

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: P601073

Luminaire Tested: UHBS-36-MV-L850-U-CDL-277V

Issue Date: 8/28/2023

Test Information

Test Method: LM-79-2019
Report Number: P601073
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-277V
Description: UHB Round Select with Clear Reflector with Lens Cover at 277V 36000 LUMEN SETTING AND 5000K
Light Source: -
Ballast/Driver: Electrical Driver

Summary

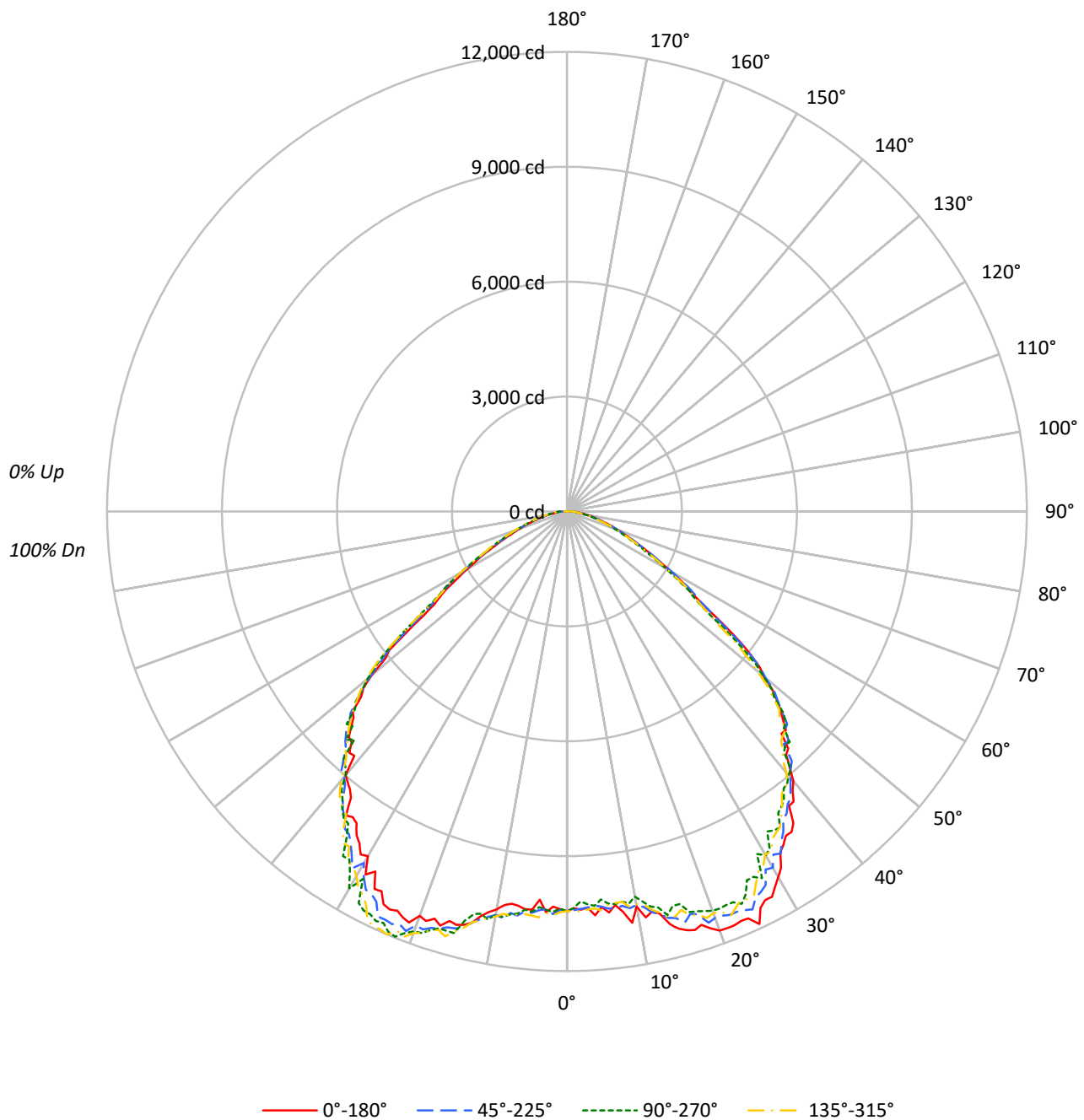
Lumens per Lamp: 29322 (1 lamp)
Luminaire Lumens: 29322.0 lumens
Efficiency: 100.0%
Efficacy: 124.4 lumens/watt
Spacing Criteria (0/90/45): 1.46 / 1.44 / 1.47
Luminous Opening: Circular (Dia: 1.33' x H: 0')
CIE Type: Direct

