

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: P776574

Luminaire Tested: HCDJBS4050CSD-HCD42TRC-5000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776574
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: HCDJBS4050CSD-HCD42TRC-5000lm-5000K
Description: 4 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5379.4 lumens
Efficiency: N/A
Efficacy: 112.1 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

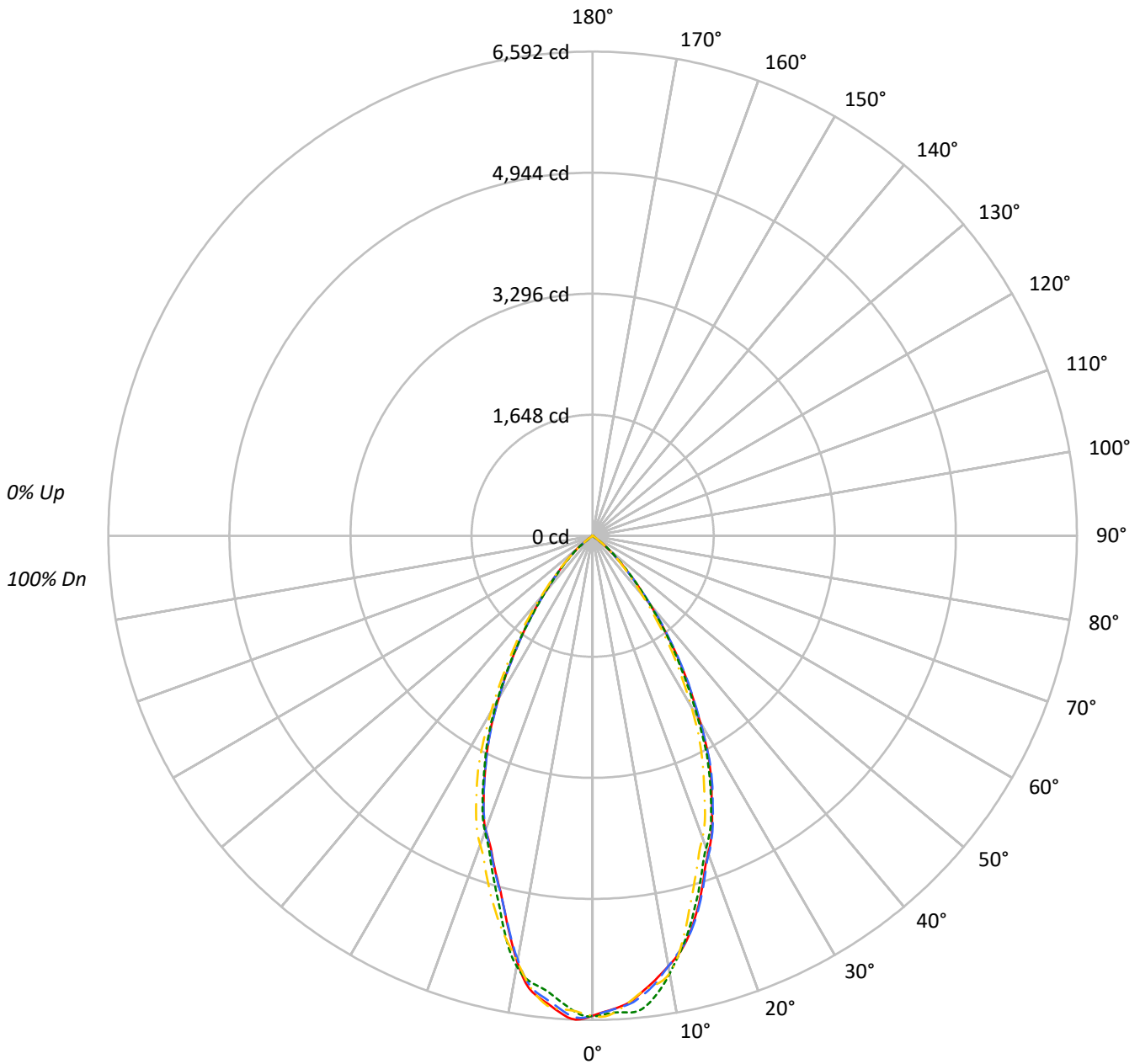
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
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°	822705	822705	822705	822705
5°	800872	822538	812533	793141
10°	760243	772958	753534	760792
15°	701634	691953	642417	657349
20°	615727	605268	570340	574036
25°	531931	527348	478928	483913
30°	425058	415670	372830	378338
35°	309926	301123	262622	264420
40°	198095	196419	168425	164680
45°	110631	113657	100700	97835
50°	50298	53724	49926	48007
55°	2984	2874	2348	2655
60°	856	1107	982	982
65°	447	566	566	566
70°	368	368	368	368
75°	243	243	243	243
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 113657 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	596.5	11.1
10°-20°	1443.3	26.8
20°-30°	1655.7	30.8
30°-40°	1157.3	21.5
40°-50°	472.1	8.8
50°-60°	52.0	1.0
60°-70°	2.0	0.0
70°-80°	0.5	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°	3695.5	68.7
0°-40°	4852.9	90.2
0°-60°	5376.9	100.0
0°-90°	5379.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5379.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	6537	6537	6537	6537	6537	
5°	6340	6511	6432	6278	6340	592
15°	5385	5311	4931	5045	5385	1493
25°	3831	3798	3449	3485	3831	1745
35°	2017	1960	1709	1721	2017	1252
45°	622	639	566	550	622	498
55°	14	13	11	12	14	50
65°	2	2	2	2	2	2
