

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: P601048

Luminaire Tested: UHBS-12-MV-L840-U-CDL-277V

Issue Date: 8/28/2023

Test Information

Test Method: LM-79-2019
Report Number: P601048
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-12-MV-L840-U-CDL-277V
Description: UHB Round Select with Clear Reflector with Lens Cover at 277V 12000 LUMEN SETTING AND 4000K
Light Source: -
Ballast/Driver: Electrical Driver

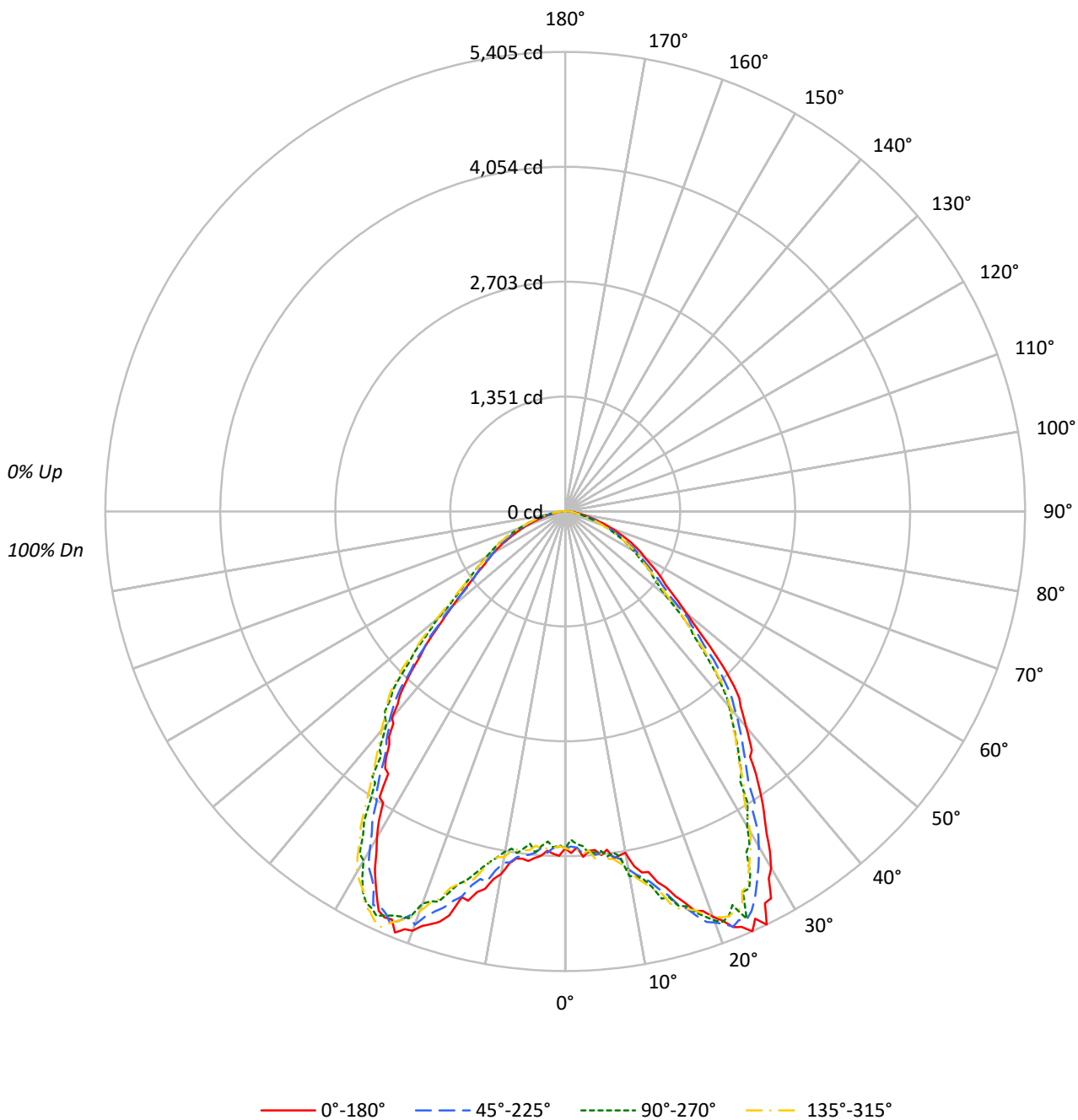
Summary

Lumens per Lamp: 10734 (1 lamp)
Luminaire Lumens: 10734.0 lumens
Efficiency: 100.0%
Efficacy: 128.7 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.43 / 1.37
Luminous Opening: Circular (Dia: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 83.4
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: P601048
CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

