

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: P601045

Luminaire Tested: UHBS-15-MV-L850-U-CDL-120V

Issue Date: 8/28/2023

**Test Information**

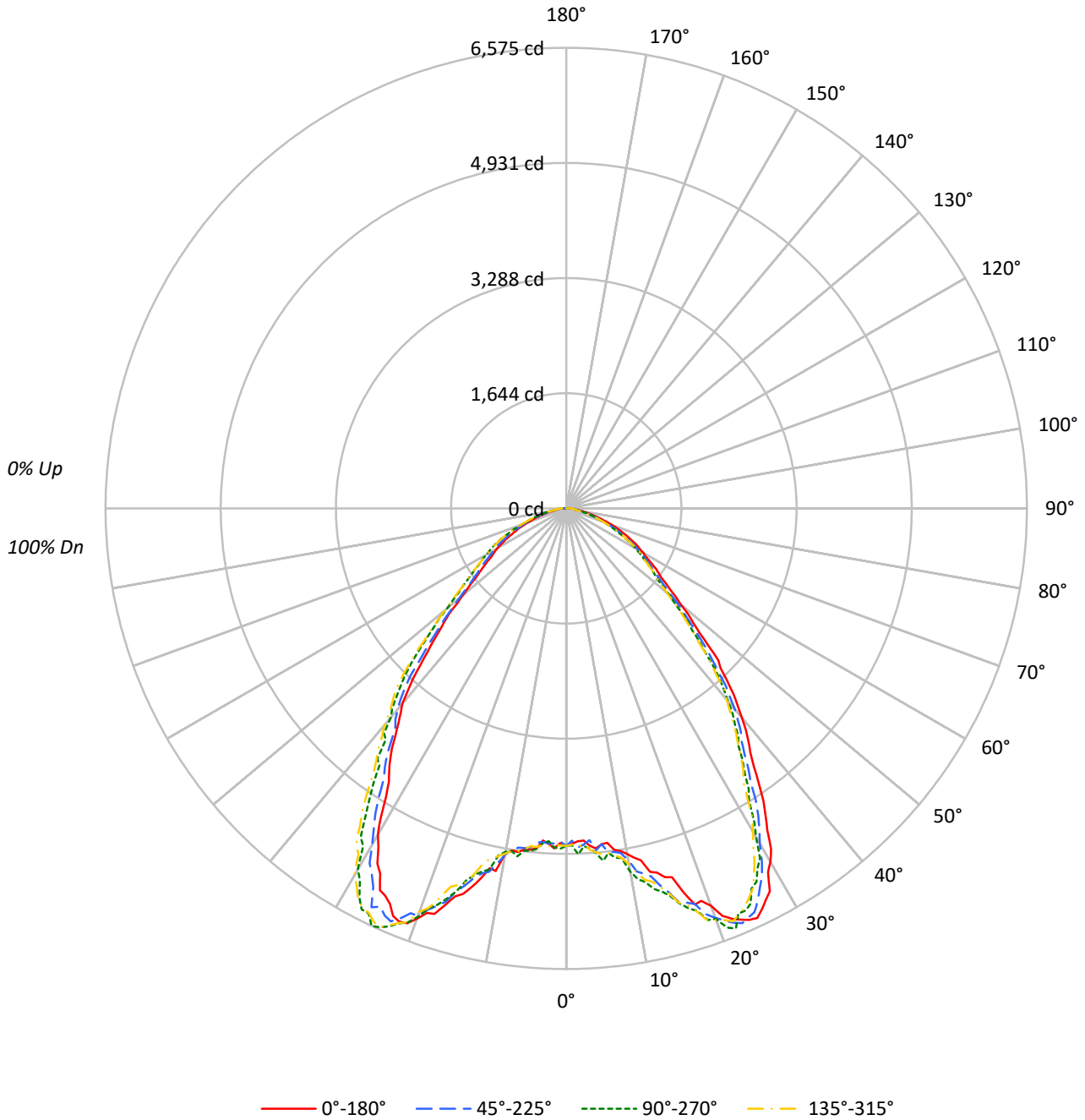
Test Method: LM-79-2019  
Report Number: P601045  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/28/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: UHBS-15-MV-L850-U-CDL-120V  
Description: UHB Round Select with Clear Reflector with Lens Cover at 120V 15000 LUMEN SETTING AND 5000K  
Light Source: -  
Ballast/Driver: Electrical Driver