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°	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2
0.5°	6516.3	6515.8	6515.8	6517.3	6540.1	6542.0	6547.9	6553.7	6556.1	6555.6	6549.3
1°	6498.8	6497.4	6499.8	6503.7	6528.4	6536.7	6550.3	6564.9	6574.6	6574.1	6561.9
1.5°	6481.8	6479.9	6484.2	6492.0	6517.8	6526.5	6544.5	6567.8	6587.7	6588.7	6567.8
2°	6465.8	6461.4	6469.7	6483.8	6507.1	6512.4	6529.4	6560.0	6592.5	6596.4	6562.9
2.5°	6450.2	6442.0	6455.1	6478.9	6500.3	6496.4	6506.1	6539.6	6583.3	6592.5	6546.4
3°	6434.2	6419.2	6442.0	6478.9	6497.8	6478.9	6477.4	6511.0	6563.4	6574.6	6519.7
3.5°	6416.7	6392.9	6427.9	6484.7	6499.8	6460.9	6443.9	6477.0	6535.2	6549.3	6487.6
4°	6396.8	6364.8	6412.9	6492.5	6506.1	6441.0	6406.5	6439.1	6502.7	6516.8	6453.6
4.5°	6371.1	6329.8	6394.4	6501.2	6511.0	6417.7	6367.2	6400.2	6467.7	6482.8	6418.2
5°	6339.5	6291.9	6372.5	6504.6	6511.0	6388.6	6327.9	6361.9	6431.8	6449.3	6383.7
5.5°	6302.6	6252.1	6343.4	6497.8	6499.8	6354.6	6289.5	6327.4	6398.8	6414.8	6351.7
6°	6263.8	6212.3	6309.4	6478.9	6475.5	6314.8	6255.0	6296.8	6368.2	6380.8	6322.5
6.5°	6223.5	6176.8	6273.0	6445.9	6442.0	6277.8	6225.9	6271.5	6338.1	6347.3	6293.9
7°	6186.1	6147.2	6235.1	6400.2	6400.2	6241.9	6204.0	6249.7	6304.6	6310.4	6262.8
7.5°	6147.7	6121.0	6194.8	6342.9	6351.2	6207.4	6187.0	6229.8	6267.2	6264.3	6224.9
8°	6110.8	6097.7	6151.1	6274.4	6299.7	6175.9	6171.0	6206.0	6219.1	6206.5	6176.3
8.5°	6069.5	6077.3	6102.0	6195.3	6243.4	6142.8	6154.0	6174.4	6155.0	6135.1	6114.2
9°	6029.2	6058.3	6051.1	6111.3	6184.1	6106.9	6127.3	6131.2	6079.2	6050.1	6042.3
9.5°	5987.9	6040.4	6000.1	6027.3	6117.1	6070.0	6091.4	6074.9	5989.4	5952.5	5955.9
10°	5949.1	6024.8	5949.1	5944.2	6048.6	6028.7	6045.7	6006.9	5896.6	5847.6	5866.5
10.5°	5908.3	6009.3	5900.0	5869.9	5978.7	5982.1	5987.0	5930.6	5799.0	5733.0	5774.2
