

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P295274

Luminaire Tested: **UHB-18-UNV-L840-CD-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P295274
Test Lab: Standard-Tech Co., Ltd Testing Center
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: UHB-18-UNV-L840-CD-U
Description: UHB 150W 4000K ROUND HIGH BAY LED WITH CLEAR RING LENS
Light Source: 4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

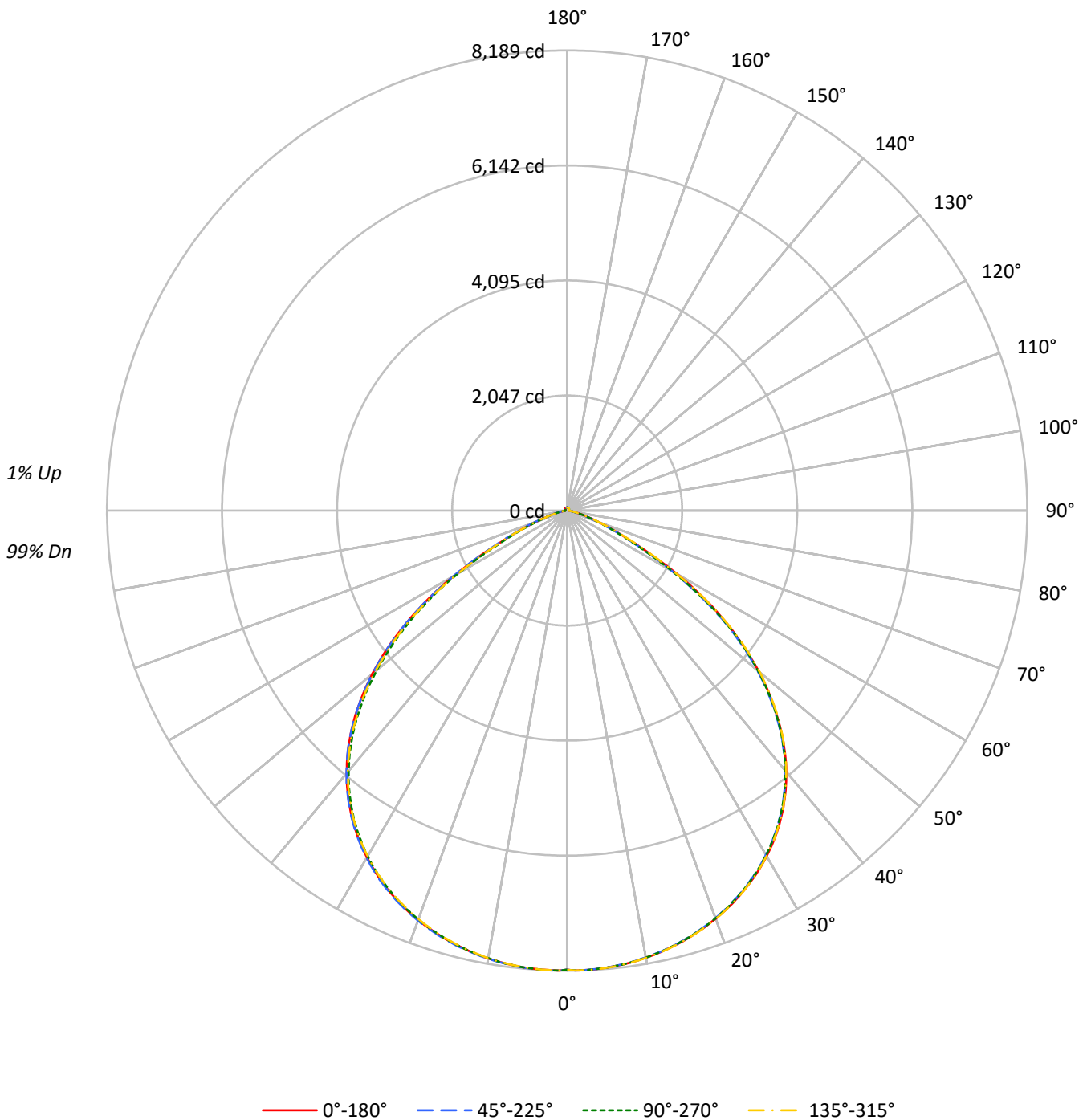
Lumens per Lamp: N/A
Luminaire Lumens: 19606.9 lumens
Efficiency: N/A
Efficacy: 133.4 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.28 / 1.37
Luminous Opening: Circular (Dia: 0.29m x H: 0m)
CIE Type: Direct

Input Watts (W): 147
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: 25 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	110	110	110	105	105	105	101	101	101	99								
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	77	73	69	75	71	67	65								
4	87	76	68	62	84	75	67	62	72	66	61	70	64	60	67	63	59	57								
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	61	56	52	50								
6	74	62	54	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44								
7	69	56	48	42	67	55	48	42	54	47	42	52	46	42	51	45	41	39								
8	64	51	43	38	63	51	43	38	49	42	38	48	42	37	47	41	37	35								
9	60	47	40	34	59	47	39	34	45	39	34	44	38	34	43	38	34	32								
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	31	29								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	123687	123687	123687	123687
5°	124084	124075	124174	124172
10°	124217	124195	124406	124370
15°	124385	124305	124668	124595
20°	124528	124400	124910	124770
25°	124525	124295	124971	124692
30°	124141	123791	124601	124122
35°	122852	122364	123345	122615
40°	119878	119380	120624	119552
45°	114170	113862	115545	113874
50°	104764	104568	106709	104187
55°	90480	89524	92512	89440
60°	68207	65697	70563	67819
65°	42565	40831	44564	41580
70°	25718	24811	26820	25085
75°	14788	15162	16022	14934
80°	9259	9024	9756	9442
85°	6584	6653	7139	7105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	777.0	4.0
10°-20°	2243.3	11.4
20°-30°	3438.0	17.5
30°-40°	4148.5	21.2
40°-50°	4100.2	20.9
50°-60°	3034.3	15.5
