

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: P775978

Luminaire Tested: HCDJBL1525CSD-HCD4TRC-2500lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775978
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL51525CSD-HCD4TRC-2500lm-4000K
Description: 4 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

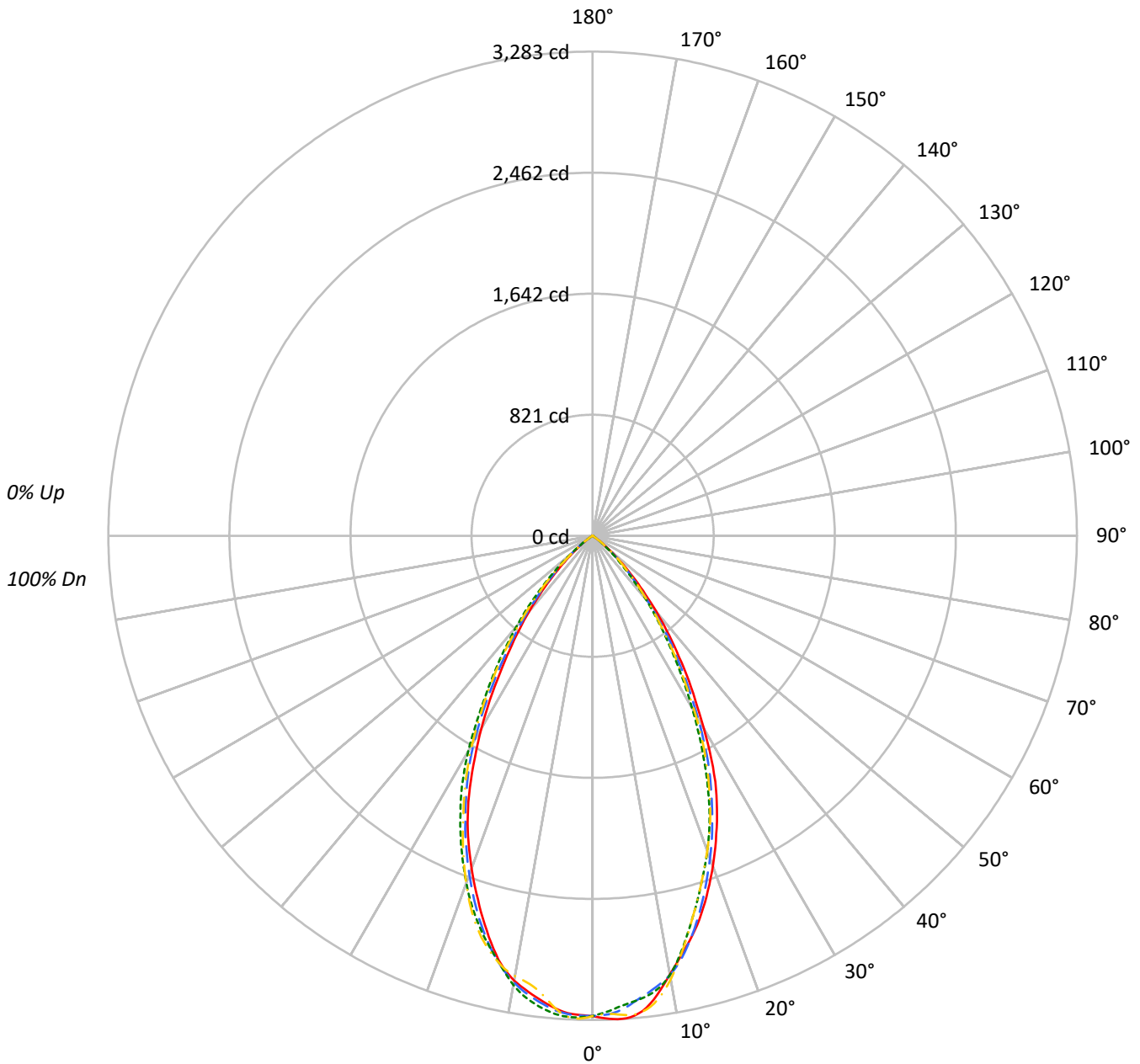
Lumens per Lamp: N/A
Luminaire Lumens: 2963.0 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.87 / 0.88
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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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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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86								
3	102	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74								
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69								
6	87	78	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64								
7	82	73	66	62	81	72	66	62	71	65	62	69	65	61	68	64	61	60								
8	78	68	62	58	77	68	62	58	67	61	57	66	61	57	65	60	57	56								
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57	53	52								
10	71	61	55	51	70	60	54	51	59	54	50	59	54	50	58	53	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	409893	409893	409893	409893
5°	412684	400569	404712	409753
10°	385917	386121	391348	395182
15°	356289	345319	361149	367781
20°	319080	304402	321330	335299
25°	276442	255183	276692	294772
30°	218821	195933	218777	244804
35°	161546	139930	159595	184684
40°	110318	92263	109348	131839
45°	64873	50386	63876	82440
50°	27586	22418	29721	39980
55°	5573	5463	9435	11782
60°	906	1082	1032	1410
65°	536	596	536	834
70°	294	368	368	478
75°	146	243	243	389
80°	0	217	217	217
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 45°

