

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: P776513

Luminaire Tested: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776513
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: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K
Description: 8 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

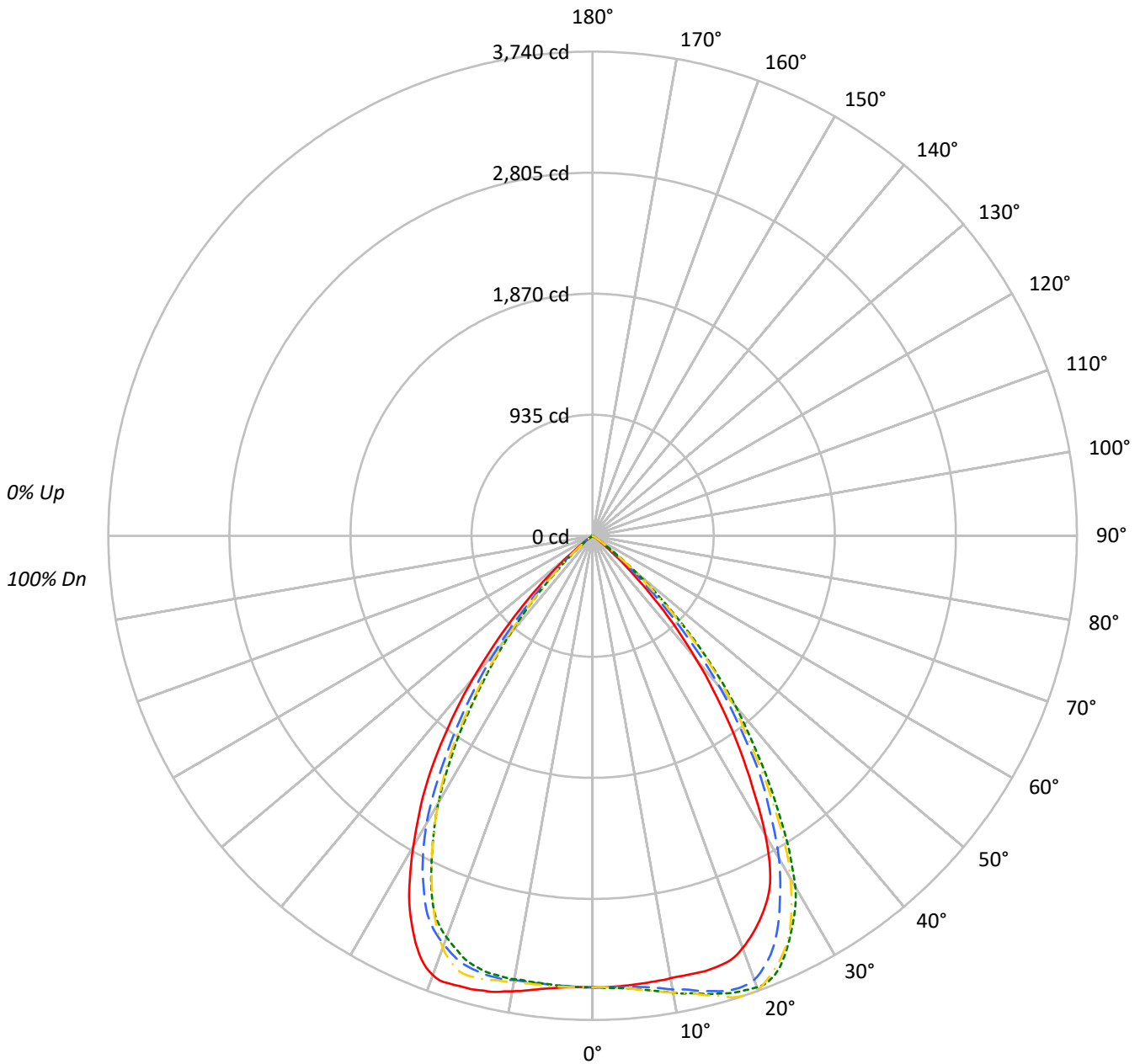
Lumens per Lamp: N/A
Luminaire Lumens: 4687.5 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.07
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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									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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93																			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85																			
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	82	80	78																			
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	74	72																			
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66																			
6	85	75	69	64	83	74	68	64	73	67	63	71	67	63	70	66	62	61																			
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	66	61	58	56																			
8	76	65	59	54	74	65	59	54	64	58	54	62	57	54	61	57	53	52																			
9	71	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48																			
10	68	57	51	47	67	57	51	47	56	50	47	55	50	46	54	50	46	45																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	83618	83618	83618	83618
5°	83831	84558	84411	83841
10°	84486	87272	86997	84691
15°	86187	90939	89998	85636
20°	86486	94710	92110	84184
25°	83502	93606	87476	78054
30°	73965	86738	76709	65991
35°	56771	70769	62736	49365
40°	39017	53782	44680	31086
45°	20519	34931	25575	14565
50°	6883	15780	9830	4719
55°	489	3420	1079	117
60°	77	96	77	58
65°	45	45	45	23
70°	28	28	28	28
75°	37	37	37	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 35301 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.8	7.1
10°-20°	1006.8	21.5
20°-30°	1468.2	31.3
30°-40°	1265.0	27.0
40°-50°	556.2	11.9
50°-60°	55.4	1.2
60°-70°	0.8	0.0
70°-80°	0.2	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°	2809.8	59.9
0°-40°	4074.8	86.9
0°-60°	4686.5	100.0
0°-90°	4687.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4687.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3487	3487	3487	3487	3487	
5°	3483	3513	3507	3483	3483	332
15°	3472	3663	3625	3450	3472	979
25°	3156	3538	3306	2950	3156	1432
35°	1939	2418	2143	1686	1939	1203
45°	605	1030	754	430	605	483
55°	12	82	26	3	12	39
65°	1	1	1	0	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	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°	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2
0.5°	3488.0	3489.6	3490.4	3487.6	3488.8	3486.8	3485.2	3486.0	3487.2	3488.4	3488.4
1°	3488.0	3490.0	3490.8	3489.6	3490.0	3488.0	3485.6	3486.4	3487.6	3488.4	3488.4
1.5°	3488.0	3489.6	3490.4	3490.8	3492.4	3490.0	3486.8	3487.6	3487.6	3488.0	3487.6
2°	3487.2	3488.4	3490.0	3492.0	3494.9	3492.8	3490.0	3489.6	3488.8	3488.0	3487.2
