

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: P776265

Luminaire Tested: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776265  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B050)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD42TRH-4000lm-2700K  
Description: 4 INCH ROUND NARROW HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

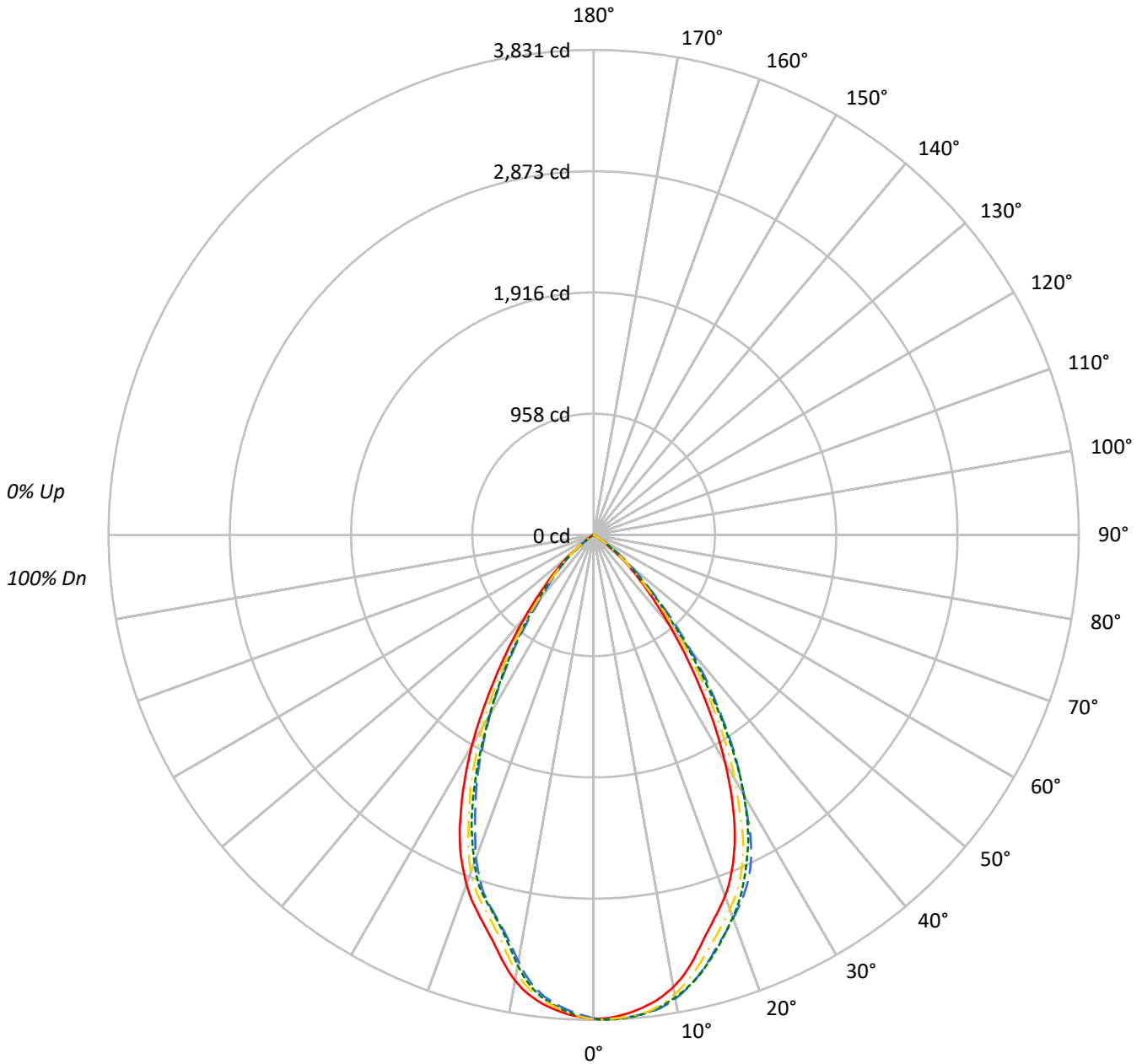
Lumens per Lamp: N/A  
Luminaire Lumens: 3855.5 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.92  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93			93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86			86
3	101	95	89	85	99	93	88	84	90	86	83	88	85	82	86	83	80	79			79
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	80	77	74	73			73
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	76	72	69	67			67
6	86	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62			62
7	81	71	65	60	80	70	64	60	69	64	60	68	63	59	67	62	59	58			58
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54			54
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	51	50			50
10	69	59	53	49	68	58	53	49	58	52	48	57	52	48	56	51	48	47			47

