56	52	60	55	52	50	50	50	50
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47	47	47	47
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43	43	43	43

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	126617	126617	126617	126617
5°	126327	126396	126327	126396
10°	125388	125439	125388	125439
15°	123603	123624	123603	123624
20°	120816	120764	120816	120764
25°	117207	116738	117207	116738
30°	103222	103199	103222	103199
35°	80616	80893	80616	80893
40°	56270	56825	56270	56825
45°	31941	32793	31941	32793
50°	12701	13640	12701	13640
55°	1878	2413	1878	2413
60°	395	395	395	395
65°	304	304	304	304
70°	231	231	231	231
75°	191	191	191	191
80°	171	171	171	171
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 53999 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.8	7.1
10°-20°	340.1	20.1
20°-30°	489.9	28.9
30°-40°	462.3	27.3
40°-50°	238.3	14.1
50°-60°	41.6	2.5
60°-70°	1.5	0.1
70°-80°	0.4	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°	950.7	56.1
0°-40°	1413.0	83.4
0°-60°	1693.0	99.9
0°-90°	1695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1695.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1281	1281	1281	1281	1281	
5°	1273	1274	1273	1274	1273	121
15°	1208	1208	1208	1208	1208	340
25°	1075	1070	1075	1070	1075	486
35°	668	670	668	670	668	415
45°	228	235	228	235	228	181
55°	11	14	11	14	11	19
65°	1	1	1	1	1	1
75°	0	0	0	0	0	1
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°	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0
0.5°	1280.8	1280.8	1280.8	1281.0	1281.8	1281.0	1280.8	1280.8	1280.8	1280.8	1280.8
1°	1280.5	1280.5	1280.5	1280.8	1281.6	1280.8	1280.5	1280.5	1280.5	1280.5	1280.5
1.5°	1280.0	1280.3	1280.3	1280.3	1281.0	1280.3	1280.3	1280.3	1280.0	1280.3	1280.3
2°	1279.5	1279.5	1279.8	1279.8	1280.5	1279.8	1279.8	1279.5	1279.5	1279.5	1279.8
2.5°	1278.8	1278.8	1279.0	1279.3	1279.8	1279.3	1279.0	1278.8	1278.8	1278.8	1279.0
3°	1278.0	1278.0	1278.2	1278.2	1279.0	1278.2	1278.2	1278.0	1278.0	1278.0	1278.2
3.5°	1277.0	1277.0	1277.2	1277.2	1278.0	1277.2	1277.2	1277.0	1277.0	1277.0	1277.2
4°	1276.0	1276.0	1276.0	1276.2	1276.7	1276.2	1276.0	1276.0	1276.0	1276.0	1276.0
4.5°	1274.7	1274.7	1274.7	1274.7	1275.5	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7
5°	1273.2	1273.2	1273.2	1273.2	1273.9	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2
5.5°	1271.4	1271.4	1271.6	1271.6	1272.2	1271.6	1271.6	1271.4	1271.4	1271.4	1271.6
6°	1269.6	1269.6	1269.6	1269.9	1270.4	1269.9	1269.6	1269.6	1269.6	1269.6	1269.6