Luminance: 82440 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.5	10.2
10°-20°	766.5	25.9
20°-30°	899.2	30.3
30°-40°	658.2	22.2
40°-50°	290.4	9.8
50°-60°	44.4	1.5
60°-70°	2.2	0.1
70°-80°	0.6	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°	1967.2	66.4
0°-40°	2625.4	88.6
0°-60°	2960.2	99.9
0°-90°	2963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2963.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3257	3257	3257	3257	3257	
5°	3267	3171	3204	3244	3267	304
15°	2735	2650	2772	2823	2735	762
25°	1991	1838	1993	2123	1991	902
35°	1052	911	1039	1202	1052	657
45°	364	283	359	463	364	287
55°	25	25	43	54	25	37
65°	2	2	2	3	2	2
75°	0	0	0	1	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P775978

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0
0.5°	3263.1	3258.8	3254.4	3253.7	3248.9	3248.9	3251.4	3253.2	3255.0	3255.7	3256.2
1°	3268.4	3260.3	3252.4	3248.3	3242.0	3242.5	3246.8	3249.9	3252.4	3254.2	3256.0
1.5°	3273.3	3262.1	3249.6	3241.5	3233.3	3237.4	3243.8	3248.3	3250.6	3252.2	3255.0
2°	3277.6	3263.1	3245.5	3232.8	3223.7	3232.3	3243.8	3249.4	3248.9	3249.6	3252.9
2.5°	3280.9	3262.6	3239.2	3221.1	3213.8	3228.0	3246.1	3251.7	3245.5	3245.0	3250.4
3°	3282.7	3259.8	3231.0	3208.4	3203.6	3225.5	3249.9	3253.9	3241.0	3238.2	3246.6
3.5°	3282.4	3254.7	3220.1	3194.7	3194.4	3223.7	3254.7	3256.0	3233.6	3229.0	3242.2
4°	3279.9	3246.8	3207.1	3179.9	3185.8	3222.4	3258.3	3256.2	3224.9	3217.8	3236.1
4.5°	3274.8	3235.9	3192.1	3166.2	3178.1	3220.9	3259.8	3254.7	3215.0	3204.3	3228.0
5°	3266.7	3222.7	3176.9	3153.2	3170.8	3218.1	3258.3	3249.9	3203.6	3189.3	3218.3
5.5°	3254.7	3207.4	3161.9	3141.0	3163.4	3213.2	3253.4	3243.0	3191.1	3172.8	3207.1
6°	3239.7	3189.8	3147.1	3130.6	3155.8	3205.6	3244.8	3232.8	3178.4	3157.0	3195.2
6.5°	3220.4	3171.3	3132.9	3120.7	3147.1	3196.2	3232.8	3220.6	3164.9	3141.0	3182.7
7°	3197.5	3150.9	3119.6	3111.0	3136.7	3183.0	3217.3	3205.1	3151.7	3127.3	3169.7
7.5°	3172.0	3129.1	3105.1	3101.3	3124.7	3165.7	3198.7	3187.8	3137.7	3113.3	3156.3
8°	3144.3	3105.9	3090.9	3090.9	3110.5	3145.3	3174.8	3167.5	3123.2	3100.8	3142.0