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

	0°	90°	180°	270°
0°	480859	480859	480859	480859
5°	476683	481964	474409	470329
10°	463358	474054	456790	441238
15°	433212	455622	422163	401969
20°	406454	430668	393503	368927
25°	366382	396750	346497	310949
30°	301493	344551	279463	239253
35°	224168	267446	202951	172516
40°	153147	186497	136817	117333
45°	98351	116523	87227	74662
50°	59206	67468	50787	41096
55°	22578	26702	15995	12463
60°	7626	8986	6368	5110
65°	3663	3871	2978	2412
70°	1693	1987	1398	1288
75°	924	1118	729	729
80°	580	580	290	290
85°	0	578	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 129640 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	353.9	9.2
10°-20°	922.7	23.9
20°-30°	1157.7	30.0
30°-40°	884.0	22.9
40°-50°	421.3	10.9
50°-60°	100.8	2.6
60°-70°	12.5	0.3
70°-80°	2.2	0.1
80°-90°	0.2	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°	2434.4	63.1
0°-40°	3318.4	86.1
0°-60°	3840.5	99.6
0°-90°	3855.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3855.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3821	3821	3821	3821	3821	
5°	3773	3815	3755	3723	3773	356
15°	3325	3497	3240	3085	3325	935
25°	2638	2857	2495	2239	2638	1193
35°	1459	1741	1321	1123	1459	912
45°	553	655	490	420	553	437
55°	103	122	73	57	103	110
65°	12	13	10	8	12	13
75°	2	2	2	2	2	2
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°	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9
0.5°	3822.0	3821.3	3820.9	3820.1	3828.2	3827.4	3825.9	3823.2	3819.0	3812.4	3809.4
1°	3821.6	3823.6	3824.7	3823.9	3830.1	3829.7	3826.6	3822.4	3815.5	3806.3	3802.5
1.5°	3819.3	3823.6	3825.9	3826.6	3830.9	3830.1	3826.2	3820.9	3812.0	3798.2	3792.5
2°	3815.5	3823.2	3826.6	3828.2	3830.5	3830.1	3825.5	3818.6	3805.9	3789.8	3782.1
2.5°	3810.9	3820.9	3825.9	3828.2	3829.3	3828.9	3823.9	3815.5	3799.8	3780.2	3771.8
3°	3804.8	3817.4	3823.9	3827.8	3828.2	3827.8	3821.6	3811.7	3792.5	3770.2	3760.2
3.5°	3797.8	3814.7	3821.6	3826.2	3825.9	3825.9	3819.3	3807.4	3784.8	3759.1	3748.0
4°	3790.2	3810.1	3818.6	3824.7	3823.2	3823.9	3817.0	3802.5	3775.6	3748.0	3734.9
4.5°	3781.7	3804.8	3815.9	3821.6	3820.1	3820.9	3813.6	3796.7	3766.4	3735.3	3721.5
5°	3773.3	3799.0	3812.8	3819.0	3815.1	3817.0	3809.4	3789.4	3755.3	3721.9	3705.7
5.5°	3763.3	3793.2	3808.6	3815.9	3810.5	3812.4	3804.0	3781.0	3744.1	3707.7	3688.9
6°	3752.2	3786.3	3804.4	3812.0	3803.2	3806.3	3797.1	3772.1	3731.5	3691.9	3670.8
6.5°	3740.3	3778.7	3799.0	3806.3	3795.9	3798.2	3788.6	3761.4	3717.6	3674.3	3649.3
7°	3728.0	3770.2	3792.5	3800.2	3787.1	3789.4	3779.0	3749.5	3702.3	3654.7	3625.9
7.5°	3715.0	3759.9	3784.8	3792.9	3776.4	3778.3	3766.4	3735.3	3685.8	3632.1	3599.8
8°	3699.6	3748.0	3775.2	3784.0	3764.8	3766.0	3753.3	3720.3	3667.7	3607.9	3569.5
8.5°	3683.5	3734.5	3763.3	3773.3	3751.8	3752.6	3738.0	3704.2	3647.0	3580.6	3537.6
9°	3665.4	3719.9	3750.3	3761.0	3739.1	3736.8	3721.9	3686.6	3625.1	3550.7	3501.2
9.5°	3646.6	3704.2	3735.7	3748.0	3724.2	3721.9	3703.8	3667.7	3600.6	3517.3	3463.2
10°	3625.9	3686.6	3719.6	3733.4	3709.6	3704.2	3685.0	3646.3	3574.5	3481.2	3420.6
10.5°	3602.9	3667.4	3702.3	3718.4	3693.5	3686.6	3664.7	3623.6	3545.7	3442.5	3380.3
11°	3578.7	3647.8	3683.1	3701.9	3676.6	3667.4	3642.8	3598.3	3513.1	3403.7	3338.5
11.5°	3552.2	3626.3	3664.3	3684.6	3659.3	3647.0	3618.6	3572.2	3479.3	3364.2	3297.0
12°	3523.8	3603.3	3643.2	3667.4	3639.7	3625.9	3594.1	3544.6	3444.0	3324.7	3259.8
12.5°	3493.5	3577.9	3620.5	3647.4	3619.4	3602.1	3568.4	3514.6	3408.3	3289.0	3225.3
13°	3460.5	3551.5	3596.8	3627.5	3598.7	3578.7	3540.3	3483.2	3371.9	3254.8	3193.0
13.5°	3426.4	3523.4	3571.4	3605.6	3576.0	3552.6	3511.9	3451.3	3336.9	3221.4	3163.5
14°	3393.0	3495.0	3545.7	3583.3	3551.8	3526.1	3482.8	3418.3	3302.4	3189.9	3133.9
14.5°	3359.6	3465.1	3519.2	3559.9	3524.6	3498.1	3452.8	3384.9	3270.9	3160.8	3104.7
15°	3325.0	3433.3	3492.0	3533.8	3497.0	3470.1	3422.5	3353.4	3240.2	3130.8	3076.0
15.5°	3292.8	3402.9	3464.0	3508.9	3470.5	3441.7	3392.6	3322.7	3210.7	3102.8	3049.1
16°	3261.3	3372.2	3433.3	3480.9	3442.5	3414.1	3365.3	3292.8	3180.7	3074.4	3021.5
16.5°	3232.9	3342.3	3404.9	3454.0	3416.0	3385.7	3338.1	3263.6	3152.3	3046.8	2993.1
17°	3203.4	3312.4	3378.4	3426.4	3387.6	3358.8	3311.2	3234.1	3123.9	3018.8	2963.1
17.5°	3174.6	3284.7	3351.9	3399.5	3359.2	3331.2	3283.2	3205.7	3095.9	2988.5	2931.3
18°	3146.2	3257.5	3325.4	3372.6	3330.8	3302.8	3255.2	3178.1	3068.3	2956.2	2889.1
18.5°	3118.9	3229.9	3300.1	3345.4	3300.9	3275.5	3227.9	3150.4	3038.4	2915.5	2846.9
19°	3092.1	3203.8	3274.8	3318.5	3272.5	3247.5	3201.1	3123.6	3006.5	2875.3	2804.6
19.5°	3064.1	3176.5	3247.9	3290.1	3243.3	3221.0	3174.2	3095.9	2972.7	2834.6	2762.4
20°	3034.9	3150.4	3221.8	3262.9	3215.7	3193.0	3147.0	3067.1	2938.2	2793.9	2717.1
20.5°	3003.8	3124.3	3196.1	3236.0	3186.5	3164.2	3118.6	3036.8	2899.0	2753.2	2665.3
21°	2969.7	3097.8	3170.0	3208.0	3154.3	3135.5	3090.2	3004.2	2859.9	2702.6	2608.1