6.5°	1267.6	1267.6	1267.8	1267.8	1268.3	1267.8	1267.8	1267.6	1267.6	1267.6	1267.8
7°	1265.5	1265.5	1265.5	1265.8	1266.3	1265.8	1265.5	1265.5	1265.5	1265.5	1265.5
7.5°	1263.3	1263.3	1263.3	1263.3	1264.0	1263.3	1263.3	1263.3	1263.3	1263.3	1263.3
8°	1260.7	1260.7	1261.0	1261.0	1261.5	1261.0	1261.0	1260.7	1260.7	1260.7	1261.0
8.5°	1258.2	1258.2	1258.2	1258.2	1258.7	1258.2	1258.2	1258.2	1258.2	1258.2	1258.2
9°	1255.4	1255.4	1255.4	1255.4	1255.9	1255.4	1255.4	1255.4	1255.4	1255.4	1255.4
9.5°	1252.3	1252.3	1252.3	1252.3	1252.8	1252.3	1252.3	1252.3	1252.3	1252.3	1252.3
10°	1249.3	1249.3	1249.3	1249.3	1249.8	1249.3	1249.3	1249.3	1249.3	1249.3	1249.3
10.5°	1246.0	1246.0	1246.0	1245.7	1246.5	1245.7	1246.0	1246.0	1246.0	1246.0	1246.0
11°	1242.4	1242.4	1242.7	1242.4	1242.9	1242.4	1242.7	1242.4	1242.4	1242.4	1242.7
11.5°	1238.9	1238.9	1238.9	1238.6	1239.1	1238.6	1238.9	1238.9	1238.9	1238.9	1238.9
12°	1235.0	1235.0	1235.0	1234.8	1235.3	1234.8	1235.0	1235.0	1235.0	1235.0	1235.0
12.5°	1230.7	1231.0	1231.0	1230.7	1231.0	1230.7	1231.0	1231.0	1230.7	1231.0	1231.0
13°	1226.7	1226.9	1226.9	1226.4	1226.9	1226.4	1226.9	1226.9	1226.7	1226.9	1226.9
13.5°	1222.3	1222.3	1222.6	1222.1	1222.6	1222.1	1222.6	1222.3	1222.3	1222.3	1222.6
14°	1217.8	1218.0	1218.0	1217.5	1217.8	1217.5	1218.0	1218.0	1217.8	1218.0	1218.0
14.5°	1212.9	1213.2	1213.4	1212.9	1212.9	1212.9	1213.4	1213.2	1212.9	1213.2	1213.4
15°	1207.9	1208.4	1208.4	1207.9	1208.1	1207.9	1208.4	1208.4	1207.9	1208.4	1208.4
15.5°	1202.8	1203.3	1203.3	1202.8	1202.8	1202.8	1203.3	1203.3	1202.8	1203.3	1203.3
16°	1197.4	1197.9	1198.2	1197.4	1197.4	1197.4	1198.2	1197.9	1197.4	1197.9	1198.2
16.5°	1192.1	1192.4	1192.9	1192.1	1191.8	1192.1	1192.9	1192.4	1192.1	1192.4	1192.9
17°	1186.5	1186.8	1187.3	1186.3	1186.3	1186.3	1187.3	1186.8	1186.5	1186.8	1187.3
17.5°	1180.4	1180.9	1181.4	1180.4	1180.4	1180.4	1181.4	1180.9	1180.4	1180.9	1181.4
18°	1174.6	1174.8	1175.3	1174.6	1174.3	1174.6	1175.3	1174.8	1174.6	1174.8	1175.3
18.5°	1168.5	1168.7	1169.2	1168.2	1168.0	1168.2	1169.2	1168.7	1168.5	1168.7	1169.2
19°	1161.9	1162.4	1162.9	1161.9	1161.4	1161.9	1162.9	1162.4	1161.9	1162.4	1162.9
19.5°	1155.5	1155.8	1156.3	1155.3	1155.0	1155.3	1156.3	1155.8	1155.5	1155.8	1156.3
20°	1148.6	1149.2	1149.7	1148.4	1148.1	1148.4	1149.7	1149.2	1148.6	1149.2	1149.7
20.5°	1142.0	1142.3	1142.8	1141.5	1141.3	1141.5	1142.8	1142.3	1142.0	1142.3	1142.8
21°	1134.9	1135.2	1135.7	1134.4	1134.2	1134.4	1135.7	1135.2	1134.9	1135.2	1135.7