2.5°	3487.2	3488.4	3490.4	3492.0	3496.9	3496.9	3492.8	3492.0	3491.2	3488.4	3486.0
3°	3486.0	3488.0	3490.8	3493.2	3498.5	3498.1	3496.9	3496.5	3492.8	3488.8	3485.2
3.5°	3485.2	3487.2	3492.0	3495.7	3500.5	3500.9	3500.1	3499.7	3495.3	3490.0	3484.4
4°	3484.0	3486.0	3493.2	3498.5	3504.1	3504.9	3504.1	3504.5	3498.9	3490.8	3483.6
4.5°	3483.6	3486.0	3495.3	3502.1	3508.2	3509.8	3509.0	3508.6	3502.9	3492.4	3482.0
5°	3482.8	3486.0	3497.7	3506.9	3513.0	3514.2	3514.6	3514.6	3506.9	3494.1	3482.0
5.5°	3482.0	3487.6	3500.9	3512.6	3517.8	3519.4	3519.8	3521.5	3512.2	3496.1	3481.6
6°	3480.8	3488.4	3504.5	3517.8	3523.5	3525.1	3526.3	3527.9	3517.4	3498.9	3481.6
6.5°	3479.1	3489.6	3509.4	3524.3	3529.9	3530.7	3533.1	3534.7	3523.9	3502.9	3482.0
7°	3477.5	3490.8	3514.6	3531.5	3536.8	3536.8	3539.6	3542.4	3530.7	3506.5	3482.0
7.5°	3476.3	3492.4	3520.6	3540.0	3543.6	3543.6	3545.6	3549.2	3537.6	3511.0	3482.0
8°	3475.9	3494.9	3526.7	3548.4	3550.9	3550.9	3553.7	3558.1	3545.2	3515.0	3482.4
8.5°	3475.1	3498.9	3533.5	3557.3	3558.5	3559.3	3561.3	3566.2	3552.9	3519.0	3483.2
9°	3474.3	3503.3	3541.6	3567.4	3567.4	3567.4	3568.6	3575.0	3560.1	3523.5	3483.6
9.5°	3472.3	3506.9	3550.5	3576.6	3575.0	3575.8	3575.8	3583.1	3567.0	3527.5	3483.6
10°	3469.9	3510.6	3557.7	3586.7	3584.3	3585.1	3583.9	3589.9	3573.0	3531.5	3485.6
10.5°	3468.3	3513.4	3564.2	3595.6	3593.2	3594.0	3591.5	3596.4	3579.1	3537.2	3490.4
11°	3468.3	3517.0	3570.2	3602.4	3601.6	3602.0	3598.4	3602.4	3585.5	3545.2	3494.5
11.5°	3469.9	3522.3	3576.6	3608.9	3608.1	3608.9	3604.8	3609.3	3595.2	3552.5	3495.7
12°	3470.7	3529.1	3585.5	3616.1	3612.9	3616.1	3612.9	3619.3	3602.8	3559.3	3494.5
12.5°	3470.7	3536.0	3596.4	3624.2	3619.3	3623.8	3622.6	3629.0	3608.9	3560.5	3492.4
13°	3470.3	3540.0	3607.3	3634.3	3627.8	3633.0	3634.7	3636.7	3611.7	3562.5	3492.0
13.5°	3471.1	3542.4	3617.3	3643.5	3638.7	3643.5	3648.0	3641.1	3613.7	3566.6	3490.8
14°	3472.7	3544.4	3624.6	3650.0	3649.2	3655.2	3658.8	3643.9	3617.3	3570.6	3488.0
14.5°	3473.1	3547.2	3632.6	3653.6	3657.2	3664.1	3667.7	3648.4	3621.8	3573.4	3483.2
15°	3471.9	3549.2	3641.9	3656.8	3663.3	3670.1	3677.4	3655.2	3625.4	3575.4	3477.9
15.5°	3468.7	3549.2	3651.2	3663.3	3669.7	3674.5	3690.3	3660.8	3626.2	3575.8	3471.9
16°	3465.5	3546.0	3659.6	3668.9	3677.8	3681.0	3704.8	3664.5	3626.6	3577.4	3466.7
16.5°	3461.8	3541.2	3665.3	3671.3	3686.2	3688.6	3717.6	3665.7	3627.4	3578.7	3460.6
17°	3457.8	3535.6	3668.9	3671.3	3692.7	3693.9	3727.3	3664.1	3629.0	3579.9	3452.2
17.5°	3453.4	3530.7	3670.9	3670.1	3696.7	3696.3	3733.4	3662.5	3630.6	3578.3	3441.3
18°	3446.9	3525.5	3670.9	3668.5	3699.5	3695.9	3736.6	3661.2	3633.0	3571.0	3426.4
18.5°	3436.0	3520.2	3669.3	3666.5	3702.3	3695.9	3738.6	3659.2	3633.8	3559.3	3409.9
19°	3421.9	3513.4	3666.5	3664.9	3705.6	3697.5	3740.2	3656.8	3630.6	3541.2	3394.1
19.5°	3406.2	3504.5	3661.2	3662.9	3708.4	3700.3	3737.8	3650.4	3622.2	3521.9	3377.6
20°	3389.3	3492.8	3650.8	3659.6	3711.6	3703.1	3731.3	3639.9	3609.7	3500.5	3359.9
20.5°	3370.8	3480.0	3635.1	3653.6	3712.8	3703.9	3718.5	3627.8	3596.0	3477.1	3341.4
21°	3350.6	3466.3	3614.9	3643.5	3710.0	3700.7	3700.7	3613.7	3577.4	3449.7	3322.0



