

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: P600922

Luminaire Tested: UHBS-36-MV-L840-U 120V

Issue Date: 8/26/2022

Test Information

Test Method: LM-79-2019
Report Number: P600922
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-L840-U 120V
Description: UHB Round Select AT 36000 LUMEN SETTING AND 4000K
Light Source: -
Ballast/Driver: -

Summary

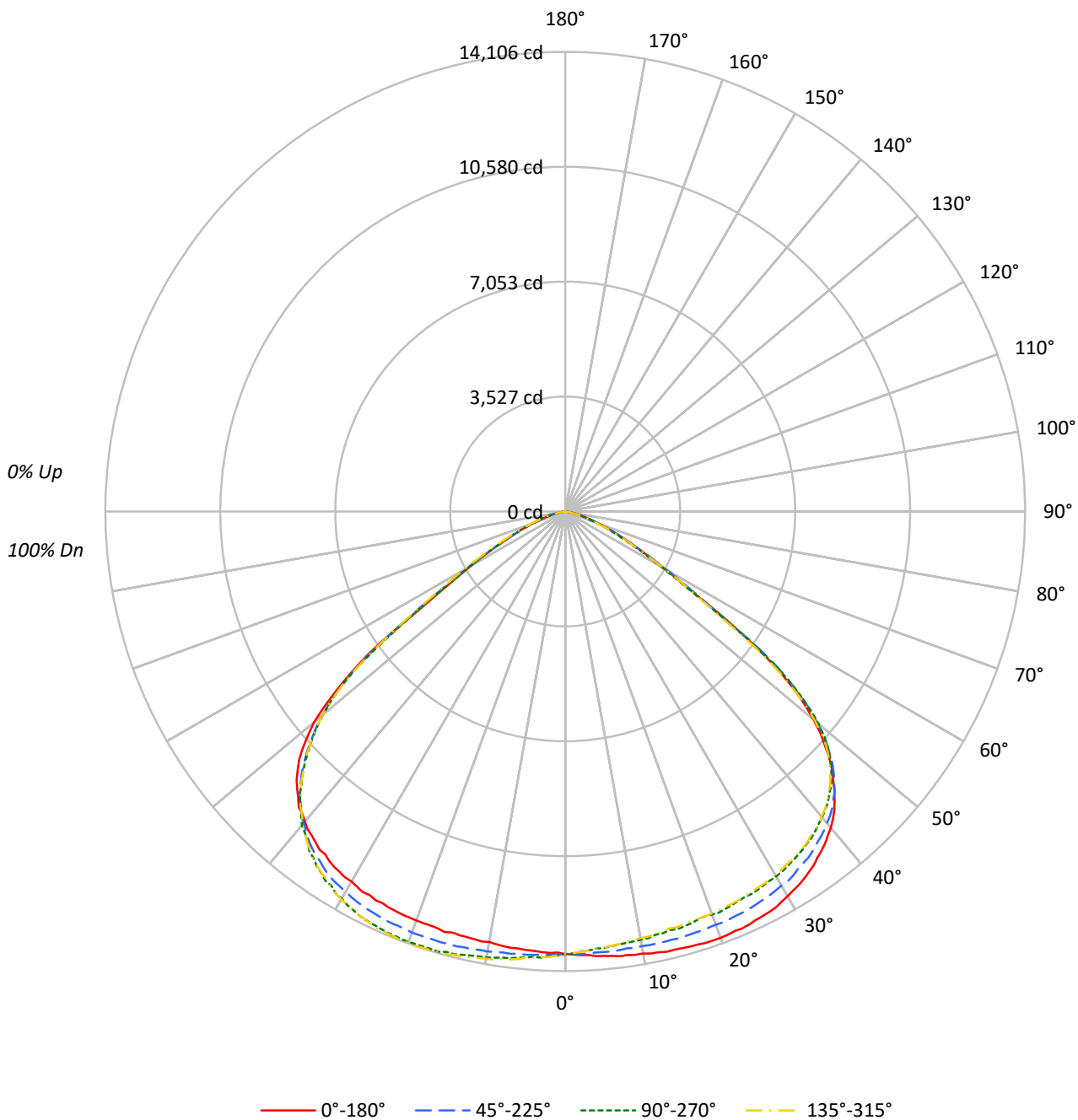
Lumens per Lamp: 36952 (1 lamp)
Luminaire Lumens: 36952.0 lumens
Efficiency: 100.0%
Efficacy: 151.3 lumens/watt
Spacing Criteria (0/90/45): 1.47 / 1.46 / 1.53
Luminous Opening: Circular (Dia: 1.33' x H: 0')
CIE Type: Direct