11°	5868.5	5991.3	5853.4	5801.4	5909.2	5928.2	5918.5	5847.6	5698.0	5617.4	5680.5
11.5°	5824.3	5964.6	5806.8	5740.7	5843.2	5866.0	5836.9	5761.1	5593.1	5501.3	5581.9
12°	5777.2	5924.8	5760.6	5685.4	5774.2	5794.6	5750.4	5672.3	5490.6	5383.8	5481.9
12.5°	5723.2	5870.4	5712.1	5634.4	5703.8	5713.1	5653.8	5580.0	5386.7	5270.6	5379.9
13°	5666.9	5803.9	5663.0	5583.4	5633.4	5627.1	5556.2	5485.3	5283.7	5165.3	5285.2
13.5°	5601.8	5728.6	5606.2	5527.5	5557.2	5532.4	5454.7	5384.3	5185.6	5065.7	5188.6
14°	5534.3	5646.5	5545.0	5465.4	5475.6	5436.2	5354.6	5291.0	5092.9	4975.9	5097.7
14.5°	5461.5	5561.0	5477.5	5400.8	5393.5	5336.7	5255.6	5194.9	5006.4	4890.9	5014.2
15°	5385.2	5470.7	5406.1	5332.8	5310.9	5240.5	5162.8	5105.5	4930.7	4812.2	4938.9
15.5°	5310.0	5385.2	5331.3	5265.3	5228.4	5150.2	5073.5	5017.6	4854.4	4740.3	4865.1
16°	5231.8	5297.8	5254.6	5193.9	5146.8	5062.3	4985.1	4932.6	4781.1	4669.4	4792.3
16.5°	5151.2	5207.5	5175.4	5119.1	5065.2	4973.9	4895.2	4844.2	4704.4	4598.0	4716.0
17°	5065.7	5116.7	5092.9	5039.0	4980.2	4885.5	4810.7	4755.9	4629.1	4526.6	4641.2
17.5°	4981.2	5023.0	5008.9	4958.4	4893.8	4796.7	4725.7	4668.4	4552.4	4456.2	4565.0
18°	4893.8	4930.7	4921.5	4876.3	4810.7	4708.8	4642.7	4586.4	4480.0	4390.2	4494.1
18.5°	4808.8	4841.8	4835.0	4794.7	4726.7	4626.2	4563.5	4505.8	4415.9	4331.4	4427.1
19°	4729.6	4759.3	4753.9	4718.5	4650.5	4551.4	4493.6	4438.2	4360.1	4280.4	4371.7
19.5°	4660.2	4686.4	4681.6	4652.4	4579.6	4487.8	4432.4	4377.1	4309.6	4231.9	4314.9
20°	4597.5	4620.4	4617.5	4593.2	4519.4	4428.5	4374.6	4317.8	4258.6	4180.4	4258.6
20.5°	4541.2	4558.2	4558.2	4539.3	4463.0	4369.8	4313.9	4252.7	4199.8	4120.2	4194.0
21°	4477.1	4492.2	4492.2	4482.9	4406.2	4305.7	4242.5	4178.9	4131.8	4052.2	4122.1