8.5°	3115.1	3080.0	3075.9	3078.9	3093.4	3122.2	3148.4	3145.3	3109.0	3090.1	3127.5
9°	3083.0	3054.3	3059.9	3065.0	3072.6	3094.2	3118.9	3120.9	3094.0	3080.5	3111.0
9.5°	3051.0	3028.1	3042.3	3048.7	3048.9	3063.7	3087.6	3093.7	3079.2	3070.6	3093.7
10°	3019.9	3001.6	3023.0	3029.9	3021.5	3030.6	3052.2	3064.7	3062.4	3059.9	3074.4
10.5°	2989.9	2974.7	3001.4	3007.2	2991.4	2994.0	3016.1	3033.2	3043.8	3048.4	3054.8
11°	2960.9	2947.7	2977.5	2979.2	2959.4	2955.8	2976.9	3000.1	3022.5	3035.7	3032.9
11.5°	2932.7	2919.5	2950.0	2951.5	2922.3	2917.9	2937.5	2964.5	2999.3	3019.7	3010.0
12°	2904.5	2890.7	2920.2	2918.7	2884.4	2873.2	2894.0	2927.1	2973.4	3001.4	2985.6
12.5°	2876.7	2861.2	2889.7	2882.1	2846.0	2832.0	2853.8	2888.4	2944.9	2979.0	2958.6
13°	2849.8	2832.0	2856.6	2844.9	2807.3	2794.8	2812.1	2849.8	2912.1	2953.0	2930.9
13.5°	2822.8	2800.2	2823.6	2809.8	2767.9	2750.6	2771.2	2810.6	2879.0	2925.6	2902.2
14°	2794.3	2767.6	2789.2	2770.7	2727.9	2711.7	2730.2	2770.9	2845.2	2894.0	2872.4
14.5°	2764.6	2734.3	2754.4	2732.0	2688.5	2673.8	2691.6	2732.8	2809.3	2861.2	2841.4
15°	2734.6	2700.5	2717.8	2693.1	2650.4	2633.8	2650.4	2694.6	2771.9	2827.4	2808.6
15.5°	2703.0	2664.9	2680.9	2653.7	2612.0	2594.7	2612.5	2656.5	2735.6	2793.1	2775.5
16°	2670.7	2629.8	2642.7	2614.2	2573.8	2557.3	2572.3	2619.3	2698.2	2756.4	2741.9
16.5°	2635.6	2592.6	2604.6	2575.6	2535.1	2520.1	2534.1	2583.7	2661.8	2719.8	2707.6
17°	2602.0	2556.0	2565.2	2536.2	2498.5	2482.0	2496.0	2545.6	2625.2	2682.9	2672.2
17.5°	2566.2	2517.8	2526.2	2497.0	2460.6	2445.4	2459.6	2509.2	2586.3	2645.0	2635.4
18°	2530.3	2480.2	2486.3	2458.1	2422.5	2407.5	2419.7	2473.3	2549.4	2606.9	2598.5
18.5°	2493.7	2441.3	2446.6	2418.9	2384.6	2370.6	2382.0	2437.0	2513.3	2566.9	2560.3
19°	2457.3	2403.4	2405.4	2379.0	2347.7	2333.7	2344.9	2399.6	2475.4	2528.8	2522.2
19.5°	2419.9	2364.5	2366.8	2339.8	2310.3	2298.3	2309.5	2364.2	2437.7	2488.6	2483.3
20°	2382.5	2327.1	2326.1	2301.1	2272.9	2261.7	2271.6	2328.1	2399.3	2448.9	2444.3
20.5°	2344.6	2288.4	2286.4	2262.0	2235.8	2225.6	2234.7	2291.0	2361.4	2408.7	2404.9
21°	2306.7	2248.7	2246.2	2222.3	2196.1	2187.9	2198.1	2254.8	2322.8	2369.3	2365.0