Input Watts (W): 235.7
Input Voltage (V): 277
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

TEST NUMBER: P601073

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

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	110	106	102	99	108	104	100	97	100	97	94		96	94	91		87
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		74
3	93	84	76	70	91	82	75	70	79	73	69		77	72	67		64
4	86	75	67	61	84	74	66	60	71	65	59		69	63	59		56
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		49
6	73	61	52	46	72	60	52	46	58	51	46		57	50	45		43
7	68	55	47	41	66	54	47	41	53	46	41		52	45	40		38
8	63	51	42	37	62	50	42	37	49	42	36		47	41	36		34
9	59	46	38	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°	80892	80892	80892	80892
5°	80649	79094	81155	81575
10°	82376	80315	83006	84138
15°	90483	85518	89632	91397
20°	96026	91475	92629	96167
25°	101624	94366	96777	100880
30°	98630	92744	92950	101663
35°	96604	90886	92189	94114
40°	92922	91063	90861	90783
45°	88477	87722	87218	86702
50°	80930	80579	80135	81855
55°	62073	57506	57077	62318
60°	48960	46222	46401	49683
65°	38675	36264	36416	38988
70°	32047	30042	29560	31676
75°	27543	25044	24508	26726
80°	24419	22162	21457	24651
85°	26438	23700	22926	26731

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 300°

Vertical Angle: 89°

Luminance: 92650 cd/sqm

TEST NUMBER: P601073

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	1000.3	3.4	3.4
10°-20°	3146.9	10.7	10.7
20°-30°	5228.6	17.8	17.8
30°-40°	6215.1	21.2	21.2
40°-50°	6157.8	21.0	21.0
50°-60°	4178.1	14.2	14.2
60°-70°	2107.4	7.2	7.2
70°-80°	950.8	3.2	3.2
80°-90°	336.8	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°	9375.8	32.0	32.0
0°-40°	15590.9	53.2	53.2
0°-60°	25926.9	88.4	88.4
0°-90°	29322.0	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°	29322.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	10441	10441	10441	10441	10441	
5°	10370	10170	10435	10489	10370	1006
15°	11281	10662	11175	11395	11281	3174
25°	11888	11039	11321	11801	11888	5328
35°	10214	9609	9747	9950	10214	6317
45°	8075	8006	7960	7913	8075	6165
55°	4595	4257	4226	4614	4595	4263
65°	2110	1978	1986	2127	2110	2135
75°	920	837	819	893	920	993
85°	297	267	258	301	297	353
90°	190	184	183	192	190	