60°-70°	1258.0	6.4
70°-80°	306.2	1.6
80°-90°	53.4	0.3
90°-100°	34.3	0.2
100°-110°	34.6	0.2
110°-120°	35.5	0.2
120°-130°	36.0	0.2
130°-140°	34.0	0.2
140°-150°	29.5	0.2
150°-160°	23.5	0.1
160°-170°	15.4	0.1
170°-180°	5.3	0.0
0°-30°	6458.3	32.9
0°-40°	10606.8	54.1
0°-60°	17741.3	90.5
0°-90°	19358.9	98.7
90°-120°	104.4	0.5
90°-150°	203.8	1.0
90°-180°	248.0	1.3
0°-180°	19606.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	8170	8170	8170	8170	8170	
5°	8165	8164	8171	8171	8165	777
15°	7936	7931	7954	7949	7936	2241
25°	7454	7441	7481	7464	7454	3435
35°	6647	6621	6674	6634	6647	4149
45°	5332	5318	5397	5319	5332	4091
55°	3428	3392	3505	3388	3428	3032
65°	1188	1140	1244	1161	1188	1251
75°	253	259	274	255	253	301
85°	38	38	41	41	38	43
90°	31	32	32	31	31	17
95°	31	32	32	31	31	25
105°	32	34	34	31	32	33
115°	34	38	37	34	34	34
125°	38	42	42	39	38	34
135°	42	46	45	42	42	32
145°	45	49	48	45	45	28
155°	49	52	51	48	49	23
165°	54	55	55	54	54	15
175°	56	55	55	56	56	5
180°	56	56	56	56	56	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8
1°	8187.7	8187.3	8187.7	8187.6	8187.6	8187.3	8187.7	8188.1	8188.4	8188.5	8189.2
2°	8185.4	8184.5	8184.5	8185.2	8185.0	8184.3	8185.7	8186.2	8186.9	8187.3	8188.8
3°	8181.1	8179.8	8179.6	8180.4	8180.7	8179.6	8181.8	8181.9	8183.8	8183.8	8186.1
4°	8174.2	8173.7	8172.4	8173.7	8173.3	8172.5	8175.2	8175.4	8178.8	8178.3	8181.2
5°	8164.8	8165.0	8162.2	8164.1	8164.2	8163.2	8166.7	8166.8	8170.7	8170.7	8173.8
6°	8152.9	8152.8	8149.7	8152.5	8152.1	8151.1	8155.1	8155.4	8159.8	8159.9	8163.9
7°	8138.3	8138.6	8134.6	8137.8	8137.7	8136.7	8141.0	8141.7	8146.6	8146.6	8151.1
8°	8121.6	8121.8	8117.5	8120.8	8120.8	8119.6	8125.5	8124.9	8131.2	8130.9	8136.1
9°	8102.1	8102.4	8097.3	8100.8	8101.1	8099.7	8106.1	8105.7	8112.8	8112.0	8118.6
10°	8080.1	8081.1	8075.2	8078.9	8078.7	8077.6	8084.2	8084.5	8092.4	8092.0	8098.4
11°	8056.2	8056.9	8050.0	8053.9	8054.3	8052.6	8060.1	8060.8	8069.4	8068.9	8075.7
12°	8029.4	8030.5	8024.0	8028.1	8027.0	8025.2	8033.4	8034.5	8044.0	8044.0	8050.7
13°	8000.6	8002.1	7994.0	7998.0	7997.5	7995.4	8004.9	8005.4	8016.0	8016.3	8025.0
14°	7969.7	7971.1	7961.8	7966.7	7965.7	7962.8	7972.7	7974.2	7985.5	7987.4	7995.4