Luminous Intensity Polar Plot





TEST NUMBER: P601048
 CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

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	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	40	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	54294	54294	54294	54294
5°	54954	55351	56264	55372
10°	56728	60612	60254	56512
15°	64932	66598	66607	63753
20°	73953	74656	76511	71589
25°	79905	74669	78386	79347
30°	76613	67727	70049	75015
35°	66610	59746	61732	65186
40°	59227	53765	56629	58472
45°	52106	43795	46834	52996
50°	39683	33180	36737	41606
55°	33406	28749	29965	32881
60°	29477	25587	26538	29255
65°	27182	22350	22752	26598
70°	23305	18661	18845	22684
75°	18825	15075	15266	19116
80°	15035	11326	11768	15880
85°	16118	14199	14640	15913

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 89°
 Luminance: 64550 cd/sqm



TEST NUMBER: P601048
 CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	388.5	3.6	3.6
10°-20°	1331.5	12.4	12.4
20°-30°	2327.3	21.7	21.7
30°-40°	2380.8	22.2	22.2
40°-50°	1922.7	17.9	17.9
50°-60°	1176.0	11.0	11.0
60°-70°	748.5	7.0	7.0
70°-80°	344.8	3.2	3.2
80°-90°	113.8	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°	4047.4	37.7	37.7
0°-40°	6428.2	59.9	59.9
0°-60°	9526.9	88.8	88.8
0°-90°	10734.0	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°	10734.0	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3962	3962	3962	3962	3962	
5°	3994	4023	4090	4025	3994	387
15°	4576	4694	4694	4493	4576	1319
25°	5284	4938	5184	5247	5284	2405
35°	3981	3571	3690	3896	3981	2498
45°	2688	2260	2416	2734	2688	2023
55°	1398	1203	1254	1376	1398	1264
65°	838	689	702	820	838	826
75°	356	285	288	361	356	389
85°	102	90	93	101	102	123
90°	80	76	77	76	80	