**Summary**

Lumens per Lamp: 12884 (1 lamp)  
Luminaire Lumens: 12884.0 lumens  
Efficiency: 100.0%  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.43 / 1.34  
Luminous Opening: Circular (Dia: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 105.1  
Input Voltage (V): 120  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31

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

	0°	90°	180°	270°
0°	66020	66020	66020	66020
5°	67038	68028	67026	67183
10°	69712	73290	69606	69279
15°	77312	81260	80853	77915
20°	88041	90916	90926	90527
25°	97545	94217	92305	99428
30°	92218	85694	85072	94149
35°	80154	73480	73304	80289
40°	69720	64405	65115	69573
45°	59510	52160	52186	60551
50°	45602	40943	41039	47152
55°	38412	34909	34147	39545
60°	34811	31371	30962	35718
65°	31998	27000	27088	32915
70°	27685	22528	23037	27489
75°	22828	18295	18756	23262
80°	18239	13520	13914	19044
85°	18980	16951	17675	19735

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 270°  
 Vertical Angle: 89°  
 Luminance: 77193 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	469.5	3.6	3.6
10°-20°	1610.7	12.5	12.5
20°-30°	2853.0	22.1	22.1
30°-40°	2879.4	22.3	22.3
40°-50°	2216.3	17.2	17.2
50°-60°	1393.7	10.8	10.8
60°-70°	907.3	7.0	7.0
70°-80°	417.6	3.2	3.2
80°-90°	136.4	1.1	1.1
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°	4933.3	38.3	38.3
0°-40°	7812.6	60.6	60.6
0°-60°	11422.6	88.7	88.7
0°-90°	12884.0	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°	12884.0	100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	4817	4817	4817	4817	4817	
5°	4873	4945	4872	4883	4873	465
15°	5449	5727	5698	5491	5449	1574
25°	6451	6230	6104	6575	6451	2889
35°	4791	4392	4381	4799	4791	3004
45°	3070	2691	2692	3124	3070	2312
55°	1608	1461	1429	1655	1608	1462
65°	987	833	835	1015	987	973
75°	431	346	354	439	431	467
85°	121	108	112	126	121	146
90°	93	92	93	95	93	