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CATALOG NUMBER: HCDJBL5125CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2191.3	2127.9	2119.0	2094.9	2071.2	2069.2	2083.4	2142.7	2206.8	2250.0	2246.4
23°	2152.3	2085.7	2075.5	2050.8	2026.4	2025.7	2040.9	2102.2	2168.1	2210.6	2207.5
23.5°	2112.4	2044.2	2031.8	2005.3	1979.4	1984.2	1999.0	2061.3	2125.6	2168.9	2166.1
24°	2072.0	2001.8	1988.5	1959.0	1932.1	1939.4	1954.7	2017.0	2082.1	2126.9	2123.1
24.5°	2032.3	1959.8	1944.5	1911.0	1884.8	1894.7	1910.2	1972.0	2036.6	2083.7	2081.1
25°	1990.8	1916.0	1900.8	1863.9	1837.7	1849.9	1865.9	1927.0	1992.6	2039.9	2040.9
25.5°	1949.9	1873.6	1857.0	1815.6	1790.4	1804.9	1821.4	1882.2	1944.8	1995.7	1996.7
26°	1907.6	1830.6	1813.0	1766.7	1740.8	1755.3	1776.9	1837.2	1896.7	1951.1	1955.0
26.5°	1863.1	1786.1	1768.3	1717.9	1690.7	1708.7	1731.9	1792.2	1848.9	1906.9	1913.2
27°	1814.8	1739.5	1723.0	1669.6	1641.3	1658.1	1684.3	1743.6	1800.8	1862.4	1871.5
27.5°	1765.7	1693.7	1674.4	1622.0	1592.0	1608.5	1639.8	1693.2	1750.0	1818.1	1829.8
28°	1715.4	1645.2	1625.6	1574.4	1541.9	1559.2	1590.0	1641.8	1699.1	1773.9	1787.8
28.5°	1663.2	1595.0	1577.2	1526.4	1492.8	1509.3	1541.1	1591.5	1650.5	1725.8	1742.3
29°	1610.1	1545.2	1527.9	1479.6	1444.2	1459.5	1492.0	1540.4	1602.2	1677.7	1695.5
29.5°	1556.6	1493.8	1478.0	1432.8	1396.1	1409.6	1441.4	1492.3	1554.1	1629.1	1647.2
30°	1505.8	1442.7	1429.7	1386.2	1348.3	1359.5	1389.8	1441.4	1505.5	1579.8	1598.1
30.5°	1455.9	1391.1	1381.6	1339.9	1300.3	1310.9	1341.0	1391.6	1457.2	1530.2	1548.5
31°	1407.1	1338.2	1333.6	1291.9	1254.0	1261.8	1291.1	1344.3	1408.4	1482.4	1498.4
31.5°	1359.8	1288.3	1287.0	1245.6	1207.7	1214.5	1242.5	1297.7	1359.8	1435.1	1449.3
32°	1312.5	1240.5	1241.0	1199.5	1162.1	1171.0	1194.4	1250.4	1313.0	1387.8	1400.0
32.5°	1268.5	1193.2	1195.7	1152.7	1117.9	1125.8	1149.7	1205.6	1264.9	1341.5	1350.9
33°	1225.7	1147.1	1151.5	1106.4	1073.9	1082.3	1103.6	1160.6	1217.6	1294.9	1302.8
33.5°	1182.2	1101.6	1107.7	1064.0	1030.9	1041.8	1059.9	1116.6	1171.0	1250.4	1252.7
34°	1138.2	1058.1	1064.2	1021.5	989.9	997.3	1016.9	1073.9	1125.8	1206.1	1204.6
34.5°	1094.0	1016.1	1022.2	979.3	949.8	956.9	974.4	1031.4	1081.3	1162.1	1158.3
35°	1051.5	974.7	979.5	939.3	910.8	920.2	933.5	989.9	1038.8	1118.6	1113.6
35.5°	1010.0	934.7	937.0	907.3	872.4	880.1	893.8	950.3	997.8	1074.6	1068.0
36°	967.6	911.3	909.1	868.4	835.8	838.9	855.6	909.8	959.4	1031.4	1024.5
36.5°	927.9	869.9	866.6	829.7	799.7	803.5	818.5	872.2	920.8	988.4	982.1
37°	890.5	828.2	823.9	790.8	763.8	766.1	781.6	833.5	882.9	946.2	942.1
37.5°	853.4	786.5	780.9	752.1	729.0	729.7	747.0	795.1	846.7	905.5	901.4
38°	816.2	745.0	738.1	716.3	694.1	695.1	713.0	760.5	809.1	864.5	863.0
38.5°	778.8	709.6	699.2	680.9	659.5	661.1	679.4	725.9	773.7	826.4	824.9
39°	741.7	675.8	664.9	645.0	626.2	629.3	646.8	688.8	737.1	788.0	787.5
39.5°	706.1	642.2	630.0	610.4	593.2	597.5	614.0	655.5	701.5	750.9	749.8
40°	671.5	608.4	596.7	576.4	561.6	566.4	582.7	622.9	665.6	713.5	714.2
40.5°	637.2	576.1	562.1	542.3	528.8	536.7	552.7	589.8	632.8	677.9	679.1
41°	602.8	545.3	531.6	510.0	499.0	507.2	523.5	558.3	598.2	642.5	644.8
41.5°	570.3	514.6	500.8	478.9	468.5	478.9	495.5	527.5	565.2	608.2	610.4
42°	537.7	484.8	471.1	448.7	439.5	451.7	468.0	498.0	533.6	574.1	578.1
42.5°	506.7	455.8	441.0	419.4	411.0	425.0	441.8	469.3	503.1	541.8	545.8
43°	476.4	426.6	414.3	392.0	383.6	399.3	417.1	440.8	473.6	509.5	514.8
43.5°	447.4	398.8	387.6	365.0	357.4	374.2	392.2	414.1	443.8	478.4	484.5