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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°	2856.8	3008.0	3086.7	3120.9	3053.7	3036.1	2995.0	2894.4	2742.5	2543.7	2449.6
23°	2816.1	2975.4	3056.4	3087.5	3016.5	3002.3	2961.6	2853.8	2697.6	2494.5	2395.9
23.5°	2773.2	2940.9	3026.1	3054.5	2977.3	2963.1	2919.0	2813.1	2649.6	2446.2	2345.3
24°	2729.4	2902.9	2993.1	3019.6	2938.6	2921.7	2876.0	2772.4	2600.1	2396.7	2294.6
24.5°	2685.3	2863.0	2958.1	2980.8	2897.9	2879.9	2833.4	2734.0	2549.4	2349.5	2243.6
25°	2638.5	2820.8	2920.9	2942.8	2857.2	2838.4	2790.8	2686.8	2495.3	2300.4	2191.0
25.5°	2589.0	2776.6	2879.1	2900.6	2816.1	2796.6	2747.8	2638.5	2439.7	2248.2	2136.9
26°	2536.8	2730.2	2836.1	2857.6	2775.5	2755.1	2691.4	2587.4	2382.9	2194.4	2081.6
26.5°	2482.3	2681.1	2786.6	2814.2	2734.4	2706.0	2633.5	2532.5	2326.8	2138.0	2025.6
27°	2427.0	2630.4	2735.2	2770.1	2688.7	2655.3	2571.3	2473.8	2272.0	2078.1	1967.2
27.5°	2370.6	2576.7	2678.0	2726.0	2640.4	2603.5	2511.0	2415.9	2214.0	2018.7	1910.4
28°	2311.9	2520.3	2616.6	2676.1	2590.1	2549.8	2451.2	2354.5	2158.0	1958.8	1853.6
28.5°	2253.2	2459.2	2555.6	2626.2	2535.2	2493.4	2393.6	2290.0	2100.8	1899.7	1798.4
29°	2192.5	2396.3	2492.2	2574.4	2483.8	2433.1	2337.2	2226.7	2043.6	1840.2	1741.6
29.5°	2134.9	2332.2	2430.8	2520.3	2426.2	2374.0	2281.2	2165.3	1984.1	1783.8	1686.3
30°	2074.7	2268.5	2371.4	2462.7	2371.0	2311.5	2224.8	2101.6	1923.1	1728.5	1632.6
30.5°	2012.9	2204.8	2314.6	2402.8	2313.4	2248.2	2168.3	2039.8	1862.8	1672.5	1578.5
31°	1951.9	2143.4	2258.9	2343.0	2257.4	2188.3	2110.8	1976.8	1801.8	1618.0	1522.8
31.5°	1889.7	2081.6	2202.9	2278.1	2196.0	2127.3	2050.5	1916.2	1739.7	1562.0	1467.2
32°	1827.5	2021.3	2146.1	2216.7	2136.1	2069.3	1989.9	1854.8	1676.3	1504.4	1411.1
32.5°	1765.8	1960.3	2087.4	2153.4	2070.5	2009.5	1928.1	1794.2	1612.6	1446.5	1355.9
33°	1703.6	1900.1	2028.3	2091.6	2006.0	1949.6	1865.2	1734.3	1552.4	1388.5	1300.6
33.5°	1643.3	1838.7	1964.9	2030.6	1938.8	1890.9	1803.0	1674.8	1491.0	1330.2	1245.0
34°	1580.4	1776.9	1902.8	1969.9	1873.6	1831.0	1742.0	1615.3	1432.3	1271.1	1191.6
34.5°	1519.8	1714.3	1839.8	1908.9	1807.2	1769.6	1681.7	1556.6	1375.5	1215.8	1139.4
35°	1459.1	1653.3	1776.1	1848.3	1740.8	1707.8	1623.4	1500.6	1321.0	1160.5	1089.2
35.5°	1399.2	1593.1	1715.1	1787.2	1676.3	1645.6	1566.2	1444.5	1264.9	1108.0	1038.1
36°	1344.8	1534.3	1656.8	1725.8	1612.6	1584.6	1509.0	1388.9	1212.0	1055.4	988.2
36.5°	1289.9	1477.5	1599.6	1662.5	1546.6	1523.2	1450.7	1335.2	1159.0	1005.9	940.3
37°	1235.0	1421.1	1540.9	1603.8	1484.1	1461.8	1393.1	1281.4	1108.3	958.3	891.9
37.5°	1180.5	1359.3	1484.4	1540.9	1422.7	1402.7	1333.2	1229.6	1058.1	911.5	847.0
38°	1125.6	1308.7	1426.9	1480.6	1364.7	1345.1	1275.3	1175.9	1011.6	865.8	802.1
38.5°	1073.8	1257.6	1367.0	1418.1	1302.5	1286.8	1218.9	1123.3	962.5	820.9	759.9
39°	1025.1	1207.0	1310.6	1362.0	1246.9	1229.6	1163.6	1071.5	918.0	778.7	720.7
39.5°	977.9	1156.3	1254.2	1303.7	1191.2	1171.3	1109.9	1022.0	874.2	738.8	685.4
40°	932.2	1104.1	1197.4	1245.7	1135.2	1114.1	1056.5	971.3	832.8	701.5	651.3
40.5°	886.1	1053.8	1141.0	1187.8	1079.2	1058.5	1006.3	922.6	790.6	666.2	618.6
41°	842.8	1002.0	1086.1	1129.8	1027.4	1004.3	958.3	876.5	751.4	634.0	589.5