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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°	1113.1	1113.1	1113.3	1112.3	1112.3	1112.3	1113.3	1113.1	1113.1	1113.1	1113.3
23°	1105.4	1105.4	1105.4	1104.7	1104.4	1104.7	1105.4	1105.4	1105.4	1105.4	1105.4
23.5°	1097.8	1097.8	1097.3	1096.8	1096.8	1096.8	1097.3	1097.8	1097.8	1097.8	1097.3
24°	1089.9	1089.9	1089.2	1088.9	1089.4	1088.9	1089.2	1089.9	1089.9	1089.9	1089.2
24.5°	1082.1	1081.8	1080.8	1080.8	1081.6	1080.8	1080.8	1081.8	1082.1	1081.8	1080.8
25°	1074.7	1073.4	1072.2	1072.4	1070.4	1072.4	1072.2	1073.4	1074.7	1073.4	1072.2
25.5°	1066.1	1065.3	1063.5	1064.3	1059.7	1064.3	1063.5	1065.3	1066.1	1065.3	1063.5
26°	1051.6	1056.9	1054.6	1056.1	1049.0	1056.1	1054.6	1056.9	1051.6	1056.9	1054.6
26.5°	1039.4	1048.5	1045.7	1047.5	1033.5	1047.5	1045.7	1048.5	1039.4	1048.5	1045.7
27°	1024.6	1040.6	1036.6	1035.6	1015.5	1035.6	1036.6	1040.6	1024.6	1040.6	1036.6
27.5°	1006.3	1029.7	1027.2	1024.6	999.2	1024.6	1027.2	1029.7	1006.3	1029.7	1027.2
28°	987.0	1015.2	1017.8	1012.9	981.2	1012.9	1017.8	1015.2	987.0	1015.2	1017.8
28.5°	967.5	1002.8	1008.4	996.4	962.4	996.4	1008.4	1002.8	967.5	1002.8	1008.4
29°	946.9	987.3	998.7	979.1	944.1	979.1	998.7	987.3	946.9	987.3	998.7
29.5°	926.0	969.0	989.1	962.4	924.3	962.4	989.1	969.0	926.0	969.0	989.1
30°	904.4	950.2	979.1	944.6	904.2	944.6	979.1	950.2	904.4	950.2	979.1
30.5°	882.3	930.4	969.5	926.0	883.3	926.0	969.5	930.4	882.3	930.4	969.5
31°	859.5	910.5	959.6	907.0	862.0	907.0	959.6	910.5	859.5	910.5	959.6
31.5°	836.3	889.9	949.7	887.9	838.9	887.9	949.7	889.9	836.3	889.9	949.7
32°	812.7	869.1	939.8	868.3	815.2	868.3	939.8	869.1	812.7	869.1	939.8
32.5°	788.6	847.5	930.1	848.3	791.3	848.3	930.1	847.5	788.6	847.5	930.1
33°	764.4	825.9	920.2	827.2	767.7	827.2	920.2	825.9	764.4	825.9	920.2
33.5°	740.0	803.3	908.8	805.6	742.0	805.6	908.8	803.3	740.0	803.3	908.8
34°	716.1	780.4	896.6	783.0	717.6	783.0	896.6	780.4	716.1	780.4	896.6
34.5°	692.0	757.3	882.3	759.6	693.5	759.6	882.3	757.3	692.0	757.3	882.3
35°	668.1	734.2	865.0	735.9	670.4	735.9	865.0	734.2	668.1	734.2	865.0
35.5°	644.7	711.3	846.5	712.8	646.5	712.8	846.5	711.3	644.7	711.3	846.5
36°	621.6	687.9	825.9	689.2	624.1	689.2	825.9	687.9	621.6	687.9	825.9
36.5°	598.2	665.0	803.8	666.1	601.3	666.1	803.8	665.0	598.2	665.0	803.8
37°	575.1	642.2	780.4	643.2	578.6	643.2	780.4	642.2	575.1	642.2	780.4
37.5°	551.7	619.6	756.8	621.1	555.8	621.1	756.8	619.6	551.7	619.6	756.8
38°	528.3	596.9	732.4	598.7	532.9	598.7	732.4	596.9	528.3	596.9	732.4
38.5°	504.7	575.1	708.2	577.1	509.5	577.1	708.2	575.1	504.7	575.1	708.2
39°	481.8	553.0	683.9	555.5	486.6	555.5	683.9	553.0	481.8	553.0	683.9
39.5°	459.2	530.9	659.2	534.2	463.0	534.2	659.2	530.9	459.2	530.9	659.2
40°	436.1	508.5	634.0	512.3	440.4	512.3	634.0	508.5	436.1	508.5	634.0
40.5°	413.5	486.4	608.6	490.2	417.5	490.2	608.6	486.4	413.5	486.4	608.6
41°	391.6	464.5	583.2	468.4	395.4	468.4	583.2	464.5	391.6	464.5	583.2