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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°	4250.8	4266.3	4274.1	4289.2	4209.5	4088.6	3995.3	3909.4	3878.3	3811.3	3879.3
23°	4161.0	4182.3	4189.1	4211.5	4128.9	4006.5	3903.6	3813.2	3792.4	3732.6	3791.9
23.5°	4073.5	4100.2	4106.1	4132.8	4045.9	3927.4	3810.3	3724.8	3706.4	3653.5	3704.9
24°	3989.0	4018.7	4021.6	4048.8	3963.8	3850.1	3730.2	3636.5	3620.9	3574.8	3618.0
24.5°	3908.4	3942.4	3942.9	3961.8	3879.8	3768.6	3650.1	3548.1	3535.0	3495.6	3531.1
25°	3830.7	3867.1	3861.3	3869.6	3797.7	3689.9	3569.9	3459.7	3449.0	3416.5	3443.7
25.5°	3756.4	3793.8	3785.1	3780.7	3712.7	3611.7	3489.8	3377.1	3366.9	3339.3	3356.7
26°	3678.2	3720.0	3703.5	3686.0	3627.7	3533.0	3409.7	3297.5	3286.3	3256.7	3275.6
26.5°	3598.1	3642.3	3621.4	3593.2	3542.2	3454.3	3329.5	3215.9	3201.3	3171.7	3190.2
27°	3514.1	3558.8	3532.5	3494.7	3456.8	3363.5	3247.5	3135.3	3116.3	3084.3	3103.7
27.5°	3426.2	3472.3	3441.2	3401.4	3371.3	3273.7	3162.0	3051.3	3028.4	2994.4	3016.3
28°	3332.0	3381.5	3344.1	3303.8	3269.8	3180.0	3074.6	2960.0	2938.6	2902.7	2925.0
28.5°	3232.9	3287.8	3242.6	3210.6	3165.9	3084.3	2978.4	2867.7	2843.9	2805.5	2830.8
29°	3128.5	3195.5	3139.2	3113.9	3062.9	2989.6	2881.8	2774.5	2751.1	2709.4	2739.0
29.5°	3027.5	3097.9	3036.7	3020.2	2960.9	2891.5	2783.7	2677.3	2658.4	2613.2	2644.8
30°	2925.0	2999.3	2936.7	2926.0	2860.4	2793.4	2686.6	2582.1	2565.6	2521.9	2552.0
30.5°	2824.5	2900.7	2838.6	2832.2	2761.3	2696.3	2588.9	2491.3	2473.4	2426.7	2458.8
31°	2727.3	2800.2	2743.9	2735.6	2670.5	2604.5	2495.2	2403.9	2384.0	2335.9	2371.9
31.5°	2633.1	2703.1	2654.0	2641.9	2570.0	2510.8	2406.3	2317.0	2295.6	2247.5	2282.5
32°	2542.3	2606.4	2565.1	2547.7	2479.2	2418.5	2318.4	2233.9	2207.2	2167.4	2196.1
32.5°	2453.0	2509.8	2477.7	2455.4	2387.9	2322.8	2232.0	2149.0	2117.4	2082.4	2110.6
33°	2367.0	2416.1	2392.7	2365.1	2304.4	2233.0	2145.6	2066.9	2032.4	2001.8	2025.1
33.5°	2280.1	2323.3	2303.9	2277.2	2211.6	2141.2	2062.0	1986.3	1946.4	1921.2	1942.6
34°	2193.1	2231.0	2216.0	2191.7	2124.2	2054.7	1977.5	1904.7	1867.8	1846.9	1860.0
34.5°	2104.8	2137.3	2127.6	2108.2	2040.7	1965.4	1893.5	1820.2	1786.7	1768.2	1781.3
35°	2017.3	2045.5	2040.2	2023.2	1960.0	1880.4	1807.1	1739.1	1709.4	1692.9	1703.6
35.5°	1930.9	1955.7	1953.2	1940.1	1876.5	1795.9	1723.0	1659.9	1633.7	1618.1	1627.4
36°	1844.9	1867.8	1865.8	1856.1	1795.4	1717.2	1639.0	1582.2	1561.3	1547.2	1551.1
36.5°	1757.0	1781.3	1781.3	1769.2	1716.2	1632.7	1555.5	1501.6	1486.1	1473.4	1477.3
37°	1675.9	1701.2	1700.2	1688.6	1641.5	1553.6	1473.9	1423.4	1413.2	1406.4	1404.5
37.5°	1594.8	1621.1	1619.1	1607.9	1560.8	1475.9	1396.7	1351.0	1341.8	1339.4	1334.0
38°	1513.7	1540.4	1538.5	1526.8	1486.1	1403.5	1321.4	1278.7	1274.3	1274.3	1264.6
38.5°	1432.6	1460.3	1457.4	1446.2	1411.3	1330.6	1250.0	1207.3	1208.8	1211.2	1199.0
39°	1351.5	1380.2	1376.3	1365.6	1340.8	1260.7	1180.6	1137.9	1145.1	1151.0	1135.4
39.5°	1276.3	1303.9	1300.1	1292.8	1264.6	1193.7	1113.1	1071.3	1083.0	1090.7	1074.7
40°	1205.8	1231.1	1224.3	1222.4	1195.6	1129.6	1048.0	1006.2	1025.2	1033.9	1015.0