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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°	3285.4	3415.9	3542.8	3601.6	3672.9	3685.0	3642.7	3569.8	3497.3	3358.3	3253.5
23°	3261.2	3392.9	3515.4	3586.7	3653.6	3674.9	3620.6	3551.3	3463.8	3323.6	3225.7
23.5°	3236.2	3366.3	3484.4	3567.8	3630.2	3662.1	3596.8	3530.7	3428.0	3287.4	3194.7
24°	3210.8	3336.1	3450.5	3547.6	3602.0	3644.3	3571.8	3506.5	3388.1	3248.7	3158.9
24.5°	3184.3	3301.5	3412.3	3524.7	3570.2	3623.0	3545.6	3478.7	3348.2	3207.6	3119.4
25°	3156.1	3264.4	3372.0	3496.9	3538.0	3596.0	3516.2	3445.7	3306.3	3162.9	3074.3
25.5°	3125.8	3224.9	3327.7	3465.0	3503.7	3565.0	3484.4	3409.1	3264.8	3118.6	3029.6
26°	3094.0	3183.0	3281.7	3428.0	3468.3	3529.5	3448.1	3368.0	3218.5	3068.6	2984.4
26.5°	3057.8	3139.1	3233.4	3386.9	3430.4	3489.2	3409.9	3322.4	3171.0	3018.3	2939.3
27°	3017.9	3090.4	3183.8	3339.8	3393.3	3444.9	3366.3	3272.1	3122.2	2968.3	2894.2
27.5°	2970.7	3039.2	3135.1	3287.0	3355.9	3399.4	3321.2	3220.1	3064.6	2918.4	2840.6
28°	2919.6	2985.6	3086.0	3228.6	3316.8	3346.2	3270.9	3165.7	3007.0	2868.4	2787.8
28.5°	2863.6	2930.4	3038.0	3166.9	3276.5	3291.4	3217.7	3114.2	2949.4	2815.2	2734.3
29°	2803.1	2876.1	2986.8	3105.3	3233.8	3234.6	3164.9	3055.3	2891.8	2760.4	2678.3
29.5°	2738.3	2819.7	2934.5	3043.7	3186.3	3175.4	3112.5	2996.1	2833.8	2705.2	2621.9
30°	2671.4	2764.1	2879.3	2980.8	3132.7	3111.7	3052.9	2936.9	2770.5	2646.0	2563.4
30.5°	2597.7	2709.3	2818.9	2919.6	3065.4	3048.1	2993.3	2878.1	2708.5	2586.8	2502.6
31°	2522.7	2655.7	2754.4	2857.9	2998.1	2984.4	2934.1	2810.4	2648.8	2524.8	2434.5
31.5°	2445.8	2598.9	2688.7	2797.1	2930.8	2920.8	2874.4	2741.9	2587.2	2462.3	2362.8
32°	2372.1	2535.6	2623.5	2737.9	2863.6	2856.7	2799.9	2671.4	2526.8	2399.5	2289.9
32.5°	2296.7	2468.8	2559.8	2676.2	2790.7	2795.9	2723.4	2602.5	2467.6	2337.4	2218.6
33°	2224.6	2398.3	2499.0	2612.2	2713.7	2730.2	2644.4	2534.4	2407.9	2273.8	2144.1
33.5°	2152.5	2323.3	2438.9	2547.3	2638.0	2664.6	2566.7	2462.7	2344.3	2207.7	2072.7
34°	2082.0	2245.2	2380.1	2481.7	2562.6	2590.4	2493.3	2390.6	2280.2	2138.8	1999.8
34.5°	2011.1	2171.0	2317.3	2412.8	2489.3	2511.9	2419.6	2319.7	2213.7	2065.1	1930.1
35°	1939.4	2097.3	2250.4	2343.1	2417.6	2429.3	2346.3	2252.0	2143.2	1991.0	1858.0
35.5°	1871.3	2025.6	2179.9	2273.8	2345.9	2347.9	2269.3	2181.9	2069.5	1916.8	1789.5
36°	1796.8	1955.5	2104.6	2203.3	2273.4	2264.5	2194.0	2113.8	1996.6	1843.9	1718.2
36.5°	1722.3	1884.2	2025.2	2131.6	2198.8	2183.5	2115.9	2043.3	1925.3	1775.8	1648.1
37°	1650.5	1811.3	1949.9	2058.2	2125.9	2103.8	2041.7	1974.8	1856.0	1708.6	1577.2
37.5°	1580.4	1741.6	1878.2	1989.8	2054.2	2031.2	1971.2	1908.0	1789.1	1640.5	1507.5
38°	1513.2	1672.7	1808.5	1919.7	1983.7	1964.0	1906.0	1843.9	1718.6	1571.6	1439.8
38.5°	1450.7	1602.6	1741.6	1852.0	1915.2	1899.9	1843.5	1775.0	1646.5	1502.7	1373.8
39°	1383.0	1531.3	1672.7	1782.7	1850.0	1838.7	1783.1	1705.7	1573.6	1434.2	1309.3
39.5°	1315.0	1461.2	1602.2	1707.7	1785.1	1777.4	1721.4	1631.6	1499.5	1362.5	1243.6
40°	1246.5	1392.3	1529.3	1626.8	1718.2	1717.8	1659.0	1559.9	1427.4	1290.4	1176.8