15°	7935.9	7937.1	7927.5	7931.6	7930.8	7928.1	7939.0	7941.6	7954.0	7955.0	7963.5
16°	7899.7	7900.3	7889.8	7894.5	7894.0	7891.4	7903.7	7905.0	7918.9	7919.9	7928.7
17°	7861.2	7861.3	7850.7	7855.1	7855.4	7851.9	7864.2	7866.2	7881.0	7882.6	7892.0
18°	7819.9	7820.6	7808.5	7813.2	7813.2	7809.2	7823.0	7824.8	7841.0	7841.6	7852.3
19°	7775.9	7776.9	7763.6	7768.1	7769.0	7763.6	7778.6	7780.4	7797.9	7798.4	7810.5
20°	7729.3	7730.6	7716.0	7721.3	7721.3	7716.5	7732.2	7734.9	7753.0	7752.4	7765.3
21°	7680.6	7681.5	7666.1	7671.3	7670.8	7665.3	7682.5	7685.3	7704.7	7702.9	7717.0
22°	7627.9	7629.0	7613.1	7617.7	7618.3	7612.4	7630.8	7632.6	7653.1	7651.4	7666.0
23°	7573.0	7574.0	7557.2	7562.3	7561.6	7555.9	7574.9	7577.7	7599.0	7597.0	7611.4
24°	7515.5	7516.6	7499.2	7504.0	7502.0	7496.6	7517.1	7518.9	7541.9	7539.4	7553.9
25°	7454.5	7454.9	7436.3	7441.4	7440.7	7434.5	7456.2	7457.7	7481.2	7478.2	7493.2
26°	7390.8	7392.3	7371.9	7377.5	7376.2	7369.0	7391.4	7393.0	7418.2	7415.1	7429.1
27°	7324.5	7325.5	7302.5	7309.6	7307.8	7300.5	7324.1	7326.3	7351.6	7348.1	7362.0
28°	7253.3	7254.6	7230.9	7237.8	7236.0	7228.2	7252.7	7254.8	7280.2	7276.8	7289.9
29°	7180.0	7180.3	7156.4	7162.5	7160.3	7151.9	7177.7	7179.1	7206.3	7202.7	7216.5
30°	7101.2	7101.4	7076.9	7082.6	7081.2	7071.6	7098.9	7100.8	7127.5	7123.0	7137.0
31°	7020.1	7020.2	6994.4	7000.5	6998.7	6988.0	7015.6	7017.5	7046.0	7040.2	7055.0
32°	6933.7	6932.9	6906.0	6912.1	6911.0	6899.8	6929.3	6931.3	6959.6	6953.5	6968.1
33°	6843.5	6843.3	6815.2	6821.9	6819.1	6807.2	6837.2	6839.8	6868.2	6861.7	6876.8
34°	6748.7	6748.3	6718.0	6724.6	6722.3	6711.7	6741.1	6743.9	6773.7	6765.2	6781.8
35°	6647.1	6647.2	6617.5	6623.5	6620.7	6609.5	6640.9	6642.2	6673.8	6664.8	6681.5
36°	6542.9	6544.5	6512.1	6519.8	6515.1	6503.5	6535.4	6538.7	6570.8	6560.9	6578.1
37°	6430.5	6433.3	6400.9	6408.9	6404.8	6391.9	6425.4	6428.4	6460.1	6450.6	6466.9
38°	6315.2	6318.9	6285.2	6294.4	6288.8	6274.8	6311.3	6313.1	6347.3	6336.9	6354.9
39°	6193.6	6198.1	6163.4	6172.9	6167.3	6152.7	6189.6	6193.7	6228.1	6217.1	6234.1
40°	6065.7	6069.5	6037.5	6046.9	6040.5	6025.6	6063.0	6068.3	6103.4	6092.8	6109.9
