

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: METALUX

Report Number: P600904

Luminaire Tested: UHBS-18-MV-L850-U 120V

Issue Date: 8/26/2022

Test Information

Test Method: LM-79-2019
Report Number: P600904
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ()
Test Lab: INNOVATION CENTER
Issue Date: 8/26/2022
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: UHBS-18-MV-L850-U 120V
Description: UHB Round Select AT 18000 LUMEN SETTING AND 5000K
Light Source: -
Ballast/Driver: -

Summary

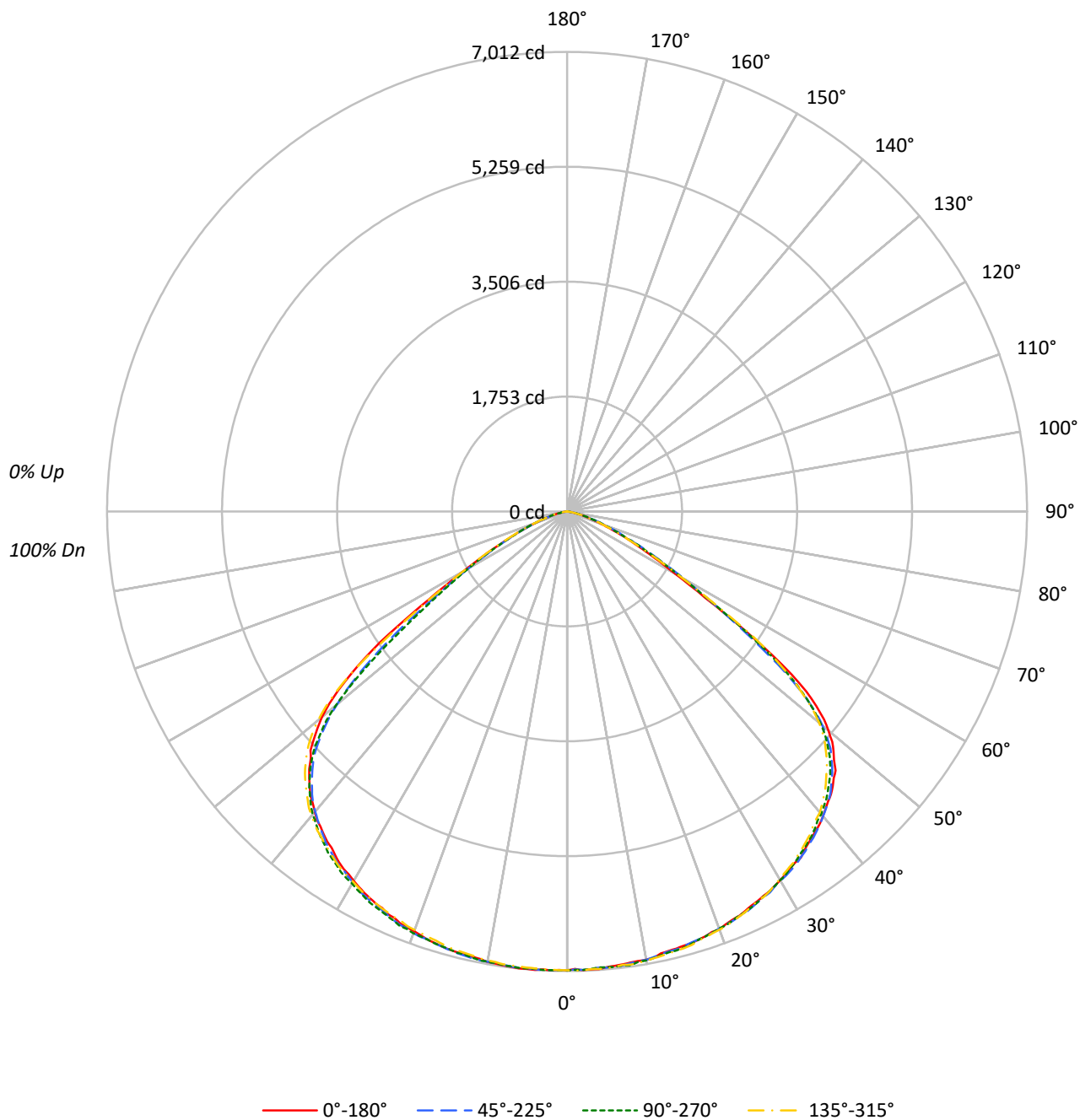
Lumens per Lamp: 18402 (1 lamp)
Luminaire Lumens: 18402.0 lumens
Efficiency: 100.0%
Efficacy: 152.5 lumens/watt
Spacing Criteria (0/90/45): 1.39 / 1.39 / 1.5
Luminous Opening: Circular (Dia: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 120.7
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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CATALOG NUMBER: UHBS-18-MV-L850-U 120V