40.5°	1178.4	1323.8	1457.6	1548.6	1650.1	1654.2	1594.1	1487.8	1352.8	1216.7	1108.7
41°	1110.3	1254.9	1382.6	1475.3	1579.2	1589.7	1528.5	1419.3	1283.1	1144.1	1040.2
41.5°	1045.0	1186.0	1307.7	1406.0	1508.7	1526.1	1462.4	1351.2	1214.6	1073.6	971.7
42°	981.4	1117.5	1232.4	1337.1	1436.6	1460.4	1394.3	1285.1	1146.2	1003.1	902.8
42.5°	918.9	1047.9	1157.4	1268.2	1366.1	1394.3	1326.2	1217.5	1078.5	935.9	835.5
43°	853.7	977.8	1082.5	1199.7	1298.0	1325.0	1256.1	1150.2	1010.0	871.0	770.3
43.5°	789.6	906.0	1013.2	1130.4	1228.7	1254.5	1185.6	1082.1	942.3	807.3	705.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	605.1	704.2	815.0	930.6	1030.1	1041.0	981.0	887.1	754.2	625.2	529.0
45.5°	547.1	643.4	755.8	866.6	962.8	970.5	912.9	824.7	694.9	569.7	477.0
46°	491.5	586.6	696.2	803.7	895.2	900.8	846.4	762.6	640.2	517.3	428.6
46.5°	438.3	531.4	638.5	740.5	830.7	832.7	781.6	700.6	584.6	466.9	389.6
47°	388.4	479.4	582.9	680.0	767.1	765.0	717.5	640.6	532.6	422.2	350.5
47.5°	342.0	431.1	529.4	620.4	705.4	701.0	653.9	582.1	481.4	383.9	311.0
48°	300.5	386.8	477.0	564.8	644.6	640.2	595.0	526.9	433.5	345.3	271.9
48.5°	265.1	345.3	428.2	512.4	583.3	580.9	537.4	473.8	390.8	307.0	241.7
49°	234.5	307.0	383.5	462.1	524.9	523.7	482.6	428.6	348.5	268.7	214.3
49.5°	207.9	271.9	341.2	412.5	468.9	470.1	436.7	383.5	305.8	236.5	189.7
50°	184.5	240.1	301.7	363.8	423.0	424.6	390.4	338.4	263.5	207.9	166.8
50.5°	162.4	210.3	265.5	318.3	377.1	379.5	344.5	293.3	228.8	180.5	143.8
51°	141.4	182.5	231.2	276.0	331.6	334.0	298.5	248.2	197.8	155.1	122.5
51.5°	122.9	158.7	200.6	238.1	285.6	288.9	252.2	214.3	170.0	130.9	103.5
52°	104.3	135.4	172.0	204.7	240.5	243.3	216.7	182.9	143.8	108.8	84.6
52.5°	85.8	116.0	145.8	173.6	206.3	206.7	184.1	155.1	119.2	89.0	68.5
53°	67.3	96.7	124.9	146.2	174.8	174.8	155.1	129.3	97.5	72.1	52.8
53.5°	48.7	76.9	104.3	124.9	147.0	146.2	128.5	106.0	79.4	55.6	36.7
54°	28.6	57.6	83.8	103.9	120.9	119.7	105.1	86.2	61.6	39.1	20.9
54.5°	14.5	37.1	63.2	82.6	97.5	97.5	85.0	70.1	43.5	22.6	5.6
55°	11.7	19.7	42.7	61.6	81.8	79.4	68.9	53.6	25.8	6.4	4.0
55.5°	8.9	16.5	23.4	40.3	66.5	61.6	52.8	37.5	8.5	4.4	3.2
56°	6.0	12.9	10.5	20.9	50.8	43.9	37.1	21.4	4.8	3.6	2.8
56.5°	3.6	9.7	8.1	8.9	35.5	25.8	20.9	5.2	4.0	3.2	2.4
57°	3.2	6.4	6.4	6.8	19.7	8.1	5.2	4.0	3.2	2.8	2.0
57.5°	2.8	3.2	4.8	5.6	4.4	4.4	4.0	3.6	2.8	2.4	2.0
58°	2.4	2.8	2.8	4.0	3.6	3.6	3.2	3.2	2.4	2.0	1.6
58.5°	2.4	2.4	2.4	2.8	2.8	2.8	2.8	2.8	2.4	2.0	1.6
59°	2.0	2.0	2.4	2.4	2.4	2.4	2.4	2.4	2.0	1.6	1.6
59.5°	2.0	2.0	2.0	2.0	2.4	2.4	2.4	2.0	2.0	1.6	1.2
60°	1.6	1.6	1.6	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.2
60.5°	1.6	1.6	1.6	1.6	1.6	2.0	2.0	2.0	1.6	1.2	1.2
61°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.2
61.5°	1.2	1.6	1.2	1.2	1.6	1.6	1.6	1.6	1.2	1.2	1.2
62°	1.2	1.2	1.2	1.2	1.2	1.6	1.6	1.6	1.2	1.2	0.8
62.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8
63°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
63.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
64°	0.8	1.2	0.8	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	1.2	1.2	1.2	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4



