

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: P601066

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

Issue Date: 8/28/2023

Test Information

Test Method: LM-79-2019
Report Number: P601066
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-36-MV-L850-U-CDL-120V
Description: UHB Round Select with Clear Reflector with Lens Cover at 120V 36000 LUMEN SETTING AND 5000K
Light Source: -
Ballast/Driver: Electrical Driver

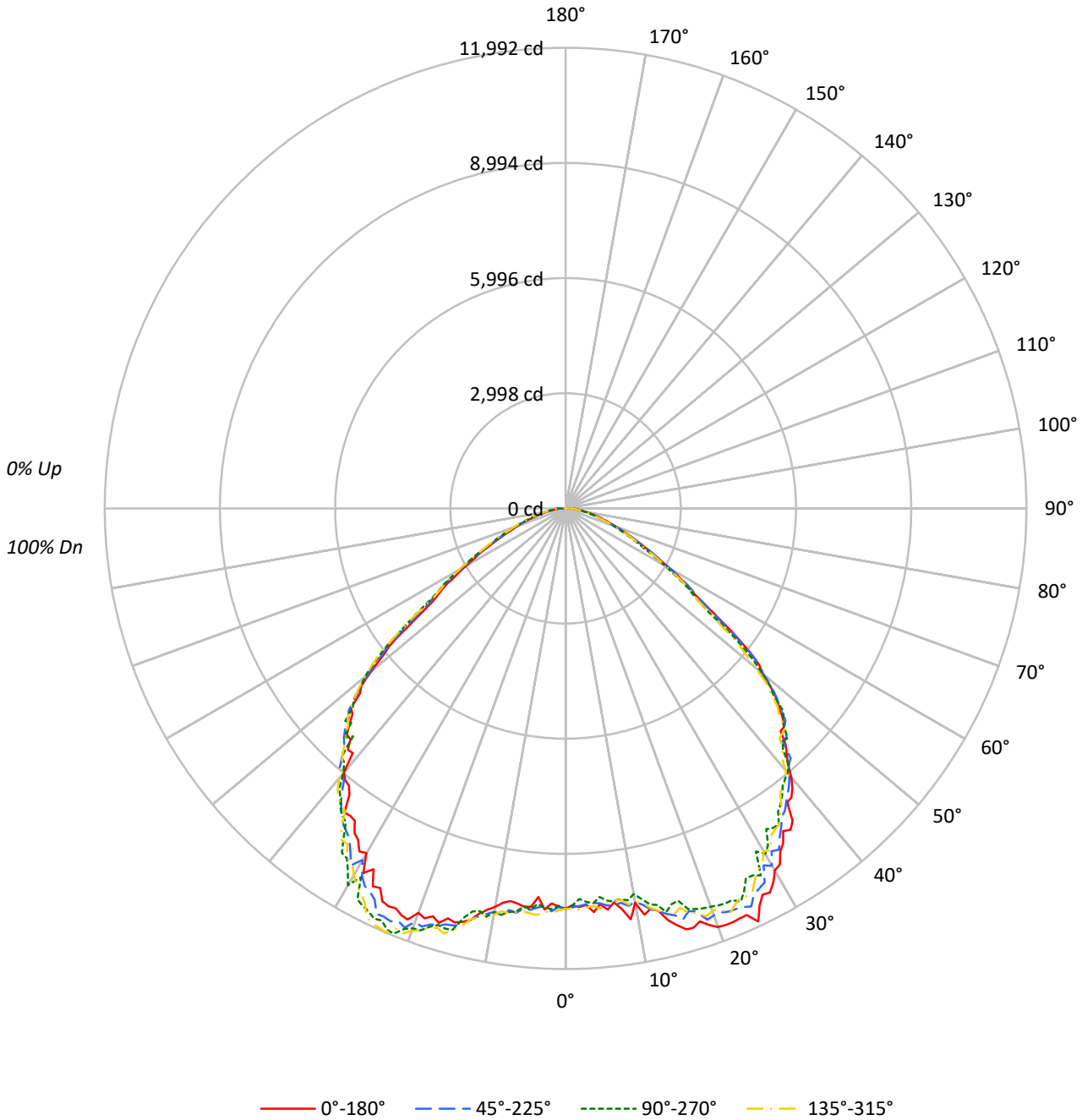
Summary

Lumens per Lamp: 29268 (1 lamp)
Luminaire Lumens: 29268.0 lumens
Efficiency: 100.0%
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.46 / 1.44 / 1.47
Luminous Opening: Circular (Dia: 1.33' x H: 0')
CIE Type: Direct