TEST NUMBER: P601048

CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	3961.6	3961.6	3961.6	3961.6	3961.6	3961.6	3961.6	3961.6	3961.6	3961.6	3961.6
1°	4017.3	3961.5	3921.1	3862.0	3961.4	4006.5	4051.2	3935.6	3948.0	3925.3	3916.2
2°	3955.5	3990.3	3920.9	3913.1	3982.6	3981.6	4028.2	3934.2	3983.5	3956.6	3938.3
3°	4069.1	4009.9	4053.5	3940.3	4041.1	4019.2	3995.0	4043.1	3993.9	3886.9	3940.6
4°	4001.0	4031.7	3966.9	4029.5	3982.9	4008.2	4057.4	3983.7	3944.0	3943.0	3962.0
5°	3994.5	4095.1	4010.8	4023.4	4097.9	4110.6	4089.7	4047.6	4003.4	4024.9	3903.0
6°	4064.2	4079.3	3994.4	4015.2	4017.3	4080.5	4133.6	4101.7	4020.4	3929.6	4030.1
7°	4006.9	4034.4	4088.4	4085.4	4121.2	4105.1	4114.7	4093.4	4052.2	3991.0	4038.2
8°	4121.8	4028.4	4170.2	4048.9	4120.8	4145.3	4121.1	4159.3	4060.2	4056.5	3977.9
9°	4095.0	4132.2	4143.9	4111.2	4182.2	4216.1	4190.7	4202.5	4155.8	4016.5	4023.0
10°	4076.3	4271.5	4273.8	4355.4	4265.9	4288.3	4329.7	4265.0	4124.2	4060.8	4115.3
11°	4252.8	4325.8	4370.2	4375.9	4333.2	4447.5	4401.6	4355.2	4253.9	4136.6	4107.9
12°	4339.8	4395.9	4414.9	4420.6	4429.6	4503.2	4537.0	4515.1	4392.0	4206.8	4152.3
13°	4351.6	4449.0	4499.2	4531.3	4560.5	4563.4	4593.6	4518.2	4355.0	4291.0	4277.4
14°	4494.5	4574.8	4590.1	4693.6	4575.2	4635.1	4717.2	4612.1	4444.4	4391.2	4483.8
15°	4576.4	4721.3	4617.7	4693.8	4805.5	4741.4	4694.4	4765.2	4609.5	4493.3	4510.4
16°	4709.0	4823.8	4798.1	4821.3	4801.7	4921.1	4941.5	4861.0	4666.8	4557.5	4530.0
17°	4811.3	4895.8	4873.7	4857.1	4896.3	4882.5	5046.2	4960.9	4780.3	4690.9	4636.7
18°	4940.9	5029.9	4971.8	4954.8	4926.5	4934.7	5102.5	5036.0	4852.9	4827.6	4757.9
19°	4969.1	5118.4	5095.3	5035.5	4958.9	5066.0	5153.9	5074.6	4993.9	4846.9	4879.9
20°	5070.6	5145.6	5141.7	5118.8	5026.3	5090.0	5246.0	5186.2	5159.7	4908.5	5015.7
21°	5153.6	5223.7	5173.0	5170.0	5098.6	5130.9	5263.6	5140.3	5034.7	5126.5	5119.7
22°	5273.5	5348.0	5184.5	5133.4	5055.3	5214.1	5340.5	5240.8	5135.6	5137.5	5188.7
23°	5306.6	5305.6	5141.1	5030.3	5077.3	5131.8	5211.1	5324.2	5203.6	5161.9	5241.2
24°	5405.2	5346.7	5150.1	5241.6	5080.1	5140.3	5225.0	5173.7	5183.9	5201.2	5354.6
25°	5284.1	5304.5	5064.4	4937.8	4856.3	4990.7	5183.6	5129.3	5136.2	5247.2	5329.2
26°	5405.0	5159.2	4998.9	4934.1	4893.9	4905.2	5048.8	5135.2	5167.7	5192.2	5275.2
27°	5171.2	5043.9	4861.1	4789.2	4733.5	4769.3	4906.1	4909.0	5000.8	5161.7	5208.9
28°	5152.9	4945.7	4698.9	4535.2	4589.8	4645.1	4765.0	4803.0	4908.9	5067.8	5040.8
29°	4934.4	4795.1	4593.9	4468.1	4439.9	4563.8	4575.5	4756.8	4780.2	4918.4	4999.7
30°	4841.2	4611.1	4490.5	4279.7	4264.4	4422.4	4426.4	4491.9	4698.1	4740.2	4893.5
31°	4671.8	4507.9	4298.6	4156.1	4105.8	4183.1	4253.9	4374.7	4446.0	4694.0	4672.8
32°	4469.8	4299.8	4023.0	4045.6	3901.1	4025.4	4040.6	4180.9	4369.8	4484.5	4540.2
33°	4305.7	4175.0	3995.4	3774.8	3838.1	3869.9	4008.9	4045.0	4103.0	4339.1	4437.8
34°	4156.8	3928.5	3776.8	3704.4	3639.0	3776.4	3720.2	3885.6	4025.0	4091.8	4153.5
35°	3981.3	3801.2	3636.4	3571.0	3509.7	3558.3	3689.7	3781.5	3831.1	3896.2	3978.9
36°	3812.2	3656.9	3542.8	3453.0	3373.8	3477.6	3583.0	3554.4	3694.0	3854.9	3832.4
37°	3611.3	3543.6	3401.3	3333.3	3284.2	3369.4	3434.2	3452.1	3529.9	3589.7	3718.7
38°	3564.8	3457.8	3275.6	3213.8	3110.7	3261.2	3361.2	3360.1	3465.6	3546.7	3560.7
39°	3430.9	3338.8	3150.3	3097.5	3136.0	3147.5	3211.0	3268.1	3319.4	3396.1	3436.3
40°	3310.5	3222.5	3049.5	3005.2	2969.5	3083.6	3165.3	3171.9	3255.7	3268.3	3331.7
41°	3190.0	3087.3	2949.7	2891.3	2872.3	2937.8	3000.9	3051.9	3140.8	3224.4	3227.1
42°	3080.4	2985.2	2844.5	2743.2	2734.7	2861.3	2902.8	2948.9	3005.5	3166.8	3091.4
43°	2999.8	2865.2	2662.1	2603.1	2572.2	2669.4	2744.0	2736.3	2919.8	3006.6	3103.2
44°	2857.9	2749.1	2492.7	2422.9	2427.1	2516.0	2590.3	2567.3	2679.3	2917.8	2955.9