41.5°	801.3	953.3	1035.4	1075.3	974.4	950.2	910.3	832.8	714.2	602.5	563.0
42°	761.0	904.2	985.2	1021.6	926.1	897.7	862.0	789.0	678.5	574.9	536.1
42.5°	722.7	857.7	936.0	969.4	876.5	848.1	815.5	748.4	643.2	546.5	510.4
43°	686.6	813.6	888.8	917.2	829.3	800.2	769.9	708.5	609.8	520.0	485.9
43.5°	650.1	770.6	841.2	867.3	783.3	755.3	725.3	670.5	578.4	494.3	461.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	552.6	651.3	704.6	728.4	654.7	630.9	602.1	565.3	490.1	422.2	393.4
45.5°	522.7	614.8	662.0	687.0	615.6	594.1	566.8	533.1	463.2	399.5	371.9
46°	493.2	579.5	621.3	646.3	576.8	559.2	532.7	502.7	437.1	377.3	352.7
46.5°	465.5	547.6	586.0	609.1	541.5	525.8	501.2	473.6	412.2	356.1	333.5
47°	439.0	516.2	551.9	572.6	507.0	493.5	471.3	445.2	387.2	336.2	313.9
47.5°	413.7	486.2	518.9	538.4	475.9	463.6	443.6	418.3	365.0	316.6	294.7
48°	389.1	457.5	488.2	506.2	445.9	435.2	416.8	393.0	343.9	296.7	275.6
48.5°	365.0	430.2	459.8	474.7	417.2	408.0	391.5	368.8	323.1	277.1	254.1
49°	342.7	403.7	432.1	446.7	391.1	382.2	367.3	347.3	302.0	254.4	230.3
49.5°	323.1	378.8	406.0	417.9	365.7	360.7	346.2	325.8	280.9	229.9	206.1
50°	302.4	355.4	380.7	392.6	344.6	339.3	325.1	304.7	259.4	205.7	181.9
50.5°	282.8	333.5	356.9	366.1	323.5	317.4	303.6	283.2	234.1	181.5	160.4
51°	262.1	312.0	334.7	343.5	302.0	295.9	282.5	261.7	208.8	158.9	139.7
51.5°	239.1	291.7	313.5	321.6	280.9	274.4	261.0	237.2	184.2	138.5	121.3
52°	214.5	270.6	292.1	300.5	259.4	252.5	236.0	211.8	161.2	121.3	106.3
52.5°	190.7	247.5	270.6	280.5	236.0	228.3	210.3	186.5	140.5	105.9	93.3
53°	166.9	222.2	247.2	258.3	210.7	202.6	185.0	163.1	122.4	93.3	82.1
53.5°	145.5	197.3	221.4	234.9	186.5	177.7	162.0	141.6	107.1	82.1	72.5
54°	131.3	172.7	195.0	208.8	162.3	155.0	140.1	123.6	94.0	72.9	64.5
54.5°	117.1	150.8	170.4	184.2	140.5	134.3	121.3	107.8	82.9	64.5	57.6
55°	102.9	130.5	148.5	159.3	121.7	116.3	105.5	94.4	72.9	57.6	51.4
55.5°	88.7	117.4	130.1	138.9	105.2	100.9	92.5	82.5	64.9	51.4	46.1
56°	74.8	104.0	116.3	125.1	91.3	87.5	81.0	72.9	57.6	46.1	41.4
56.5°	66.0	90.6	102.9	111.3	79.8	77.1	71.4	64.5	51.4	41.4	37.2
57°	58.3	77.5	89.4	97.5	70.2	67.9	62.9	57.2	46.1	37.6	34.2
57.5°	52.2	68.7	76.0	84.0	61.8	59.9	56.0	51.0	41.4	34.5	31.5
58°	46.4	61.0	67.2	70.2	54.9	53.3	49.9	45.7	37.2	31.5	28.4
58.5°	41.8	54.1	59.5	61.8	48.7	47.6	44.5	40.7	34.2	28.4	25.7
59°	37.6	48.4	53.0	54.9	43.4	42.2	39.9	36.8	31.5	25.7	22.6
59.5°	33.8	43.4	47.2	48.7	38.8	38.0	36.8	33.8	28.4	22.6	20.7
60°	30.3	38.8	42.2	43.4	35.7	34.9	33.8	31.1	25.3	20.7	18.8
60.5°	27.6	34.9	38.0	38.8	32.6	31.9	30.7	28.0	22.6	18.8	16.9
61°	24.9	31.5	34.2	34.9	29.6	28.8	27.6	24.9	20.3	16.9	15.7
61.5°	22.6	28.4	30.7	31.5	26.5	25.7	24.6	22.3	18.4	15.7	14.2
62°	20.3	25.7	27.6	28.4	23.0	22.6	21.5	20.0	16.9	14.2	13.0
62.5°	18.8	23.4	25.3	25.7	21.1	20.7	19.6	18.4	15.4	13.0	11.9
63°	16.9	21.1	23.0	23.4	19.2	18.8	17.7	16.5	14.2	11.9	10.7
63.5°	15.4	19.2	20.7	21.1	17.3	16.9	16.1	15.0	12.7	10.7	10.0
64°	14.2	17.7	18.8	19.2	15.7	15.4	14.6	13.8	11.9	10.0	9.2
64.5°	13.0	16.1	17.3	17.3	14.2	14.2	13.4	12.7	10.7	9.2	8.4
65°	12.3	14.6	15.7	15.7	13.0	13.0	12.3	11.5	10.0	8.4	7.7
65.5°	11.1	13.4	14.2	14.6	11.9	11.9	11.1	10.4	9.2	7.7	6.9
66°	10.0	12.3	13.0	13.4	11.1	10.7	10.4	9.6	8.1	6.9	6.5





