

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: P600923

Luminaire Tested: UHBS-36-MV-L850-U 120V

Issue Date: 8/26/2022

Test Information

Test Method: LM-79-2019
Report Number: P600923
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-36-MV-L850-U 120V
Description: UHB Round Select AT 36000 LUMEN SETTING AND 5000K
Light Source: -
Ballast/Driver: -

Summary

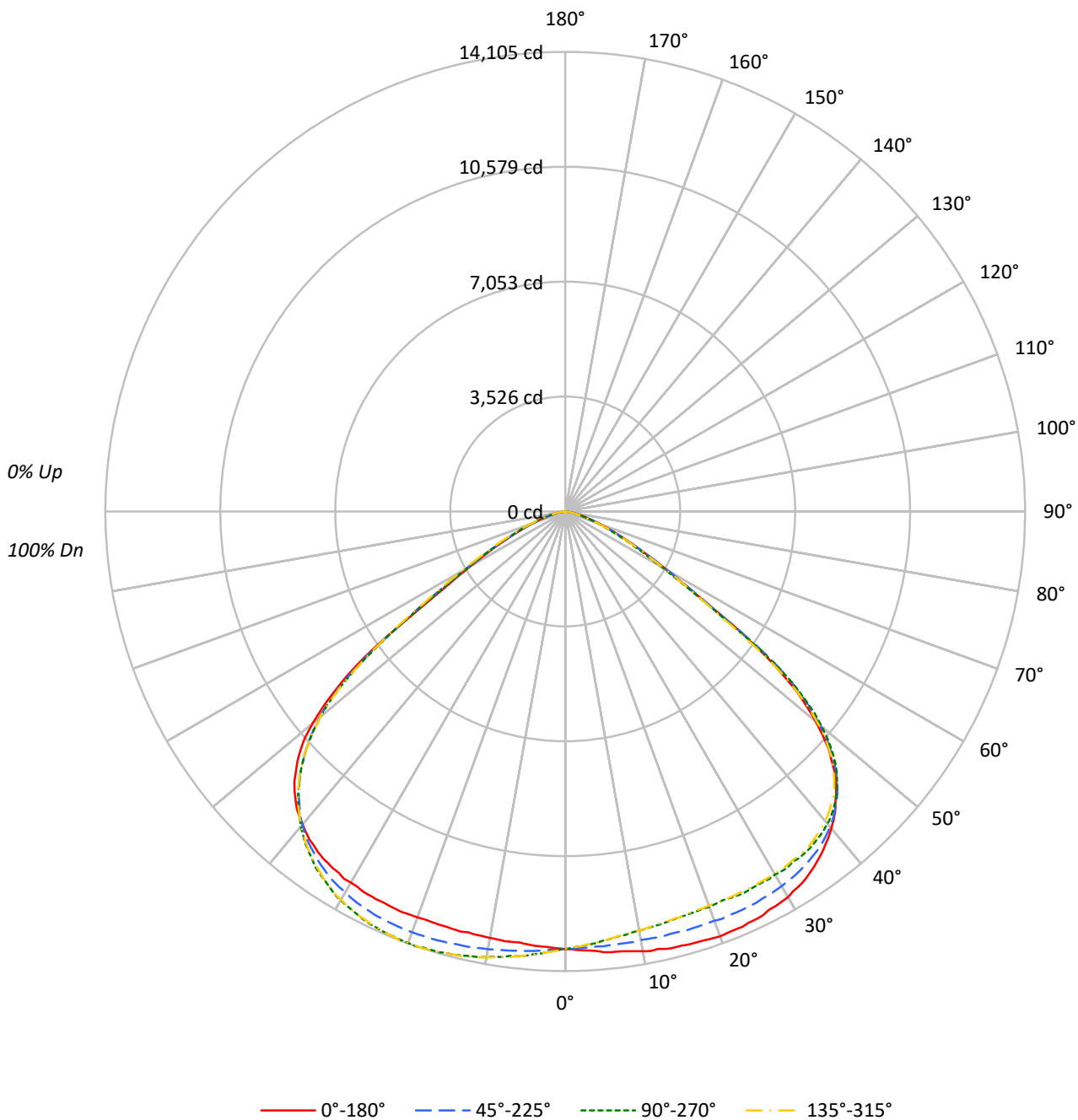
Lumens per Lamp: 37167 (1 lamp)
Luminaire Lumens: 37167.0 lumens
Efficiency: 100.0%
Efficacy: 151.4 lumens/watt
Spacing Criteria (0/90/45): 1.49 / 1.48 / 1.54
Luminous Opening: Circular (Dia: 1.33' x H: 0')
CIE Type: Direct