41.5°	369.8	442.7	557.6	446.5	373.8	446.5	557.6	442.7	369.8	442.7	557.6
42°	348.7	421.3	531.9	424.6	353.0	424.6	531.9	421.3	348.7	421.3	531.9
42.5°	327.8	400.0	506.7	403.6	332.4	403.6	506.7	400.0	327.8	400.0	506.7
43°	307.2	379.2	481.6	382.2	312.1	382.2	481.6	379.2	307.2	379.2	481.6
43.5°	286.7	358.6	456.9	362.1	292.2	362.1	456.9	358.6	286.7	358.6	456.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	228.5	299.1	386.3	302.9	234.6	302.9	386.3	299.1	228.5	299.1	386.3
45.5°	210.7	280.0	364.2	284.4	216.5	284.4	364.2	280.0	210.7	280.0	364.2
46°	193.6	261.5	343.1	266.1	199.2	266.1	343.1	261.5	193.6	261.5	343.1
46.5°	176.4	242.7	322.2	247.8	182.7	247.8	322.2	242.7	176.4	242.7	322.2
47°	160.1	224.9	301.9	229.7	167.2	229.7	301.9	224.9	160.1	224.9	301.9
47.5°	143.8	207.6	282.3	211.9	152.0	211.9	282.3	207.6	143.8	207.6	282.3
48°	129.6	191.1	263.5	195.4	137.2	195.4	263.5	191.1	129.6	191.1	263.5
48.5°	115.9	174.8	245.5	179.7	124.0	179.7	245.5	174.8	115.9	174.8	245.5
49°	104.4	158.8	227.4	164.2	111.8	164.2	227.4	158.8	104.4	158.8	227.4
49.5°	93.5	143.8	210.2	149.4	100.1	149.4	210.2	143.8	93.5	143.8	210.2
50°	82.6	129.6	193.1	135.2	88.7	135.2	193.1	129.6	82.6	129.6	193.1
50.5°	72.2	116.1	177.4	122.0	77.5	122.0	177.4	116.1	72.2	116.1	177.4
51°	62.3	104.4	162.1	110.0	68.1	110.0	162.1	104.4	62.3	104.4	162.1
51.5°	54.1	93.3	147.6	98.3	59.2	98.3	147.6	93.3	54.1	93.3	147.6
52°	46.3	82.3	133.7	87.2	50.8	87.2	133.7	82.3	46.3	82.3	133.7
52.5°	38.9	71.7	120.5	76.5	42.9	76.5	120.5	71.7	38.9	71.7	120.5
53°	32.0	62.0	108.8	67.1	35.6	67.1	108.8	62.0	32.0	62.0	108.8
53.5°	26.4	53.4	97.3	58.4	28.5	58.4	97.3	53.4	26.4	53.4	97.3
54°	20.6	45.5	86.7	50.1	22.6	50.1	86.7	45.5	20.6	45.5	86.7
54.5°	15.0	38.1	76.7	42.2	18.3	42.2	76.7	38.1	15.0	38.1	76.7
55°	10.9	31.8	67.1	34.8	14.0	34.8	67.1	31.8	10.9	31.8	67.1
55.5°	6.9	25.9	58.4	28.0	9.7	28.0	58.4	25.9	6.9	25.9	58.4
56°	4.6	20.3	50.1	21.9	5.3	21.9	50.1	20.3	4.6	20.3	50.1
56.5°	3.6	14.7	42.9	16.8	3.3	16.8	42.9	14.7	3.6	14.7	42.9
57°	2.5	9.7	36.6	12.2	2.8	12.2	36.6	9.7	2.5	9.7	36.6
57.5°	2.5	6.1	30.7	8.1	2.5	8.1	30.7	6.1	2.5	6.1	30.7
58°	2.3	3.8	25.7	5.3	2.5	5.3	25.7	3.8	2.3	3.8	25.7
58.5°	2.3	2.5	21.3	3.8	2.3	3.8	21.3	2.5	2.3	2.5	21.3
59°	2.0	2.0	17.3	2.8	2.3	2.8	17.3	2.0	2.0	2.0	17.3
59.5°	2.0	2.0	14.0	2.0	2.3	2.0	14.0	2.0	2.0	2.0	14.0
60°	2.0	2.0	11.2	2.0	2.0	2.0	11.2	2.0	2.0	2.0	11.2
60.5°	1.8	1.8	8.6	2.0	2.0	2.0	8.6	1.8	1.8	1.8	8.6
61°	1.8	1.8	6.9	1.8	2.0	1.8	6.9	1.8	1.8	1.8	6.9
61.5°	1.8	1.8	5.1	1.8	1.8	1.8	5.1	1.8	1.8	1.8	5.1
62°	1.5	1.5	3.8	1.8	1.8	1.8	3.8	1.5	1.5	1.5	3.8
62.5°	1.5	1.5	2.8	1.5	1.8	1.5	2.8	1.5	1.5	1.5	2.8
63°	1.5	1.5	2.0	1.5	1.5	1.5	2.0	1.5	1.5	1.5	2.0
63.5°	1.5	1.3	1.5	1.5	1.5	1.5	1.5	1.3	1.5	1.3	1.5
64°	1.3	1.3	1.3	1.3	1.5	1.3	1.3	1.3	1.3	1.3	1.3
64.5°	1.3	1.3	1.0	1.3	1.5	1.3	1.0	1.3	1.3	1.3	1.0
65°	1.3	1.3	1.0	1.3	1.3	1.3	1.0	1.3	1.3	1.3	1.0
65.5°	1.3	1.0	1.0	1.3	1.3	1.3	1.0	1.0	1.3	1.0	1.0
66°	1.3	1.0	0.8	1.0	1.3	1.0	0.8	1.0	1.3	1.0	0.8