TEST NUMBER: P601045

CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-120V

**CANDELA DISTRIBUTION (FULL):**

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	4817.2	4817.2	4817.2	4817.2	4817.2	4817.2	4817.2	4817.2	4817.2	4817.2	4817.2
1°	4787.5	4750.8	4736.5	4810.1	4777.6	4824.3	4776.6	4739.8	4772.2	4857.2	4849.9
2°	4754.8	4792.8	4889.3	4941.5	4849.8	4833.1	4855.3	4826.9	4745.4	4845.8	4790.4
3°	4745.6	4766.3	4842.8	4828.8	4791.2	4803.4	4792.4	4749.3	4831.0	4757.9	4857.3
4°	4825.2	4789.2	4703.7	4867.8	4942.1	4831.7	4752.8	4765.4	4782.5	4793.0	4823.2
5°	4872.9	4904.9	4890.4	4944.8	4922.3	4940.6	4872.0	4830.8	4745.7	4883.4	4915.4
6°	4819.4	4787.4	4849.6	5058.0	4962.2	4967.3	4898.1	4832.1	4899.0	4913.9	4810.3
7°	4809.8	4907.6	4974.2	4954.3	4984.3	4932.0	4903.7	4858.9	4915.0	4922.9	4918.4
8°	4924.5	4900.9	5002.4	5033.3	4991.0	5017.1	4954.6	4868.6	4910.6	5015.7	4908.0
9°	4951.2	4909.3	5054.3	5052.8	5073.0	5030.4	4942.0	4925.4	4946.8	4956.0	4919.1
10°	5009.3	5054.5	5146.4	5266.4	5191.3	5122.9	5001.7	5031.5	5003.6	4978.2	5045.7
11°	5079.7	5223.7	5336.1	5397.4	5346.8	5265.2	5273.5	5222.1	5109.5	5042.4	5083.3
12°	5136.6	5291.7	5372.9	5455.4	5433.8	5410.0	5249.8	5296.5	5311.0	5269.5	5095.0
13°	5324.2	5341.5	5445.1	5577.8	5471.9	5470.6	5421.4	5367.2	5327.4	5316.1	5148.2
14°	5356.8	5431.0	5661.8	5632.3	5646.5	5497.6	5569.1	5443.8	5423.6	5389.9	5416.3
15°	5448.9	5629.0	5725.4	5727.2	5728.5	5666.2	5698.5	5565.5	5568.1	5491.4	5503.1
16°	5476.6	5793.8	5902.5	5864.5	5872.5	5843.7	5763.5	5747.1	5626.1	5684.4	5552.9
17°	5730.5	5885.7	5885.7	5968.1	5929.5	5909.2	5923.9	5918.7	5823.0	5821.8	5660.8
18°	5946.3	5831.6	6045.1	6040.9	6038.3	6072.9	6085.1	5999.1	5929.7	5947.0	5860.8
19°	5924.6	6073.5	6181.5	6214.8	6316.6	6137.4	6108.2	6072.9	6040.9	6036.3	6038.3
20°	6036.6	6264.7	6169.5	6233.7	6293.8	6216.4	6234.4	6225.7	6162.1	6207.0	6142.1
21°	6231.8	6239.3	6361.7	6410.9	6315.2	6271.2	6343.5	6216.4	6164.0	6334.1	6340.1
22°	6318.3	6332.9	6420.7	6464.7	6383.8	6329.0	6363.1	6341.3	6280.8	6389.4	6432.7
23°	6377.2	6420.6	6441.7	6281.7	6307.6	6281.3	6322.6	6382.7	6429.1	6483.9	6459.6
24°	6429.1	6436.3	6349.0	6285.0	6263.3	6220.0	6181.4	6334.6	6398.2	6545.1	6572.6
25°	6450.6	6366.3	6352.5	6230.5	6151.4	6155.7	6104.1	6287.9	6253.9	6575.1	6590.8
26°	6367.3	6178.7	6286.5	6035.1	6105.2	6015.6	6064.9	6279.1	6394.2	6430.7	6494.2
27°	6276.3	6117.5	6048.5	5981.3	5880.9	5918.2	5851.6	5903.5	6231.5	6427.5	6376.7
28°	6189.0	6016.3	5884.8	5817.3	5782.7	5665.1	5741.1	5860.2	5960.6	6288.3	6444.9
29°	5938.8	5874.2	5649.6	5704.9	5502.5	5501.2	5531.9	5729.3	5848.6	6074.6	6192.6
30°	5827.3	5575.6	5475.5	5415.0	5345.4	5315.4	5375.7	5357.4	5713.6	5949.3	6017.6
31°	5677.0	5395.8	5316.6	5212.1	5137.2	5174.4	5136.6	5228.6	5439.2	5624.0	5823.1
32°	5416.1	5219.0	5122.9	4921.8	4861.0	4904.2	4849.3	5039.2	5240.9	5538.2	5696.0
33°	5219.1	5032.1	4898.1	4781.6	4678.6	4592.2	4648.2	4778.1	5033.5	5269.8	5388.6
34°	5035.6	4790.1	4626.7	4555.3	4511.3	4532.8	4520.8	4472.0	4832.8	5026.8	5212.9
35°	4790.8	4599.6	4457.6	4391.9	4317.5	4380.1	4381.4	4449.0	4578.9	4798.9	4971.7
36°	4558.0	4379.9	4277.8	4175.2	4211.1	4154.4	4228.4	4188.4	4508.7	4533.2	4712.5
37°	4365.1	4213.5	4110.0	4085.8	4029.6	4029.0	4048.0	4048.7	4234.3	4479.1	4538.7
38°	4226.2	4098.8	3993.1	3912.5	3878.7	3874.4	3889.8	3886.9	4031.3	4183.5	4361.3
39°	4074.5	3985.9	3811.2	3772.9	3699.8	3721.5	3751.0	3817.4	3931.1	4133.6	4150.3
40°	3897.0	3799.7	3691.3	3599.9	3602.2	3523.3	3639.6	3648.1	3828.5	3888.8	4073.6
41°	3732.0	3643.9	3473.6	3435.2	3433.2	3487.1	3440.5	3516.9	3682.9	3789.8	3816.4
42°	3568.1	3513.0	3286.2	3270.2	3166.5	3255.8	3267.3	3330.9	3518.6	3622.3	3724.6
43°	3368.5	3255.6	3098.9	3070.8	3052.3	3024.8	3048.3	3144.3	3350.7	3463.1	3589.4
44°	3169.7	3067.6	2925.9	2859.2	2873.6	2823.6	2851.3	2914.8	3102.0	3314.3	3428.0



TEST NUMBER: P601045  
 CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-120V