TEST NUMBER: P601073

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	10440.7	10440.7	10440.7	10440.7	10440.7	10440.7	10440.7	10440.7	10440.7	10440.7	10440.7
1°	10358.7	10219.7	10600.7	10352.7	10426.7	10435.7	10388.7	10350.7	10468.7	10366.7	10437.7
2°	10407.7	10283.7	10485.7	10188.7	10450.7	10480.7	10320.7	10571.7	10468.7	10463.7	10558.7
3°	10360.7	10322.7	10374.7	10270.7	10423.7	10391.7	10479.7	10274.7	10506.7	10414.7	10491.7
4°	10571.7	10271.7	10374.7	10321.7	10367.7	10414.7	10160.7	10323.7	10552.7	10354.7	10624.7
5°	10369.7	10227.7	10481.7	10169.7	10406.7	10512.7	10434.7	10381.7	10657.7	10488.7	10634.7
6°	10527.7	10471.7	10381.7	10292.7	10281.7	10351.7	10438.7	10413.7	10599.7	10454.7	10537.7
7°	10354.7	10335.7	10514.7	10324.7	10368.7	10236.7	10377.7	10465.7	10792.6	10578.7	10586.7
8°	10560.7	10379.7	10414.7	10287.7	10328.7	10253.7	10344.7	10458.7	10717.6	10623.7	10756.6
9°	10870.6	10522.7	10453.7	10363.7	10407.7	10496.7	10402.7	10664.6	10822.6	10720.6	10816.6
10°	10470.7	10370.7	10489.7	10208.7	10340.7	10479.7	10550.7	10644.7	10757.6	10694.6	10611.7
11°	10798.6	10340.7	10713.6	10383.7	10239.7	10656.7	10655.7	10734.6	10834.6	10854.6	10840.6
12°	10676.6	10685.6	10708.6	10547.7	10548.7	10716.6	10798.6	10699.6	11068.6	10739.6	10935.6
13°	10781.6	10844.6	10741.6	10618.7	10691.6	10804.6	11020.6	10903.6	11125.6	10786.6	10974.6
14°	11105.6	10971.6	10898.6	10858.6	10940.6	10909.6	11121.6	11125.6	11283.6	11007.6	11091.6
15°	11280.6	10992.6	10990.6	10661.6	10891.6	10996.6	11174.6	11089.6	11457.6	11394.6	11179.6
16°	11376.6	11134.6	11201.6	10663.6	10781.6	10866.6	11121.6	11157.6	11437.6	11392.6	11398.6
17°	11428.6	11035.6	10944.6	10934.6	10980.6	11076.6	11309.6	11196.6	11580.6	11380.6	11401.6
18°	11350.6	11070.6	11049.6	10976.6	10975.6	11170.6	11180.6	11300.6	11570.6	11486.6	11322.6
19°	11513.6	11378.6	11338.6	11031.6	11129.6	11322.6	11307.6	11345.6	11742.6	11643.6	11526.6
20°	11646.6	11266.6	11324.6	11094.6	11095.6	11241.6	11234.6	11585.6	11413.6	11663.6	11813.6
21°	11655.6	11475.6	11129.6	11105.6	11085.6	11276.6	11495.6	11601.6	11867.6	11789.6	11919.6
22°	11655.6	11311.6	11408.6	11087.6	11370.6	11418.6	11431.6	11457.6	11803.6	11975.6	11828.6
23°	11617.6	11317.6	11393.6	11088.6	11198.6	11311.6	11325.6	11497.6	11909.6	11928.6	12000.6
24°	11627.6	11470.6	11322.6	11213.6	10985.6	11264.6	11374.6	11562.6	11769.6	11764.6	11869.6
25°	11887.6	11524.6	11400.6	11038.6	11127.6	11201.6	11320.6	11407.6	11941.6	11800.6	11994.6
26°	11516.6	11335.6	11119.6	10713.6	11151.6	11114.6	11032.6	11127.6	11547.6	11705.6	11966.6
27°	11391.6	11245.6	11049.6	10708.6	10805.6	10947.6	11060.6	11024.6	11423.6	11690.6	11571.6
28°	11395.6	11006.6	11086.6	10847.6	10479.7	10816.6	10644.7	10955.6	11408.6	11575.6	11498.6
29°	11202.6	10585.7	10789.6	10223.7	10631.7	10512.7	10837.6	10909.6	10958.6	10971.6	11520.6
30°	11024.6	10715.6	10766.6	10366.7	10261.7	10413.7	10389.7	10357.7	10840.6	11363.6	10937.6
31°	10851.6	10473.7	10424.7	10276.7	10211.7	10504.7	10452.7	10764.6	10973.6	10991.6	10784.6
32°	10505.7	10538.7	10525.7	9854.1	10107.7	10093.7	10215.7	10395.7	10788.6	10713.6	11016.6
33°	10373.7	10257.7	10292.7	9927.8	9912.4	10103.7	10079.7	10209.7	10497.7	10729.6	10424.7
34°	10212.7	10034.7	10154.7	9946.4	9988.8	9891.6	9819.4	10107.7	10230.7	10278.7	10589.7
35°	10213.7	9861.6	9800.6	9609.1	9695.2	9794.3	9746.9	9943.8	10274.7	9950.4	10393.7
36°	10053.7	9795.5	9702.5	9522.7	9499.2	9630.0	9803.8	9821.0	9964.3	9906.1	10014.7
37°	9628.3	9571.1	9580.3	9408.0	9246.7	9387.8	9359.8	9696.7	9739.0	9738.8	9702.7
38°	9607.0	9385.2	9564.9	9182.6	9177.2	9126.2	9201.9	9371.3	9610.6	9515.6	9758.5
39°	9359.5	9268.2	9265.0	9132.4	9333.8	9002.8	9088.4	9100.4	9293.0	9343.4	9432.3
40°	9187.5	8968.5	9199.4	9003.7	8933.7	8880.7	8983.7	9002.7	9100.5	8976.0	9255.4
41°	8865.2	8871.5	8932.9	8894.5	8593.7	8584.7	8454.1	8897.3	9042.3	8809.0	8911.4
42°	8551.4	8548.8	8988.1	8469.0	8596.2	8238.8	8483.2	8691.8	8727.2	8721.5	8661.9
43°	8463.4	8320.2	8283.3	8346.5	8127.4	8261.5	8232.5	8440.5	8483.4	8129.5	8419.0
44°	8059.7	8153.6	8505.8	8364.7	8222.5	8015.0	8193.9	8300.6	8339.6	8292.3	8328.7