TEST NUMBER: P776018

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.0	1.0	0.8	1.0	1.0	1.0	0.8	1.0	1.0	1.0	0.8
68°	1.0	0.8	0.8	1.0	1.0	1.0	0.8	0.8	1.0	0.8	0.8
68.5°	1.0	0.8	0.5	0.8	1.0	0.8	0.5	0.8	1.0	0.8	0.5
69°	0.8	0.8	0.5	0.8	1.0	0.8	0.5	0.8	0.8	0.8	0.5
69.5°	0.8	0.8	0.5	0.8	1.0	0.8	0.5	0.8	0.8	0.8	0.5
70°	0.8	0.8	0.5	0.8	0.8	0.8	0.5	0.8	0.8	0.8	0.5
70.5°	0.8	0.8	0.5	0.8	0.8	0.8	0.5	0.8	0.8	0.8	0.5
71°	0.8	0.5	0.5	0.8	0.8	0.8	0.5	0.5	0.8	0.5	0.5
71.5°	0.8	0.5	0.5	0.5	0.8	0.5	0.5	0.5	0.8	0.5	0.5
72°	0.8	0.5	0.5	0.5	0.8	0.5	0.5	0.5	0.8	0.5	0.5
72.5°	0.5	0.5	0.3	0.5	0.8	0.5	0.3	0.5	0.5	0.5	0.3
73°	0.5	0.5	0.3	0.5	0.8	0.5	0.3	0.5	0.5	0.5	0.3
73.5°	0.5	0.5	0.3	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.3
74°	0.5	0.5	0.3	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.3
74.5°	0.5	0.5	0.3	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.3
75°	0.5	0.5	0.3	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.3
75.5°	0.5	0.3	0.3	0.5	0.5	0.5	0.3	0.3	0.5	0.3	0.3
76°	0.5	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.5	0.3	0.3
76.5°	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3
77°	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.0	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.0
79.5°	0.3	0.3	0.0	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.0
80°	0.3	0.3	0.0	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.0
80.5°	0.3	0.3	0.0	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.0
81°	0.3	0.3	0.0	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.0
81.5°	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.3	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.3	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: P776018  
CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