**CANDELA DISTRIBUTION (continued):**

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	3070.4	2908.1	2744.8	2691.2	2640.6	2620.1	2692.5	2720.1	2923.7	3124.1	3201.4
46°	2834.1	2662.9	2602.4	2496.1	2470.2	2494.4	2510.5	2531.4	2719.8	2931.9	3014.6
47°	2602.3	2504.6	2415.8	2380.9	2314.6	2337.6	2386.3	2376.5	2517.7	2733.7	2798.3
48°	2433.0	2322.2	2270.5	2207.6	2153.7	2191.4	2247.1	2223.9	2359.3	2548.5	2602.5
49°	2312.2	2254.6	2094.9	2030.9	2014.4	2035.8	2055.5	2081.2	2162.1	2407.2	2429.7
50°	2138.8	2087.8	1918.5	1920.3	1860.9	1899.6	1924.8	1917.9	2051.8	2211.5	2242.5
51°	2020.6	1957.5	1825.9	1779.3	1725.5	1800.7	1800.7	1800.6	1917.6	2082.2	2094.6
52°	1888.1	1822.0	1695.1	1664.5	1640.6	1694.0	1688.9	1676.4	1794.9	1941.5	1958.8
53°	1777.0	1723.2	1592.9	1589.7	1567.1	1615.3	1584.8	1579.5	1711.4	1853.5	1839.6
54°	1674.6	1633.8	1521.3	1531.0	1523.7	1549.1	1503.2	1504.9	1625.4	1744.4	1740.6
55°	1607.6	1556.4	1460.2	1461.0	1432.4	1472.6	1429.1	1447.4	1555.3	1655.0	1646.0
56°	1548.7	1483.2	1391.6	1391.1	1360.0	1396.4	1355.0	1379.5	1484.4	1582.0	1564.5
57°	1466.6	1410.7	1329.8	1324.1	1297.2	1334.3	1282.3	1310.7	1413.4	1500.1	1491.8
58°	1380.1	1338.3	1279.7	1260.2	1249.7	1288.9	1231.4	1252.1	1342.9	1437.7	1421.3
59°	1311.7	1281.2	1225.9	1200.8	1209.0	1233.9	1185.4	1196.3	1277.5	1375.6	1348.0
60°	1270.0	1224.0	1160.2	1144.5	1150.5	1179.8	1129.6	1148.3	1220.7	1303.1	1275.6
61°	1204.9	1161.7	1107.9	1081.6	1083.6	1113.5	1072.8	1105.5	1171.6	1257.6	1228.6
62°	1159.8	1099.2	1055.1	1022.8	1021.4	1048.5	1014.5	1050.4	1114.1	1202.3	1170.8
63°	1107.2	1033.7	993.6	952.5	953.6	979.3	957.8	986.7	1055.0	1142.6	1107.6
64°	1043.5	976.5	932.0	893.2	899.3	917.9	896.0	930.4	992.6	1080.3	1049.8
65°	986.7	913.4	878.0	832.6	844.8	855.3	835.3	879.8	935.2	1015.0	992.0
66°	929.6	855.0	819.8	773.4	783.7	802.1	783.2	815.6	879.3	941.8	938.4
67°	866.8	788.4	759.7	724.2	724.1	747.6	735.2	760.1	822.2	874.5	882.7
68°	811.0	732.4	700.8	666.9	666.1	690.9	684.8	714.4	766.7	817.2	814.9
69°	750.2	673.3	649.6	614.3	610.9	629.0	628.6	661.9	712.6	750.3	755.1
70°	690.9	614.9	597.4	562.2	565.3	576.1	574.9	611.2	657.3	686.0	694.5
71°	633.9	557.5	554.8	512.2	514.3	518.4	523.9	564.8	598.0	633.3	634.2
72°	580.9	513.1	502.9	471.3	468.9	464.1	478.7	517.8	546.5	578.9	581.8
73°	532.6	466.7	454.6	428.5	418.9	419.4	433.1	465.9	493.8	535.0	533.1
74°	482.3	419.8	412.2	385.4	372.5	377.4	392.4	418.7	445.9	486.6	483.1
75°	431.1	377.2	370.5	345.5	334.5	338.6	354.2	371.5	401.4	439.3	441.1
76°	386.5	339.7	336.2	308.5	298.1	299.1	315.5	334.3	360.8	398.6	395.7
77°	345.3	305.0	295.4	271.6	263.4	259.5	277.0	296.8	324.1	357.6	360.3
78°	306.6	268.6	254.7	238.0	226.4	222.0	238.5	259.3	286.7	321.9	317.0
79°	268.0	233.0	220.4	204.3	192.7	190.0	204.3	224.8	249.7	281.4	273.7
80°	231.1	204.1	190.6	171.3	162.9	165.1	176.3	193.2	215.3	241.3	232.6
81°	197.3	174.9	164.8	147.3	143.6	145.1	157.9	165.1	184.1	205.0	199.4
82°	168.6	154.9	144.5	132.9	131.6	132.2	139.5	145.4	160.9	174.5	171.3
83°	146.8	135.0	131.4	122.7	121.8	122.3	128.3	131.1	143.5	155.6	150.6
84°	132.0	123.4	121.1	114.3	114.1	114.3	119.7	120.4	131.6	136.8	134.5
85°	120.7	114.2	112.5	107.8	107.7	107.8	112.4	111.9	120.8	125.5	123.6
86°	111.9	107.1	105.8	102.6	102.7	102.7	106.5	105.1	111.6	115.9	114.9
87°	105.1	101.6	100.5	98.4	98.7	98.5	101.3	99.9	105.0	108.4	107.8
88°	99.9	97.1	96.6	95.3	95.8	95.3	97.4	95.7	99.9	102.8	102.3
89°	95.9	93.9	93.5	93.3	93.8	93.4	94.7	92.7	95.8	98.3	98.1