40.5°	1135.4	1161.2	1149.5	1154.8	1128.1	1067.4	985.4	945.5	970.3	979.0	960.1
41°	1065.5	1094.1	1080.1	1087.8	1064.5	1008.7	926.6	886.8	917.4	927.6	906.7
41.5°	999.4	1028.1	1013.0	1023.2	1001.4	951.4	871.2	834.3	866.9	877.5	855.7
42°	940.2	966.9	950.4	960.1	945.1	897.5	819.3	784.3	817.3	830.0	807.1
42.5°	881.9	906.7	889.2	897.5	887.7	846.0	771.2	739.6	772.2	784.3	760.0
43°	825.6	847.9	831.4	839.2	834.3	796.0	726.5	697.9	727.5	740.1	715.8
43.5°	769.3	789.6	776.5	781.4	782.4	747.9	684.3	659.5	684.3	696.9	673.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	621.6	631.8	627.0	629.4	638.6	618.7	571.1	551.2	565.8	576.0	558.5
45.5°	573.5	584.2	580.8	585.7	595.9	576.5	536.6	518.7	529.8	538.1	523.5
46°	532.3	541.0	537.6	543.4	552.7	537.1	502.6	486.6	494.9	501.2	489.5
46.5°	489.5	497.8	495.4	501.7	513.3	500.2	471.1	456.5	462.8	468.2	458.0
47°	451.2	457.0	456.0	463.3	475.0	466.7	440.0	426.4	431.2	435.6	426.9
47.5°	411.3	417.2	417.2	425.9	439.5	432.7	408.9	396.3	399.2	402.6	395.3
48°	376.4	381.2	380.7	389.5	404.1	399.2	377.8	366.2	367.1	369.6	364.2
48.5°	342.9	347.2	347.2	356.0	368.6	365.2	346.7	336.5	335.6	336.5	333.1
49°	313.7	316.2	316.2	323.9	333.6	331.7	318.6	308.9	307.9	309.4	306.0
49.5°	285.1	286.0	286.5	292.4	303.0	302.1	291.9	282.6	280.7	282.6	279.7
50°	256.9	256.9	257.4	263.2	274.4	273.4	263.2	255.9	255.0	256.4	253.0
50.5°	227.3	227.3	226.8	232.1	244.3	243.3	235.0	227.8	227.8	228.7	225.3
51°	195.2	194.7	193.8	198.1	211.3	210.8	203.0	196.7	197.2	197.2	193.8
51.5°	159.8	159.3	158.8	159.3	176.3	175.8	170.5	165.1	165.6	164.6	161.7
52°	130.6	130.2	130.2	130.6	140.3	138.4	134.5	131.6	132.1	130.2	127.2
52.5°	101.5	101.0	102.0	102.0	107.3	104.4	101.5	100.0	99.1	98.1	95.7
53°	72.4	72.4	73.3	72.8	88.4	86.0	83.0	82.1	81.1	80.6	78.7
53.5°	43.2	43.7	45.2	44.7	69.4	67.5	65.1	64.1	63.6	63.1	61.2
54°	26.2	26.7	27.7	27.7	50.0	48.6	47.1	46.1	46.1	45.7	44.2
54.5°	15.5	16.0	17.0	16.5	31.1	30.1	29.1	28.7	28.7	28.2	26.7
55°	13.6	13.6	14.1	14.1	13.1	12.1	11.2	10.7	10.7	10.7	10.7
55.5°	11.2	11.2	11.7	11.7	10.2	9.7	8.7	8.7	8.3	8.3	8.7
56°	8.7	8.7	9.2	9.7	8.7	8.3	7.8	7.3	7.3	7.3	7.8
56.5°	6.3	6.3	6.8	7.3	7.8	7.3	6.8	6.8	6.3	6.8	6.8
57°	5.8	5.8	6.3	6.8	7.3	6.8	6.3	5.8	5.8	5.8	6.3
57.5°	5.3	5.3	5.8	6.3	6.3	6.3	5.8	5.3	5.3	5.3	5.8
58°	4.9	4.9	5.3	5.8	5.8	5.8	5.3	5.3	4.9	4.9	5.3
58.5°	4.4	4.4	4.9	5.3	5.3	5.3	4.9	4.9	4.4	4.9	4.9
59°	3.9	4.4	4.4	4.9	5.3	4.9	4.4	4.4	4.4	4.4	4.4
59.5°	3.9	3.9	4.4	4.4	4.9	4.4	4.4	3.9	3.9	3.9	4.4
60°	3.4	3.4	3.9	4.4	4.4	4.4	3.9	3.9	3.9	3.9	3.9
60.5°	3.4	3.4	3.4	3.9	3.9	3.9	3.4	3.4	3.4	3.4	3.4
61°	2.9	2.9	3.4	3.4	3.9	3.4	3.4	3.4	2.9	3.4	3.4
61.5°	2.9	2.9	2.9	3.4	3.4	3.4	2.9	2.9	2.9	2.9	2.9
62°	2.4	2.4	2.9	2.9	3.4	2.9	2.9	2.9	2.9	2.9	2.9
62.5°	2.4	2.4	2.4	2.9	2.9	2.9	2.9	2.4	2.4	2.4	2.9
63°	2.4	2.4	2.4	2.4	2.9	2.9	2.4	2.4	2.4	2.4	2.4
63.5°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
64°	1.9	1.9	1.9	2.4	2.4	2.4	1.9	1.9	1.9	1.9	2.4
64.5°	1.9	1.9	1.9	1.9	2.4	1.9	1.9	1.9	1.9	1.9	1.9
65°	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
65.5°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.5	1.5	1.9	1.9
66°	1.5	1.5	1.5	1.9	1.9	1.9	1.5	1.5	1.5	1.5	1.5