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				0
RW	70	50	30	10	70	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		100
1	111	107	104	100	108	105	102	99	101	98	96		97	95	93		88
2	102	95	89	85	100	93	88	84	90	85	82		87	83	80		76
3	94	85	78	72	92	83	77	71	80	75	70		78	73	69		66
4	87	76	68	62	84	74	67	61	72	66	61		70	64	60		57
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		50
6	74	61	53	47	72	60	53	47	59	52	46		57	51	46		44
7	68	56	47	42	67	55	47	41	53	46	41		52	46	41		39
8	64	51	43	37	62	50	42	37	49	42	37		48	41	37		35
9	59	47	39	33	58	46	38	33	45	38	33		44	37	33		31
10	56	43	35	30	54	42	35	30	41	35	30		40	34	30		28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	95946	95946	95946	95946
5°	95999	96006	96365	96265
10°	96635	96832	97126	97077
15°	97325	97736	98230	98095
20°	98971	98752	99407	99891
25°	100424	100698	100937	101667
30°	102809	102796	102919	103756
35°	105568	105268	104733	106284
40°	108575	107809	107056	107934
45°	111451	109915	107748	107302
50°	110866	107689	103924	98071
55°	91125	88793	83151	69247
60°	52578	55355	50010	47282
65°	34962	36716	32315	31819
70°	22311	24367	20661	21466
75°	13847	15250	12576	12963
80°	7087	7569	5114	4270
85°	1116	1447	786	676

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 46°

Luminance: 112277 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	666.3	3.6	3.6
10°-20°	1950.1	10.6	10.6
20°-30°	3084.1	16.8	16.8
30°-40°	3946.6	21.4	21.4
40°-50°	4301.9	23.4	23.4
50°-60°	3047.2	16.6	16.6
60°-70°	1095.7	6.0	6.0
70°-80°	293.1	1.6	1.6
80°-90°	17.0	0.1	0.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	5700.5	31.0	31.0
0°-40°	9647.1	52.4	52.4
0°-60°	16996.2	92.4	92.4
0°-90°	18402.0	100.0	100.0
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	18402.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	7001	7001	7001	7001	7001	
5°	6978	6978	7005	6997	6978	665
15°	6859	6888	6923	6914	6859	1942
25°	6641	6659	6675	6723	6641	3071
35°	6310	6292	6260	6353	6310	3952
45°	5750	5671	5559	5536	5750	4417
55°	3814	3716	3480	2898	3814	3280
65°	1078	1132	996	981	1078	1106
75°	262	288	238	245	262	298
85°	7	9	5	4	7	20
90°	2	3	2	1	2	