41°	5931.9	5936.8	5904.4	5914.1	5908.5	5893.9	5931.3	5937.1	5976.1	5964.2	5980.4
42°	5789.5	5798.1	5762.2	5777.2	5770.7	5752.5	5794.4	5799.2	5839.8	5827.1	5844.2
43°	5645.9	5652.6	5619.3	5635.4	5626.3	5607.7	5649.2	5655.0	5698.8	5685.8	5701.3
44°	5490.2	5500.3	5466.0	5481.2	5475.3	5456.8	5500.0	5504.1	5551.0	5536.9	5553.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	5332.4	5343.4	5306.6	5324.3	5318.0	5300.4	5342.2	5348.0	5396.6	5383.5	5397.6
46°	5167.1	5180.6	5139.4	5160.9	5154.2	5135.7	5180.5	5186.7	5237.3	5221.1	5236.3
47°	4995.1	5009.8	4967.4	4991.2	4984.6	4963.9	5010.1	5016.0	5068.7	5053.4	5066.4
48°	4818.0	4832.5	4790.1	4814.4	4809.6	4789.6	4836.3	4842.1	4896.3	4880.7	4893.6
49°	4635.8	4651.0	4604.8	4629.9	4627.6	4606.8	4657.7	4660.8	4715.6	4698.7	4712.2
50°	4448.0	4461.4	4416.4	4442.0	4439.7	4418.7	4470.8	4472.9	4530.6	4512.7	4524.0
51°	4253.0	4266.8	4216.8	4243.3	4244.5	4222.4	4279.0	4277.8	4337.8	4317.9	4331.2
52°	4054.7	4069.9	4016.6	4043.0	4041.6	4023.2	4079.4	4079.6	4139.2	4119.3	4132.2
53°	3852.7	3861.5	3805.4	3831.7	3832.9	3812.8	3876.2	3871.1	3936.6	3914.1	3926.6
54°	3643.9	3651.1	3589.7	3615.8	3613.4	3599.3	3662.3	3656.1	3724.0	3700.2	3716.9
55°	3427.9	3433.4	3368.2	3393.1	3391.7	3375.7	3442.9	3433.5	3504.9	3484.6	3500.6
56°	3206.8	3208.0	3132.7	3163.8	3159.6	3145.4	3210.9	3200.9	3276.4	3258.4	3277.2
57°	2979.2	2977.5	2892.8	2924.7	2921.6	2907.2	2977.6	2972.9	3048.3	3027.7	3053.0
58°	2743.9	2730.3	2646.0	2672.3	2670.9	2667.8	2732.4	2735.6	2822.2	2792.0	2816.2
59°	2502.8	2483.1	2396.8	2419.9	2420.3	2424.0	2487.2	2502.6	2576.3	2557.3	2579.4
60°	2252.6	2235.9	2152.8	2167.5	2169.7	2180.7	2242.2	2262.6	2330.4	2320.3	2342.6
61°	2003.1	1993.8	1914.9	1918.9	1923.9	1947.0	2009.4	2023.3	2084.5	2082.9	2104.3
62°	1770.2	1766.5	1694.0	1694.4	1695.4	1725.1	1787.3	1789.5	1849.1	1852.8	1872.7
63°	1552.3	1554.3	1489.7	1486.9	1487.1	1522.0	1581.9	1573.5	1626.7	1632.5	1655.4
64°	1358.5	1364.3	1305.9	1301.8	1304.1	1339.2	1396.5	1376.6	1424.8	1437.2	1454.5
65°	1188.2	1192.8	1139.1	1137.1	1139.8	1176.3	1225.8	1202.6	1244.0	1254.9	1275.7
66°	1036.8	1039.7	1001.4	988.1	995.6	1045.4	1071.2	1061.5	1081.7	1112.0	1115.9
67°	916.7	898.6	864.0	854.7	866.5	914.5	932.5	921.3	938.7	969.5	974.5