Input Watts (W): 242.9
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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CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	74
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	52	46	72	60	52	46	58	51	46	57	50	45	55	49	45	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38
8	63	51	42	37	62	50	42	37	49	42	36	47	41	36	46	40	36	34
9	59	46	38	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	35	30	40	34	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	80747	80747	80747	80747
5°	80456	78986	81032	81444
10°	82000	80214	82842	83959
15°	90148	85576	89515	91095
20°	95608	90975	92418	95905
25°	101438	93975	96472	100720
30°	97416	92880	92701	101335
35°	96597	91139	92428	94282
40°	92460	90893	90707	91023
45°	88139	87956	87084	86446
50°	80547	80332	79644	82082
55°	61916	57352	56811	62313
60°	48876	46039	46363	49474
65°	38589	36090	36328	38829
70°	32034	29981	29453	31635
75°	27489	24987	24451	26726
80°	24384	22104	21412	24620
85°	26366	23620	22882	26713

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 300°
 Vertical Angle: 89°
 Luminance: 92739 cd/sqm



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 CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-120V

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	998.6	3.4	3.4
10°-20°	3140.7	10.7	10.7
20°-30°	5217.0	17.8	17.8
30°-40°	6203.6	21.2	21.2
40°-50°	6147.0	21.0	21.0
50°-60°	4171.6	14.3	14.3
60°-70°	2104.1	7.2	7.2
70°-80°	949.1	3.2	3.2
80°-90°	336.3	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°	9356.2	32.0	32.0
0°-40°	15559.9	53.2	53.2
0°-60°	25878.5	88.4	88.4
0°-90°	29268.0	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°	29268.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	10422	10422	10422	10422	10422	
5°	10345	10156	10419	10472	10345	1003
15°	11239	10669	11160	11357	11239	3165
25°	11866	10993	11285	11782	11866	5306
35°	10213	9636	9772	9968	10213	6302
45°	8044	8027	7948	7890	8044	6148
55°	4584	4246	4206	4613	4584	4253
65°	2105	1969	1982	2118	2105	2132
75°	918	835	817	893	918	991
85°	297	266	257	300	297	353
90°	189	184	182	191	189	



