

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: P776260

Luminaire Tested: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776260
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B049)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD42TRC-4000lm-2700K
Description: 4 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

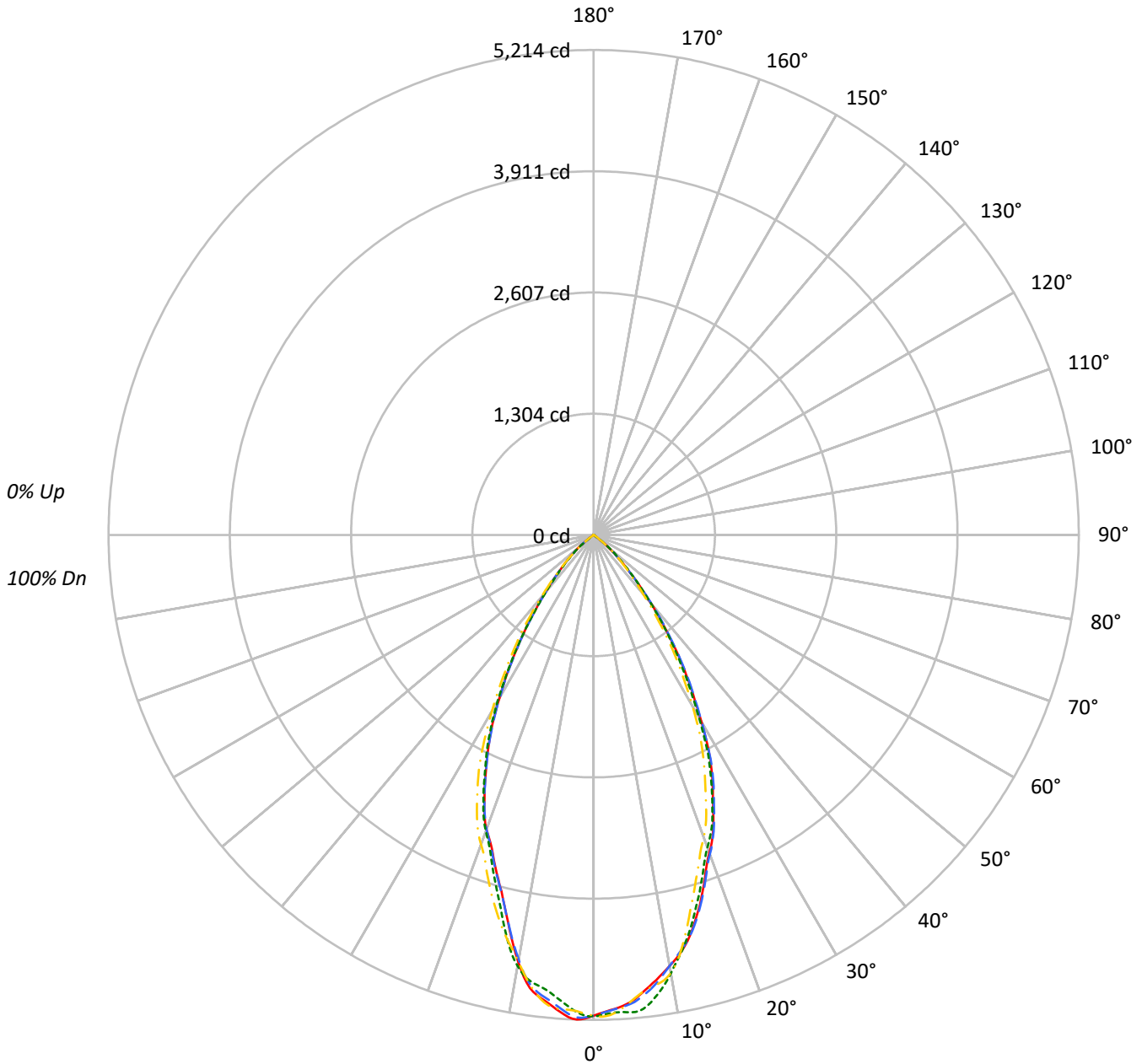
Lumens per Lamp: N/A
Luminaire Lumens: 4254.4 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.84
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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					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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	95	90	86	92	88	85	89	86	84	87	85	82	81								
4	97	90	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	74	90	83	77	73	81	76	73	79	75	72	78	74	71	70								
6	87	78	72	68	86	78	72	68	76	71	67	75	70	67	73	70	66	65								
7	83	74	68	63	82	73	67	63	72	67	63	71	66	63	69	65	62	61								
8	79	69	63	59	78	69	63	59	68	62	59	67	62	59	66	61	58	57								
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53								
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	52	50								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	650656	650656	650656	650656
5°	633396	650526	642618	627282
10°	601258	611315	595954	601705
15°	554915	547254	508076	519880
20°	486970	478694	451065	453998
25°	420690	417066	378768	382726
30°	336166	328740	294866	299226
35°	245123	238164	207713	209127
40°	156679	155348	133202	130229
45°	87494	89897	79645	77385
50°	39784	42486	39471	37983
55°	2370	2282	1843	2106
60°	680	881	780	780
65°	357	447	447	447
70°	294	294	294	294
75°	194	194	194	194
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 89897 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.8	11.1
10°-20°	1141.5	26.8
20°-30°	1309.5	30.8
30°-40°	915.3	21.5
40°-50°	373.3	8.8
50°-60°	41.1	1.0
60°-70°	1.6	0.0