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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	7000.8	7000.8	7000.8	7000.8	7000.8	7000.8	7000.8	7000.8	7000.8	7000.8	7000.8
1°	6981.8	6984.9	6990.2	6996.5	7012.9	7000.7	6995.2	7000.9	7002.8	7000.3	6994.4
2°	7002.5	6992.5	7003.9	6998.5	7008.9	7001.8	7008.8	7008.1	7000.8	7001.8	7004.6
3°	6996.5	6984.1	6993.9	6987.4	6996.3	6988.5	6995.9	7015.4	6998.7	7005.3	7004.8
4°	6999.7	6970.7	6981.3	6973.9	6996.2	6995.2	7012.4	6993.1	7009.7	6994.4	6993.7
5°	6978.0	6975.5	6997.1	6978.5	7003.7	6986.7	7004.6	6999.3	6992.8	6997.3	6998.3
6°	6969.9	6981.7	6977.1	6986.5	6980.8	6991.8	7010.7	7001.0	7000.0	7004.1	6987.5
7°	6962.3	6987.2	6974.9	6979.3	6959.7	6980.2	7000.3	6998.6	6992.4	6991.3	6986.7
8°	6949.9	6961.5	6958.5	6992.4	6967.1	6994.5	6992.7	6994.5	6975.3	6990.7	6976.0
9°	6945.3	6944.4	6948.0	6954.5	6961.5	6985.2	6984.7	6988.2	6971.6	6975.8	6968.9
10°	6943.9	6926.5	6971.4	6958.1	6953.6	6961.7	6979.2	6978.9	6972.5	6975.7	6958.0
11°	6936.9	6928.3	6922.6	6940.8	6933.3	6953.4	6953.5	6980.3	6971.6	6978.3	6960.5
12°	6893.3	6894.1	6909.1	6919.6	6935.4	6931.3	6944.9	6969.9	6965.5	6958.4	6932.2
13°	6882.9	6887.0	6894.2	6903.1	6909.0	6918.2	6937.4	6965.3	6946.0	6937.9	6912.7
14°	6873.2	6893.9	6880.4	6901.6	6902.0	6913.5	6930.8	6946.5	6941.2	6937.5	6906.1
15°	6859.4	6870.2	6864.1	6888.4	6900.6	6892.3	6923.2	6932.1	6919.3	6913.7	6910.4
16°	6852.0	6848.8	6839.1	6864.4	6874.8	6893.6	6907.6	6907.0	6909.7	6903.1	6885.0
17°	6837.0	6826.7	6837.8	6837.3	6840.6	6859.7	6885.6	6889.6	6890.3	6892.7	6864.7
18°	6817.1	6810.5	6810.8	6818.7	6822.3	6838.6	6869.9	6873.1	6860.3	6871.1	6841.8
19°	6785.5	6804.3	6797.3	6798.6	6802.5	6811.4	6840.6	6860.3	6870.6	6856.7	6826.9
20°	6786.0	6772.4	6775.4	6771.0	6784.1	6793.8	6815.9	6840.9	6846.1	6849.1	6799.6
21°	6745.4	6738.8	6761.5	6765.7	6769.5	6778.6	6799.2	6815.8	6810.6	6822.1	6794.6
22°	6722.6	6743.8	6737.0	6734.7	6729.7	6754.7	6781.1	6786.1	6817.0	6817.8	6756.1
23°	6705.2	6704.4	6720.6	6701.4	6701.8	6726.4	6737.1	6769.0	6779.6	6779.8	6753.3
24°	6674.4	6693.0	6708.6	6687.7	6677.9	6696.4	6724.6	6729.7	6746.3	6749.9	6721.4
25°	6641.0	6658.8	6669.4	6659.1	6644.2	6656.2	6674.9	6698.8	6701.6	6723.2	6695.0
26°	6616.1	6636.2	6634.3	6630.5	6613.5	6615.0	6654.9	6680.2	6676.8	6698.9	6672.8
27°	6585.9	6595.2	6606.7	6596.6	6604.2	6594.6	6620.9	6643.5	6656.7	6674.3	6642.9
28°	6567.4	6590.8	6581.0	6566.5	6567.4	6569.0	6586.9	6611.6	6627.9	6632.0	6625.9
29°	6530.0	6543.3	6526.8	6534.1	6502.7	6533.3	6547.7	6572.1	6596.5	6599.2	6586.0
30°	6496.5	6515.2	6507.5	6495.7	6475.7	6481.8	6503.5	6514.0	6552.9	6556.4	6535.7
31°	6464.0	6486.3	6472.2	6469.6	6425.1	6450.2	6460.5	6464.6	6513.5	6529.2	6514.6
32°	6422.2	6428.1	6470.4	6418.3	6396.9	6396.8	6430.0	6440.4	6436.9	6493.5	6466.6
33°	6384.9	6420.0	6411.8	6383.1	6365.8	6371.7	6383.0	6395.1	6422.8	6444.4	6429.8
34°	6372.7	6373.1	6363.9	6330.4	6301.0	6309.7	6324.8	6362.9	6354.2	6396.3	6388.4
35°	6309.8	6332.7	6325.0	6291.9	6258.6	6263.8	6259.9	6295.8	6310.3	6352.6	6332.8
36°	6255.9	6276.6	6279.8	6241.4	6211.0	6212.5	6224.1	6244.4	6257.8	6285.3	6291.0
37°	6213.6	6240.0	6228.7	6195.4	6152.8	6172.3	6165.2	6178.5	6184.0	6232.0	6236.2
38°	6169.3	6184.0	6182.8	6137.5	6087.5	6095.5	6102.8	6107.2	6126.7	6166.0	6182.5
39°	6128.2	6135.2	6126.4	6068.9	6029.0	6043.1	6059.7	6041.6	6048.5	6094.6	6122.9
40°	6068.8	6081.8	6064.0	6026.0	5980.4	6009.8	5983.9	5961.3	5987.8	6033.0	6050.4
41°	6008.5	6019.1	6005.1	5965.6	5934.3	5916.8	5905.0	5896.9	5910.3	5950.4	5977.5
42°	5949.0	5968.4	5943.9	5907.4	5856.0	5840.8	5842.2	5794.7	5819.7	5855.0	5902.9
43°	5900.8	5885.4	5885.9	5830.1	5773.3	5776.6	5754.5	5706.1	5700.1	5762.8	5795.5
44°	5829.8	5809.4	5788.2	5750.4	5694.5	5677.8	5656.1	5606.3	5582.2	5649.6	5710.4