TEST NUMBER: P601066

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-120V

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	10421.9	10421.9	10421.9	10421.9	10421.9	10421.9	10421.9	10421.9	10421.9	10421.9	10421.9
1°	10334.9	10195.9	10570.9	10334.9	10425.9	10424.9	10366.9	10315.9	10446.9	10346.9	10428.9
2°	10380.9	10252.9	10462.9	10173.9	10437.9	10466.9	10290.9	10546.9	10442.9	10438.9	10555.9
3°	10338.9	10295.9	10341.9	10257.9	10427.9	10383.9	10457.9	10245.9	10476.9	10407.9	10492.9
4°	10534.9	10226.9	10359.9	10307.9	10362.9	10396.9	10139.9	10295.9	10536.9	10323.9	10622.9
5°	10344.9	10186.9	10464.9	10155.9	10402.9	10508.9	10418.9	10354.9	10621.9	10471.9	10626.9
6°	10501.9	10435.9	10356.9	10269.9	10290.9	10332.9	10420.9	10382.9	10572.9	10428.9	10521.9
7°	10333.9	10319.9	10491.9	10307.9	10357.9	10227.9	10357.9	10445.9	10769.9	10571.9	10576.9
8°	10535.9	10338.9	10406.9	10267.9	10315.9	10258.9	10322.9	10428.9	10691.9	10611.9	10751.9
9°	10833.9	10500.9	10442.9	10332.9	10394.9	10485.9	10388.9	10633.9	10800.9	10714.9	10820.9
10°	10422.9	10352.9	10457.9	10195.9	10343.9	10480.9	10529.9	10612.9	10718.9	10671.9	10589.9
11°	10775.9	10325.9	10691.9	10358.9	10247.9	10652.9	10640.9	10703.9	10811.9	10833.9	10840.9
12°	10651.9	10640.9	10698.9	10531.9	10554.9	10717.9	10781.9	10674.9	11037.9	10716.9	10905.9
13°	10753.9	10819.9	10713.9	10598.9	10698.9	10795.9	10997.9	10868.9	11090.9	10768.9	10945.9
14°	11052.9	10911.9	10853.9	10830.9	10946.9	10916.9	11093.9	11105.9	11254.9	10989.9	11091.9
15°	11238.9	10959.9	10973.9	10668.9	10888.9	10968.9	11159.9	11071.9	11418.9	11356.9	11172.9
16°	11399.9	11090.9	11159.9	10622.9	10771.9	10862.9	11100.9	11119.9	11417.9	11383.9	11394.9
17°	11414.9	10998.9	10921.9	10909.9	10984.9	11076.9	11285.9	11159.9	11549.9	11340.9	11376.9
18°	11302.9	11047.9	11029.9	10970.9	10974.9	11158.9	11161.9	11248.9	11534.9	11452.9	11289.9
19°	11470.9	11330.9	11320.9	11007.9	11156.9	11300.9	11284.9	11307.9	11713.9	11617.9	11479.9
20°	11595.9	11235.9	11317.9	11033.9	11088.9	11222.9	11208.9	11526.9	11389.9	11631.9	11780.9
21°	11615.9	11422.9	11112.9	11072.9	11086.9	11237.9	11469.9	11549.9	11830.9	11729.9	11847.9
22°	11620.9	11245.9	11400.9	11088.9	11356.9	11415.9	11416.9	11428.9	11763.9	11941.9	11792.9
23°	11594.9	11268.9	11400.9	11079.9	11188.9	11289.9	11308.9	11464.9	11884.9	11906.9	11948.9
24°	11589.9	11431.9	11290.9	11203.9	10980.9	11255.9	11339.9	11515.9	11749.9	11750.9	11830.9
25°	11865.9	11467.9	11408.9	10992.9	11125.9	11161.9	11284.9	11388.9	11903.9	11781.9	11978.9
26°	11519.9	11298.9	11067.9	10709.9	11120.9	11070.9	10991.9	11108.9	11547.9	11686.9	11877.9
27°	11288.9	11245.9	10961.9	10726.9	10794.9	10900.9	11048.9	10997.9	11422.9	11616.9	11569.9
28°	11326.9	10989.9	11071.9	10821.9	10458.9	10865.9	10637.9	10925.9	11338.9	11535.9	11468.9
29°	11145.9	10572.9	10682.9	10211.9	10630.9	10512.9	10851.9	10852.9	10997.9	10974.9	11473.9
30°	10888.9	10723.9	10753.9	10381.9	10234.9	10372.9	10361.9	10319.9	10818.9	11326.9	11032.9
31°	10822.9	10452.9	10369.9	10230.9	10267.9	10494.9	10419.9	10738.9	10938.9	11004.9	10722.9
32°	10543.9	10493.9	10461.9	9849.0	10063.9	10079.9	10188.9	10384.9	10751.9	10740.9	11033.9
33°	10392.9	10212.9	10247.9	9914.9	9895.2	10082.9	10080.9	10175.9	10448.9	10688.9	10435.9
34°	10131.9	9942.9	10118.9	9925.4	9960.5	9905.7	9806.6	10120.9	10232.9	10325.9	10562.9
35°	10212.9	9780.7	9844.6	9635.9	9702.7	9773.0	9772.2	9907.0	10237.9	9968.2	10400.9
36°	10050.9	9744.6	9691.9	9523.7	9461.8	9639.9	9787.4	9834.5	10003.9	9888.1	9987.5
37°	9582.3	9544.1	9546.1	9368.5	9224.5	9351.1	9342.6	9671.8	9725.1	9734.3	9627.5
38°	9548.4	9291.5	9523.3	9170.9	9173.2	9164.0	9158.3	9342.1	9610.9	9524.7	9755.9
39°	9379.1	9235.8	9243.2	9075.6	9276.2	8982.6	9107.7	9100.6	9240.5	9340.9	9426.2
40°	9141.8	8922.0	9204.2	8986.8	8930.6	8887.4	8968.5	8966.6	9067.0	8999.7	9255.4
41°	8811.0	8870.7	8831.7	8863.1	8570.6	8562.0	8438.5	8856.9	9083.0	8775.7	8895.3
42°	8604.3	8514.6	8990.2	8456.8	8611.9	8277.3	8467.7	8676.2	8688.9	8713.6	8756.1
43°	8393.9	8322.7	8219.7	8292.3	8110.5	8222.3	8212.0	8405.6	8475.9	8113.5	8378.6
44°	8057.7	8107.7	8466.0	8314.0	8215.4	8049.7	8195.9	8319.4	8283.5	8300.9	8351.6



