

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: P601051

Luminaire Tested: UHBS-15-MV-L850-U-CDL-277V

Issue Date: 8/28/2023

Test Information

Test Method: LM-79-2019
Report Number: P601051
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-277V
Description: UHB Round Select with Clear Reflector with Lens Cover at 277V 15000 LUMEN SETTING AND 5000K
Light Source: -
Ballast/Driver: Electrical Driver

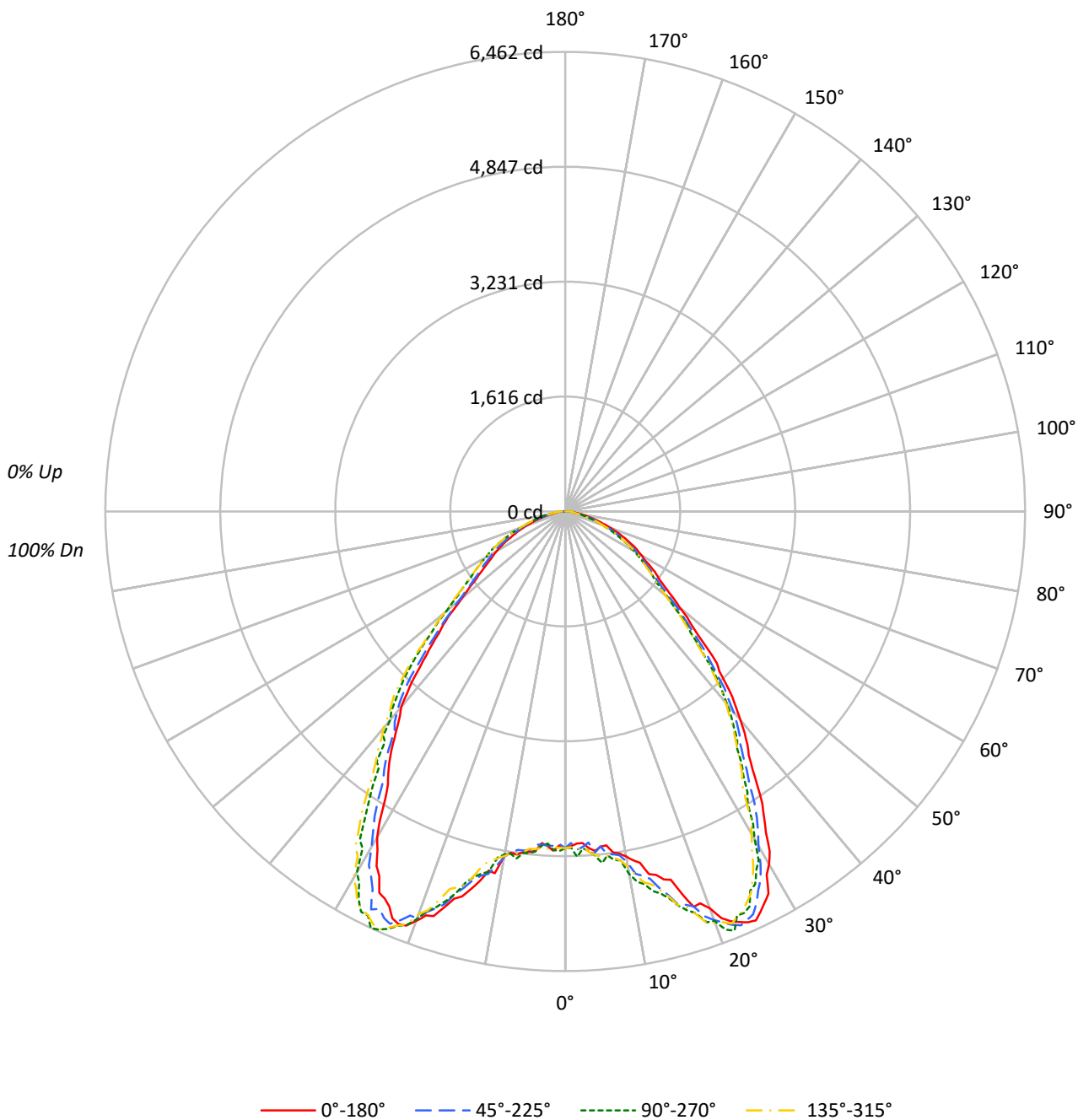
Summary

Lumens per Lamp: 12665 (1 lamp)
Luminaire Lumens: 12665.0 lumens
Efficiency: 100.0%
Efficacy: 124.5 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): 101.7
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: P601051
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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°	64895	64895	64895	64895
5°	65917	66861	65899	66030
10°	68548	72036	68401	68131
15°	76013	79844	79484	76609
20°	86574	89370	89392	88997
25°	95928	92695	90793	97717
30°	90661	84206	83660	92559
35°	78809	72262	72108	78978
40°	68552	63308	64052	68373
45°	58483	51257	51304	59498
50°	44809	40216	40350	46327
55°	37750	34309	33413	38866
60°	34211	30828	30444	35101
65°	31443	26537	26640	32351
70°	27204	22139	22656	27004
75°	22425	17998	18449	22870
80°	17932	13307	13685	18721
85°	18665	16668	17392	19389

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°
 Vertical Angle: 89°
 Luminance: 75858 cd/sqm



TEST NUMBER: P601051
 CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-277V

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	461.6	3.6	3.6
10°-20°	1583.4	12.5	12.5
20°-30°	2805.0	22.1	22.1
30°-40°	2831.1	22.4	22.4
40°-50°	2178.1	17.2	17.2
50°-60°	1369.6	10.8	10.8
60°-70°	891.7	7.0	7.0
70°-80°	410.4	3.2	3.2
80°-90°	134.1	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°	4850.0	38.3	38.3
0°-40°	7681.0	60.6	60.6
0°-60°	11228.7	88.7	88.7
0°-90°	12665.0	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°	12665.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4735	4735	4735	4735	4735	
5°	4791	4860	4790	4800	4791	458
15°	5357	5627	5602	5399	5357	1548
25°	6344	6130	6004	6462	6344	2841
35°	4710	4319	4310	4720	4710	2953
45°	3017	2645	2647	3070	3017	2273
55°	1580	1436	1398	1627	1580	1436
65°	970	818	822	998	970	956
75°	424	340	348	432	424	458
85°	119	106	111	123	119	144
90°	91	91	92	93	91	