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°	2922.7	68.7
0°-40°	3838.0	90.2
0°-60°	4252.5	100.0
0°-90°	4254.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4254.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5170	5170	5170	5170	5170	
5°	5014	5149	5087	4965	5014	468
15°	4259	4200	3900	3990	4259	1180
25°	3030	3004	2728	2756	3030	1380
35°	1596	1550	1352	1361	1596	990
45°	492	505	448	435	492	394
55°	11	10	8	10	11	40
65°	1	2	2	2	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1
0.5°	5153.6	5153.2	5153.2	5154.4	5172.4	5174.0	5178.6	5183.2	5185.1	5184.7	5179.7
1°	5139.8	5138.6	5140.5	5143.6	5163.2	5169.7	5180.5	5192.0	5199.7	5199.3	5189.7
1.5°	5126.3	5124.8	5128.3	5134.4	5154.8	5161.7	5175.9	5194.3	5210.1	5210.8	5194.3
2°	5113.7	5110.2	5116.7	5127.9	5146.3	5150.5	5164.0	5188.2	5213.9	5217.0	5190.5
2.5°	5101.4	5094.8	5105.2	5124.0	5140.9	5137.9	5145.5	5172.0	5206.6	5213.9	5177.4
3°	5088.7	5076.8	5094.8	5124.0	5139.0	5124.0	5122.9	5149.4	5190.9	5199.7	5156.3
3.5°	5074.9	5056.1	5083.7	5128.6	5140.5	5109.8	5096.4	5122.5	5168.6	5179.7	5130.9
4°	5059.1	5033.8	5071.8	5134.8	5145.5	5094.1	5066.8	5092.5	5142.9	5154.0	5104.1
4.5°	5038.8	5006.1	5057.2	5141.7	5149.4	5075.6	5035.7	5061.8	5115.2	5127.1	5076.0
5°	5013.8	4976.2	5039.9	5144.4	5149.4	5052.6	5004.6	5031.5	5086.8	5100.6	5048.8
5.5°	4984.6	4944.7	5016.9	5139.0	5140.5	5025.7	4974.2	5004.2	5060.7	5073.3	5023.4
6°	4953.9	4913.2	4990.0	5124.0	5121.3	4994.2	4947.0	4980.0	5036.5	5046.4	5000.4
6.5°	4922.0	4885.1	4961.2	5097.9	5094.8	4965.0	4923.9	4960.0	5012.7	5019.9	4977.7
7°	4892.4	4861.7	4931.2	5061.8	5061.8	4936.6	4906.6	4942.7	4986.1	4990.8	4953.1
7.5°	4862.1	4841.0	4899.3	5016.5	5023.0	4909.3	4893.2	4927.0	4956.6	4954.3	4923.2
8°	4832.9	4822.5	4864.8	4962.3	4982.3	4884.4	4880.5	4908.2	4918.6	4908.6	4884.8
8.5°	4800.3	4806.4	4826.0	4899.7	4937.8	4858.2	4867.1	4883.2	4867.9	4852.1	4835.6
9°	4768.4	4791.4	4785.7	4833.3	4890.9	4829.8	4846.0	4849.0	4807.9	4784.9	4778.7