TEST NUMBER: P776574
 CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
68°	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.5
68.5°	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.0	1.0	1.0	1.0
69°	1.0	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0
69.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70.5°	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
71°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
71.5°	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
72°	0.5	0.5	0.5	0.5	1.0	1.0	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
77.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
78°	0.0	0.0	0.0	0.0	0.5	0.5	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: P776574
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

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: P776574

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	6537.2	6537.2	6537.2	6537.2	6537.2	6537.2
0.5°	6540.1	6545.9	6531.8	6524.6	6519.7	6516.3
1°	6544.0	6537.2	6518.7	6509.0	6503.2	6498.8
1.5°	6538.6	6519.2	6501.7	6493.5	6488.6	6481.8
2°	6522.1	6494.0	6480.4	6479.9	6476.5	6465.8
2.5°	6494.4	6461.4	6458.5	6470.2	6468.2	6450.2
3°	6460.4	6425.5	6437.1	6464.3	6463.4	6434.2
3.5°	6421.6	6388.1	6415.3	6461.9	6461.9	6416.7
4°	6383.2	6352.2	6392.5	6460.4	6461.9	6396.8
4.5°	6344.9	6315.2	6365.7	6457.5	6459.0	6371.1
5°	6309.4	6278.3	6335.6	6447.3	6448.8	6339.5
5.5°	6276.9	6244.3	6299.2	6425.0	6428.9	6302.6
6°	6248.2	6215.7	6261.3	6392.0	6398.3	6263.8
6.5°	6225.9	6191.9	6222.5	6349.7	6357.5	6223.5
7°	6207.4	6171.5	6184.6	6300.7	6308.9	6186.1
7.5°	6189.9	6153.0	6146.7	6243.9	6245.3	6147.7
8°	6170.0	6130.7	6106.4	6185.6	6182.2	6110.8
8.5°	6139.9	6100.6	6066.1	6117.1	6106.9	6069.5
9°	6098.6	6061.7	6020.9	6043.3	6031.6	6029.2
9.5°	6042.8	6012.2	5971.9	5965.6	5952.0	5987.9
10°	5974.8	5953.4	5919.0	5891.8	5879.6	5949.1
10.5°	5895.2	5889.8	5862.1	5819.9	5813.1	5908.3
11°	5809.7	5814.5	5800.0	5754.3	5750.9	5868.5
11.5°	5721.3	5725.7	5731.0	5690.2	5692.7	5824.3
12°	5625.6	5630.5	5656.2	5628.1	5640.7	5777.2
12.5°	5526.6	5531.4	5575.6	5563.5	5589.2	5723.2
13°	5429.0	5429.0	5491.6	5498.9	5538.2	5666.9
13.5°	5327.5	5326.5	5400.8	5427.5	5482.4	5601.8
14°	5223.0	5227.4	5306.6	5355.1	5424.1	5534.3
14.5°	5125.9	5134.2	5214.3	5280.8	5360.5	5461.5
15°	5033.2	5045.3	5123.0	5207.0	5295.9	5385.2
15.5°	4944.8	4959.3	5035.1	5133.2	5230.8	5310.0
16°	4857.8	4873.9	4947.2	5057.4	5161.4	5231.8
16.5°	4770.9	4790.8	4859.8	4978.3	5088.5	5151.2
17°	4682.5	4706.8	4774.8	4898.1	5010.8	5065.7
17.5°	4594.6	4622.3	4687.4	4818.0	4932.1	4981.2
18°	4509.6	4540.7	4602.9	4736.9	4852.0	4893.8
18.5°	4430.0	4469.3	4523.7	4657.3	4771.9	4808.8
19°	4361.0	4402.8	4455.7	4586.9	4699.0	4729.6
19.5°	4298.9	4345.0	4395.5	4528.6	4637.4	4660.2
20°	4238.7	4286.2	4335.8	4476.1	4583.5	4597.5
20.5°	4172.6	4226.5	4275.6	4422.2	4529.5	4541.2
21°	4099.3	4158.0	4210.0	4362.0	4471.3	4477.1