68°	797.6	777.7	746.8	740.5	752.6	783.7	809.0	781.2	809.6	827.1	846.2
69°	678.4	669.4	648.8	638.4	647.6	678.7	699.5	674.2	699.0	716.1	732.9
70°	581.0	576.2	557.2	554.0	560.5	589.1	600.7	580.4	605.9	617.6	637.4
71°	504.3	492.1	476.1	474.0	480.1	508.6	518.3	499.3	515.4	529.4	543.0
72°	422.0	416.7	407.6	403.9	412.4	438.4	440.1	424.9	440.0	449.7	471.7
73°	358.1	352.3	345.9	344.2	352.6	367.3	377.3	352.0	367.1	380.3	406.0
74°	302.9	298.1	291.1	295.0	300.2	308.9	319.3	295.2	316.5	326.6	344.7
75°	252.8	258.9	243.0	245.9	259.2	255.6	274.2	247.1	273.9	273.3	292.3
76°	214.1	219.7	204.7	197.1	218.2	214.2	229.1	205.8	231.2	228.9	253.8
77°	182.4	180.7	172.1	165.9	177.7	179.3	184.5	173.1	188.9	194.0	215.4
78°	154.4	153.9	143.8	140.5	150.5	151.0	154.9	146.9	161.4	164.6	177.0
79°	128.9	128.3	118.8	117.9	127.0	127.3	130.1	122.9	136.3	137.3	149.0
80°	106.2	103.3	95.4	96.1	103.5	105.0	107.3	101.6	111.9	114.3	123.0
81°	83.5	79.1	72.0	74.0	78.4	82.8	83.6	80.3	89.5	91.3	99.1
82°	60.7	59.9	56.2	57.6	58.9	60.5	63.0	62.2	67.9	68.3	73.8
83°	49.4	49.1	48.0	48.7	48.8	48.8	50.2	50.1	52.8	52.5	56.3
84°	43.2	43.3	42.3	43.0	43.4	43.2	44.7	44.6	45.7	45.6	46.9
85°	37.9	37.9	37.0	37.8	38.3	38.2	39.7	39.7	41.1	41.0	42.1
86°	35.3	35.2	35.0	35.1	35.5	35.5	35.9	36.2	37.0	36.9	37.6
87°	34.4	34.4	34.2	34.3	34.7	34.7	35.0	35.1	35.4	35.4	35.5
88°	33.3	33.3	33.0	33.2	33.7	33.7	34.1	34.2	34.6	34.5	34.7
89°	31.7	31.8	31.4	31.8	32.3	32.3	32.8	32.8	33.4	33.3	33.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	31.0	30.9	31.0	30.9	31.5	31.5	31.6	31.7	31.8	31.7	32.0
91°	30.9	30.9	30.9	30.9	31.6	31.5	31.6	31.6	31.7	31.6	31.6
92°	30.9	30.9	30.9	30.8	31.6	31.6	31.7	31.7	31.7	31.6	31.6
93°	30.9	30.9	30.9	30.8	31.7	31.6	31.7	31.8	31.8	31.7	31.7
94°	30.8	30.9	30.8	30.8	31.8	31.7	31.8	31.8	31.9	31.8	31.8
95°	30.8	30.9	30.8	30.8	31.9	31.8	31.9	32.0	32.0	31.9	31.9
96°	30.8	30.9	30.8	30.8	32.0	31.9	32.1	32.1	32.1	32.0	32.0
97°	30.8	30.9	30.8	30.8	32.1	32.1	32.2	32.2	32.2	32.1	32.1
98°	30.9	30.9	30.9	30.8	32.3	32.2	32.3	32.4	32.4	32.3	32.3
99°	30.9	31.0	30.9	30.9	32.4	32.4	32.5	32.5	32.5	32.4	32.4
100°	31.0	31.1	31.0	30.9	32.6	32.6	32.6	32.7	32.7	32.6	32.5