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



TEST NUMBER: P776018

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1281.0	1281.0	1281.0	1281.0	1281.0	1281.0
0.5°	1281.0	1281.8	1281.0	1280.8	1280.8	1280.8
1°	1280.8	1281.6	1280.8	1280.5	1280.5	1280.5
1.5°	1280.3	1281.0	1280.3	1280.3	1280.3	1280.0
2°	1279.8	1280.5	1279.8	1279.8	1279.5	1279.5
2.5°	1279.3	1279.8	1279.3	1279.0	1278.8	1278.8
3°	1278.2	1279.0	1278.2	1278.2	1278.0	1278.0
3.5°	1277.2	1278.0	1277.2	1277.2	1277.0	1277.0
4°	1276.2	1276.7	1276.2	1276.0	1276.0	1276.0
4.5°	1274.7	1275.5	1274.7	1274.7	1274.7	1274.7
5°	1273.2	1273.9	1273.2	1273.2	1273.2	1273.2
5.5°	1271.6	1272.2	1271.6	1271.6	1271.4	1271.4
6°	1269.9	1270.4	1269.9	1269.6	1269.6	1269.6
6.5°	1267.8	1268.3	1267.8	1267.8	1267.6	1267.6
7°	1265.8	1266.3	1265.8	1265.5	1265.5	1265.5
7.5°	1263.3	1264.0	1263.3	1263.3	1263.3	1263.3
8°	1261.0	1261.5	1261.0	1261.0	1260.7	1260.7
8.5°	1258.2	1258.7	1258.2	1258.2	1258.2	1258.2
9°	1255.4	1255.9	1255.4	1255.4	1255.4	1255.4
9.5°	1252.3	1252.8	1252.3	1252.3	1252.3	1252.3
10°	1249.3	1249.8	1249.3	1249.3	1249.3	1249.3
10.5°	1245.7	1246.5	1245.7	1246.0	1246.0	1246.0
11°	1242.4	1242.9	1242.4	1242.7	1242.4	1242.4
11.5°	1238.6	1239.1	1238.6	1238.9	1238.9	1238.9
12°	1234.8	1235.3	1234.8	1235.0	1235.0	1235.0
12.5°	1230.7	1231.0	1230.7	1231.0	1231.0	1230.7
13°	1226.4	1226.9	1226.4	1226.9	1226.9	1226.7
13.5°	1222.1	1222.6	1222.1	1222.6	1222.3	1222.3
14°	1217.5	1217.8	1217.5	1218.0	1218.0	1217.8
14.5°	1212.9	1212.9	1212.9	1213.4	1213.2	1212.9
15°	1207.9	1208.1	1207.9	1208.4	1208.4	1207.9
15.5°	1202.8	1202.8	1202.8	1203.3	1203.3	1202.8
16°	1197.4	1197.4	1197.4	1198.2	1197.9	1197.4
16.5°	1192.1	1191.8	1192.1	1192.9	1192.4	1192.1
17°	1186.3	1186.3	1186.3	1187.3	1186.8	1186.5
17.5°	1180.4	1180.4	1180.4	1181.4	1180.9	1180.4
18°	1174.6	1174.3	1174.6	1175.3	1174.8	1174.6
18.5°	1168.2	1168.0	1168.2	1169.2	1168.7	1168.5
19°	1161.9	1161.4	1161.9	1162.9	1162.4	1161.9
19.5°	1155.3	1155.0	1155.3	1156.3	1155.8	1155.5
20°	1148.4	1148.1	1148.4	1149.7	1149.2	1148.6
20.5°	1141.5	1141.3	1141.5	1142.8	1142.3	1142.0
21°	1134.4	1134.2	1134.4	1135.7	1135.2	1134.9