TEST NUMBER: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4
68°	0.8	0.8	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	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: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-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: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3487.2	3487.2	3487.2	3487.2	3487.2	3487.2
0.5°	3486.4	3488.8	3486.4	3485.2	3486.0	3488.0
1°	3486.4	3488.4	3487.2	3485.6	3487.2	3488.0
1.5°	3486.0	3488.4	3487.6	3486.4	3487.2	3488.0
2°	3485.2	3488.0	3488.0	3487.6	3487.6	3487.2
2.5°	3483.6	3487.2	3488.8	3488.8	3488.0	3487.2
3°	3482.4	3486.4	3489.6	3490.8	3488.8	3486.0
3.5°	3480.8	3486.0	3490.8	3491.2	3488.8	3485.2
4°	3479.1	3485.6	3491.2	3492.8	3488.8	3484.0
4.5°	3477.1	3484.0	3492.0	3493.2	3488.4	3483.6
5°	3475.5	3483.2	3492.0	3493.2	3488.0	3482.8
5.5°	3474.3	3482.0	3491.2	3493.2	3486.4	3482.0
6°	3472.7	3480.8	3490.8	3492.4	3486.0	3480.8
6.5°	3469.9	3479.6	3490.8	3492.4	3485.2	3479.1
7°	3467.9	3478.7	3491.2	3492.8	3484.4	3477.5
7.5°	3465.0	3477.5	3492.8	3494.5	3484.0	3476.3
8°	3462.2	3477.1	3492.8	3495.3	3484.4	3475.9
8.5°	3459.0	3475.9	3492.4	3495.3	3484.0	3475.1
9°	3455.0	3474.7	3492.8	3495.3	3482.4	3474.3
9.5°	3451.8	3475.9	3496.1	3496.1	3481.2	3472.3
10°	3450.5	3478.3	3500.5	3500.1	3481.2	3469.9
10.5°	3451.4	3480.0	3504.5	3504.9	3483.2	3468.3
11°	3450.5	3479.1	3507.3	3508.2	3486.0	3468.3
11.5°	3448.1	3476.7	3508.6	3510.2	3486.4	3469.9
12°	3444.9	3473.9	3510.6	3511.0	3484.8	3470.7
12.5°	3444.5	3472.7	3515.4	3515.8	3483.2	3470.7
13°	3444.5	3471.9	3521.9	3521.9	3482.4	3470.3
13.5°	3443.7	3469.9	3527.5	3526.3	3482.4	3471.1
14°	3441.3	3465.0	3529.5	3529.1	3480.0	3472.7
14.5°	3436.8	3457.4	3530.7	3529.9	3475.1	3473.1
15°	3432.8	3449.7	3531.1	3530.7	3468.7	3471.9
15.5°	3428.0	3442.1	3531.1	3531.1	3463.0	3468.7
16°	3423.2	3433.6	3529.1	3530.7	3456.6	3465.5
16.5°	3418.3	3423.2	3522.7	3527.1	3450.1	3461.8
17°	3409.1	3408.6	3510.6	3518.2	3441.3	3457.8
17.5°	3395.8	3391.3	3492.8	3504.5	3429.2	3453.4
18°	3379.2	3372.8	3470.7	3486.4	3415.1	3446.9
18.5°	3359.9	3355.5	3446.1	3465.9	3399.0	3436.0
19°	3340.6	3337.3	3418.3	3442.1	3382.9	3421.9
19.5°	3320.0	3318.8	3387.3	3415.5	3367.2	3406.2
20°	3297.5	3299.1	3353.1	3384.5	3351.0	3389.3
20.5°	3274.5	3279.3	3315.6	3351.0	3334.1	3370.8
21°	3249.1	3257.2	3274.5	3312.8	3316.8	3350.6