9.5°	4735.7	4777.2	4745.3	4766.8	4837.9	4800.6	4817.5	4804.5	4736.9	4707.7	4710.4
10°	4705.0	4764.9	4705.0	4701.2	4783.7	4768.0	4781.4	4750.7	4663.5	4624.7	4639.7
10.5°	4672.7	4752.6	4666.2	4642.4	4728.4	4731.1	4735.0	4690.4	4586.3	4534.1	4566.7
11°	4641.2	4738.4	4629.3	4588.2	4673.5	4688.5	4680.8	4624.7	4506.4	4442.7	4492.6
11.5°	4606.3	4717.3	4592.5	4540.2	4621.3	4639.3	4616.3	4556.4	4423.5	4350.9	4414.6
12°	4569.0	4685.8	4556.0	4496.4	4566.7	4582.9	4547.9	4486.1	4342.4	4257.9	4335.5
12.5°	4526.4	4642.8	4517.6	4456.1	4511.0	4518.3	4471.5	4413.1	4260.2	4168.4	4254.9
13°	4481.8	4590.2	4478.8	4415.8	4455.3	4450.4	4394.3	4338.2	4178.8	4085.1	4180.0
13.5°	4430.4	4530.6	4433.8	4371.6	4395.0	4375.5	4314.0	4258.3	4101.2	4006.4	4103.5
14°	4377.0	4465.7	4385.4	4322.5	4330.5	4299.4	4234.9	4184.6	4027.9	3935.3	4031.7
14.5°	4319.4	4398.1	4332.1	4271.4	4265.6	4220.7	4156.5	4108.5	3959.5	3868.1	3965.6
15°	4259.1	4326.7	4275.6	4217.6	4200.3	4144.6	4083.2	4037.9	3899.6	3805.9	3906.1
15.5°	4199.5	4259.1	4216.4	4164.2	4135.0	4073.2	4012.5	3968.3	3839.3	3749.0	3847.7
16°	4137.7	4189.9	4155.8	4107.8	4070.5	4003.7	3942.6	3901.1	3781.3	3692.9	3790.1
16.5°	4074.0	4118.5	4093.2	4048.6	4006.0	3933.8	3871.5	3831.2	3720.6	3636.5	3729.8
17°	4006.4	4046.7	4027.9	3985.2	3938.8	3863.9	3804.7	3761.3	3661.1	3580.0	3670.7
17.5°	3939.5	3972.6	3961.4	3921.5	3870.4	3793.6	3737.5	3692.2	3600.4	3524.3	3610.4
18°	3870.4	3899.6	3892.3	3856.6	3804.7	3724.1	3671.8	3627.3	3543.2	3472.1	3554.3
18.5°	3803.2	3829.3	3823.9	3792.0	3738.3	3658.8	3609.2	3563.5	3492.5	3425.6	3501.3
19°	3740.6	3764.0	3759.8	3731.7	3678.0	3599.6	3553.9	3510.1	3448.3	3385.3	3457.5
19.5°	3685.6	3706.4	3702.5	3679.5	3621.9	3549.3	3505.5	3461.7	3408.3	3346.9	3412.6
20°	3636.1	3654.2	3651.8	3632.6	3574.3	3502.4	3459.8	3414.9	3368.0	3306.2	3368.0
20.5°	3591.5	3605.0	3605.0	3590.0	3529.7	3456.0	3411.8	3363.4	3321.5	3258.5	3316.9
21°	3540.8	3552.8	3552.8	3545.5	3484.8	3405.3	3355.3	3305.0	3267.8	3204.8	3260.1