Input Watts (W): 245.5
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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CATALOG NUMBER: UHBS-36-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				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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	61	53	47	72	60	53	47	59	52	46	57	51	46	56	50	46	44
7	68	56	47	42	67	55	47	41	53	46	41	52	46	41	51	45	41	39
8	64	51	43	37	62	50	42	37	49	42	37	48	41	36	46	41	36	34
9	59	46	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	104055	104055	104055	104055
5°	105594	102862	103733	106404
10°	107806	102765	104574	109239
15°	110662	103875	106433	112554
20°	114442	106515	109306	116194
25°	118137	110505	113141	119806
30°	122298	115145	117633	123229
35°	125876	121090	122729	126262
40°	128391	126568	126718	127634
45°	128552	129214	128678	126225
50°	121058	123862	121813	118158
55°	93513	94016	89194	88139
60°	56275	53517	51585	53670
65°	37956	35285	34957	36491
70°	25711	23729	23607	25668
75°	17323	15216	15342	17039
80°	10632	8388	8741	10200
85°	1520	1253	1245	1653

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 30°
 Vertical Angle: 45°
 Luminance: 129618 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	1285.3	3.5	3.5
10°-20°	3831.3	10.3	10.3
20°-30°	6231.8	16.8	16.8
30°-40°	8179.9	22.0	22.0
40°-50°	8900.6	23.9	23.9
50°-60°	5990.2	16.1	16.1
60°-70°	2083.5	5.6	5.6
70°-80°	610.2	1.6	1.6
80°-90°	54.3	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°	11348.3	30.5	30.5
0°-40°	19528.2	52.5	52.5
0°-60°	34419.0	92.6	92.6
0°-90°	37167.0	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°	37167.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	13430	13430	13430	13430	13430	
5°	13577	13226	13338	13681	13577	1298
15°	13796	12950	13269	14032	13796	3914
25°	13819	12926	13235	14014	13819	6381
35°	13308	12802	12976	13349	13308	8320
45°	11732	11793	11744	11520	11732	8964
55°	6923	6960	6603	6525	6923	6074
65°	2070	1925	1907	1990	2070	2141
75°	579	508	512	569	579	647
85°	17	14	14	19	17	65
90°	4	4	4	4	4	