TEST NUMBER: P601048
 CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	2688.4	2558.6	2382.6	2259.6	2274.4	2331.1	2416.4	2418.2	2577.9	2734.3	2833.5
46°	2503.0	2334.6	2201.0	2087.0	2104.4	2176.7	2295.0	2235.2	2360.8	2537.7	2682.8
47°	2321.6	2245.6	2059.5	2014.4	1982.5	2007.8	2133.6	2150.2	2232.1	2419.4	2476.7
48°	2140.7	2004.1	1971.3	1858.8	1850.0	1909.5	1981.6	1968.0	2046.7	2223.6	2332.9
49°	1977.9	1981.8	1837.5	1701.4	1691.3	1768.8	1850.3	1844.2	1941.5	2073.0	2118.7
50°	1861.2	1787.3	1681.8	1556.2	1564.7	1629.8	1723.0	1686.8	1793.5	1951.4	1998.4
51°	1745.2	1644.0	1543.8	1446.3	1465.7	1530.2	1613.7	1561.2	1673.9	1748.0	1844.1
52°	1639.6	1553.4	1468.4	1379.8	1367.1	1441.2	1514.4	1443.9	1517.4	1644.7	1701.7
53°	1536.0	1473.6	1369.5	1307.1	1298.0	1363.6	1415.2	1349.1	1437.0	1534.9	1565.7
54°	1451.0	1393.9	1301.8	1256.7	1241.5	1308.7	1326.3	1288.2	1356.7	1455.4	1445.0
55°	1398.1	1317.0	1223.8	1203.2	1182.5	1242.0	1254.1	1232.3	1303.1	1376.1	1369.8
56°	1331.4	1246.2	1163.9	1138.1	1112.1	1176.6	1184.5	1174.0	1245.8	1311.2	1288.2
57°	1264.5	1182.2	1109.0	1073.9	1057.3	1119.9	1118.7	1107.3	1181.3	1254.1	1232.8
58°	1199.6	1112.7	1061.1	1023.1	1015.7	1070.3	1064.6	1044.8	1111.8	1184.9	1163.5
59°	1132.7	1059.2	1015.2	978.9	976.7	1029.9	1016.2	999.1	1045.1	1126.2	1094.8
60°	1075.4	1015.7	970.2	933.5	933.4	980.1	968.2	964.8	994.2	1067.3	1047.8
61°	1035.6	970.4	922.8	885.4	889.4	923.6	924.7	920.8	956.3	1020.3	992.0
62°	994.9	911.7	875.0	835.9	836.9	864.6	865.4	876.8	916.1	975.0	947.8
63°	940.2	855.3	828.0	787.3	778.5	810.0	810.6	827.7	866.7	927.7	902.5
64°	891.4	801.7	775.6	740.0	727.7	757.3	752.6	778.1	807.6	880.9	859.7
65°	838.2	754.8	721.9	689.2	683.6	705.0	701.6	730.5	764.6	820.2	817.1
66°	780.0	704.8	674.7	642.8	629.1	653.8	656.7	688.0	721.2	769.8	767.8
67°	735.1	657.5	625.3	594.1	586.2	608.4	610.7	643.1	675.0	716.0	716.3
68°	678.2	605.4	582.0	550.7	542.5	558.1	564.7	597.7	631.7	659.5	659.4
69°	630.2	556.2	533.3	505.4	494.7	511.5	516.7	555.0	580.3	605.9	613.6
70°	581.6	510.1	489.6	465.7	455.0	466.6	470.3	515.4	537.9	566.1	560.7
71°	536.8	471.2	450.8	432.3	417.0	422.1	429.7	478.3	496.0	520.5	516.3
72°	489.6	429.0	409.7	390.9	372.1	378.7	390.9	435.1	454.0	476.7	465.9
73°	444.2	390.4	370.7	353.0	336.3	341.5	356.6	390.3	413.3	437.8	424.8
74°	396.7	352.8	334.8	318.8	300.5	307.7	319.3	352.8	374.3	396.3	388.9
75°	355.5	320.5	301.7	284.7	268.7	274.1	288.3	318.1	337.8	361.0	353.1
76°	320.7	288.3	268.5	254.6	238.6	244.0	259.2	283.5	305.2	328.6	318.6
77°	285.9	259.6	238.4	225.0	210.8	212.9	229.2	253.6	273.4	291.6	284.0
78°	254.9	227.5	208.4	195.1	185.7	184.5	198.7	224.3	242.7	262.0	250.5
79°	220.6	198.2	182.4	167.9	160.4	160.2	170.3	194.4	212.4	232.5	218.3
80°	190.5	171.7	157.6	143.5	135.1	138.6	149.1	166.5	184.7	201.2	191.0
81°	164.6	150.6	135.4	123.7	119.7	122.7	128.0	143.0	160.2	171.6	163.3
82°	142.7	129.6	118.2	111.1	109.8	112.1	115.7	123.5	135.7	148.7	139.9
83°	122.5	115.5	107.5	102.7	101.7	103.4	106.5	111.3	119.6	125.8	120.8
84°	110.8	106.3	99.5	96.2	95.9	96.5	99.1	102.0	108.3	111.4	106.9
85°	102.5	98.6	92.2	90.3	90.6	91.2	93.1	94.7	99.2	101.2	97.9
86°	95.7	92.1	86.1	85.4	86.1	86.7	88.2	88.7	92.2	93.9	91.0
87°	90.2	86.5	81.8	82.0	82.6	82.8	84.2	83.8	86.8	87.7	85.5
88°	85.4	82.5	78.6	79.3	80.9	79.8	81.2	79.9	82.0	82.6	80.8
89°	82.2	79.6	76.1	77.2	78.8	77.7	78.9	77.1	78.3	78.7	77.2