TEST NUMBER: P776265

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	7.7	9.2	10.0	10.0	8.4	8.4	7.7	7.3	6.1	5.4	5.0
68°	6.9	8.4	9.2	9.2	7.7	7.7	7.3	6.9	5.8	5.0	4.6
68.5°	6.1	7.7	8.4	8.4	6.9	6.9	6.5	6.1	5.4	4.6	4.2
69°	5.8	7.3	7.7	7.7	6.5	6.5	6.1	5.8	5.0	4.2	3.8
69.5°	5.4	6.5	6.9	7.3	6.1	5.8	5.4	5.4	4.2	3.8	3.5
70°	4.6	6.1	6.5	6.5	5.4	5.4	5.0	4.6	3.8	3.5	3.1
70.5°	4.2	5.4	5.8	6.1	5.0	5.0	4.6	4.2	3.8	3.1	3.1
71°	3.8	5.0	5.4	5.4	4.6	4.6	4.2	3.8	3.5	3.1	2.7
71.5°	3.5	4.6	5.0	5.0	4.2	4.2	3.8	3.8	3.1	2.7	2.7
72°	3.5	4.2	4.6	4.6	3.8	3.8	3.5	3.5	2.7	2.3	2.3
72.5°	3.1	3.8	4.2	4.2	3.5	3.5	3.5	3.1	2.7	2.3	1.9
73°	2.7	3.5	3.8	3.8	3.5	3.1	3.1	2.7	2.3	1.9	1.9
73.5°	2.7	3.1	3.5	3.5	3.1	3.1	2.7	2.7	1.9	1.9	1.9
74°	2.3	3.1	3.1	3.5	2.7	2.7	2.7	2.3	1.9	1.5	1.5
74.5°	1.9	2.7	3.1	3.1	2.7	2.3	2.3	2.3	1.9	1.5	1.5
75°	1.9	2.3	2.7	2.7	2.3	2.3	2.3	1.9	1.5	1.2	1.2
75.5°	1.5	2.3	2.3	2.7	2.3	1.9	1.9	1.9	1.5	1.2	1.2
76°	1.5	1.9	2.3	2.3	1.9	1.9	1.9	1.5	1.2	1.2	1.2
76.5°	1.5	1.9	1.9	2.3	1.9	1.9	1.5	1.5	1.2	0.8	0.8
77°	1.2	1.5	1.9	1.9	1.5	1.5	1.5	1.2	1.2	0.8	0.8
77.5°	1.2	1.5	1.5	1.9	1.5	1.5	1.2	1.2	0.8	0.8	0.8
78°	1.2	1.2	1.5	1.5	1.5	1.2	1.2	1.2	0.8	0.8	0.8
78.5°	0.8	1.2	1.5	1.5	1.2	1.2	1.2	0.8	0.8	0.8	0.8
79°	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.4	0.4
79.5°	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.4	0.4
80°	0.8	0.8	1.2	1.2	0.8	0.8	0.8	0.8	0.4	0.4	0.4
80.5°	0.4	0.8	0.8	1.2	0.8	0.8	0.8	0.8	0.4	0.4	0.4
81°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
81.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.0	0.4
82.5°	0.4	0.4	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.0	0.0
83°	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.0	0.0	0.0
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
84°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
84.5°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.4	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: P776265  
CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**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: P776265