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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	5750.3	5720.3	5705.8	5671.0	5596.9	5592.7	5559.2	5487.9	5476.1	5536.2	5602.4
46°	5690.9	5622.8	5613.6	5577.3	5517.0	5494.1	5431.1	5374.6	5347.1	5397.3	5485.7
47°	5566.7	5525.4	5497.0	5474.8	5411.7	5384.0	5346.5	5212.5	5171.3	5251.9	5370.9
48°	5467.9	5415.5	5386.4	5346.0	5307.5	5279.3	5193.8	5048.7	4974.4	5054.6	5214.1
49°	5354.0	5275.8	5228.4	5217.3	5173.6	5156.1	5042.8	4863.1	4752.2	4863.1	5037.1
50°	5199.8	5095.7	5066.7	5050.8	5026.9	5002.4	4874.2	4656.5	4504.7	4599.7	4833.7
51°	5040.0	4911.0	4861.5	4858.9	4832.0	4836.4	4664.8	4413.0	4218.7	4294.5	4580.6
52°	4824.4	4662.4	4589.9	4627.6	4609.7	4602.8	4421.4	4151.7	3911.5	3952.5	4282.8
53°	4565.5	4359.4	4285.8	4373.6	4375.2	4347.9	4128.5	3862.9	3570.5	3590.7	3954.6
54°	4232.1	3991.9	3948.0	4067.5	4112.9	4055.1	3820.4	3533.6	3237.9	3216.0	3572.8
55°	3813.7	3589.6	3586.5	3716.1	3819.5	3743.3	3480.0	3162.6	2915.1	2898.1	3195.7
56°	3353.7	3205.9	3223.6	3309.5	3501.5	3372.5	3076.3	2793.6	2618.7	2595.8	2837.9
57°	2877.1	2856.8	2894.7	2921.2	3082.9	2924.4	2674.1	2476.0	2360.5	2341.0	2524.0
58°	2485.2	2551.2	2598.4	2580.3	2699.8	2533.7	2344.4	2211.4	2125.8	2105.3	2271.9
59°	2180.0	2280.7	2332.3	2272.1	2351.3	2225.1	2060.2	1981.1	1890.1	1919.6	2022.3
60°	1918.2	2044.7	2087.2	2019.5	2052.0	1959.7	1824.5	1763.1	1685.3	1725.0	1797.4
61°	1699.3	1850.9	1847.5	1799.6	1816.7	1742.7	1627.2	1569.9	1502.2	1573.0	1589.5
62°	1506.8	1634.7	1659.1	1612.4	1600.0	1554.7	1448.7	1392.2	1341.6	1404.7	1434.9
63°	1343.1	1458.6	1478.3	1422.0	1412.3	1372.5	1284.5	1259.4	1207.6	1247.8	1275.6
64°	1204.9	1298.7	1312.6	1276.2	1232.9	1208.2	1116.3	1101.7	1082.5	1100.7	1128.2
65°	1078.1	1146.1	1164.3	1132.2	1079.9	1071.0	996.5	978.3	965.3	981.2	1005.1
66°	954.3	1025.7	1039.2	997.0	956.7	955.3	874.4	872.9	852.5	881.0	896.3
67°	835.8	909.9	924.5	880.3	844.5	844.1	765.4	771.9	754.2	780.6	795.5
68°	730.1	800.8	820.6	781.7	746.6	741.8	674.7	676.0	664.5	691.7	700.6
69°	639.5	705.9	720.7	688.2	657.7	649.4	592.4	585.9	584.4	610.9	616.8
70°	556.8	614.6	633.1	608.1	574.1	566.7	515.6	513.9	510.1	535.7	540.4
71°	485.1	537.5	555.2	533.6	499.8	495.3	444.6	444.8	442.1	466.5	469.3
72°	421.1	467.6	482.9	461.5	432.6	427.8	383.5	381.2	382.6	403.5	406.9
73°	363.0	404.9	417.0	397.3	372.1	368.6	328.0	326.4	326.4	345.1	347.9
74°	309.8	344.9	357.4	340.5	316.7	313.6	280.7	275.5	276.6	291.8	292.6
75°	261.5	293.1	305.1	288.0	267.8	258.7	237.5	231.6	231.4	244.8	238.4
76°	219.4	244.8	255.6	239.9	223.2	214.7	197.3	191.0	190.6	203.9	198.2
77°	182.1	201.6	212.5	199.2	183.0	176.2	161.4	153.1	152.7	164.5	156.9
78°	149.6	163.7	173.2	162.5	147.3	140.0	127.1	117.8	114.1	127.1	119.2
79°	118.9	127.0	137.2	128.4	112.1	107.2	95.2	85.3	77.1	91.9	86.5
80°	89.8	95.4	103.4	95.9	82.5	77.1	64.8	55.1	45.9	54.1	60.3
81°	59.4	65.7	73.2	65.5	55.5	47.9	36.8	27.7	22.4	27.5	34.7
82°	32.7	39.6	44.7	39.0	31.7	27.5	18.7	15.8	13.9	16.6	18.9
83°	17.2	20.2	23.5	21.2	18.1	16.0	12.2	10.6	9.4	10.3	12.5
84°	11.2	12.9	14.8	13.8	12.3	10.5	7.7	6.8	6.2	6.3	7.5
85°	7.1	8.2	9.6	9.2	8.0	6.3	5.0	4.7	4.5	4.3	4.7
86°	4.6	5.1	5.9	6.0	5.1	4.5	3.9	3.6	3.6	3.4	3.6
87°	3.7	3.9	4.2	4.4	4.0	3.7	3.4	3.2	3.2	3.0	3.1
88°	3.2	3.3	3.4	3.6	3.4	3.3	3.1	2.9	2.8	2.6	2.7
89°	2.9	2.9	2.9	3.3	3.1	3.0	2.5	2.0	1.8	1.7	2.0