Input Watts (W): 244.2
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					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					100			
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90					88				
2	102	95	90	85	100	93	88	84	90	86	82	87	83	80	84	81	78					76				
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68					66				
4	87	76	68	62	85	75	67	62	72	66	61	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46					44				
7	69	56	48	42	67	55	47	42	54	46	41	52	46	41	51	45	41					39				
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	47	41	36					35				
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33					31				
10	56	43	35	30	54	42	35	30	41	35	30	41	34	30	40	34	30					28				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	105254	105254	105254	105254
5°	106513	104631	105056	106879
10°	108392	105026	105579	109331
15°	111306	106444	107319	112294
20°	114865	108529	110145	115916
25°	118243	111598	113385	119473
30°	122002	115755	117315	122707
35°	125557	119924	121474	125653
40°	128195	123987	125598	127188
45°	127359	126533	127679	124812
50°	119870	122226	121097	116838
55°	92467	92526	88266	86119
60°	55273	53047	51814	52487
65°	37272	34827	34304	35663
70°	25009	23063	22864	24545
75°	16434	14692	14734	16437
80°	10035	8036	8477	9874
85°	1529	1253	1200	1636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 30°
 Vertical Angle: 45°
 Luminance: 128465 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	1299.2	3.5	3.5
10°-20°	3864.1	10.5	10.5
20°-30°	6254.2	16.9	16.9
30°-40°	8138.3	22.0	22.0
40°-50°	8806.3	23.8	23.8
50°-60°	5906.2	16.0	16.0
60°-70°	2042.3	5.5	5.5
70°-80°	588.1	1.6	1.6
80°-90°	53.3	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°	11417.5	30.9	30.9
0°-40°	19555.8	52.9	52.9
0°-60°	34268.3	92.7	92.7
0°-90°	36952.0	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°	36952.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	13585	13585	13585	13585	13585	
5°	13695	13453	13508	13742	13695	1310
15°	13877	13270	13380	14000	13877	3936
25°	13832	13054	13263	13976	13832	6396
35°	13275	12679	12843	13285	13275	8297
45°	11624	11548	11653	11391	11624	8900
55°	6845	6850	6534	6376	6845	5998
65°	2033	1900	1871	1945	2033	2087
75°	549	491	492	549	549	619
85°	17	14	14	18	17	63
90°	4	4	4	3	4	