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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°	3361.9	3374.2	3380.3	3392.2	3329.2	3233.6	3159.8	3091.9	3067.3	3014.3	3068.0
23°	3290.8	3307.7	3313.1	3330.8	3265.5	3168.7	3087.2	3015.8	2999.3	2952.1	2998.9
23.5°	3221.7	3242.8	3247.4	3268.5	3199.8	3106.1	3013.5	2945.9	2931.3	2889.4	2930.2
24°	3154.8	3178.3	3180.6	3202.1	3134.9	3045.0	2950.1	2876.0	2863.7	2827.2	2861.4
24.5°	3091.1	3118.0	3118.4	3133.3	3068.4	2980.5	2886.8	2806.1	2795.7	2764.6	2792.7
25°	3029.6	3058.4	3053.8	3060.4	3003.5	2918.3	2823.4	2736.2	2727.7	2702.0	2723.5
25.5°	2970.9	3000.4	2993.5	2990.1	2936.3	2856.4	2760.0	2670.9	2662.8	2640.9	2654.8
26°	2909.0	2942.1	2929.0	2915.2	2869.1	2794.2	2696.6	2607.9	2599.1	2575.7	2590.6
26.5°	2845.7	2880.6	2864.1	2841.8	2801.5	2732.0	2633.3	2543.4	2531.9	2508.4	2523.0
27°	2779.2	2814.6	2793.8	2763.9	2733.9	2660.1	2568.4	2479.6	2464.7	2439.3	2454.7
27.5°	2709.7	2746.2	2721.6	2690.1	2666.3	2589.1	2500.8	2413.2	2395.1	2368.2	2385.5
28°	2635.2	2674.4	2644.8	2612.9	2586.0	2515.0	2431.6	2341.0	2324.1	2295.7	2313.3
28.5°	2556.8	2600.2	2564.5	2539.2	2503.8	2439.3	2355.6	2268.0	2249.2	2218.8	2238.8
29°	2474.3	2527.3	2482.7	2462.7	2422.4	2364.4	2279.1	2194.3	2175.8	2142.8	2166.2
29.5°	2394.4	2450.1	2401.7	2388.6	2341.7	2286.8	2201.6	2117.4	2102.5	2066.7	2091.7
30°	2313.3	2372.1	2322.5	2314.1	2262.2	2209.2	2124.7	2042.2	2029.1	1994.5	2018.3
30.5°	2233.8	2294.1	2245.0	2240.0	2183.9	2132.4	2047.5	1970.3	1956.1	1919.3	1944.6
31°	2157.0	2214.6	2170.1	2163.5	2112.1	2059.8	1973.4	1901.2	1885.5	1847.4	1875.9
31.5°	2082.5	2137.8	2099.0	2089.4	2032.6	1985.7	1903.1	1832.5	1815.6	1777.5	1805.2
32°	2010.7	2061.4	2028.7	2014.9	1960.7	1912.7	1833.6	1766.8	1745.7	1714.2	1736.8
32.5°	1940.0	1984.9	1959.6	1941.9	1888.5	1837.1	1765.2	1699.6	1674.6	1646.9	1669.2
33°	1872.0	1910.8	1892.4	1870.5	1822.5	1766.0	1696.9	1634.7	1607.4	1583.2	1601.6
33.5°	1803.3	1837.4	1822.1	1801.0	1749.1	1693.4	1630.8	1570.9	1539.4	1519.4	1536.3
34°	1734.5	1764.5	1752.6	1733.4	1680.0	1625.0	1564.0	1506.4	1477.2	1460.7	1471.0
34.5°	1664.6	1690.3	1682.7	1667.3	1613.9	1554.4	1497.5	1439.5	1413.0	1398.4	1408.8
35°	1595.5	1617.8	1613.5	1600.1	1550.2	1487.2	1429.2	1375.4	1352.0	1338.9	1347.4
35.5°	1527.1	1546.7	1544.8	1534.4	1484.1	1420.3	1362.7	1312.8	1292.1	1279.8	1287.1
36°	1459.1	1477.2	1475.6	1468.0	1420.0	1358.1	1296.3	1251.3	1234.8	1223.7	1226.8
36.5°	1389.6	1408.8	1408.8	1399.2	1357.3	1291.3	1230.2	1187.6	1175.3	1165.3	1168.4
37°	1325.5	1345.4	1344.7	1335.5	1298.2	1228.7	1165.7	1125.7	1117.7	1112.3	1110.8
37.5°	1261.3	1282.1	1280.5	1271.7	1234.4	1167.2	1104.6	1068.5	1061.2	1059.3	1055.1
38°	1197.2	1218.3	1216.8	1207.6	1175.3	1110.0	1045.1	1011.3	1007.8	1007.8	1000.1
38.5°	1133.0	1154.9	1152.6	1143.8	1116.1	1052.4	988.6	954.8	956.0	957.9	948.3
39°	1068.9	1091.6	1088.5	1080.0	1060.4	997.1	933.7	899.9	905.7	910.3	898.0
39.5°	1009.4	1031.3	1028.2	1022.4	1000.1	944.1	880.3	847.3	856.5	862.6	850.0
40°	953.7	973.6	968.3	966.7	945.6	893.4	828.8	795.8	810.8	817.7	802.7
40.5°	898.0	918.3	909.1	913.3	892.2	844.2	779.3	747.8	767.4	774.3	759.3
41°	842.7	865.3	854.2	860.3	841.9	797.7	732.8	701.3	725.5	733.6	717.1
41.5°	790.4	813.1	801.2	809.3	792.0	752.4	689.0	659.9	685.6	694.0	676.8
42°	743.6	764.7	751.6	759.3	747.4	709.8	647.9	620.3	646.4	656.4	638.3
42.5°	697.5	717.1	703.3	709.8	702.1	669.1	609.9	585.0	610.7	620.3	601.1
43°	652.9	670.6	657.5	663.7	659.9	629.5	574.6	551.9	575.4	585.3	566.1
43.5°	608.4	624.5	614.1	618.0	618.8	591.5	541.2	521.6	541.2	551.2	532.7