TEST NUMBER: P601051
 CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	4735.1	4735.1	4735.1	4735.1	4735.1	4735.1	4735.1	4735.1	4735.1	4735.1	4735.1
1°	4707.2	4670.6	4652.6	4727.1	4698.1	4742.7	4696.8	4660.0	4689.8	4774.7	4769.9
2°	4671.5	4712.2	4805.1	4858.1	4768.0	4750.2	4773.5	4743.7	4663.4	4762.6	4707.8
3°	4668.4	4686.7	4759.5	4745.3	4711.9	4723.9	4712.4	4668.8	4746.4	4676.5	4776.8
4°	4743.8	4708.7	4622.6	4784.2	4858.3	4750.1	4673.1	4684.0	4699.9	4710.7	4735.6
5°	4791.4	4822.2	4805.6	4860.0	4841.1	4857.5	4790.1	4749.3	4664.0	4799.6	4832.7
6°	4739.2	4706.1	4764.8	4971.7	4880.0	4884.2	4816.3	4752.6	4815.0	4830.6	4730.8
7°	4728.8	4824.1	4886.4	4871.7	4902.3	4848.4	4822.4	4778.0	4829.9	4839.2	4837.3
8°	4842.6	4818.4	4914.8	4948.1	4908.2	4931.9	4872.5	4788.4	4826.5	4930.5	4827.7
9°	4869.9	4827.3	4965.5	4965.7	4987.9	4946.4	4859.2	4845.4	4861.7	4873.7	4837.6
10°	4925.7	4970.2	5057.5	5176.3	5102.8	5035.1	4915.1	4947.5	4917.1	4895.7	4963.1
11°	4994.6	5135.7	5242.6	5305.3	5255.5	5176.2	5184.1	5133.6	5020.7	4955.6	4999.5
12°	5051.7	5202.3	5276.9	5360.1	5343.9	5319.0	5161.8	5206.9	5219.2	5180.2	5010.4
13°	5233.4	5249.3	5348.4	5477.8	5381.2	5376.7	5331.7	5276.9	5234.8	5225.4	5065.7
14°	5266.4	5338.8	5563.3	5534.5	5551.7	5405.7	5474.8	5349.7	5329.4	5297.1	5327.6
15°	5357.4	5534.0	5627.0	5627.4	5633.0	5570.3	5602.0	5471.6	5471.1	5399.4	5413.0
16°	5384.7	5694.1	5801.7	5763.8	5774.7	5744.5	5665.3	5650.1	5527.6	5586.0	5463.3
17°	5633.9	5785.8	5783.8	5866.4	5831.8	5808.1	5824.7	5820.0	5720.6	5722.9	5566.5
18°	5846.0	5732.9	5940.8	5939.1	5938.4	5969.6	5981.3	5897.2	5829.8	5846.3	5764.0
19°	5826.1	5969.5	6075.5	6108.3	6211.9	6033.2	6007.7	5971.3	5935.7	5933.5	5939.1
20°	5936.0	6158.4	6064.5	6127.7	6193.4	6111.9	6129.2	6119.0	6056.1	6102.1	6039.3
21°	6127.0	6134.2	6251.1	6299.7	6208.5	6167.0	6237.5	6112.1	6057.5	6228.0	6235.4