TEST NUMBER: P600922

CATALOG NUMBER: UHBS-36-MV-L840-U 120V

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	13585.0	13585.0	13585.0	13585.0	13585.0	13585.0	13585.0	13585.0	13585.0	13585.0	13585.0
1°	13605.9	13584.8	13571.2	13571.5	13557.6	13569.1	13541.9	13584.3	13603.9	13631.1	13630.1
2°	13624.4	13622.2	13571.1	13514.1	13517.6	13522.7	13559.3	13599.0	13612.7	13646.7	13684.5
3°	13632.4	13610.7	13562.1	13493.5	13489.4	13498.5	13548.7	13602.4	13651.7	13710.9	13684.6
4°	13677.5	13602.0	13545.5	13454.7	13482.4	13467.8	13520.3	13599.9	13689.9	13707.6	13729.7
5°	13695.2	13626.3	13522.4	13453.2	13438.2	13457.7	13507.9	13618.7	13698.2	13742.3	13739.9
6°	13717.9	13624.8	13528.7	13421.3	13389.6	13418.6	13494.9	13587.4	13700.6	13770.3	13837.4
7°	13753.8	13619.9	13510.6	13384.7	13373.9	13392.7	13492.5	13617.2	13742.6	13812.3	13872.3
8°	13752.2	13619.0	13470.1	13378.9	13341.7	13349.2	13477.3	13606.2	13737.5	13830.2	13910.1
9°	13775.8	13662.9	13472.8	13367.0	13304.1	13337.3	13453.2	13600.7	13788.0	13866.0	13965.2
10°	13777.6	13629.8	13458.5	13349.7	13283.6	13320.4	13420.0	13613.9	13806.6	13896.9	13933.1
11°	13818.8	13650.3	13461.6	13342.2	13283.8	13296.5	13444.0	13623.3	13796.1	13911.0	13968.1
12°	13832.8	13642.6	13461.2	13288.0	13237.1	13306.0	13417.4	13629.3	13847.1	13932.7	14028.8
13°	13867.7	13667.9	13436.7	13290.3	13216.8	13267.7	13407.4	13632.2	13833.3	13963.1	14032.9
14°	13860.8	13672.5	13427.6	13245.9	13153.5	13232.0	13404.5	13653.2	13866.5	14008.7	14063.6
15°	13876.7	13675.7	13433.9	13270.5	13184.4	13249.4	13379.6	13645.7	13849.9	13999.8	14088.6
16°	13898.2	13664.1	13413.9	13250.0	13152.9	13216.8	13431.7	13661.4	13862.9	14054.5	14077.2
17°	13899.8	13656.0	13404.5	13216.3	13103.6	13181.1	13378.2	13619.7	13893.2	14049.1	14101.9
18°	13930.3	13658.9	13394.2	13167.5	13121.0	13178.6	13365.6	13604.1	13893.2	14045.0	14109.5
19°	13923.6	13629.0	13389.9	13146.2	13100.2	13183.7	13366.4	13612.2	13886.6	14050.0	14148.6
20°	13931.5	13638.0	13361.0	13163.0	13095.7	13171.5	13359.0	13617.0	13886.7	14058.9	14111.5
21°	13917.3	13661.0	13348.4	13182.7	13086.3	13137.6	13349.4	13601.2	13856.0	14054.4	14110.1
22°	13890.5	13641.5	13336.8	13145.7	13053.6	13113.5	13344.4	13590.7	13829.5	14036.9	14093.3
23°	13899.6	13612.6	13323.2	13119.8	13042.3	13121.1	13318.2	13583.2	13850.4	14029.2	14074.3
24°	13875.4	13598.8	13312.6	13080.5	13022.3	13103.6	13312.0	13561.6	13815.6	14002.7	14058.6
25°	13831.7	13584.3	13283.2	13054.4	13017.0	13027.8	13263.4	13540.5	13802.5	13975.5	14024.4
26°	13819.5	13546.6	13266.1	13060.0	12996.5	13056.3	13275.2	13534.4	13748.2	13953.1	13969.7
27°	13795.1	13510.7	13228.0	13031.4	12934.4	13004.2	13218.2	13496.4	13732.1	13920.6	13949.7
28°	13760.0	13486.9	13209.4	12986.0	12913.9	12998.5	13231.7	13470.7	13691.7	13853.6	13917.3
29°	13696.5	13453.3	13156.4	12952.6	12893.1	12961.4	13168.5	13420.6	13646.5	13801.4	13827.8
30°	13637.0	13406.9	13111.9	12938.8	12858.7	12946.4	13113.1	13365.2	13583.6	13715.9	13743.9
31°	13574.7	13392.6	13098.4	12896.6	12781.0	12921.3	13105.0	13322.9	13526.3	13671.7	13679.8
32°	13522.5	13328.0	13039.0	12854.8	12764.0	12826.1	13051.0	13266.2	13495.0	13543.6	13574.9
33°	13449.9	13242.6	12948.8	12792.8	12725.5	12788.7	13008.3	13226.6	13406.1	13510.9	13460.7
34°	13355.3	13169.1	12904.6	12741.7	12673.1	12712.8	12941.0	13144.6	13294.7	13385.9	13385.7
35°	13274.8	13121.7	12850.9	12679.2	12621.4	12687.1	12843.1	13049.7	13168.6	13285.0	13276.8
36°	13148.1	13015.3	12785.4	12609.0	12553.5	12622.0	12829.4	12983.5	13064.2	13141.8	13169.4
37°	13052.4	12911.6	12681.8	12550.5	12448.6	12549.2	12715.0	12880.9	12954.2	13040.7	13021.2
38°	12939.6	12816.2	12593.2	12457.2	12388.3	12462.3	12629.7	12749.1	12846.2	12845.2	12848.9
39°	12796.9	12721.5	12497.5	12351.4	12304.5	12385.6	12557.9	12625.6	12652.4	12691.8	12700.4
40°	12675.0	12598.5	12381.4	12258.9	12202.3	12258.2	12418.2	12489.3	12467.6	12575.4	12517.7
41°	12510.4	12460.8	12298.2	12143.7	12104.1	12167.3	12298.0	12350.9	12298.9	12339.2	12260.8
42°	12337.4	12330.1	12160.4	12034.5	11995.4	12019.2	12210.9	12150.0	12083.0	12131.4	12109.4
43°	12119.5	12133.2	11995.7	11869.1	11825.2	11868.6	12013.6	12006.8	11871.0	11942.3	11863.7
44°	11883.0	11965.8	11834.7	11742.2	11679.9	11704.9	11839.4	11773.0	11619.1	11644.8	11635.9