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CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	491.6	499.7	495.8	497.8	505.1	489.3	451.7	435.9	447.5	455.5	441.7
45.5°	453.6	462.1	459.4	463.2	471.3	455.9	424.4	410.2	419.0	425.6	414.0
46°	421.0	427.9	425.2	429.8	437.1	424.8	397.5	384.8	391.4	396.4	387.2
46.5°	387.2	393.7	391.8	396.8	406.0	395.6	372.6	361.0	366.0	370.3	362.2
47°	356.8	361.4	360.7	366.4	375.6	369.1	348.0	337.2	341.1	344.5	337.6
47.5°	325.3	329.9	329.9	336.8	347.6	342.2	323.4	313.4	315.7	318.4	312.6
48°	297.7	301.5	301.1	308.0	319.6	315.7	298.8	289.6	290.4	292.3	288.1
48.5°	271.2	274.6	274.6	281.5	291.5	288.8	274.2	266.2	265.4	266.2	263.5
49°	248.1	250.0	250.0	256.2	263.9	262.3	252.0	244.3	243.5	244.7	242.0
49.5°	225.5	226.2	226.6	231.2	239.7	238.9	230.8	223.5	222.0	223.5	221.2
50°	203.2	203.2	203.6	208.2	217.0	216.2	208.2	202.4	201.6	202.8	200.1
50.5°	179.8	179.8	179.4	183.6	193.2	192.4	185.9	180.1	180.1	180.9	178.2
51°	154.4	154.0	153.2	156.7	167.1	166.7	160.5	155.6	155.9	155.9	153.2
51.5°	126.4	126.0	125.6	126.0	139.4	139.0	134.8	130.6	131.0	130.2	127.9
52°	103.3	102.9	102.9	103.3	111.0	109.5	106.4	104.1	104.5	102.9	100.6
52.5°	80.3	79.9	80.7	80.7	84.9	82.6	80.3	79.1	78.4	77.6	75.7
53°	57.2	57.2	58.0	57.6	69.9	68.0	65.7	64.9	64.1	63.8	62.2
53.5°	34.2	34.6	35.7	35.3	54.9	53.4	51.5	50.7	50.3	49.9	48.4
54°	20.7	21.1	21.9	21.9	39.6	38.4	37.3	36.5	36.5	36.1	35.0
54.5°	12.3	12.7	13.4	13.1	24.6	23.8	23.0	22.7	22.7	22.3	21.1
55°	10.8	10.8	11.1	11.1	10.4	9.6	8.8	8.4	8.4	8.4	8.4
55.5°	8.8	8.8	9.2	9.2	8.1	7.7	6.9	6.9	6.5	6.5	6.9
56°	6.9	6.9	7.3	7.7	6.9	6.5	6.1	5.8	5.8	5.8	6.1
56.5°	5.0	5.0	5.4	5.8	6.1	5.8	5.4	5.4	5.0	5.4	5.4
57°	4.6	4.6	5.0	5.4	5.8	5.4	5.0	4.6	4.6	4.6	5.0
57.5°	4.2	4.2	4.6	5.0	5.0	5.0	4.6	4.2	4.2	4.2	4.6
58°	3.8	3.8	4.2	4.6	4.6	4.6	4.2	4.2	3.8	3.8	4.2
58.5°	3.5	3.5	3.8	4.2	4.2	4.2	3.8	3.8	3.5	3.8	3.8
59°	3.1	3.5	3.5	3.8	4.2	3.8	3.5	3.5	3.5	3.5	3.5
59.5°	3.1	3.1	3.5	3.5	3.8	3.5	3.5	3.1	3.1	3.1	3.5
60°	2.7	2.7	3.1	3.5	3.5	3.5	3.1	3.1	3.1	3.1	3.1
60.5°	2.7	2.7	2.7	3.1	3.1	3.1	2.7	2.7	2.7	2.7	2.7
61°	2.3	2.3	2.7	2.7	3.1	2.7	2.7	2.7	2.3	2.7	2.7
61.5°	2.3	2.3	2.3	2.7	2.7	2.7	2.3	2.3	2.3	2.3	2.3
62°	1.9	1.9	2.3	2.3	2.7	2.3	2.3	2.3	2.3	2.3	2.3
62.5°	1.9	1.9	1.9	2.3	2.3	2.3	2.3	1.9	1.9	1.9	2.3
63°	1.9	1.9	1.9	1.9	2.3	2.3	1.9	1.9	1.9	1.9	1.9
63.5°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
64°	1.5	1.5	1.5	1.9	1.9	1.9	1.5	1.5	1.5	1.5	1.9
64.5°	1.5	1.5	1.5	1.5	1.9	1.5	1.5	1.5	1.5	1.5	1.5
65°	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
65.5°	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.5	1.5
66°	1.2	1.2	1.2	1.5	1.5	1.5	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P776260
 CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