TEST NUMBER: P600923
 CATALOG NUMBER: UHBS-36-MV-L850-U 120V

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	13430.3	13430.3	13430.3	13430.3	13430.3	13430.3	13430.3	13430.3	13430.3	13430.3	13430.3
1°	13445.1	13443.0	13406.8	13387.0	13370.9	13391.6	13412.1	13448.5	13475.6	13457.8	13473.2
2°	13475.5	13438.7	13390.3	13349.1	13324.0	13388.7	13384.6	13456.4	13462.6	13512.8	13533.5
3°	13492.4	13426.5	13385.8	13318.7	13279.8	13324.4	13373.4	13467.6	13531.4	13576.8	13598.6
4°	13519.7	13438.0	13337.9	13285.6	13262.4	13281.8	13360.5	13488.2	13547.9	13618.0	13645.5
5°	13577.1	13470.6	13319.2	13225.8	13217.0	13239.3	13337.8	13488.0	13591.1	13681.2	13686.5
6°	13599.1	13447.6	13312.4	13190.1	13168.8	13215.8	13305.7	13489.0	13623.8	13731.7	13738.0
7°	13605.9	13458.5	13296.1	13149.0	13102.4	13167.3	13311.9	13507.7	13657.9	13742.2	13806.4
8°	13627.5	13458.9	13285.0	13130.8	13077.5	13144.2	13316.4	13523.7	13665.7	13809.8	13826.5
9°	13662.3	13471.1	13278.7	13085.0	13039.3	13119.7	13298.2	13534.3	13695.8	13838.1	13867.6
10°	13703.1	13472.9	13234.8	13062.3	13017.6	13117.9	13292.3	13531.7	13753.2	13885.2	13933.2
11°	13745.4	13496.7	13226.3	13039.2	12967.6	13083.7	13273.6	13532.5	13780.2	13935.8	13956.3
12°	13725.1	13506.0	13233.7	13016.2	12966.0	13053.7	13278.7	13557.3	13810.7	13954.4	13991.5
13°	13779.1	13511.4	13242.3	13001.9	12915.9	13029.4	13255.4	13562.1	13822.0	13987.1	14045.2
14°	13796.5	13511.7	13213.4	12974.9	12892.1	13027.7	13285.9	13560.0	13825.7	14022.8	14049.5
15°	13796.4	13536.6	13179.7	12950.2	12859.3	13005.4	13269.1	13588.4	13850.5	14032.3	14083.2
16°	13817.9	13545.1	13237.2	12937.7	12886.9	12995.3	13258.9	13577.5	13862.9	14070.0	14096.4
17°	13825.0	13544.2	13203.3	12930.2	12847.7	12979.2	13259.3	13604.0	13866.9	14073.5	14116.9
18°	13839.3	13559.1	13189.6	12916.4	12810.1	12960.2	13250.9	13614.2	13861.2	14077.2	14127.3
19°	13859.8	13555.3	13189.9	12901.8	12808.5	12963.3	13241.3	13594.2	13884.6	14104.8	14151.0
20°	13880.2	13559.4	13174.7	12918.7	12803.1	12949.7	13257.2	13601.2	13883.9	14092.7	14116.4
21°	13858.1	13571.4	13215.3	12897.3	12786.2	12954.5	13258.2	13596.5	13869.2	14088.5	14158.2
22°	13850.1	13553.3	13186.4	12873.3	12799.4	12946.7	13275.4	13586.3	13879.1	14063.9	14109.6
23°	13857.8	13560.7	13194.6	12894.7	12793.8	12952.2	13264.3	13575.8	13860.1	14058.7	14083.4
24°	13821.8	13555.3	13195.6	12914.2	12817.4	12933.8	13250.8	13571.9	13830.4	14032.3	14059.8
25°	13819.3	13546.7	13185.9	12926.5	12797.2	12932.8	13234.8	13577.1	13813.4	14014.5	14031.4
26°	13803.6	13543.7	13185.9	12909.9	12802.5	12928.4	13237.9	13551.0	13771.9	13980.8	14000.5
27°	13734.8	13499.0	13160.7	12896.5	12798.8	12921.2	13220.6	13521.8	13744.5	13930.6	13957.6
28°	13722.8	13507.5	13154.6	12886.4	12808.0	12895.1	13211.8	13500.0	13699.5	13878.5	13896.4
29°	13690.7	13463.9	13138.6	12900.9	12798.3	12898.9	13166.6	13458.5	13654.0	13834.6	13851.5
30°	13670.1	13433.0	13116.8	12870.6	12784.2	12885.7	13148.7	13400.2	13589.8	13774.2	13779.1
31°	13588.9	13393.7	13092.0	12885.7	12787.3	12861.3	13160.3	13375.7	13525.1	13718.2	13719.8
32°	13552.8	13355.0	13079.2	12877.7	12762.7	12868.0	13086.8	13339.3	13454.8	13610.1	13621.5
33°	13487.1	13310.4	13039.1	12821.3	12750.9	12810.6	13065.8	13255.0	13397.8	13524.2	13545.7
34°	13398.7	13256.1	12996.8	12831.2	12735.0	12788.9	13019.0	13189.2	13279.1	13433.4	13401.6
35°	13308.5	13168.0	12959.3	12802.5	12708.5	12767.8	12975.8	13117.7	13191.4	13349.3	13315.1
36°	13205.5	13110.5	12889.3	12773.0	12680.7	12731.8	12913.0	13022.0	13070.7	13200.6	13198.1
37°	13099.8	13040.4	12829.9	12717.6	12613.8	12669.2	12824.4	12944.9	12939.6	13069.4	13053.3
38°	12968.0	12931.5	12763.9	12663.2	12553.9	12583.3	12758.9	12827.6	12834.2	12943.8	12932.3
39°	12844.6	12827.8	12673.2	12595.4	12483.8	12511.7	12645.1	12710.0	12685.0	12779.0	12766.0
40°	12694.4	12704.0	12562.9	12514.1	12412.2	12420.2	12529.0	12567.4	12524.3	12619.5	12595.6
41°	12550.3	12568.4	12457.6	12419.9	12284.3	12305.5	12423.7	12441.3	12324.3	12413.3	12406.0
42°	12378.0	12395.1	12319.2	12290.7	12180.9	12156.8	12298.5	12240.5	12119.6	12217.3	12210.2
43°	12158.9	12240.5	12170.4	12148.6	12080.2	12028.5	12126.0	12053.4	11911.0	12019.4	12008.3
44°	11962.5	12030.3	12007.2	11989.6	11889.1	11852.3	11952.2	11830.9	11661.8	11768.9	11763.5