TEST NUMBER: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3172.2	3175.0	3143.2	3186.7	3255.6	3285.4
23°	3144.4	3138.3	3094.8	3139.9	3229.8	3261.2
23.5°	3115.8	3097.2	3046.9	3091.6	3200.8	3236.2
24°	3086.0	3051.3	2996.9	3042.4	3165.7	3210.8
24.5°	3056.9	3003.0	2945.8	2991.7	3125.4	3184.3
25°	3019.5	2950.2	2892.6	2940.5	3079.5	3156.1
25.5°	2982.0	2896.2	2842.6	2889.0	3030.8	3125.8
26°	2944.9	2841.8	2792.3	2835.4	2978.8	3094.0
26.5°	2907.1	2786.6	2736.7	2782.2	2925.2	3057.8
27°	2854.3	2729.8	2682.3	2727.8	2869.6	3017.9
27.5°	2797.1	2673.8	2628.3	2671.8	2813.6	2970.7
28°	2731.4	2618.6	2572.3	2614.6	2757.2	2919.6
28.5°	2666.2	2563.4	2514.3	2559.4	2700.8	2863.6
29°	2599.7	2505.8	2454.7	2503.4	2643.2	2803.1
29.5°	2533.6	2448.2	2395.4	2445.4	2581.6	2738.3
30°	2463.9	2383.4	2338.2	2387.8	2519.1	2671.4
30.5°	2392.6	2316.5	2280.6	2327.8	2453.5	2597.7
31°	2320.9	2248.0	2222.6	2270.6	2385.8	2522.7
31.5°	2248.8	2179.5	2164.6	2212.9	2314.5	2445.8
32°	2177.1	2106.2	2104.6	2153.3	2243.2	2372.1
32.5°	2105.0	2036.5	2044.5	2089.7	2170.6	2296.7
33°	2032.9	1968.0	1979.7	2023.2	2098.1	2224.6
33.5°	1964.4	1900.7	1908.0	1954.7	2025.2	2152.5
34°	1895.1	1832.2	1832.6	1883.0	1959.9	2082.0
34.5°	1825.0	1762.1	1754.9	1808.9	1891.1	2011.1
35°	1752.1	1686.4	1682.8	1733.9	1821.4	1939.4
35.5°	1678.7	1611.9	1609.9	1659.8	1748.4	1871.3
36°	1607.8	1538.1	1540.6	1587.7	1676.3	1796.8
36.5°	1538.1	1463.2	1468.4	1517.2	1598.2	1722.3
37°	1472.5	1396.3	1397.5	1448.7	1526.9	1650.5
37.5°	1408.8	1329.5	1327.0	1378.2	1457.2	1580.4
38°	1342.8	1262.2	1256.1	1307.7	1390.7	1513.2
38.5°	1273.9	1195.3	1185.6	1237.2	1323.8	1450.7
39°	1202.2	1128.4	1114.7	1166.7	1256.9	1383.0
39.5°	1134.5	1060.7	1047.5	1096.2	1190.1	1315.0
40°	1067.6	993.1	980.2	1030.5	1123.2	1246.5
40.5°	1005.6	930.6	912.9	964.9	1055.5	1178.4
41°	943.1	869.4	851.7	900.0	992.7	1110.3
41.5°	882.3	808.1	787.6	836.3	927.8	1045.0
42°	818.6	749.3	730.8	775.1	866.2	981.4
42.5°	756.6	691.7	674.4	715.9	804.9	918.9
43°	695.3	634.5	621.6	659.9	746.5	853.7
43.5°	636.5	578.1	571.3	606.7	687.3	789.6