TEST NUMBER: P601073

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	8074.9	7941.6	8163.3	8006.0	8031.2	8116.9	7960.0	8129.0	8160.3	7912.9	8093.4
46°	7838.7	7868.9	8114.3	7932.8	7739.7	7687.5	7743.2	7876.0	7863.3	7992.2	7890.4
47°	7623.3	7535.3	7797.1	7730.7	7573.0	7569.8	7639.2	7683.3	7761.0	7561.1	7555.1
48°	7382.9	7242.0	7566.1	7289.6	7259.0	7161.6	7220.4	7331.2	7412.2	7407.7	7439.8
49°	7107.1	7052.8	7279.7	7074.1	6909.5	6938.2	7041.0	7159.0	6969.8	7067.8	7146.7
50°	6714.3	6677.9	6864.3	6685.2	6407.0	6538.1	6648.3	6780.3	6624.4	6791.0	6760.0
51°	6481.7	6411.9	6583.3	6354.9	5965.8	6145.7	6090.8	6226.2	6274.8	6415.5	6518.5
52°	6107.0	5955.5	6183.3	5812.1	5566.3	5740.5	5872.9	5991.1	5878.5	6064.1	6002.6
53°	5641.2	5540.2	5617.9	5307.4	4997.0	5089.8	5232.3	5457.8	5327.1	5562.6	5597.3
54°	5108.3	4989.0	5058.0	4650.9	4549.5	4730.0	4635.7	4858.9	4858.8	5087.8	4992.8
55°	4595.3	4495.2	4642.8	4257.2	4206.3	4327.9	4225.5	4431.6	4418.9	4613.5	4553.6
56°	4153.2	4114.7	4272.1	3985.7	3977.7	4060.8	4000.3	4115.1	4143.7	4203.5	4166.9
57°	3837.8	3903.7	4018.5	3798.5	3792.6	3851.0	3798.8	3900.9	3940.1	3936.1	3875.7
58°	3646.9	3672.8	3768.3	3509.1	3523.8	3626.4	3496.2	3656.2	3702.9	3728.0	3667.7
59°	3403.3	3390.1	3509.7	3245.8	3223.4	3346.9	3240.3	3384.5	3397.9	3454.6	3429.9
60°	3159.6	3095.4	3251.6	2982.9	2977.3	3067.5	2994.5	3112.9	3134.5	3206.3	3191.8
61°	2894.4	2860.8	2993.5	2752.6	2757.8	2824.1	2772.2	2883.8	2895.5	2952.5	2930.5
62°	2659.5	2665.7	2745.2	2527.9	2564.3	2603.4	2583.5	2654.7	2663.6	2735.7	2729.7
63°	2461.8	2482.3	2529.8	2312.8	2352.8	2378.6	2376.6	2445.5	2451.0	2497.3	2516.3
64°	2286.0	2291.2	2323.9	2144.9	2164.6	2182.9	2172.9	2240.6	2258.1	2292.9	2331.6
65°	2109.6	2071.5	2120.7	1978.1	2015.9	2036.4	1986.4	2057.7	2090.9	2126.7	2157.0
66°	1955.5	1908.5	1963.1	1820.7	1871.5	1873.1	1830.0	1916.4	1927.1	1974.5	1990.0
67°	1786.4	1770.8	1836.6	1686.8	1729.3	1717.6	1668.4	1764.2	1759.8	1815.4	1829.5
68°	1648.7	1644.4	1696.6	1552.6	1586.8	1563.7	1536.2	1608.9	1625.9	1660.3	1691.0
69°	1535.6	1503.1	1550.7	1437.8	1456.5	1438.6	1420.6	1483.9	1490.5	1514.1	1561.2
70°	1414.7	1388.5	1424.8	1326.2	1326.1	1326.9	1304.9	1357.8	1355.0	1398.3	1435.9
71°	1301.3	1274.0	1315.8	1220.5	1219.9	1222.0	1206.7	1242.6	1250.2	1282.7	1331.1
72°	1198.5	1176.2	1202.9	1114.2	1126.0	1116.1	1094.6	1141.0	1148.1	1185.4	1215.1
73°	1109.7	1066.7	1097.9	1017.8	1023.6	1013.2	995.4	1039.3	1052.7	1079.8	1107.8
74°	1013.2	977.5	994.9	925.2	919.0	914.0	901.7	943.5	955.3	981.1	1014.1
75°	920.1	895.8	912.9	836.6	829.4	831.5	818.7	856.7	865.7	892.8	931.4
76°	835.2	814.1	831.2	759.0	752.4	757.5	745.3	771.6	788.3	813.2	845.6
77°	757.2	736.8	752.2	691.2	682.4	685.3	669.2	696.2	714.7	737.2	768.7
78°	687.7	662.2	679.0	618.3	613.1	616.0	598.6	625.3	644.4	671.3	693.2
79°	614.1	594.7	611.6	555.0	549.7	547.6	537.4	560.9	574.7	609.1	622.0
80°	547.3	534.9	541.6	496.7	489.0	488.6	480.9	501.9	514.0	552.5	559.4
81°	488.2	481.0	481.2	442.8	433.3	434.0	424.9	446.4	457.4	493.7	502.4
82°	438.4	423.7	427.5	389.3	379.5	383.7	373.0	394.5	404.5	439.6	448.3
83°	387.7	371.6	375.9	341.6	333.1	335.5	327.0	344.9	356.0	388.9	398.6
84°	337.8	325.4	328.9	298.3	294.2	295.4	288.6	300.9	313.8	340.4	350.5
85°	297.4	290.1	290.6	266.6	263.8	265.3	257.9	266.9	279.9	300.7	309.3
86°	265.8	261.0	260.9	240.8	239.2	241.2	234.8	240.8	252.6	268.9	275.2
87°	239.9	236.3	236.4	219.7	219.0	221.1	215.6	219.8	229.9	243.3	248.8
88°	219.2	215.4	215.7	201.5	201.7	203.6	198.9	202.1	210.5	222.4	227.0
89°	201.4	197.7	198.3	189.5	192.0	193.1	187.4	188.6	195.6	204.2	208.7