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3820.9	3820.9	3820.9	3820.9	3820.9	3820.9
0.5°	3807.1	3820.5	3820.9	3820.5	3820.1	3822.0
1°	3798.2	3814.7	3815.5	3815.9	3816.3	3821.6
1.5°	3788.3	3807.4	3807.8	3809.4	3811.7	3819.3
2°	3777.5	3798.2	3799.8	3801.3	3804.8	3815.5
2.5°	3765.6	3788.3	3789.4	3792.1	3796.3	3810.9
3°	3752.6	3776.7	3778.7	3781.7	3787.5	3804.8
3.5°	3739.5	3764.8	3766.8	3770.6	3777.9	3797.8
4°	3724.9	3751.8	3753.7	3758.7	3767.1	3790.2
4.5°	3710.3	3738.0	3739.5	3745.7	3755.6	3781.7
5°	3692.7	3723.0	3725.7	3732.2	3744.1	3773.3
5.5°	3673.9	3706.9	3710.0	3718.0	3731.5	3763.3
6°	3653.5	3689.6	3693.5	3702.7	3717.6	3752.2
6.5°	3628.2	3670.1	3673.9	3685.8	3702.7	3740.3
7°	3602.5	3647.8	3653.5	3667.7	3686.9	3728.0
7.5°	3570.7	3624.0	3630.1	3648.2	3670.4	3715.0
8°	3539.2	3595.2	3605.2	3625.9	3651.2	3699.6
8.5°	3501.6	3564.5	3576.4	3601.0	3630.1	3683.5
9°	3462.8	3530.4	3544.6	3573.7	3607.9	3665.4
9.5°	3420.2	3493.1	3508.9	3543.4	3583.3	3646.6
10°	3377.6	3452.8	3471.3	3509.6	3556.5	3625.9
10.5°	3335.0	3409.9	3431.0	3473.2	3525.4	3602.9
11°	3293.6	3366.5	3389.5	3434.8	3492.7	3578.7
11.5°	3252.1	3322.7	3345.0	3394.1	3458.2	3552.2
12°	3219.1	3281.3	3304.7	3353.1	3420.6	3523.8
12.5°	3186.5	3242.9	3264.0	3312.0	3381.5	3493.5
13°	3155.8	3207.2	3229.1	3275.5	3344.2	3460.5
13.5°	3126.6	3174.2	3196.5	3239.5	3307.8	3426.4
14°	3096.7	3143.1	3165.4	3207.6	3272.5	3393.0
14.5°	3071.4	3114.7	3137.0	3177.7	3239.5	3359.6
15°	3042.6	3085.2	3108.2	3147.7	3208.0	3325.0
15.5°	3017.2	3057.9	3080.6	3118.6	3178.1	3292.8
16°	2991.5	3032.2	3052.6	3089.8	3147.7	3261.3
16.5°	2962.4	3005.7	3026.5	3062.5	3118.2	3232.9
17°	2931.3	2980.8	2999.6	3034.5	3091.7	3203.4
17.5°	2890.6	2952.8	2972.7	3006.9	3063.3	3174.6
18°	2850.3	2920.2	2941.3	2979.3	3035.7	3146.2
18.5°	2810.0	2883.7	2907.1	2947.4	3006.5	3118.9
19°	2769.7	2844.2	2871.4	2914.4	2976.2	3092.1
19.5°	2729.0	2800.8	2831.1	2875.6	2942.8	3064.1
20°	2679.9	2754.7	2787.4	2835.3	2907.5	3034.9
20.5°	2626.9	2707.2	2742.5	2791.2	2868.7	3003.8
21°	2574.8	2660.0	2693.3	2743.2	2826.9	2969.7