TEST NUMBER: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	473.0	429.5	435.5	462.5	517.3	605.1
45.5°	428.6	385.5	395.6	420.6	466.5	547.1
46°	384.7	344.5	358.1	380.7	418.2	491.5
46.5°	340.8	307.0	321.9	343.2	371.8	438.3
47°	296.9	273.1	289.3	308.6	329.9	388.4
47.5°	253.0	242.1	257.8	274.8	292.1	342.0
48°	225.6	214.3	228.8	244.1	258.2	300.5
48.5°	201.8	189.7	201.4	215.5	228.4	265.1
49°	180.5	167.6	175.2	188.9	202.2	234.5
49.5°	159.9	146.2	151.1	164.4	178.1	207.9
50°	140.6	126.5	130.9	140.2	156.3	184.5
50.5°	120.9	107.2	110.8	120.5	135.8	162.4
51°	101.9	87.4	90.2	100.7	117.6	141.4
51.5°	84.6	68.1	70.1	81.0	99.1	122.9
52°	68.5	48.3	50.0	61.6	81.0	104.3
52.5°	52.8	27.8	29.8	41.9	62.4	85.8
53°	37.1	13.3	14.5	23.0	41.5	67.3
53.5°	20.9	10.5	11.7	10.1	23.4	48.7
54°	5.6	7.7	8.5	8.5	10.9	28.6
54.5°	4.0	5.2	5.6	6.4	8.9	14.5
55°	3.2	2.8	2.8	4.8	6.8	11.7
55.5°	2.8	2.4	2.4	2.8	5.2	8.9
56°	2.4	2.0	2.4	2.8	3.2	6.0
56.5°	2.0	2.0	2.0	2.4	2.8	3.6
57°	2.0	1.6	2.0	2.0	2.4	3.2
57.5°	1.6	1.6	1.6	2.0	2.4	2.8
58°	1.6	1.6	1.6	2.0	2.0	2.4
58.5°	1.6	1.2	1.6	1.6	2.0	2.4
59°	1.2	1.2	1.2	1.6	2.0	2.0
59.5°	1.2	1.2	1.2	1.6	1.6	2.0
60°	1.2	1.2	1.2	1.2	1.6	1.6
60.5°	1.2	1.2	1.2	1.2	1.6	1.6
61°	1.2	0.8	1.2	1.2	1.2	1.6
61.5°	0.8	0.8	0.8	1.2	1.2	1.2
62°	0.8	0.8	0.8	1.2	1.2	1.2
62.5°	0.8	0.8	0.8	0.8	1.2	1.2
63°	0.8	0.8	0.8	0.8	1.2	1.2
63.5°	0.8	0.8	0.8	0.8	0.8	1.2
64°	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.4	0.8	0.8	0.8	0.8
65.5°	0.4	0.4	0.4	0.8	0.8	0.8
66°	0.4	0.4	0.4	0.8	0.8	0.8