TEST NUMBER: P601073

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	189.8	187.9	188.3	184.0	186.3	187.7	182.6	183.4	189.0	191.5	194.7

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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	10440.7	10440.7
1°	10499.7	10358.7
2°	10527.7	10407.7
3°	10504.7	10360.7
4°	10621.7	10571.7
5°	10550.7	10369.7
6°	10588.7	10527.7
7°	10620.7	10354.7
8°	10548.7	10560.7
9°	10457.7	10870.6
10°	10876.6	10470.7
11°	10772.6	10798.6
12°	10907.6	10676.6
13°	11042.6	10781.6
14°	11335.6	11105.6
15°	11543.6	11280.6
16°	11681.6	11376.6
17°	11456.6	11428.6
18°	11696.6	11350.6
19°	11750.6	11513.6
20°	11607.6	11646.6
21°	11885.6	11655.6
22°	11797.6	11655.6
23°	11999.6	11617.6
24°	12035.6	11627.6
25°	11886.6	11887.6
26°	11802.6	11516.6
27°	11498.6	11391.6
28°	11187.6	11395.6
29°	10941.6	11202.6
30°	11042.6	11024.6
31°	10861.6	10851.6
32°	10523.7	10505.7
33°	10436.7	10373.7
34°	10307.7	10212.7
35°	9976.0	10213.7
36°	9591.5	10053.7
37°	9619.4	9628.3
38°	9486.8	9607.0
39°	9404.9	9359.5
40°	9076.2	9187.5
41°	8814.4	8865.2
42°	8533.2	8551.4
43°	8534.2	8463.4
44°	8130.8	8059.7

TEST NUMBER: P601073

CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	8018.8	8074.9
46°	7785.7	7838.7
47°	7701.2	7623.3
48°	7312.6	7382.9
49°	7124.0	7107.1
50°	6897.7	6714.3
51°	6525.1	6481.7
52°	6237.8	6107.0
53°	5580.2	5641.2
54°	5173.7	5108.3
55°	4576.6	4595.3
56°	4121.2	4153.2
57°	3873.3	3837.8
58°	3728.9	3646.9
59°	3483.4	3403.3
60°	3216.7	3159.6
61°	2956.0	2894.4
62°	2724.0	2659.5
63°	2519.3	2461.8
64°	2332.1	2286.0
65°	2152.1	2109.6
66°	1979.1	1955.5
67°	1813.3	1786.4
68°	1683.4	1648.7
69°	1565.9	1535.6
70°	1440.0	1414.7
71°	1314.1	1301.3
72°	1208.3	1198.5
73°	1104.5	1109.7
74°	1001.9	1013.2
75°	917.6	920.1
76°	836.3	835.2
77°	764.1	757.2
78°	691.2	687.7
79°	620.7	614.1
80°	557.4	547.3
81°	500.1	488.2
82°	446.7	438.4
83°	394.7	387.7
84°	346.0	337.8
85°	304.7	297.4
86°	272.6	265.8
87°	246.2	239.9
88°	225.1	219.2
89°	207.1	201.4

TEST NUMBER: P601073
CATALOG NUMBER: UHBS-36-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	194.2	189.8

(END OF REPORT)