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	11732.4	11829.7	11760.4	11792.8	11680.7	11656.8	11743.9	11609.6	11427.4	11520.0	11504.6
46°	11474.4	11573.2	11557.8	11573.3	11467.2	11431.9	11485.2	11322.6	11128.1	11230.3	11236.6
47°	11166.8	11264.0	11290.8	11338.5	11198.6	11169.9	11235.1	11034.4	10817.6	10925.1	10915.6
48°	10864.2	10965.9	10971.6	11027.2	10895.7	10892.5	10914.2	10712.5	10505.5	10590.0	10567.1
49°	10461.4	10600.0	10636.3	10682.3	10520.7	10540.8	10569.2	10323.3	10128.3	10212.5	10192.4
50°	10043.5	10173.9	10226.7	10276.1	10110.4	10134.6	10106.1	9931.5	9739.2	9802.9	9766.8
51°	9566.5	9722.4	9759.2	9841.1	9615.3	9674.9	9599.1	9461.1	9265.5	9328.4	9291.7
52°	9065.1	9229.5	9277.5	9289.9	9077.1	9111.2	9019.6	8953.1	8712.1	8748.7	8734.8
53°	8410.4	8651.1	8701.8	8682.0	8413.2	8463.0	8374.6	8335.1	8064.4	8088.6	8026.5
54°	7718.8	7978.0	8024.6	7949.7	7648.7	7678.3	7614.3	7587.8	7257.2	7326.2	7312.9
55°	6922.9	7102.0	7116.6	6960.1	6616.2	6771.8	6603.1	6755.0	6467.9	6525.0	6559.2
56°	6120.4	6045.1	6045.4	5869.7	5650.8	5866.6	5546.2	5891.8	5672.2	5669.0	5795.3
57°	5190.4	5221.6	5253.6	5057.7	4982.5	5146.6	4759.4	5095.3	4979.0	4918.0	5067.0
58°	4546.5	4595.4	4669.7	4417.8	4432.3	4548.8	4192.3	4419.7	4439.9	4338.3	4543.3
59°	4036.4	4058.0	4164.2	3876.2	3980.6	4030.6	3732.5	3895.5	3964.6	3862.5	4063.8
60°	3631.7	3598.3	3750.0	3453.7	3530.7	3588.0	3329.0	3442.0	3546.9	3463.6	3649.6
61°	3248.8	3191.4	3349.2	3055.6	3153.5	3157.4	2986.0	3028.8	3161.6	3091.5	3285.1
62°	2891.9	2844.4	2988.8	2721.3	2825.8	2812.8	2683.1	2689.9	2844.3	2773.8	2933.3
63°	2583.1	2540.7	2661.6	2423.2	2534.0	2494.7	2401.0	2388.8	2545.8	2499.8	2631.6
64°	2320.1	2262.6	2376.5	2162.0	2241.4	2217.5	2139.7	2120.1	2266.4	2228.7	2372.6
65°	2070.4	2012.9	2107.4	1924.7	1991.3	1966.9	1906.8	1881.1	2014.9	1990.5	2139.8
66°	1847.7	1791.3	1877.6	1708.8	1768.7	1740.2	1693.2	1670.5	1784.3	1788.3	1921.6
67°	1642.5	1588.8	1663.5	1517.4	1574.6	1543.7	1503.4	1483.5	1582.6	1607.2	1706.9
68°	1457.2	1417.8	1469.6	1344.6	1398.0	1367.7	1340.5	1315.1	1394.0	1439.0	1517.2
69°	1286.0	1253.0	1290.8	1187.4	1219.4	1207.2	1184.7	1158.0	1227.1	1277.9	1344.9
70°	1135.0	1106.9	1133.3	1047.5	1068.9	1056.2	1042.1	1020.7	1075.3	1133.1	1182.8
71°	999.2	973.2	988.0	916.7	931.0	926.6	913.7	898.0	942.4	996.5	1042.7
72°	877.0	855.6	861.6	796.5	805.7	808.4	797.2	784.3	822.3	873.3	916.7
73°	767.6	744.2	747.4	689.4	695.1	701.4	691.9	680.9	713.0	762.5	797.5
74°	669.0	644.1	644.8	595.5	594.5	602.1	595.2	589.5	615.5	660.7	689.9
75°	578.7	552.7	553.9	508.3	506.5	516.7	512.5	505.8	527.2	569.2	594.1
76°	496.4	471.1	471.4	431.3	426.5	436.7	433.5	430.6	448.8	485.7	506.2
77°	422.5	398.1	395.4	361.9	355.5	366.5	366.2	362.4	377.4	412.8	427.8
78°	357.2	332.6	327.3	300.5	292.4	305.0	305.2	302.8	311.1	345.8	355.7
79°	296.4	273.1	263.2	241.4	235.3	245.6	249.9	245.3	255.4	286.7	292.6
80°	238.3	217.0	207.2	188.0	178.6	192.1	195.9	191.7	199.3	228.6	231.6
81°	182.0	161.6	155.3	137.9	129.3	142.5	146.1	142.8	147.4	174.2	173.2
82°	130.6	106.7	106.1	93.2	83.3	95.2	96.8	95.1	95.1	123.5	121.5
83°	80.3	61.7	62.2	53.7	44.2	52.9	53.3	52.7	54.5	76.0	73.0
84°	37.3	31.3	29.2	23.5	21.6	23.6	23.4	25.2	26.4	36.0	35.9
85°	17.1	15.3	15.0	14.1	13.5	14.2	14.0	15.3	15.4	18.6	18.6
86°	10.1	9.4	9.5	9.0	8.6	8.7	8.6	9.3	9.8	11.0	11.9
87°	6.4	6.1	6.2	6.6	6.5	6.5	6.5	6.5	6.6	6.5	6.8
88°	5.3	5.2	5.2	5.8	5.8	5.7	5.7	5.6	5.7	5.3	5.3
89°	4.7	4.5	4.5	5.2	5.2	5.2	5.1	5.0	5.1	4.6	4.6