22°	6214.0	6225.6	6308.6	6354.7	6277.5	6220.9	6256.1	6234.7	6172.5	6283.4	6326.9
23°	6271.3	6312.3	6330.6	6175.8	6203.3	6175.0	6217.0	6276.6	6319.1	6374.7	6353.3
24°	6321.6	6331.2	6238.5	6178.7	6161.1	6114.5	6079.2	6227.6	6288.3	6435.3	6466.0
25°	6343.7	6257.7	6242.5	6129.9	6053.1	6051.2	6004.1	6183.5	6147.3	6462.0	6480.8
26°	6261.0	6074.3	6177.2	5932.4	6005.6	5915.4	5963.5	6171.7	6282.0	6322.5	6386.5
27°	6173.0	6012.0	5943.9	5882.1	5783.5	5815.8	5754.8	5803.8	6122.5	6318.6	6273.3
28°	6085.3	5914.5	5785.3	5718.6	5688.9	5571.2	5646.7	5763.2	5857.9	6182.4	6336.6
29°	5839.6	5774.4	5552.2	5606.5	5413.5	5408.9	5439.9	5632.0	5747.9	5971.2	6090.8
30°	5728.9	5480.7	5382.7	5321.0	5256.6	5224.2	5286.5	5267.1	5613.0	5848.8	5917.3
31°	5579.5	5303.9	5222.9	5124.6	5052.6	5086.0	5054.0	5140.1	5346.4	5528.4	5724.5
32°	5323.5	5131.5	5034.1	4836.6	4783.4	4818.7	4771.2	4952.6	5151.2	5445.2	5598.3
33°	5130.4	4947.1	4813.6	4701.9	4602.7	4514.8	4571.4	4693.0	4950.7	5180.7	5298.8
34°	4951.9	4708.7	4547.7	4479.7	4438.4	4458.4	4446.0	4396.6	4750.7	4943.0	5128.7
35°	4710.4	4521.6	4379.2	4319.1	4247.6	4306.1	4309.9	4373.6	4500.0	4720.5	4887.1
36°	4481.7	4305.6	4205.5	4107.7	4143.0	4086.0	4158.2	4119.6	4431.5	4457.2	4631.6
37°	4288.2	4140.9	4039.8	4016.0	3962.7	3963.8	3982.5	3980.3	4161.2	4404.0	4465.4
38°	4157.0	4029.3	3924.3	3847.4	3813.2	3810.0	3830.0	3823.0	3960.6	4113.4	4289.1
39°	4005.7	3920.2	3744.9	3709.9	3639.8	3659.5	3688.4	3752.7	3863.6	4064.3	4081.9
40°	3831.7	3734.1	3626.9	3538.6	3545.3	3462.4	3580.2	3587.6	3763.6	3821.7	4005.3
41°	3669.7	3582.3	3415.6	3376.3	3377.4	3325.8	3383.6	3458.8	3618.1	3725.7	3753.0
42°	3509.3	3451.0	3230.1	3213.8	3114.9	3189.0	3214.9	3275.8	3457.6	3561.7	3664.4
43°	3312.3	3201.5	3045.0	3019.2	3005.5	2971.6	2997.7	3092.7	3295.2	3404.5	3530.2
44°	3116.4	3016.2	2877.0	2810.5	2826.7	2776.0	2807.6	2866.1	3048.8	3258.3	3338.1