TEST NUMBER: P601048
CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	79.6	77.4	75.3	76.3	77.4	76.3	77.1	74.8	75.5	75.7	74.4

TEST NUMBER: P601048
CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
0°	3961.6	3961.6
1°	3957.3	4017.3
2°	3983.7	3955.5
3°	3983.5	4069.1
4°	4013.3	4001.0
5°	3984.8	3994.5
6°	3978.0	4064.2
7°	3992.8	4006.9
8°	4049.1	4121.8
9°	4058.5	4095.0
10°	4141.3	4076.3
11°	4176.0	4252.8
12°	4220.0	4339.8
13°	4377.9	4351.6
14°	4435.6	4494.5
15°	4525.1	4576.4
16°	4587.9	4709.0
17°	4627.1	4811.3
18°	4822.6	4940.9
19°	4857.4	4969.1
20°	5003.8	5070.6
21°	5145.0	5153.6
22°	5177.5	5273.5
23°	5269.3	5306.6
24°	5350.6	5405.2
25°	5283.2	5284.1
26°	5191.5	5405.0
27°	5175.2	5171.2
28°	5068.3	5152.9
29°	4956.8	4934.4
30°	4901.4	4841.2
31°	4805.9	4671.8
32°	4569.3	4469.8
33°	4383.5	4305.7
34°	4253.2	4156.8
35°	4065.1	3981.3
36°	3873.4	3812.2
37°	3709.0	3611.3
38°	3610.3	3564.8
39°	3466.4	3430.9
40°	3395.6	3310.5
41°	3263.5	3190.0
42°	3175.1	3080.4
43°	3014.2	2999.8
44°	2956.8	2857.9

TEST NUMBER: P601048
CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	2788.9	2688.4
46°	2635.1	2503.0
47°	2409.5	2321.6
48°	2282.4	2140.7
49°	2114.8	1977.9
50°	1982.7	1861.2
51°	1810.0	1745.2
52°	1689.0	1639.6
53°	1573.4	1536.0
54°	1486.3	1451.0
55°	1399.3	1398.1
56°	1339.3	1331.4
57°	1266.5	1264.5
58°	1199.4	1199.6
59°	1131.0	1132.7
60°	1073.7	1075.4
61°	1031.7	1035.6
62°	988.9	994.9
63°	944.9	940.2
64°	892.6	891.4
65°	835.3	838.2
66°	777.5	780.0
67°	732.1	735.1
68°	678.3	678.2
69°	625.9	630.2
70°	579.7	581.6
71°	532.5	536.8
72°	483.9	489.6
73°	445.0	444.2
74°	401.1	396.7
75°	361.9	355.5
76°	324.2	320.7
77°	286.2	285.9
78°	253.3	254.9
79°	221.9	220.6
80°	192.9	190.5
81°	165.4	164.6
82°	141.3	142.7
83°	123.7	122.5
84°	110.7	110.8
85°	102.2	102.5
86°	95.5	95.7
87°	89.8	90.2
88°	84.9	85.4
89°	80.8	82.2



TEST NUMBER: P601048
CATALOG NUMBER: UHBS-12-MV-L840-U-CDL-277V

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	77.5	79.6

(END OF REPORT)