TEST NUMBER: P775978

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	364.5	321.5	313.1	290.0	283.1	305.2	323.0	339.1	358.9	392.5	401.1
45.5°	338.5	297.1	290.2	267.6	261.2	284.4	301.4	315.4	332.4	366.3	374.9
46°	313.1	274.4	268.6	246.0	242.7	263.8	280.6	293.0	307.3	340.8	349.0
46.5°	287.9	252.6	248.0	225.9	224.1	245.5	260.5	271.9	282.1	316.7	324.6
47°	263.5	231.5	228.2	207.0	205.3	227.1	242.7	251.3	259.2	293.0	301.9
47.5°	240.1	211.4	209.1	189.2	186.7	208.8	225.1	233.0	240.6	270.6	279.3
48°	218.7	192.0	191.0	173.0	168.4	190.5	207.3	214.7	222.1	251.6	257.2
48.5°	197.4	173.7	174.0	157.7	153.6	172.5	189.5	196.4	203.5	232.5	237.6
49°	177.3	156.7	157.7	142.9	139.9	156.9	171.7	178.0	184.7	213.1	218.0
49.5°	158.7	140.4	142.4	129.7	126.9	141.9	155.4	162.0	166.3	194.1	198.4
50°	140.9	124.9	127.4	117.3	114.5	127.7	140.7	146.5	151.8	175.0	179.1
50.5°	124.9	110.1	113.7	105.3	102.8	114.2	126.2	132.5	138.4	158.7	162.3
51°	109.6	96.4	100.7	93.6	91.8	101.2	112.7	119.5	125.4	143.5	146.5
51.5°	95.1	85.5	88.0	83.9	81.4	89.3	99.5	106.8	113.2	129.5	130.7
52°	83.9	74.5	77.6	74.3	71.2	78.1	87.8	94.9	101.7	116.2	116.2
52.5°	73.0	63.6	67.4	64.6	61.3	67.4	75.8	83.4	90.8	103.5	102.2
53°	62.1	52.7	57.2	54.7	52.1	57.2	65.1	72.7	80.6	91.6	89.5
53.5°	51.1	41.7	47.1	45.3	43.5	48.1	55.2	62.3	69.9	80.4	77.3
54°	40.2	33.8	38.7	37.1	36.1	39.7	45.8	52.9	60.0	69.7	66.1
54.5°	32.3	27.0	31.3	30.0	30.5	33.6	37.6	44.0	50.9	59.3	56.0
55°	25.4	20.1	24.4	23.1	24.9	27.5	31.5	36.4	43.0	50.1	46.3
55.5°	18.6	14.0	17.8	16.8	19.3	21.4	25.7	30.5	36.9	41.7	37.9
56°	12.7	9.4	12.2	11.7	13.7	15.3	19.8	24.7	31.0	35.1	32.0
56.5°	8.4	8.1	8.4	8.4	8.4	9.4	14.0	18.8	24.9	28.7	25.9
57°	7.4	7.1	7.6	7.6	7.1	7.1	8.1	13.2	18.8	22.4	20.1
57.5°	6.4	5.9	6.6	6.9	6.4	6.4	6.4	7.4	13.0	16.0	14.2
58°	5.3	4.8	5.9	6.1	5.9	5.6	5.6	5.9	6.9	9.7	8.4
58.5°	4.6	4.3	5.1	5.3	5.3	5.3	5.1	5.1	5.6	6.9	6.4
59°	4.1	4.1	4.6	4.8	4.8	4.8	4.6	4.6	4.8	5.6	5.6
59.5°	3.8	3.8	4.3	4.6	4.6	4.6	4.3	4.3	4.3	4.8	5.1
60°	3.6	3.3	3.8	4.1	4.3	4.1	4.1	3.8	4.1	4.3	4.6
60.5°	3.3	3.1	3.6	3.8	4.1	3.8	3.6	3.6	3.8	4.1	4.3
61°	3.1	3.1	3.3	3.6	3.6	3.6	3.3	3.3	3.3	3.8	3.8
61.5°	2.8	2.8	3.1	3.3	3.6	3.3	3.1	3.1	3.1	3.3	3.6
62°	2.5	2.5	2.8	3.1	3.3	3.1	3.1	2.8	2.8	3.1	3.3
62.5°	2.3	2.3	2.8	3.1	3.1	2.8	2.8	2.8	2.8	3.1	3.1
63°	2.3	2.3	2.5	2.8	2.8	2.8	2.5	2.5	2.5	2.8	2.8
63.5°	2.0	2.0	2.3	2.5	2.5	2.5	2.3	2.3	2.3	2.5	2.8
64°	2.0	2.0	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.5
64.5°	1.8	1.8	2.0	2.3	2.3	2.3	2.0	2.0	2.0	2.3	2.3
65°	1.8	1.8	2.0	2.0	2.0	2.0	2.0	1.8	1.8	2.0	2.3
65.5°	1.5	1.5	1.8	2.0	2.0	2.0	1.8	1.8	1.8	2.0	2.0
66°	1.5	1.5	1.8	1.8	1.8	1.8	1.8	1.5	1.5	1.8	1.8