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	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
68°	0.8	0.8	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
68.5°	0.8	0.8	0.8	0.8	1.2	1.2	0.8	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
71°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
71.5°	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8
72°	0.4	0.4	0.4	0.4	0.8	0.8	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	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
77.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
78°	0.0	0.0	0.0	0.0	0.4	0.4	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: P776260
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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: P776260

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	5170.1	5170.1	5170.1	5170.1	5170.1	5170.1
0.5°	5172.4	5177.0	5165.9	5160.1	5156.3	5153.6
1°	5175.5	5170.1	5155.5	5147.8	5143.2	5139.8
1.5°	5171.3	5155.9	5142.1	5135.6	5131.7	5126.3
2°	5158.2	5135.9	5125.2	5124.8	5122.1	5113.7
2.5°	5136.3	5110.2	5107.9	5117.1	5115.6	5101.4
3°	5109.4	5081.8	5091.0	5112.5	5111.7	5088.7
3.5°	5078.7	5052.2	5073.7	5110.6	5110.6	5074.9
4°	5048.4	5023.8	5055.7	5109.4	5110.6	5059.1
4.5°	5018.0	4994.6	5034.5	5107.1	5108.3	5038.8
5°	4990.0	4965.4	5010.7	5099.1	5100.2	5013.8
5.5°	4964.3	4938.5	4981.9	5081.4	5084.5	4984.6
6°	4941.6	4915.9	4952.0	5055.3	5060.3	4953.9
6.5°	4923.9	4897.0	4921.2	5021.9	5028.0	4922.0
7°	4909.3	4880.9	4891.3	4983.1	4989.6	4892.4
7.5°	4895.5	4866.3	4861.3	4938.1	4939.3	4862.1
8°	4879.8	4848.6	4829.4	4892.0	4889.4	4832.9
8.5°	4855.9	4824.8	4797.6	4837.9	4829.8	4800.3
9°	4823.3	4794.1	4761.8	4779.5	4770.3	4768.4
9.5°	4779.1	4754.9	4723.1	4718.1	4707.3	4735.7
10°	4725.4	4708.5	4681.2	4659.7	4650.1	4705.0
10.5°	4662.4	4658.1	4636.3	4602.8	4597.5	4672.7
11°	4594.8	4598.6	4587.1	4551.0	4548.3	4641.2
11.5°	4524.9	4528.3	4532.5	4500.3	4502.2	4606.3
12°	4449.2	4453.0	4473.4	4451.1	4461.1	4569.0
12.5°	4370.8	4374.7	4409.6	4400.0	4420.4	4526.4
13°	4293.6	4293.6	4343.2	4349.0	4380.1	4481.8
13.5°	4213.4	4212.6	4271.4	4292.5	4335.9	4430.4
14°	4130.8	4134.3	4196.9	4235.3	4289.8	4377.0
14.5°	4054.0	4060.5	4123.9	4176.5	4239.5	4319.4
15°	3980.6	3990.2	4051.7	4118.1	4188.4	4259.1
15.5°	3910.7	3922.2	3982.2	4059.7	4136.9	4199.5
16°	3842.0	3854.6	3912.6	3999.8	4082.0	4137.7
16.5°	3773.2	3789.0	3843.5	3937.2	4024.4	4074.0
17°	3703.3	3722.5	3776.3	3873.8	3963.0	4006.4
17.5°	3633.8	3655.7	3707.2	3810.5	3900.7	3939.5
18°	3566.6	3591.2	3640.3	3746.3	3837.4	3870.4
18.5°	3503.6	3534.7	3577.7	3683.3	3774.0	3803.2
19°	3449.1	3482.1	3523.9	3627.7	3716.4	3740.6
19.5°	3399.9	3436.4	3476.3	3581.6	3667.6	3685.6
20°	3352.3	3389.9	3429.1	3540.1	3625.0	3636.1
20.5°	3300.0	3342.7	3381.5	3497.4	3582.3	3591.5
21°	3242.0	3288.5	3329.6	3449.8	3536.2	3540.8