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	11623.5	11724.5	11611.1	11548.1	11486.3	11518.4	11652.7	11521.2	11355.0	11391.1	11360.8
46°	11368.6	11470.8	11408.9	11344.7	11284.5	11283.4	11407.9	11255.5	11046.0	11097.7	11080.8
47°	11066.4	11197.5	11148.5	11123.8	11052.9	11038.2	11155.6	10953.1	10709.6	10765.2	10769.4
48°	10709.8	10850.2	10855.0	10848.6	10774.2	10770.7	10818.7	10598.2	10365.5	10444.5	10431.4
49°	10374.7	10492.6	10531.6	10533.3	10426.1	10441.9	10443.5	10231.1	10038.8	10089.7	10083.6
50°	9944.9	10061.6	10125.4	10140.4	10011.3	10014.0	10046.7	9828.8	9605.0	9693.4	9669.5
51°	9485.1	9621.3	9657.5	9688.5	9539.3	9510.5	9480.8	9369.8	9152.6	9236.1	9205.1
52°	8974.6	9086.1	9120.5	9132.1	8930.5	8913.2	8875.1	8850.4	8659.6	8716.5	8658.5
53°	8361.2	8520.0	8573.1	8504.3	8259.3	8319.7	8215.5	8264.9	8019.1	8072.4	8039.2
54°	7645.0	7848.4	7870.0	7757.0	7507.8	7559.8	7487.3	7519.1	7183.7	7247.2	7275.5
55°	6845.4	6962.0	6985.8	6849.8	6538.4	6650.5	6534.4	6663.5	6342.6	6375.5	6431.9
56°	6000.7	5942.1	5958.4	5819.1	5592.8	5768.8	5439.0	5773.9	5561.5	5542.1	5637.2
57°	5076.0	5131.9	5225.7	4990.4	4920.0	5042.0	4703.9	4998.4	4896.4	4831.5	4954.0
58°	4449.0	4511.6	4638.1	4365.2	4404.2	4477.6	4170.3	4351.0	4347.9	4252.2	4448.3
59°	3968.8	3953.2	4155.4	3852.7	3926.6	3986.8	3718.3	3842.3	3884.1	3784.0	4008.2
60°	3567.0	3492.5	3715.5	3423.4	3495.4	3549.3	3343.8	3403.1	3477.4	3387.2	3586.3
61°	3150.8	3142.6	3328.6	3040.4	3096.9	3119.0	2991.9	2972.8	3094.8	3043.1	3229.7
62°	2798.2	2795.2	2954.0	2701.2	2763.9	2758.7	2665.3	2660.9	2776.9	2703.5	2882.3
63°	2523.8	2491.7	2636.2	2389.6	2469.0	2448.8	2362.6	2368.6	2471.6	2427.6	2602.2
64°	2265.1	2220.9	2351.6	2131.8	2206.8	2173.7	2105.3	2101.2	2198.8	2179.3	2335.9
65°	2033.1	1972.2	2088.0	1899.7	1963.8	1927.3	1871.2	1864.6	1958.0	1945.3	2094.2
66°	1810.2	1754.0	1859.1	1698.0	1726.2	1702.4	1660.3	1652.5	1728.5	1743.0	1869.5
67°	1599.9	1560.9	1634.6	1501.1	1524.8	1512.7	1498.1	1461.7	1530.8	1556.5	1669.5
68°	1417.9	1389.0	1440.4	1326.7	1347.0	1336.5	1307.3	1291.5	1351.4	1388.9	1487.6
69°	1250.1	1222.9	1266.4	1162.6	1178.0	1176.3	1149.5	1136.7	1187.4	1225.8	1311.4
70°	1104.0	1075.6	1110.0	1018.1	1027.8	1031.3	1009.3	999.4	1041.8	1083.5	1156.5
71°	971.7	943.6	973.2	890.1	895.0	906.3	880.1	874.3	907.2	955.6	1012.8
72°	846.3	827.9	843.1	775.7	770.6	785.6	769.3	761.7	788.6	838.4	885.9
73°	736.9	719.8	727.8	670.8	666.7	679.5	664.9	660.5	681.2	732.3	769.1
74°	637.5	624.3	626.1	576.2	571.2	586.7	574.4	571.4	588.1	636.5	667.8
75°	549.0	537.5	531.9	490.8	486.1	502.6	492.2	488.6	501.9	549.1	574.1
76°	467.8	458.3	448.1	414.6	408.7	426.0	416.4	416.6	428.3	468.9	486.0
77°	398.2	388.0	375.3	345.1	339.5	357.5	352.2	349.8	360.7	396.5	409.6
78°	336.6	323.9	311.6	285.4	278.8	298.2	293.0	291.5	299.0	331.9	341.9
79°	276.7	265.7	252.6	229.7	223.1	242.5	240.0	237.1	244.8	273.8	278.2
80°	224.9	212.6	201.1	180.1	173.4	190.1	190.0	189.1	192.7	221.3	223.5
81°	175.3	159.1	152.6	133.0	126.2	141.4	140.8	142.7	143.9	169.9	167.9
82°	125.9	107.9	104.3	90.1	82.3	94.7	95.2	97.2	93.7	120.1	117.6
83°	80.0	65.7	64.4	52.5	45.9	53.7	53.7	55.9	53.7	75.3	73.6
84°	38.7	33.8	31.5	24.2	21.9	23.9	23.2	25.7	26.1	36.2	37.7
85°	17.2	15.3	15.2	14.1	13.6	13.6	13.5	14.6	15.2	18.4	18.4
86°	9.9	9.1	9.3	8.5	8.2	8.2	8.1	8.7	9.3	10.6	11.5
87°	6.1	5.8	5.8	6.2	6.1	6.1	6.1	6.1	6.3	6.2	6.4
88°	5.1	4.9	4.9	5.4	5.4	5.4	5.4	5.3	5.5	5.0	5.1
89°	4.5	4.3	4.2	4.9	4.9	4.9	4.8	4.8	4.9	4.4	4.4