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	8044.1	7957.3	8147.3	8027.4	8040.3	8108.5	7947.8	8097.0	8141.7	7889.6	8016.3
46°	7851.3	7832.2	8069.7	7876.6	7714.4	7735.1	7709.1	7854.7	7838.8	7969.8	7906.3
47°	7588.2	7497.5	7776.2	7753.2	7547.1	7518.8	7633.9	7696.3	7737.9	7560.5	7539.5
48°	7375.8	7230.5	7577.6	7282.1	7224.4	7110.1	7200.0	7360.4	7377.7	7417.9	7445.0
49°	7059.5	7006.5	7195.5	7058.0	6885.5	6912.7	7037.9	7132.5	6976.0	7076.7	7085.0
50°	6682.5	6637.7	6823.0	6664.7	6378.3	6552.2	6607.6	6772.1	6631.8	6809.9	6777.1
51°	6492.9	6370.6	6572.2	6310.8	5919.0	6138.9	6144.9	6209.9	6294.7	6429.4	6476.3
52°	6089.9	5972.3	6192.6	5829.6	5573.5	5728.2	5822.3	5999.0	5859.9	6053.5	6024.7
53°	5612.3	5505.9	5586.3	5300.5	5010.1	5117.7	5202.5	5438.8	5305.7	5576.9	5574.2
54°	5085.1	4972.5	5025.3	4632.0	4532.4	4705.6	4627.6	4852.5	4863.1	5078.1	5007.1
55°	4583.7	4479.6	4630.1	4245.8	4198.1	4323.9	4205.8	4410.7	4410.5	4613.1	4586.7
56°	4145.9	4095.2	4267.6	3988.2	3979.9	4053.7	3985.6	4107.7	4141.2	4206.7	4167.6
57°	3838.0	3890.7	4015.9	3798.5	3798.4	3845.8	3790.7	3898.7	3934.0	3926.2	3881.2
58°	3637.7	3657.2	3758.3	3502.4	3523.1	3617.9	3494.9	3646.5	3702.5	3731.8	3669.8
59°	3396.0	3380.2	3492.5	3236.6	3210.1	3337.8	3235.6	3373.4	3384.8	3452.9	3431.3
60°	3154.2	3093.2	3233.0	2971.1	2967.4	3058.2	2992.0	3101.1	3129.9	3192.8	3192.7
61°	2894.2	2850.9	2988.4	2748.4	2749.0	2820.0	2761.9	2877.5	2891.7	2950.5	2937.8
62°	2654.9	2650.7	2734.4	2525.8	2567.5	2601.7	2582.5	2651.2	2664.9	2735.2	2729.5
63°	2459.7	2472.0	2522.2	2310.2	2351.9	2376.5	2378.3	2444.2	2450.6	2495.3	2517.8
64°	2283.5	2285.7	2318.1	2137.0	2160.4	2176.4	2168.0	2232.7	2253.8	2288.3	2330.5
65°	2104.9	2065.8	2120.1	1968.6	2012.3	2028.2	1981.6	2048.5	2084.5	2118.0	2154.9
66°	1954.4	1901.3	1960.1	1817.0	1864.5	1869.7	1828.8	1907.9	1928.0	1973.0	1994.9
67°	1783.3	1762.5	1825.0	1680.9	1732.7	1718.4	1667.7	1762.0	1759.7	1812.9	1829.2
68°	1646.7	1635.6	1685.9	1551.1	1582.8	1559.4	1531.8	1609.6	1626.1	1660.8	1691.4
69°	1531.2	1501.1	1545.4	1433.1	1452.2	1433.9	1415.9	1480.5	1488.5	1516.1	1562.7
70°	1414.1	1383.9	1420.7	1323.5	1321.7	1321.5	1300.2	1356.6	1350.8	1396.5	1439.3
71°	1298.7	1267.1	1310.9	1216.8	1217.9	1217.9	1205.5	1240.0	1248.1	1277.4	1333.3
72°	1194.2	1169.0	1199.0	1113.0	1124.2	1111.2	1094.9	1136.2	1145.8	1179.3	1215.9
73°	1107.3	1062.5	1090.5	1016.0	1022.2	1011.6	995.5	1035.2	1052.1	1081.6	1106.8
74°	1011.5	972.9	989.6	924.3	918.0	910.3	899.8	941.3	956.9	981.6	1014.8
75°	918.3	890.5	909.6	834.7	827.6	829.3	816.8	853.4	865.0	892.8	932.2
76°	832.5	810.7	827.2	757.8	751.4	754.7	743.6	770.0	788.1	812.0	846.9
77°	756.2	734.7	749.7	689.2	679.7	684.2	668.9	695.4	714.1	736.6	769.7
78°	685.6	660.3	676.9	616.0	612.2	614.0	597.8	624.2	643.5	670.2	694.3
79°	613.5	591.8	608.6	552.2	549.3	546.8	536.0	559.8	574.4	608.1	623.5
80°	546.5	532.1	539.9	495.4	487.3	486.9	479.9	500.5	514.0	551.8	561.4
81°	488.6	480.2	480.3	441.4	431.6	432.4	422.8	445.3	457.9	493.5	502.1
82°	437.2	421.8	425.3	388.1	378.7	381.5	372.3	393.9	404.0	439.6	449.0
83°	386.8	369.2	374.7	340.2	332.3	333.8	326.2	344.2	355.7	389.1	400.1
84°	337.7	324.0	327.5	297.2	293.3	294.2	288.0	300.4	313.7	340.7	350.6
85°	296.6	288.7	289.6	265.7	263.0	264.4	257.4	266.7	279.2	300.5	309.8
86°	265.3	260.0	260.4	240.1	238.7	240.4	234.3	240.6	252.7	268.4	275.5
87°	239.6	235.3	235.6	219.1	218.5	220.7	215.1	219.4	229.9	242.8	249.1
88°	218.6	214.4	214.9	201.0	201.2	203.0	198.3	201.8	210.4	222.1	227.4
89°	201.1	196.9	197.6	189.2	191.8	192.9	187.0	188.3	195.3	204.0	208.9