101°	31.1	31.1	31.0	31.0	32.8	32.8	32.8	32.9	32.9	32.8	32.7
102°	31.2	31.2	31.1	31.1	33.0	33.0	33.0	33.1	33.1	33.0	32.9
103°	31.3	31.3	31.3	31.2	33.2	33.2	33.2	33.3	33.3	33.2	33.1
104°	31.4	31.4	31.4	31.3	33.5	33.4	33.5	33.5	33.5	33.4	33.3
105°	31.5	31.6	31.5	31.5	33.7	33.7	33.7	33.8	33.7	33.7	33.6
106°	31.7	31.8	31.8	31.6	34.0	34.0	34.0	34.1	34.0	33.9	33.8
107°	31.9	32.0	32.1	31.8	34.3	34.3	34.4	34.4	34.3	34.3	34.1
108°	32.1	32.1	32.3	32.0	34.7	34.6	34.7	34.7	34.6	34.6	34.5
109°	32.3	32.4	32.5	32.3	35.1	35.0	35.0	35.0	34.9	34.9	34.7
110°	32.6	33.1	32.7	32.5	35.7	35.3	35.4	35.4	35.3	35.4	35.1
111°	33.1	33.3	32.9	32.8	36.2	35.7	35.7	35.7	35.7	35.8	35.4
112°	33.4	33.4	33.2	33.1	36.6	36.1	36.1	36.1	36.1	36.1	35.8
113°	33.6	33.5	33.5	33.4	36.9	36.5	36.5	36.5	36.4	36.4	36.2
114°	33.8	33.8	33.8	33.8	37.3	36.9	37.0	36.9	36.8	36.8	36.6
115°	34.1	34.1	34.2	34.2	37.8	37.3	37.4	37.3	37.3	37.2	37.0
116°	34.5	34.5	34.6	34.6	38.2	37.8	37.9	37.8	37.7	37.6	37.5
117°	34.9	34.9	34.9	35.1	38.7	38.4	38.4	38.3	38.1	38.1	38.0
118°	35.2	35.3	35.3	35.6	39.1	38.9	38.9	38.8	38.6	38.5	38.4
119°	35.6	35.7	35.8	36.1	39.6	39.4	39.4	39.2	39.0	39.0	38.9
120°	36.0	36.1	36.2	36.6	40.0	39.9	39.8	39.6	39.5	39.5	39.4
121°	36.4	36.6	36.7	37.1	40.5	40.4	40.3	40.1	39.9	39.9	39.9
122°	36.8	37.0	37.1	37.5	41.0	40.9	40.8	40.5	40.3	40.4	40.4
123°	37.2	37.4	37.6	37.8	41.5	41.3	41.3	41.0	40.7	40.8	40.9
124°	37.6	37.8	38.1	38.1	41.9	41.7	41.7	41.4	41.1	41.2	41.3
125°	38.0	38.3	38.5	38.6	42.4	42.1	42.2	41.8	41.5	41.7	41.8
126°	38.4	38.7	39.0	39.0	42.8	42.5	42.7	42.3	41.9	42.1	42.3
127°	38.9	39.2	39.5	39.5	43.1	42.9	43.1	42.7	42.2	42.6	42.8
128°	39.3	39.5	39.9	39.9	43.5	43.3	43.5	43.1	42.6	43.0	43.2
129°	39.7	39.9	40.3	40.3	43.8	43.7	43.9	43.4	42.9	43.3	43.6
130°	40.1	40.2	40.7	40.7	44.1	44.1	44.3	43.8	43.3	43.7	44.0
131°	40.5	40.6	41.1	41.1	44.4	44.6	44.7	44.2	43.6	44.1	44.3
132°	40.9	40.9	41.5	41.5	44.8	44.9	45.0	44.6	43.9	44.5	44.6
133°	41.2	41.3	41.9	41.8	45.1	45.3	45.4	44.9	44.2	44.8	45.0
134°	41.6	41.7	42.3	42.2	45.3	45.6	45.7	45.3	44.5	45.1	45.4



TEST NUMBER: P295274

CATALOG NUMBER: UHB-18-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	41.9	42.0	42.7	42.5	45.5	45.9	46.0	45.6	44.8	45.4	45.8