TEST NUMBER: P601051
 CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	3017.4	2858.6	2698.1	2644.6	2597.7	2574.5	2647.0	2675.0	2870.7	3069.8	3146.0
46°	2784.8	2620.5	2557.8	2453.9	2429.5	2452.2	2471.4	2489.3	2673.4	2881.4	2962.3
47°	2557.9	2462.7	2375.5	2339.5	2275.3	2298.6	2347.5	2337.1	2472.8	2688.3	2750.3
48°	2390.9	2286.4	2231.9	2168.9	2118.3	2153.9	2209.8	2188.7	2317.7	2505.1	2555.1
49°	2274.7	2214.1	2057.3	1996.8	1980.4	1999.4	2022.8	2045.1	2125.5	2365.4	2389.1
50°	2101.6	2053.3	1885.7	1886.2	1831.0	1865.9	1892.5	1883.7	2016.5	2172.8	2206.2
51°	1985.6	1923.2	1792.7	1747.7	1696.3	1768.6	1771.6	1769.7	1883.9	2046.7	2058.8
52°	1855.1	1789.7	1664.6	1635.4	1613.2	1664.0	1660.6	1647.5	1763.9	1907.0	1926.4
53°	1746.1	1693.1	1565.0	1562.3	1540.0	1587.3	1557.3	1552.2	1680.0	1821.8	1807.6
54°	1645.3	1606.2	1494.5	1504.1	1474.4	1521.6	1477.8	1479.1	1597.4	1714.3	1710.7
55°	1579.9	1530.5	1434.9	1435.9	1408.7	1447.4	1398.4	1422.2	1527.0	1626.6	1617.4
56°	1521.8	1459.4	1366.9	1367.0	1337.5	1372.4	1332.1	1356.0	1457.7	1554.2	1537.7
57°	1441.1	1388.2	1306.3	1300.9	1275.9	1310.8	1260.5	1287.5	1388.5	1488.6	1466.3
58°	1356.0	1315.6	1257.4	1238.5	1228.7	1266.5	1210.8	1230.6	1319.1	1423.1	1396.6
59°	1289.0	1258.8	1204.2	1180.0	1188.7	1212.6	1165.6	1175.6	1255.5	1351.5	1324.6
60°	1248.1	1203.2	1140.4	1124.7	1131.7	1159.3	1110.7	1128.6	1199.1	1280.6	1254.1
61°	1184.4	1141.9	1088.5	1062.6	1065.2	1094.2	1054.5	1086.2	1151.0	1236.0	1207.3
62°	1140.0	1081.0	1036.3	1004.8	1005.5	1030.3	997.9	1032.2	1094.3	1181.2	1151.0
63°	1088.1	1016.5	976.4	936.1	938.4	962.1	941.6	969.6	1036.4	1123.0	1088.8
64°	1025.2	959.8	915.7	877.7	884.8	901.7	881.2	913.7	975.2	1061.7	1031.2
65°	969.6	898.1	862.8	818.3	831.2	839.7	821.5	864.7	918.9	997.6	975.2
66°	913.6	840.7	806.1	760.0	770.9	788.3	770.1	801.5	863.8	925.7	922.9
67°	851.8	775.0	745.8	711.4	711.7	734.3	722.8	747.4	807.9	859.6	866.8
68°	797.0	720.4	688.8	655.7	655.2	679.2	673.6	701.7	753.3	803.0	800.8
69°	736.7	662.4	638.1	603.6	600.4	617.6	617.7	650.5	699.8	737.0	742.0
70°	678.9	605.0	587.1	552.5	555.9	566.0	565.4	600.6	645.6	673.9	682.8
71°	622.9	548.1	545.1	503.1	506.0	509.7	515.1	555.2	587.3	622.4	623.1
72°	570.6	504.6	493.6	463.2	461.6	455.7	470.7	508.4	536.7	569.0	571.4
73°	523.1	459.1	446.4	421.3	412.2	412.2	426.0	457.7	485.2	525.6	523.7
74°	474.1	412.8	405.0	378.7	366.7	370.7	385.7	411.3	438.0	478.4	475.0
75°	423.5	370.8	363.6	339.9	329.3	332.7	348.4	364.9	394.4	431.9	433.3
76°	379.7	334.0	325.8	303.4	293.4	293.6	310.3	328.6	354.1	391.8	388.7
77°	339.3	300.0	288.0	267.0	259.0	254.6	272.5	291.6	318.4	351.5	354.4
78°	301.3	264.1	250.2	234.0	222.9	218.1	234.7	254.6	281.6	316.4	311.7
79°	263.3	229.2	216.6	201.0	189.5	186.7	201.2	220.9	245.2	276.5	269.0
80°	227.2	200.8	187.3	168.6	160.3	162.3	173.4	189.8	211.5	237.2	228.8
81°	194.0	172.2	162.1	144.9	141.5	142.5	155.3	162.1	180.8	201.4	196.0
82°	165.6	152.5	142.1	130.7	129.5	129.9	137.2	143.0	160.9	171.5	168.2
83°	144.2	132.9	129.2	120.6	119.8	120.1	126.2	128.8	141.0	152.9	148.0
84°	129.7	121.3	119.0	112.3	112.1	112.3	117.7	118.3	129.3	134.4	132.1
85°	118.7	112.3	110.6	106.0	105.9	105.9	110.6	110.0	118.7	123.3	121.5
86°	109.9	105.3	103.9	100.9	101.0	100.9	104.8	103.3	109.6	113.8	113.0
87°	103.3	100.0	98.8	96.7	97.1	96.7	99.6	98.2	103.2	106.5	105.9
88°	98.2	95.5	94.9	93.7	94.2	93.7	95.8	94.1	98.1	101.0	100.6
89°	94.3	92.3	91.9	91.7	92.3	91.7	93.1	91.1	94.1	96.6	96.4