TEST NUMBER: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.4	0.4	0.4	0.4	0.4	0.8
68°	0.4	0.4	0.4	0.4	0.4	0.8
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.0	0.0	0.4	0.4	0.4	0.4
74°	0.0	0.0	0.0	0.4	0.4	0.4
74.5°	0.0	0.0	0.0	0.4	0.4	0.4
75°	0.0	0.0	0.0	0.0	0.4	0.4
75.5°	0.0	0.0	0.0	0.0	0.0	0.4
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	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
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: P776513

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQC-4000lm-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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Peachtree City, GA 30269

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°	3329.7	3452.2	3592.4	3629.4	3701.5	3696.3	3682.6	3600.8	3555.3	3420.7	3301.1
22°	3308.3	3435.6	3568.6	3615.7	3688.6	3691.1	3663.3	3586.3	3527.9	3390.5	3278.9



44°	726.4	836.3	944.7	1061.1	1162.7	1184.0	1116.3	1015.6	877.8	744.5	644.2
44.5°	665.1	768.3	879.1	994.3	1097.0	1112.7	1047.5	949.2	815.0	682.9	585.0



66.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4
67°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4



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°	3224.5	3232.6	3233.4	3272.1	3297.9	3329.7
22°	3197.9	3205.6	3188.3	3230.2	3277.7	3308.3



44°	580.9	525.3	523.3	556.4	627.7	726.4
44.5°	526.5	476.6	478.2	508.0	571.7	665.1



66.5°	0.4	0.4	0.4	0.8	0.8	0.8
67°	0.4	0.4	0.4	0.4	0.8	0.8

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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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(END OF REPORT)