TEST NUMBER: P776265

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2414.0	2517.2	2536.8	2584.7	2684.5	2856.8
23°	2357.5	2466.5	2481.1	2529.9	2634.2	2816.1
23.5°	2305.3	2414.0	2425.8	2477.3	2582.0	2773.2
24°	2246.2	2357.2	2371.7	2423.9	2531.0	2729.4
24.5°	2192.5	2301.1	2314.6	2370.2	2478.4	2685.3
25°	2135.7	2239.3	2259.3	2318.8	2428.9	2638.5
25.5°	2080.1	2181.4	2204.0	2265.0	2377.9	2589.0
26°	2023.7	2122.7	2147.2	2212.1	2327.6	2536.8
26.5°	1968.8	2063.9	2092.7	2156.4	2275.8	2482.3
27°	1911.6	2001.8	2034.4	2100.4	2221.3	2427.0
27.5°	1856.3	1942.3	1977.2	2043.6	2166.4	2370.6
28°	1799.1	1882.0	1919.6	1981.8	2109.6	2311.9
28.5°	1742.3	1821.0	1863.2	1926.6	2051.3	2253.2
29°	1682.5	1762.3	1804.9	1867.8	1992.6	2192.5
29.5°	1623.0	1703.2	1748.5	1811.0	1930.4	2134.9
30°	1566.2	1646.4	1691.3	1755.8	1871.3	2074.7
30.5°	1507.1	1590.4	1632.2	1699.0	1809.9	2012.9
31°	1452.2	1536.3	1574.2	1643.3	1749.3	1951.9
31.5°	1397.3	1482.1	1515.9	1587.7	1689.0	1889.7
32°	1344.4	1429.6	1459.9	1532.0	1631.0	1827.5
32.5°	1292.9	1374.7	1404.2	1476.4	1573.9	1765.8
33°	1240.4	1324.0	1352.4	1419.2	1515.9	1703.6
33.5°	1190.9	1273.4	1300.2	1358.2	1458.3	1643.3
34°	1140.2	1222.7	1248.0	1305.6	1400.8	1580.4
34.5°	1092.2	1172.1	1195.8	1253.0	1344.0	1519.8
35°	1045.0	1122.9	1144.0	1200.5	1287.2	1459.1
35.5°	998.2	1077.6	1094.5	1147.9	1230.4	1399.2
36°	953.3	1032.4	1046.9	1096.1	1173.6	1344.8
36.5°	910.7	990.5	999.7	1045.0	1117.2	1289.9
37°	868.9	946.4	954.8	994.0	1063.4	1235.0
37.5°	829.3	904.6	910.3	943.7	1012.4	1180.5
38°	790.2	863.5	868.1	895.0	962.5	1125.6
38.5°	752.2	823.6	827.0	847.4	916.5	1073.8
39°	716.9	787.1	787.1	800.6	871.6	1025.1
39.5°	680.4	748.7	749.9	757.6	827.4	977.9
40°	647.4	714.2	712.3	716.1	784.4	932.2
40.5°	614.4	678.9	677.0	678.5	743.0	886.1
41°	583.3	646.3	642.4	642.8	704.6	842.8
41.5°	554.6	613.3	609.4	611.0	667.8	801.3
42°	526.2	583.0	578.7	580.7	634.0	761.0
42.5°	499.7	553.0	549.2	552.6	600.6	722.7
43°	472.4	524.2	520.8	525.8	569.9	686.6
43.5°	447.9	496.6	493.9	500.8	540.7	650.1