TEST NUMBER: P776018

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1112.3	1112.3	1112.3	1113.3	1113.1	1113.1
23°	1104.7	1104.4	1104.7	1105.4	1105.4	1105.4
23.5°	1096.8	1096.8	1096.8	1097.3	1097.8	1097.8
24°	1088.9	1089.4	1088.9	1089.2	1089.9	1089.9
24.5°	1080.8	1081.6	1080.8	1080.8	1081.8	1082.1
25°	1072.4	1070.4	1072.4	1072.2	1073.4	1074.7
25.5°	1064.3	1059.7	1064.3	1063.5	1065.3	1066.1
26°	1056.1	1049.0	1056.1	1054.6	1056.9	1051.6
26.5°	1047.5	1033.5	1047.5	1045.7	1048.5	1039.4
27°	1035.6	1015.5	1035.6	1036.6	1040.6	1024.6
27.5°	1024.6	999.2	1024.6	1027.2	1029.7	1006.3
28°	1012.9	981.2	1012.9	1017.8	1015.2	987.0
28.5°	996.4	962.4	996.4	1008.4	1002.8	967.5
29°	979.1	944.1	979.1	998.7	987.3	946.9
29.5°	962.4	924.3	962.4	989.1	969.0	926.0
30°	944.6	904.2	944.6	979.1	950.2	904.4
30.5°	926.0	883.3	926.0	969.5	930.4	882.3
31°	907.0	862.0	907.0	959.6	910.5	859.5
31.5°	887.9	838.9	887.9	949.7	889.9	836.3
32°	868.3	815.2	868.3	939.8	869.1	812.7
32.5°	848.3	791.3	848.3	930.1	847.5	788.6
33°	827.2	767.7	827.2	920.2	825.9	764.4
33.5°	805.6	742.0	805.6	908.8	803.3	740.0
34°	783.0	717.6	783.0	896.6	780.4	716.1
34.5°	759.6	693.5	759.6	882.3	757.3	692.0
35°	735.9	670.4	735.9	865.0	734.2	668.1
35.5°	712.8	646.5	712.8	846.5	711.3	644.7
36°	689.2	624.1	689.2	825.9	687.9	621.6
36.5°	666.1	601.3	666.1	803.8	665.0	598.2
37°	643.2	578.6	643.2	780.4	642.2	575.1
37.5°	621.1	555.8	621.1	756.8	619.6	551.7
38°	598.7	532.9	598.7	732.4	596.9	528.3
38.5°	577.1	509.5	577.1	708.2	575.1	504.7
39°	555.5	486.6	555.5	683.9	553.0	481.8
39.5°	534.2	463.0	534.2	659.2	530.9	459.2
40°	512.3	440.4	512.3	634.0	508.5	436.1
40.5°	490.2	417.5	490.2	608.6	486.4	413.5
41°	468.4	395.4	468.4	583.2	464.5	391.6
41.5°	446.5	373.8	446.5	557.6	442.7	369.8
42°	424.6	353.0	424.6	531.9	421.3	348.7
42.5°	403.6	332.4	403.6	506.7	400.0	327.8
43°	382.2	312.1	382.2	481.6	379.2	307.2
43.5°	362.1	292.2	362.1	456.9	358.6	286.7



TEST NUMBER: P776018

CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	302.9	234.6	302.9	386.3	299.1	228.5
45.5°	284.4	216.5	284.4	364.2	280.0	210.7
46°	266.1	199.2	266.1	343.1	261.5	193.6
46.5°	247.8	182.7	247.8	322.2	242.7	176.4
47°	229.7	167.2	229.7	301.9	224.9	160.1
47.5°	211.9	152.0	211.9	282.3	207.6	143.8
48°	195.4	137.2	195.4	263.5	191.1	129.6
48.5°	179.7	124.0	179.7	245.5	174.8	115.9
49°	164.2	111.8	164.2	227.4	158.8	104.4
49.5°	149.4	100.1	149.4	210.2	143.8	93.5
50°	135.2	88.7	135.2	193.1	129.6	82.6
50.5°	122.0	77.5	122.0	177.4	116.1	72.2
51°	110.0	68.1	110.0	162.1	104.4	62.3
51.5°	98.3	59.2	98.3	147.6	93.3	54.1
52°	87.2	50.8	87.2	133.7	82.3	46.3
52.5°	76.5	42.9	76.5	120.5	71.7	38.9
53°	67.1	35.6	67.1	108.8	62.0	32.0
53.5°	58.4	28.5	58.4	97.3	53.4	26.4
54°	50.1	22.6	50.1	86.7	45.5	20.6
54.5°	42.2	18.3	42.2	76.7	38.1	15.0
55°	34.8	14.0	34.8	67.1	31.8	10.9
55.5°	28.0	9.7	28.0	58.4	25.9	6.9
56°	21.9	5.3	21.9	50.1	20.3	4.6
56.5°	16.8	3.3	16.8	42.9	14.7	3.6
57°	12.2	2.8	12.2	36.6	9.7	2.5
57.5°	8.1	2.5	8.1	30.7	6.1	2.5
58°	5.3	2.5	5.3	25.7	3.8	2.3
58.5°	3.8	2.3	3.8	21.3	2.5	2.3
59°	2.8	2.3	2.8	17.3	2.0	2.0
59.5°	2.0	2.3	2.0	14.0	2.0	2.0
60°	2.0	2.0	2.0	11.2	2.0	2.0
60.5°	2.0	2.0	2.0	8.6	1.8	1.8
61°	1.8	2.0	1.8	6.9	1.8	1.8
61.5°	1.8	1.8	1.8	5.1	1.8	1.8
62°	1.8	1.8	1.8	3.8	1.5	1.5
62.5°	1.5	1.8	1.5	2.8	1.5	1.5
63°	1.5	1.5	1.5	2.0	1.5	1.5
63.5°	1.5	1.5	1.5	1.5	1.3	1.5
64°	1.3	1.5	1.3	1.3	1.3	1.3
64.5°	1.3	1.5	1.3	1.0	1.3	1.3
65°	1.3	1.3	1.3	1.0	1.3	1.3
65.5°	1.3	1.3	1.3	1.0	1.0	1.3
66°	1.0	1.3	1.0	0.8	1.0	1.3