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	91.3	90.2	89.9	90.9	91.5	91.0	91.6	89.3	91.4	93.2	92.7



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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	4735.1	4735.1
1°	4684.4	4707.2
2°	4750.4	4671.5
3°	4720.4	4668.4
4°	4733.8	4743.8
5°	4700.6	4791.4
6°	4803.3	4739.2
7°	4800.1	4728.8
8°	4891.1	4842.6
9°	4899.9	4869.9
10°	4875.9	4925.7
11°	4936.9	4994.6
12°	5037.2	5051.7
13°	5114.4	5233.4
14°	5217.6	5266.4
15°	5452.7	5357.4
16°	5534.1	5384.7
17°	5539.4	5633.9
18°	5739.5	5846.0
19°	5928.4	5826.1
20°	6005.4	5936.0
21°	6203.9	6127.0
22°	6225.9	6214.0
23°	6362.3	6271.3
24°	6399.9	6321.6
25°	6315.7	6343.7
26°	6247.3	6261.0
27°	6303.1	6173.0
28°	6105.3	6085.3
29°	6026.6	5839.6
30°	5979.9	5728.9
31°	5594.0	5579.5
32°	5526.4	5323.5
33°	5339.1	5130.4
34°	5098.8	4951.9
35°	4842.2	4710.4
36°	4584.3	4481.7
37°	4386.1	4288.2
38°	4284.2	4157.0
39°	4123.6	4005.7
40°	3933.2	3831.7
41°	3786.3	3669.7
42°	3625.9	3509.3
43°	3516.5	3312.3
44°	3318.3	3116.4

TEST NUMBER: P601051
CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	3157.8	3017.4
46°	2950.8	2784.8
47°	2723.3	2557.9
48°	2545.8	2390.9
49°	2390.9	2274.7
50°	2234.9	2101.6
51°	2115.7	1985.6
52°	1966.2	1855.1
53°	1834.2	1746.1
54°	1757.5	1645.3
55°	1661.6	1579.9
56°	1586.5	1521.8
57°	1505.4	1441.1
58°	1432.2	1356.0
59°	1359.2	1289.0
60°	1296.9	1248.1
61°	1248.8	1184.4
62°	1197.8	1140.0
63°	1137.8	1088.1
64°	1073.9	1025.2
65°	1015.3	969.6
66°	947.7	913.6
67°	885.9	851.8
68°	816.1	797.0
69°	749.4	736.7
70°	684.1	678.9
71°	621.9	622.9
72°	576.4	570.6
73°	523.7	523.1
74°	476.1	474.1
75°	426.6	423.5
76°	380.8	379.7
77°	340.1	339.3
78°	299.6	301.3
79°	263.8	263.3
80°	224.5	227.2
81°	191.3	194.0
82°	163.9	165.6
83°	142.8	144.2
84°	127.1	129.7
85°	117.2	118.7
86°	109.4	109.9
87°	103.0	103.3
88°	97.8	98.2
89°	93.9	94.3



TEST NUMBER: P601051
CATALOG NUMBER: UHBS-15-MV-L850-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	90.9	91.3

(END OF REPORT)