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	189.4	187.3	187.8	183.8	186.0	187.5	182.2	182.8	188.8	191.2	194.6



TEST NUMBER: P601066
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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	10421.9	10421.9
1°	10498.9	10334.9
2°	10524.9	10380.9
3°	10512.9	10338.9
4°	10600.9	10534.9
5°	10541.9	10344.9
6°	10579.9	10501.9
7°	10610.9	10333.9
8°	10518.9	10535.9
9°	10417.9	10833.9
10°	10889.9	10422.9
11°	10748.9	10775.9
12°	10866.9	10651.9
13°	11016.9	10753.9
14°	11322.9	11052.9
15°	11564.9	11238.9
16°	11624.9	11399.9
17°	11458.9	11414.9
18°	11678.9	11302.9
19°	11743.9	11470.9
20°	11632.9	11595.9
21°	11863.9	11615.9
22°	11798.9	11620.9
23°	12035.9	11594.9
24°	12059.9	11589.9
25°	11878.9	11865.9
26°	11741.9	11519.9
27°	11473.9	11288.9
28°	11173.9	11326.9
29°	10960.9	11145.9
30°	11005.9	10888.9
31°	10848.9	10822.9
32°	10429.9	10543.9
33°	10399.9	10392.9
34°	10280.9	10131.9
35°	9967.2	10212.9
36°	9563.8	10050.9
37°	9631.9	9582.3
38°	9473.8	9548.4
39°	9417.3	9379.1
40°	9085.3	9141.8
41°	8815.6	8811.0
42°	8620.5	8604.3
43°	8487.3	8393.9
44°	8118.8	8057.7



TEST NUMBER: P601066
 CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-120V

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	7979.4	8044.1
46°	7857.1	7851.3
47°	7742.6	7588.2
48°	7359.4	7375.8
49°	7140.2	7059.5
50°	6858.7	6682.5
51°	6509.4	6492.9
52°	6231.8	6089.9
53°	5590.7	5612.3
54°	5185.5	5085.1
55°	4572.7	4583.7
56°	4112.7	4145.9
57°	3877.0	3838.0
58°	3726.9	3637.7
59°	3488.5	3396.0
60°	3219.6	3154.2
61°	2961.0	2894.2
62°	2723.6	2654.9
63°	2520.2	2459.7
64°	2333.4	2283.5
65°	2154.8	2104.9
66°	1980.2	1954.4
67°	1814.2	1783.3
68°	1682.3	1646.7
69°	1564.4	1531.2
70°	1440.9	1414.1
71°	1317.4	1298.7
72°	1207.8	1194.2
73°	1103.9	1107.3
74°	1003.8	1011.5
75°	920.3	918.3
76°	837.7	832.5
77°	764.9	756.2
78°	692.2	685.6
79°	621.9	613.5
80°	558.0	546.5
81°	500.6	488.6
82°	447.4	437.2
83°	396.0	386.8
84°	346.6	337.7
85°	305.5	296.6
86°	273.1	265.3
87°	246.7	239.6
88°	225.6	218.6
89°	207.2	201.1



TEST NUMBER: P601066
CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-120V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	194.2	189.4

(END OF REPORT)