TEST NUMBER: P775978

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.3	1.3	1.5	1.5
68°	1.0	1.0	1.3	1.5	1.5	1.3	1.3	1.3	1.3	1.3	1.5
68.5°	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
69°	1.0	1.0	1.0	1.3	1.3	1.3	1.0	1.0	1.0	1.3	1.3
69.5°	0.8	0.8	1.0	1.3	1.3	1.0	1.0	1.0	1.0	1.0	1.3
70°	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70.5°	0.8	0.8	1.0	1.0	1.0	1.0	1.0	0.8	0.8	1.0	1.0
71°	0.8	0.8	0.8	1.0	1.0	1.0	0.8	0.8	0.8	1.0	1.0
71.5°	0.5	0.5	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.8	1.0
72°	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
72.5°	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
73°	0.5	0.5	0.5	0.8	0.8	0.8	0.5	0.5	0.5	0.8	0.8
73.5°	0.5	0.5	0.5	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.8
74°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.3	0.3	0.5	0.5
76.5°	0.3	0.3	0.3	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.5
77°	0.3	0.3	0.3	0.3	0.3	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	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
80°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
80.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3
81°	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3
81.5°	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.3
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: P775978
CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-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: P775978

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3257.0	3257.0	3257.0	3257.0	3257.0	3257.0
0.5°	3260.0	3259.8	3262.1	3264.6	3264.9	3263.1
1°	3261.8	3263.6	3267.4	3271.0	3271.5	3268.4
1.5°	3262.8	3266.4	3270.7	3274.8	3276.8	3273.3
2°	3263.6	3267.9	3271.0	3276.1	3280.6	3277.6
2.5°	3264.1	3267.7	3268.2	3273.5	3281.9	3280.9
3°	3263.9	3265.9	3260.8	3265.6	3280.4	3282.7
3.5°	3263.6	3262.8	3249.4	3253.7	3275.3	3282.4
4°	3263.4	3258.0	3234.6	3235.6	3266.9	3279.9
4.5°	3262.1	3251.7	3216.0	3214.3	3255.0	3274.8
5°	3260.0	3243.5	3193.9	3190.4	3239.2	3266.7
5.5°	3257.8	3233.8	3171.5	3164.7	3220.9	3254.7
6°	3254.2	3222.9	3148.9	3140.5	3203.1	3239.7
6.5°	3248.1	3211.5	3127.0	3118.1	3184.5	3220.4
7°	3239.2	3199.0	3108.2	3098.8	3162.4	3197.5
7.5°	3227.5	3185.8	3092.9	3082.5	3141.8	3172.0
8°	3211.0	3170.8	3080.0	3069.0	3119.9	3144.3
8.5°	3191.1	3154.7	3069.0	3058.9	3097.3	3115.1
9°	3168.7	3136.2	3059.1	3048.9	3073.9	3083.0
9.5°	3142.8	3115.3	3051.5	3039.8	3051.2	3051.0
10°	3113.0	3092.4	3041.6	3030.4	3027.6	3019.9
10.5°	3084.0	3067.0	3030.9	3020.4	3004.2	2989.9
11°	3053.0	3040.5	3018.9	3008.7	2980.0	2960.9
11.5°	3020.7	3012.8	3004.9	2995.3	2956.6	2932.7
12°	2990.4	2985.3	2987.6	2979.0	2932.9	2904.5
12.5°	2961.2	2957.6	2969.3	2960.2	2909.3	2876.7
13°	2931.2	2929.9	2949.7	2941.1	2886.7	2849.8
13.5°	2901.4	2903.2	2928.1	2919.7	2862.0	2822.8
14°	2872.7	2876.2	2905.5	2897.3	2836.5	2794.3
14.5°	2843.7	2850.3	2882.3	2874.2	2810.1	2764.6
15°	2814.2	2822.8	2856.4	2849.3	2782.6	2734.6
15.5°	2784.9	2796.1	2829.7	2823.8	2752.9	2703.0
16°	2753.4	2767.6	2801.4	2795.6	2722.6	2670.7
16.5°	2722.3	2738.6	2772.7	2765.1	2691.6	2635.6
17°	2688.0	2707.8	2742.2	2733.5	2658.8	2602.0
17.5°	2654.7	2676.8	2709.1	2699.5	2624.9	2566.2
18°	2619.1	2644.0	2673.8	2663.6	2590.1	2530.3
18.5°	2583.7	2610.2	2638.4	2625.7	2552.7	2493.7
19°	2546.3	2574.6	2600.8	2586.0	2516.6	2457.3
19.5°	2509.4	2540.5	2562.9	2545.6	2479.4	2419.9
20°	2471.0	2503.6	2525.0	2505.9	2441.5	2382.5
20.5°	2433.9	2468.2	2483.8	2464.7	2403.1	2344.6
21°	2395.5	2430.3	2444.8	2423.0	2364.7	2306.7