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	2.1	2.5	2.6	2.8	2.5	1.9	1.8	1.8	1.9	1.4	1.4

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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	7000.8	7000.8
1°	7003.8	6981.8
2°	6987.3	7002.5
3°	6983.9	6996.5
4°	6981.6	6999.7
5°	6976.2	6978.0
6°	6970.8	6969.9
7°	6971.5	6962.3
8°	6978.0	6949.9
9°	6952.9	6945.3
10°	6950.9	6943.9
11°	6933.2	6936.9
12°	6920.0	6893.3
13°	6913.6	6882.9
14°	6898.7	6873.2
15°	6879.8	6859.4
16°	6858.7	6852.0
17°	6828.2	6837.0
18°	6814.1	6817.1
19°	6792.0	6785.5
20°	6788.6	6786.0
21°	6765.7	6745.4
22°	6734.0	6722.6
23°	6705.5	6705.2
24°	6684.6	6674.4
25°	6665.7	6641.0
26°	6629.6	6616.1
27°	6599.7	6585.9
28°	6572.4	6567.4
29°	6534.3	6530.0
30°	6513.5	6496.5
31°	6471.9	6464.0
32°	6456.9	6422.2
33°	6413.3	6384.9
34°	6355.0	6372.7
35°	6312.5	6309.8
36°	6264.1	6255.9
37°	6211.4	6213.6
38°	6176.2	6169.3
39°	6118.6	6128.2
40°	6061.4	6068.8
41°	6013.6	6008.5
42°	5921.2	5949.0
43°	5855.5	5900.8
44°	5776.9	5829.8

TEST NUMBER: P600904
 CATALOG NUMBER: UHBS-18-MV-L850-U 120V

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	5698.6	5750.3
46°	5599.5	5690.9
47°	5487.1	5566.7
48°	5379.3	5467.9
49°	5234.4	5354.0
50°	5074.3	5199.8
51°	4888.9	5040.0
52°	4650.4	4824.4
53°	4348.3	4565.5
54°	3949.6	4232.1
55°	3489.4	3813.7
56°	3056.0	3353.7
57°	2668.6	2877.1
58°	2359.9	2485.2
59°	2100.8	2180.0
60°	1877.1	1918.2
61°	1664.4	1699.3
62°	1493.3	1506.8
63°	1322.6	1343.1
64°	1158.3	1204.9
65°	1022.9	1078.1
66°	902.7	954.3
67°	794.3	835.8
68°	702.0	730.1
69°	612.7	639.5
70°	536.0	556.8
71°	464.4	485.1
72°	398.8	421.1
73°	340.7	363.0
74°	291.1	309.8
75°	247.2	261.5
76°	206.2	219.4
77°	169.0	182.1
78°	136.0	149.6
79°	104.2	118.9
80°	72.3	89.8
81°	42.3	59.4
82°	20.7	32.7
83°	13.5	17.2
84°	8.6	11.2
85°	5.5	7.1
86°	4.0	4.6
87°	3.3	3.7
88°	2.9	3.2
89°	2.5	2.9



TEST NUMBER: P600904
CATALOG NUMBER: UHBS-18-MV-L850-U 120V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	1.4	2.1

(END OF REPORT)