TEST NUMBER: P776574

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3844.8	3917.6	3992.9	4144.9	4257.1	4250.8
23°	3758.4	3830.7	3911.8	4061.4	4171.1	4161.0
23.5°	3672.4	3744.3	3832.2	3975.4	4085.7	4073.5
24°	3586.0	3655.4	3752.0	3891.4	3996.8	3989.0
24.5°	3500.0	3569.4	3672.4	3808.4	3910.8	3908.4
25°	3413.6	3484.9	3586.9	3725.8	3823.9	3830.7
25.5°	3336.3	3404.8	3507.3	3642.8	3736.5	3756.4
26°	3257.2	3323.7	3423.3	3555.4	3645.7	3678.2
26.5°	3175.1	3242.6	3338.3	3465.0	3555.8	3598.1
27°	3092.5	3160.0	3246.5	3370.3	3460.7	3514.1
27.5°	3004.6	3072.1	3156.6	3271.3	3364.5	3426.2
28°	2915.3	2982.8	3060.0	3165.4	3267.4	3332.0
28.5°	2819.1	2890.0	2961.9	3063.4	3176.1	3232.9
29°	2723.0	2796.8	2861.4	2961.4	3077.0	3128.5
29.5°	2628.3	2698.2	2763.3	2861.9	2981.8	3027.5
30°	2537.5	2603.5	2667.1	2763.3	2883.7	2925.0
30.5°	2448.1	2507.8	2569.0	2669.1	2788.1	2824.5
31°	2364.1	2413.6	2476.3	2573.9	2692.4	2727.3
31.5°	2279.1	2321.4	2385.5	2481.6	2598.2	2633.1
32°	2199.9	2230.1	2296.1	2390.8	2503.5	2542.3
32.5°	2115.9	2143.6	2207.2	2297.1	2410.7	2453.0
33°	2035.8	2058.1	2121.3	2207.7	2322.3	2367.0
33.5°	1952.8	1975.1	2034.3	2120.3	2235.9	2280.1
34°	1869.2	1890.6	1947.9	2034.3	2149.4	2193.1
34.5°	1787.6	1804.6	1864.9	1952.3	2065.4	2104.8
35°	1708.5	1721.1	1779.9	1868.7	1980.9	2017.3
35.5°	1629.8	1641.5	1702.2	1790.5	1899.8	1930.9
36°	1554.5	1561.3	1624.5	1736.2	1815.3	1844.9
36.5°	1478.3	1481.7	1547.2	1655.1	1723.5	1757.0
37°	1407.9	1402.0	1469.5	1573.0	1643.9	1675.9
37.5°	1333.1	1327.7	1392.3	1491.4	1564.7	1594.8
38°	1261.2	1258.3	1320.5	1409.8	1485.1	1513.7
38.5°	1190.8	1189.8	1252.5	1337.0	1405.9	1432.6
39°	1120.4	1126.7	1186.9	1266.5	1332.6	1351.5
39.5°	1052.4	1061.1	1122.8	1197.6	1259.3	1276.3
40°	987.8	1002.4	1060.1	1129.1	1190.3	1205.8
40.5°	926.6	943.1	1002.4	1065.0	1122.8	1135.4
41°	871.2	890.2	946.0	1002.8	1057.7	1065.5
41.5°	819.8	838.2	892.6	944.6	995.1	999.4
42°	771.7	789.2	844.5	888.7	932.9	940.2
42.5°	728.5	745.0	795.0	836.3	875.1	881.9
43°	687.7	701.3	747.9	782.8	818.3	825.6
43.5°	649.8	660.5	702.7	732.3	763.9	769.3