TEST NUMBER: P775978

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2282.3	2318.9	2324.8	2295.3	2245.9	2191.3
23°	2242.9	2281.0	2282.8	2252.6	2205.8	2152.3
23.5°	2203.5	2241.6	2240.1	2208.5	2163.0	2112.4
24°	2165.3	2202.7	2198.1	2162.8	2121.8	2072.0
24.5°	2126.4	2163.0	2154.6	2118.0	2078.6	2032.3
25°	2086.0	2122.8	2109.6	2073.7	2037.6	1990.8
25.5°	2046.8	2082.6	2066.9	2030.0	1992.9	1949.9
26°	2007.6	2041.9	2024.7	1987.5	1951.4	1907.6
26.5°	1966.2	2001.5	1981.7	1944.0	1908.2	1863.1
27°	1924.4	1960.3	1939.4	1901.8	1864.4	1814.8
27.5°	1883.0	1918.1	1895.9	1858.8	1816.8	1765.7
28°	1841.3	1873.8	1851.9	1815.1	1773.9	1715.4
28.5°	1799.8	1827.8	1808.2	1770.3	1726.8	1663.2
29°	1753.3	1781.7	1763.7	1726.3	1678.2	1610.1
29.5°	1705.2	1733.9	1719.7	1680.3	1630.1	1556.6
30°	1654.6	1684.6	1673.4	1633.5	1580.6	1505.8
30.5°	1602.9	1634.2	1625.1	1585.4	1528.7	1455.9
31°	1555.1	1582.3	1577.5	1537.3	1478.8	1407.1
31.5°	1502.0	1529.9	1528.9	1489.5	1427.4	1359.8
32°	1446.8	1479.6	1481.1	1443.2	1378.6	1312.5
32.5°	1398.4	1430.0	1432.0	1396.4	1330.3	1268.5
33°	1348.3	1382.2	1386.0	1351.6	1282.4	1225.7
33.5°	1298.2	1333.3	1336.1	1306.6	1237.4	1182.2
34°	1250.9	1289.6	1290.3	1261.1	1193.9	1138.2
34.5°	1205.9	1245.6	1246.3	1216.6	1151.5	1094.0
35°	1162.4	1202.1	1200.5	1173.1	1109.2	1051.5
35.5°	1119.7	1159.3	1156.5	1129.1	1068.8	1010.0
36°	1077.4	1117.4	1114.3	1086.1	1028.1	967.6
36.5°	1035.2	1076.2	1071.8	1042.1	988.9	927.9
37°	993.8	1034.7	1028.9	998.8	949.8	890.5
37.5°	952.8	993.8	989.4	958.1	908.0	853.4
38°	912.4	952.3	947.7	918.5	870.4	816.2
38.5°	872.4	912.6	904.0	879.8	833.3	778.8
39°	833.0	876.0	867.3	840.9	795.9	741.7
39.5°	795.4	839.1	830.7	802.2	758.5	706.1
40°	758.7	802.5	794.3	763.3	721.3	671.5
40.5°	722.9	765.9	757.7	724.7	686.2	637.2
41°	690.3	729.2	721.1	688.3	651.7	602.8
41.5°	655.2	694.4	684.7	652.7	617.8	570.3
42°	622.4	660.3	648.9	618.1	584.5	537.7
42.5°	590.1	625.7	614.3	585.0	552.2	506.7
43°	560.3	591.9	579.7	552.2	519.9	476.4
43.5°	528.3	558.6	546.1	519.1	487.8	447.4



TEST NUMBER: P775978

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	441.6	463.2	451.7	427.8	396.3	364.5
45.5°	412.3	433.2	421.5	399.1	367.8	338.5
46°	385.6	404.2	392.5	370.8	340.6	313.1
46.5°	358.6	375.9	365.0	343.9	313.9	287.9
47°	333.2	348.5	337.5	317.7	288.4	263.5
47.5°	307.5	321.8	311.3	292.3	263.5	240.1
48°	283.6	296.3	285.4	267.6	240.6	218.7
48.5°	260.2	271.6	261.5	244.9	219.0	197.4
49°	239.1	248.5	238.6	222.1	197.9	177.3
49.5°	218.2	226.1	216.7	200.7	178.0	158.7
50°	197.1	204.2	194.3	179.8	160.0	140.9
50.5°	176.3	183.9	175.0	160.5	141.9	124.9
51°	158.2	164.8	156.2	142.7	125.4	109.6
51.5°	141.2	146.8	139.1	125.7	110.4	95.1
52°	124.6	130.0	122.1	109.4	95.6	83.9
52.5°	109.6	114.5	107.1	95.1	84.4	73.0
53°	95.9	99.5	92.6	83.9	73.0	62.1
53.5°	82.7	86.5	81.6	72.5	61.8	51.1
54°	70.2	75.5	70.7	61.3	50.4	40.2
54.5°	59.5	64.6	59.8	50.1	39.2	32.3
55°	49.3	53.7	48.8	38.9	31.8	25.4
55.5°	40.2	42.5	37.9	31.3	24.7	18.6
56°	34.1	34.6	30.5	24.7	18.1	12.7
56.5°	28.0	27.7	24.2	17.8	12.0	8.4
57°	21.9	20.9	17.3	12.2	8.1	7.4
57.5°	15.8	15.0	12.0	8.4	7.4	6.4
58°	9.7	10.4	8.6	7.4	6.4	5.3
58.5°	7.4	9.2	7.9	6.6	5.3	4.6
59°	6.4	8.1	6.9	5.6	4.6	4.1
59.5°	5.9	6.9	6.1	4.8	4.1	3.8
60°	5.3	5.6	5.1	4.3	3.8	3.6
60.5°	4.8	5.1	4.8	4.1	3.6	3.3
61°	4.6	4.8	4.3	3.8	3.3	3.1
61.5°	4.1	4.3	4.1	3.6	3.1	2.8
62°	3.8	4.1	3.8	3.3	2.8	2.5
62.5°	3.6	3.8	3.6	3.1	2.5	2.3
63°	3.3	3.6	3.3	2.8	2.5	2.3
63.5°	3.1	3.3	3.1	2.5	2.3	2.0
64°	2.8	3.1	2.8	2.3	2.0	2.0
64.5°	2.8	2.8	2.5	2.3	2.0	1.8
65°	2.5	2.8	2.5	2.0	1.8	1.8
65.5°	2.3	2.5	2.3	2.0	1.8	1.5
66°	2.3	2.3	2.0	1.8	1.5	1.5