TEST NUMBER: P776260

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3040.8	3098.4	3157.9	3278.1	3366.9	3361.9
23°	2972.4	3029.6	3093.8	3212.1	3298.9	3290.8
23.5°	2904.4	2961.3	3030.8	3144.1	3231.3	3221.7
24°	2836.1	2891.0	2967.4	3077.6	3161.0	3154.8
24.5°	2768.1	2823.0	2904.4	3012.0	3093.0	3091.1
25°	2699.7	2756.2	2836.8	2946.7	3024.3	3029.6
25.5°	2638.6	2692.8	2773.8	2881.0	2955.1	2970.9
26°	2576.0	2628.7	2707.4	2811.9	2883.3	2909.0
26.5°	2511.1	2564.5	2640.2	2740.4	2812.2	2845.7
27°	2445.8	2499.2	2567.6	2665.5	2737.0	2779.2
27.5°	2376.3	2429.7	2496.5	2587.2	2660.9	2709.7
28°	2305.6	2359.0	2420.1	2503.4	2584.1	2635.2
28.5°	2229.6	2285.7	2342.5	2422.8	2511.9	2556.8
29°	2153.5	2211.9	2263.0	2342.1	2433.5	2474.3
29.5°	2078.7	2134.0	2185.4	2263.4	2358.3	2394.4
30°	2006.8	2059.1	2109.4	2185.4	2280.7	2313.3
30.5°	1936.2	1983.4	2031.8	2110.9	2205.0	2233.8
31°	1869.7	1908.9	1958.4	2035.6	2129.3	2157.0
31.5°	1802.5	1835.9	1886.6	1962.7	2054.8	2082.5
32°	1739.9	1763.7	1815.9	1890.8	1979.9	2010.7
32.5°	1673.4	1695.3	1745.7	1816.7	1906.6	1940.0
33°	1610.1	1627.7	1677.7	1746.0	1836.7	1872.0
33.5°	1544.4	1562.1	1608.9	1676.9	1768.3	1803.3
34°	1478.3	1495.2	1540.6	1608.9	1699.9	1734.5
34.5°	1413.8	1427.2	1474.9	1544.0	1633.5	1664.6
35°	1351.2	1361.2	1407.7	1477.9	1566.7	1595.5
35.5°	1289.0	1298.2	1346.2	1416.1	1502.5	1527.1
36°	1229.4	1234.8	1284.8	1373.1	1435.7	1459.1
36.5°	1169.1	1171.8	1223.7	1309.0	1363.1	1389.6
37°	1113.5	1108.8	1162.2	1244.0	1300.1	1325.5
37.5°	1054.3	1050.1	1101.2	1179.5	1237.5	1261.3
38°	997.5	995.2	1044.3	1115.0	1174.5	1197.2
38.5°	941.8	941.0	990.5	1057.4	1111.9	1133.0
39°	886.1	891.1	938.7	1001.7	1053.9	1068.9
39.5°	832.3	839.2	888.0	947.1	995.9	1009.4
40°	781.2	792.7	838.5	893.0	941.4	953.7
40.5°	732.8	745.9	792.7	842.3	888.0	898.0
41°	689.0	704.0	748.2	793.1	836.5	842.7
41.5°	648.3	662.9	705.9	747.0	787.0	790.4
42°	610.3	624.1	667.9	702.9	737.8	743.6
42.5°	576.1	589.2	628.7	661.4	692.1	697.5
43°	543.9	554.6	591.5	619.1	647.2	652.9
43.5°	513.9	522.4	555.8	579.2	604.2	608.4