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**CANDELA DISTRIBUTION (continued):**

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	92.9	91.8	91.5	92.5	93.1	92.6	93.1	90.9	93.1	94.9	94.3





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**CANDELA DISTRIBUTION (continued):**

	330°	360°
0°	4817.2	4817.2
1°	4767.0	4787.5
2°	4833.3	4754.8
3°	4800.8	4745.6
4°	4815.5	4825.2
5°	4781.6	4872.9
6°	4886.9	4819.4
7°	4882.3	4809.8
8°	4974.8	4924.5
9°	4984.2	4951.2
10°	4958.5	5009.3
11°	5025.4	5079.7
12°	5125.0	5136.6
13°	5203.6	5324.2
14°	5308.1	5356.8
15°	5546.2	5448.9
16°	5632.2	5476.6
17°	5634.8	5730.5
18°	5837.9	5946.3
19°	6031.4	5924.6
20°	6109.1	6036.6
21°	6311.6	6231.8
22°	6335.3	6318.3
23°	6471.9	6377.2
24°	6512.5	6429.1
25°	6423.5	6450.6
26°	6356.2	6367.3
27°	6410.1	6276.3
28°	6209.2	6189.0
29°	6130.2	5938.8
30°	6079.5	5827.3
31°	5689.7	5677.0
32°	5614.4	5416.1
33°	5428.9	5219.1
34°	5186.0	5035.6
35°	4922.3	4790.8
36°	4661.6	4558.0
37°	4461.7	4365.1
38°	4358.1	4226.2
39°	4192.3	4074.5
40°	4000.7	3897.0
41°	3850.9	3732.0
42°	3688.3	3568.1
43°	3573.9	3368.5
44°	3374.5	3169.7



TEST NUMBER: P601045  
 CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-120V

**CANDELA DISTRIBUTION (continued):**

	330°	360°
45°	3210.6	3070.4
46°	3001.8	2834.1
47°	2769.9	2602.3
48°	2589.9	2433.0
49°	2431.7	2312.2
50°	2273.8	2138.8
51°	2151.7	2020.6
52°	2001.1	1888.1
53°	1866.1	1777.0
54°	1787.9	1674.6
55°	1691.8	1607.6
56°	1614.3	1548.7
57°	1531.4	1466.6
58°	1457.2	1380.1
59°	1382.9	1311.7
60°	1319.9	1270.0
61°	1270.9	1204.9
62°	1218.9	1159.8
63°	1157.0	1107.2
64°	1093.1	1043.5
65°	1032.1	986.7
66°	964.8	929.6
67°	901.4	866.8
68°	830.1	811.0
69°	761.8	750.2
70°	695.6	690.9
71°	632.3	633.9
72°	586.2	580.9
73°	532.5	532.6
74°	483.9	482.3
75°	434.0	431.1
76°	387.4	386.5
77°	345.9	345.3
78°	304.6	306.6
79°	267.9	268.0
80°	227.9	231.1
81°	194.3	197.3
82°	166.7	168.6
83°	145.2	146.8
84°	129.1	132.0
85°	119.2	120.7
86°	111.3	111.9
87°	104.7	105.1
88°	99.5	99.9
89°	95.5	95.9



TEST NUMBER: P601045  
CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-120V

**CANDELA DISTRIBUTION (continued):**

	330°	360°
90°	92.5	92.9

(END OF REPORT)