TEST NUMBER: P775978
 CATALOG NUMBER: HCDJBL1525CSD-HCD4TRC-2500lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.8	2.0	1.8	1.5	1.3	1.3
68°	1.8	1.8	1.5	1.3	1.3	1.0
68.5°	1.5	1.8	1.5	1.3	1.0	1.0
69°	1.5	1.5	1.5	1.3	1.0	1.0
69.5°	1.3	1.5	1.3	1.0	1.0	0.8
70°	1.3	1.3	1.3	1.0	0.8	0.8
70.5°	1.3	1.3	1.3	1.0	0.8	0.8
71°	1.0	1.3	1.0	1.0	0.8	0.8
71.5°	1.0	1.0	1.0	0.8	0.8	0.5
72°	1.0	1.0	1.0	0.8	0.8	0.5
72.5°	1.0	1.0	0.8	0.8	0.5	0.5
73°	0.8	0.8	0.8	0.8	0.5	0.5
73.5°	0.8	0.8	0.8	0.5	0.5	0.5
74°	0.8	0.8	0.8	0.5	0.5	0.5
74.5°	0.8	0.8	0.8	0.5	0.5	0.3
75°	0.5	0.8	0.5	0.5	0.5	0.3
75.5°	0.5	0.5	0.5	0.5	0.3	0.3
76°	0.5	0.5	0.5	0.5	0.3	0.3
76.5°	0.5	0.5	0.5	0.3	0.3	0.3
77°	0.5	0.5	0.5	0.3	0.3	0.3
77.5°	0.5	0.5	0.5	0.3	0.3	0.3
78°	0.5	0.5	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	0.3	0.3	0.3
79.5°	0.3	0.3	0.3	0.3	0.3	0.0
80°	0.3	0.3	0.3	0.3	0.0	0.0
80.5°	0.3	0.3	0.3	0.3	0.0	0.0
81°	0.3	0.3	0.3	0.3	0.0	0.0
81.5°	0.3	0.3	0.3	0.0	0.0	0.0
82°	0.3	0.3	0.3	0.0	0.0	0.0
82.5°	0.3	0.3	0.3	0.0	0.0	0.0
83°	0.3	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: P775978
CATALOG NUMBER: HCDJBL1525CSD-HCD4TRC-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°	2268.8	2209.3	2204.7	2180.3	2155.9	2150.3	2163.0	2218.5	2283.8	2328.6	2325.8
22°	2230.7	2168.6	2163.0	2137.6	2114.2	2110.4	2124.1	2181.6	2245.4	2289.7	2286.1



44°	418.9	372.1	361.7	338.5	332.2	350.5	368.3	388.1	414.3	448.7	456.1
44.5°	390.9	346.4	337.0	313.6	307.0	327.4	345.2	363.0	386.4	420.2	427.8



66.5°	1.3	1.3	1.5	1.8	1.8	1.8	1.5	1.5	1.5	1.8	1.8
67°	1.3	1.3	1.5	1.5	1.8	1.5	1.5	1.5	1.5	1.5	1.8



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°	2357.6	2393.7	2405.2	2381.0	2325.6	2268.8
22°	2319.2	2355.8	2364.5	2339.0	2286.9	2230.7



44°	498.5	526.3	513.5	487.8	456.1	418.9
44.5°	469.3	494.5	482.8	457.6	426.6	390.9



66.5°	2.0	2.3	2.0	1.8	1.5	1.3
67°	2.0	2.0	1.8	1.5	1.3	1.3

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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)