TEST NUMBER: P776260

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	431.3	434.8	458.6	470.5	485.5	491.6
45.5°	405.6	407.9	427.9	437.5	450.5	453.6
46°	380.6	381.8	397.9	406.4	418.3	421.0
46.5°	356.8	355.3	368.7	375.6	386.4	387.2
47°	333.4	330.3	340.7	346.1	356.0	356.8
47.5°	310.0	305.7	313.0	318.0	327.2	325.3
48°	286.5	281.9	288.1	291.5	299.6	297.7
48.5°	262.7	259.6	263.9	266.2	273.1	271.2
49°	242.0	238.1	242.0	243.1	249.7	248.1
49.5°	221.2	216.6	220.1	220.1	226.6	225.5
50°	199.7	194.0	197.4	197.8	203.9	203.2
50.5°	177.4	170.1	174.0	174.0	180.1	179.8
51°	152.5	143.6	147.1	148.6	154.8	154.4
51.5°	127.5	121.0	124.1	125.2	126.7	126.4
52°	99.9	98.3	100.6	101.8	103.3	103.3
52.5°	76.4	75.7	77.6	78.4	79.9	80.3
53°	62.6	53.0	54.2	54.9	56.8	57.2
53.5°	49.2	30.3	31.1	31.9	33.4	34.2
54°	35.3	18.1	18.8	19.2	20.4	20.7
54.5°	21.9	10.8	11.5	11.5	11.9	12.3
55°	8.8	9.6	10.0	9.6	10.0	10.8
55.5°	7.3	8.4	8.4	8.4	8.4	8.8
56°	6.5	6.9	6.9	6.9	6.9	6.9
56.5°	5.8	5.8	5.4	5.4	5.0	5.0
57°	5.4	5.0	5.0	4.6	4.6	4.6
57.5°	5.0	4.6	4.6	4.2	4.2	4.2
58°	4.6	4.2	4.2	3.8	3.8	3.8
58.5°	4.2	4.2	3.8	3.8	3.5	3.5
59°	3.8	3.8	3.5	3.5	3.5	3.1
59.5°	3.5	3.5	3.5	3.1	3.1	3.1
60°	3.5	3.1	3.1	3.1	2.7	2.7
60.5°	3.1	3.1	3.1	2.7	2.7	2.7
61°	2.7	2.7	2.7	2.7	2.3	2.3
61.5°	2.7	2.7	2.7	2.3	2.3	2.3
62°	2.3	2.3	2.3	2.3	1.9	1.9
62.5°	2.3	2.3	2.3	1.9	1.9	1.9
63°	2.3	2.3	1.9	1.9	1.9	1.9
63.5°	1.9	1.9	1.9	1.9	1.5	1.5
64°	1.9	1.9	1.9	1.5	1.5	1.5
64.5°	1.9	1.9	1.5	1.5	1.5	1.5
65°	1.5	1.5	1.5	1.5	1.2	1.2
65.5°	1.5	1.5	1.5	1.2	1.2	1.2
66°	1.5	1.5	1.2	1.2	1.2	1.2



TEST NUMBER: P776260

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.2	1.2	1.2	1.2	0.8	0.8
68°	1.2	1.2	1.2	0.8	0.8	0.8
68.5°	1.2	1.2	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.8	0.8	0.8	0.8	0.8	0.4
71°	0.8	0.8	0.8	0.8	0.4	0.4
71.5°	0.8	0.8	0.8	0.4	0.4	0.4
72°	0.8	0.8	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°	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.0
76.5°	0.4	0.4	0.4	0.4	0.0	0.0
77°	0.4	0.4	0.4	0.4	0.0	0.0
77.5°	0.4	0.4	0.4	0.0	0.0	0.0
78°	0.4	0.4	0.0	0.0	0.0	0.0
78.5°	0.4	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: P776260
CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-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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21.5°	3485.2	3497.4	3498.6	3500.5	3436.4	3352.3	3295.4	3239.3	3206.3	3143.7	3199.8
22°	3423.7	3436.0	3439.8	3449.4	3385.3	3295.8	3230.1	3168.3	3138.7	3080.7	3135.6



44°	568.4	581.5	572.3	574.6	579.2	555.0	510.1	490.5	508.5	518.1	501.2
44.5°	529.6	539.3	532.7	534.6	540.8	522.0	481.3	463.2	477.0	486.2	470.9



66.5°	1.2	1.2	1.2	1.2	1.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2
67°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



89°	0.0	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	0.0

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21.5°	3180.6	3230.1	3276.2	3397.6	3485.5	3485.2
22°	3112.2	3165.6	3216.3	3341.5	3427.9	3423.7



44°	484.7	491.2	522.7	541.2	562.3	568.4
44.5°	457.4	462.8	489.3	505.1	522.4	529.6

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66.5°	1.2	1.2	1.2	1.2	1.2	1.2
67°	1.2	1.2	1.2	1.2	1.2	1.2

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Scaled Data Report



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)