TEST NUMBER: P776574

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	545.4	549.7	579.9	594.9	613.8	621.6
45.5°	512.8	515.7	541.0	553.1	569.7	573.5
46°	481.3	482.7	503.1	513.8	528.9	532.3
46.5°	451.2	449.2	466.2	475.0	488.6	489.5
47°	421.5	417.6	430.8	437.6	450.2	451.2
47.5°	391.9	386.6	395.8	402.1	413.8	411.3
48°	362.3	356.5	364.2	368.6	378.8	376.4
48.5°	332.2	328.3	333.6	336.5	345.3	342.9
49°	306.0	301.1	306.0	307.4	315.7	313.7
49.5°	279.7	273.9	278.3	278.3	286.5	285.1
50°	252.5	245.2	249.6	250.1	257.9	256.9
50.5°	224.4	215.1	220.0	220.0	227.8	227.3
51°	192.8	181.6	186.0	187.9	195.7	195.2
51.5°	161.2	153.0	156.9	158.3	160.3	159.8
52°	126.3	124.3	127.2	128.7	130.6	130.6
52.5°	96.6	95.7	98.1	99.1	101.0	101.5
53°	79.2	67.0	68.5	69.4	71.9	72.4
53.5°	62.2	38.4	39.3	40.3	42.3	43.2
54°	44.7	22.8	23.8	24.3	25.7	26.2
54.5°	27.7	13.6	14.6	14.6	15.1	15.5
55°	11.2	12.1	12.6	12.1	12.6	13.6
55.5°	9.2	10.7	10.7	10.7	10.7	11.2
56°	8.3	8.7	8.7	8.7	8.7	8.7
56.5°	7.3	7.3	6.8	6.8	6.3	6.3
57°	6.8	6.3	6.3	5.8	5.8	5.8
57.5°	6.3	5.8	5.8	5.3	5.3	5.3
58°	5.8	5.3	5.3	4.9	4.9	4.9
58.5°	5.3	5.3	4.9	4.9	4.4	4.4
59°	4.9	4.9	4.4	4.4	4.4	3.9
59.5°	4.4	4.4	4.4	3.9	3.9	3.9
60°	4.4	3.9	3.9	3.9	3.4	3.4
60.5°	3.9	3.9	3.9	3.4	3.4	3.4
61°	3.4	3.4	3.4	3.4	2.9	2.9
61.5°	3.4	3.4	3.4	2.9	2.9	2.9
62°	2.9	2.9	2.9	2.9	2.4	2.4
62.5°	2.9	2.9	2.9	2.4	2.4	2.4
63°	2.9	2.9	2.4	2.4	2.4	2.4
63.5°	2.4	2.4	2.4	2.4	1.9	1.9
64°	2.4	2.4	2.4	1.9	1.9	1.9
64.5°	2.4	2.4	1.9	1.9	1.9	1.9
65°	1.9	1.9	1.9	1.9	1.5	1.5
65.5°	1.9	1.9	1.9	1.5	1.5	1.5
66°	1.9	1.9	1.5	1.5	1.5	1.5



TEST NUMBER: P776574

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.5	1.5	1.5	1.5	1.0	1.0
68°	1.5	1.5	1.5	1.0	1.0	1.0
68.5°	1.5	1.5	1.0	1.0	1.0	1.0
69°	1.0	1.0	1.0	1.0	1.0	1.0
69.5°	1.0	1.0	1.0	1.0	1.0	1.0
70°	1.0	1.0	1.0	1.0	1.0	1.0
70.5°	1.0	1.0	1.0	1.0	1.0	0.5
71°	1.0	1.0	1.0	1.0	0.5	0.5
71.5°	1.0	1.0	1.0	0.5	0.5	0.5
72°	1.0	1.0	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.0
76.5°	0.5	0.5	0.5	0.5	0.0	0.0
77°	0.5	0.5	0.5	0.5	0.0	0.0
77.5°	0.5	0.5	0.5	0.0	0.0	0.0
78°	0.5	0.5	0.0	0.0	0.0	0.0
78.5°	0.5	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: P776574
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-5000K

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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21.5°	4406.7	4422.2	4423.7	4426.1	4345.0	4238.7	4166.8	4095.9	4054.1	3975.0	4045.9
22°	4329.0	4344.5	4349.4	4361.5	4280.4	4167.3	4084.2	4006.0	3968.6	3895.3	3964.8



44°	718.7	735.3	723.6	726.5	732.3	701.7	644.9	620.2	643.0	655.1	633.8
44.5°	669.7	681.8	673.6	676.0	683.8	660.0	608.5	585.7	603.2	614.8	595.4



66.5°	1.5	1.5	1.5	1.5	1.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5
67°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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°	4021.6	4084.2	4142.5	4296.0	4407.2	4406.7
22°	3935.1	4002.6	4066.7	4225.1	4334.3	4329.0



44°	612.9	621.1	661.0	684.3	711.0	718.7
44.5°	578.4	585.2	618.7	638.6	660.5	669.7



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

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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)