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	3.7	3.5	3.4	3.7	3.7	3.7	3.7	3.6	3.7	3.5	3.6



TEST NUMBER: P600923
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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	13430.3	13430.3
1°	13491.3	13445.1
2°	13514.7	13475.5
3°	13549.8	13492.4
4°	13606.5	13519.7
5°	13664.0	13577.1
6°	13707.2	13599.1
7°	13747.1	13605.9
8°	13795.5	13627.5
9°	13835.3	13662.3
10°	13872.8	13703.1
11°	13923.6	13745.4
12°	13955.8	13725.1
13°	13985.2	13779.1
14°	13981.1	13796.5
15°	13994.7	13796.4
16°	14016.3	13817.9
17°	14043.9	13825.0
18°	14071.1	13839.3
19°	14037.6	13859.8
20°	14052.1	13880.2
21°	14046.6	13858.1
22°	14040.5	13850.1
23°	14033.2	13857.8
24°	13989.0	13821.8
25°	13964.9	13819.3
26°	13908.3	13803.6
27°	13898.7	13734.8
28°	13878.2	13722.8
29°	13790.3	13690.7
30°	13732.1	13670.1
31°	13670.6	13588.9
32°	13601.6	13552.8
33°	13499.4	13487.1
34°	13406.2	13398.7
35°	13293.5	13308.5
36°	13179.1	13205.5
37°	13060.6	13099.8
38°	12903.0	12968.0
39°	12778.4	12844.6
40°	12594.8	12694.4
41°	12431.0	12550.3
42°	12234.7	12378.0
43°	12019.9	12158.9
44°	11784.3	11962.5



TEST NUMBER: P600923
 CATALOG NUMBER: UHBS-36-MV-L850-U 120V

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	11539.7	11732.4
46°	11251.5	11474.4
47°	10954.3	11166.8
48°	10603.2	10864.2
49°	10246.0	10461.4
50°	9822.5	10043.5
51°	9343.4	9566.5
52°	8784.1	9065.1
53°	8176.1	8410.4
54°	7477.3	7718.8
55°	6761.6	6922.9
56°	5997.3	6120.4
57°	5272.0	5190.4
58°	4692.9	4546.5
59°	4187.5	4036.4
60°	3735.0	3631.7
61°	3330.1	3248.8
62°	2950.3	2891.9
63°	2624.0	2583.1
64°	2341.2	2320.1
65°	2086.7	2070.4
66°	1861.5	1847.7
67°	1660.7	1642.5
68°	1482.0	1457.2
69°	1313.1	1286.0
70°	1161.8	1135.0
71°	1020.0	999.2
72°	894.7	877.0
73°	780.8	767.6
74°	678.0	669.0
75°	587.5	578.7
76°	503.3	496.4
77°	427.3	422.5
78°	356.4	357.2
79°	292.9	296.4
80°	234.8	238.3
81°	178.7	182.0
82°	123.4	130.6
83°	72.8	80.3
84°	34.2	37.3
85°	16.8	17.1
86°	10.8	10.1
87°	6.6	6.4
88°	5.4	5.3
89°	4.6	4.7



TEST NUMBER: P600923
CATALOG NUMBER: UHBS-36-MV-L850-U 120V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	3.7	3.7

(END OF REPORT)