TEST NUMBER: P776018  
 CATALOG NUMBER: HCDJBL51525CSD-HCD4TSQMB-2500lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.0	1.0	1.0	0.8	1.0	1.0
68°	1.0	1.0	1.0	0.8	0.8	1.0
68.5°	0.8	1.0	0.8	0.5	0.8	1.0
69°	0.8	1.0	0.8	0.5	0.8	0.8
69.5°	0.8	1.0	0.8	0.5	0.8	0.8
70°	0.8	0.8	0.8	0.5	0.8	0.8
70.5°	0.8	0.8	0.8	0.5	0.8	0.8
71°	0.8	0.8	0.8	0.5	0.5	0.8
71.5°	0.5	0.8	0.5	0.5	0.5	0.8
72°	0.5	0.8	0.5	0.5	0.5	0.8
72.5°	0.5	0.8	0.5	0.3	0.5	0.5
73°	0.5	0.8	0.5	0.3	0.5	0.5
73.5°	0.5	0.5	0.5	0.3	0.5	0.5
74°	0.5	0.5	0.5	0.3	0.5	0.5
74.5°	0.5	0.5	0.5	0.3	0.5	0.5
75°	0.5	0.5	0.5	0.3	0.5	0.5
75.5°	0.5	0.5	0.5	0.3	0.3	0.5
76°	0.3	0.5	0.3	0.3	0.3	0.5
76.5°	0.3	0.5	0.3	0.3	0.3	0.3
77°	0.3	0.5	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.0	0.3	0.3
79.5°	0.3	0.3	0.3	0.0	0.3	0.3
80°	0.3	0.3	0.3	0.0	0.3	0.3
80.5°	0.3	0.3	0.3	0.0	0.3	0.3
81°	0.3	0.3	0.3	0.0	0.3	0.3
81.5°	0.3	0.3	0.3	0.0	0.0	0.3
82°	0.0	0.3	0.0	0.0	0.0	0.0
82.5°	0.0	0.3	0.0	0.0	0.0	0.0
83°	0.0	0.3	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: P776018  
CATALOG NUMBER: HCDJBL1525CSD-HCD4TSQMB-2500lm-4000K

**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°	1127.8	1128.1	1128.3	1127.3	1127.0	1127.3	1128.3	1128.1	1127.8	1128.1	1128.3
22°	1120.4	1120.7	1120.9	1119.7	1119.7	1119.7	1120.9	1120.7	1120.4	1120.7	1120.9



44°	266.8	338.2	432.5	341.8	272.4	341.8	432.5	338.2	266.8	338.2	432.5
44.5°	247.5	318.7	409.1	322.2	253.1	322.2	409.1	318.7	247.5	318.7	409.1



66.5°	1.0	1.0	0.8	1.0	1.3	1.0	0.8	1.0	1.0	1.0	0.8
67°	1.0	1.0	0.8	1.0	1.0	1.0	0.8	1.0	1.0	1.0	0.8



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°	1127.3	1127.0	1127.3	1128.3	1128.1	1127.8
22°	1119.7	1119.7	1119.7	1120.9	1120.7	1120.4



44°	341.8	272.4	341.8	432.5	338.2	266.8
44.5°	322.2	253.1	322.2	409.1	318.7	247.5

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66.5°	1.0	1.3	1.0	0.8	1.0	1.0
67°	1.0	1.0	1.0	0.8	1.0	1.0

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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)