TEST NUMBER: P776265

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	377.6	419.5	419.1	429.1	462.5	552.6
45.5°	356.9	395.3	395.7	407.2	438.3	522.7
46°	337.7	372.3	373.4	384.9	414.9	493.2
46.5°	318.5	350.8	352.3	363.8	392.2	465.5
47°	299.3	330.8	332.7	343.9	370.3	439.0
47.5°	279.8	312.0	313.5	324.7	348.9	413.7
48°	261.4	292.8	295.1	306.3	328.9	389.1
48.5°	238.7	274.8	277.5	288.2	310.1	365.0
49°	214.9	254.8	258.3	270.2	291.3	342.7
49.5°	190.7	233.3	237.6	251.0	272.5	323.1
50°	167.7	209.9	214.9	229.5	252.9	302.4
50.5°	146.6	185.7	191.9	206.5	230.3	282.8
51°	126.6	162.3	168.5	183.8	206.9	262.1
51.5°	110.5	141.6	147.0	161.2	183.8	239.1
52°	96.3	127.4	132.8	140.5	160.8	214.5
52.5°	84.8	113.6	118.2	126.6	140.1	190.7
53°	74.5	100.2	103.6	112.8	126.6	166.9
53.5°	66.0	86.3	89.4	99.4	112.8	145.5
54°	58.7	72.5	74.8	85.6	99.0	131.3
54.5°	52.6	63.7	66.0	71.8	85.2	117.1
55°	46.8	56.8	58.7	63.7	71.8	102.9
55.5°	42.2	50.7	52.2	56.4	63.3	88.7
56°	38.0	45.3	46.8	50.3	56.4	74.8
56.5°	34.9	40.7	41.8	44.9	50.3	66.0
57°	31.9	36.8	37.6	40.3	44.9	58.3
57.5°	28.8	33.0	33.8	36.1	40.3	52.2
58°	25.7	29.9	30.7	32.6	36.1	46.4
58.5°	23.0	26.9	27.6	29.6	32.6	41.8
59°	20.7	24.6	24.9	26.9	29.6	37.6
59.5°	18.8	22.3	22.6	24.2	26.5	33.8
60°	17.3	20.3	20.7	21.9	24.2	30.3
60.5°	15.7	18.4	18.8	20.0	21.9	27.6
61°	14.2	16.5	16.9	18.0	20.0	24.9
61.5°	13.0	15.4	15.7	16.5	18.0	22.6
62°	11.9	14.2	14.6	15.0	16.5	20.3
62.5°	10.7	13.0	13.4	13.8	15.0	18.8
63°	10.0	11.9	12.3	12.7	13.8	16.9
63.5°	9.2	10.7	11.1	11.5	12.7	15.4
64°	8.4	9.6	10.0	10.4	11.5	14.2
64.5°	7.7	8.8	9.2	9.6	10.4	13.0
65°	6.9	8.1	8.4	8.8	9.6	12.3
65.5°	6.5	7.7	7.7	8.1	8.8	11.1
66°	5.8	6.9	6.9	7.3	8.1	10.0



TEST NUMBER: P776265

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.6	5.4	5.4	5.8	6.1	7.7
68°	4.2	5.0	5.0	5.4	5.8	6.9
68.5°	3.8	4.6	4.6	5.0	5.4	6.1
69°	3.5	4.2	4.2	4.2	4.6	5.8
69.5°	3.1	3.8	3.8	4.2	4.2	5.4
70°	3.1	3.5	3.5	3.8	3.8	4.6
70.5°	2.7	3.1	3.1	3.5	3.5	4.2
71°	2.7	3.1	3.1	3.1	3.5	3.8
71.5°	2.3	2.7	2.7	2.7	3.1	3.5
72°	1.9	2.3	2.3	2.7	2.7	3.5
72.5°	1.9	2.3	2.3	2.3	2.7	3.1
73°	1.9	1.9	1.9	2.3	2.3	2.7
73.5°	1.5	1.9	1.9	1.9	1.9	2.7
74°	1.5	1.5	1.5	1.9	1.9	2.3
74.5°	1.2	1.5	1.5	1.5	1.5	1.9
75°	1.2	1.5	1.5	1.5	1.5	1.9
75.5°	1.2	1.2	1.2	1.5	1.5	1.5
76°	1.2	1.2	1.2	1.2	1.2	1.5
76.5°	0.8	1.2	1.2	1.2	1.2	1.5
77°	0.8	0.8	1.2	1.2	1.2	1.2
77.5°	0.8	0.8	0.8	0.8	0.8	1.2
78°	0.8	0.8	0.8	0.8	0.8	1.2
78.5°	0.8	0.8	0.8	0.8	0.8	0.8
79°	0.4	0.8	0.8	0.8	0.8	0.8
79.5°	0.4	0.4	0.4	0.4	0.4	0.8
80°	0.4	0.4	0.4	0.4	0.4	0.8
80.5°	0.4	0.4	0.4	0.4	0.4	0.4
81°	0.4	0.4	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.0	0.4	0.4	0.4	0.4	0.4
83°	0.0	0.4	0.4	0.4	0.0	0.4
83.5°	0.0	0.0	0.0	0.0	0.0	0.4
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: P776265

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-2700K

**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°	2933.6	3069.4	3143.5	3180.0	3122.8	3103.2	3059.8	2969.3	2820.8	2649.2	2554.0
22°	2896.4	3039.5	3115.1	3151.2	3088.2	3071.4	3028.4	2935.1	2781.6	2595.1	2501.8



44°	616.0	728.4	793.6	819.7	739.9	711.9	681.6	633.2	548.0	470.1	438.3
44.5°	583.7	688.9	748.7	773.3	696.9	670.1	641.3	599.1	518.5	445.6	415.6



66.5°	8.8	11.1	12.3	12.3	10.0	10.0	9.2	8.8	7.7	6.5	5.8
67°	8.1	10.0	11.1	11.1	9.2	8.8	8.4	8.1	6.9	5.8	5.4



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°	2521.8	2612.7	2642.7	2691.4	2782.0	2933.6
22°	2469.6	2564.8	2590.1	2637.3	2734.0	2896.4



44°	424.1	469.7	467.8	475.5	513.1	616.0
44.5°	400.7	444.0	442.9	452.5	487.8	583.7

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66.5°	5.4	6.1	6.5	6.9	7.3	8.8
67°	5.0	5.8	5.8	6.1	6.9	8.1

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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)