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	3.6	3.4	3.3	3.6	3.7	3.6	3.6	3.6	3.6	3.3	3.5



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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	13585.0	13585.0
1°	13627.7	13605.9
2°	13668.7	13624.4
3°	13701.8	13632.4
4°	13725.9	13677.5
5°	13752.2	13695.2
6°	13790.9	13717.9
7°	13829.5	13753.8
8°	13844.8	13752.2
9°	13890.2	13775.8
10°	13942.6	13777.6
11°	13948.7	13818.8
12°	13962.4	13832.8
13°	14006.6	13867.7
14°	13991.7	13860.8
15°	14055.2	13876.7
16°	14039.6	13898.2
17°	14060.8	13899.8
18°	14060.0	13930.3
19°	14062.4	13923.6
20°	14061.1	13931.5
21°	14063.0	13917.3
22°	14039.3	13890.5
23°	14020.3	13899.6
24°	14032.2	13875.4
25°	13985.9	13831.7
26°	13916.8	13819.5
27°	13895.6	13795.1
28°	13837.6	13760.0
29°	13779.6	13696.5
30°	13731.0	13637.0
31°	13672.0	13574.7
32°	13585.7	13522.5
33°	13443.4	13449.9
34°	13376.4	13355.3
35°	13269.4	13274.8
36°	13154.6	13148.1
37°	13003.0	13052.4
38°	12864.9	12939.6
39°	12715.9	12796.9
40°	12526.0	12675.0
41°	12351.0	12510.4
42°	12179.0	12337.4
43°	11895.7	12119.5
44°	11686.7	11883.0



TEST NUMBER: P600922
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CANDELA DISTRIBUTION (continued):

	330°	360°
45°	11411.4	11623.5
46°	11098.4	11368.6
47°	10829.0	11066.4
48°	10500.0	10709.8
49°	10137.4	10374.7
50°	9739.7	9944.9
51°	9261.4	9485.1
52°	8738.4	8974.6
53°	8100.3	8361.2
54°	7345.7	7645.0
55°	6595.3	6845.4
56°	5838.8	6000.7
57°	5142.7	5076.0
58°	4559.2	4449.0
59°	4074.6	3968.8
60°	3615.1	3567.0
61°	3216.8	3150.8
62°	2884.9	2798.2
63°	2568.7	2523.8
64°	2267.8	2265.1
65°	2027.4	2033.1
66°	1804.4	1810.2
67°	1609.9	1599.9
68°	1430.8	1417.9
69°	1256.4	1250.1
70°	1107.6	1104.0
71°	974.7	971.7
72°	855.9	846.3
73°	745.9	736.9
74°	645.8	637.5
75°	554.6	549.0
76°	472.8	467.8
77°	401.8	398.2
78°	335.6	336.6
79°	277.1	276.7
80°	223.6	224.9
81°	171.7	175.3
82°	118.4	125.9
83°	70.7	80.0
84°	34.9	38.7
85°	16.7	17.2
86°	10.5	9.9
87°	6.3	6.1
88°	5.1	5.1
89°	4.5	4.5



TEST NUMBER: P600922
CATALOG NUMBER: UHBS-36-MV-L840-U 120V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	3.6	3.6

(END OF REPORT)