136°	42.1	42.3	43.1	42.8	45.9	46.2	46.3	45.9	45.0	45.8	46.2
137°	42.4	42.7	43.4	43.1	46.2	46.5	46.6	46.2	45.3	46.1	46.5
138°	42.8	43.0	43.7	43.5	46.6	46.8	46.8	46.6	45.6	46.5	46.9
139°	43.1	43.3	44.1	43.7	46.9	47.0	47.1	46.9	45.9	46.8	47.2
140°	43.4	43.7	44.4	44.0	47.2	47.3	47.3	47.2	46.3	47.2	47.5
141°	43.8	43.9	44.6	44.2	47.5	47.6	47.6	47.5	46.7	47.5	47.8
142°	44.1	44.2	44.9	44.5	47.8	47.9	47.9	47.8	47.0	47.8	48.2
143°	44.4	44.4	45.2	44.8	48.1	48.3	48.2	48.1	47.4	48.1	48.6
144°	44.7	44.6	45.5	45.0	48.3	48.7	48.4	48.4	47.7	48.3	48.9
145°	45.0	44.9	45.7	45.3	48.6	49.1	48.7	48.7	48.1	48.7	49.3
146°	45.4	45.2	46.1	45.6	48.9	49.5	49.0	49.1	48.4	49.1	49.6
147°	45.7	45.6	46.4	46.0	49.2	49.9	49.4	49.5	48.7	49.6	50.0
148°	46.1	45.9	46.7	46.4	49.5	50.3	49.8	49.9	49.0	50.1	50.4
149°	46.5	46.3	47.1	46.8	49.9	50.7	50.3	50.4	49.3	50.6	50.9
150°	46.9	46.8	47.6	47.1	50.3	51.0	50.8	50.8	49.6	50.9	51.4
151°	47.3	47.2	48.1	47.3	50.7	51.1	51.3	50.9	49.9	51.1	52.0
152°	47.8	47.6	48.4	47.6	51.1	51.4	51.7	51.1	50.3	51.5	52.5
153°	48.2	48.1	48.7	48.0	51.3	51.8	52.1	51.5	50.7	51.9	52.9
154°	48.7	48.6	49.2	48.5	51.6	52.2	52.4	51.9	51.1	52.4	53.3
155°	49.2	49.1	49.5	49.0	51.8	52.6	52.8	52.3	51.4	52.8	53.6
156°	49.7	49.6	49.8	49.6	52.1	53.0	53.1	52.7	51.9	53.3	53.9
157°	50.3	50.2	50.2	50.2	52.4	53.2	53.4	53.2	52.4	53.6	53.9
158°	50.9	50.7	50.7	50.8	52.6	53.5	53.6	53.5	52.9	54.1	54.0
159°	51.3	51.2	51.1	51.3	52.9	53.8	53.9	54.0	53.4	54.4	54.3
160°	51.9	51.7	51.6	51.8	53.2	54.3	54.4	54.4	53.8	54.7	54.7
161°	52.4	52.2	51.9	52.3	53.8	54.7	54.7	54.8	54.2	54.9	54.9
162°	52.9	52.5	52.4	52.8	54.2	54.9	55.1	55.1	54.6	55.2	55.2
163°	53.3	52.8	52.8	53.3	54.5	55.2	55.5	55.4	54.9	55.4	55.7
164°	53.8	53.1	53.2	53.7	54.8	55.4	55.8	55.6	55.2	55.6	56.2
165°	54.3	53.5	53.6	54.2	55.0	55.6	56.1	55.9	55.3	55.8	56.4
166°	54.7	53.8	54.1	54.6	55.3	55.8	56.4	56.1	55.6	56.0	56.6
167°	55.0	54.0	54.4	55.0	55.6	55.9	56.5	56.3	55.8	56.2	56.8
168°	55.3	54.3	54.7	55.3	55.6	56.0	56.4	56.4	55.7	56.1	56.5
169°	55.5	54.5	54.9	55.6	55.6	55.9	56.2	56.2	55.7	55.9	56.2
170°	55.5	54.6	55.0	55.8	55.5	55.7	55.9	56.0	55.6	55.7	56.1
171°	55.5	54.7	55.2	55.9	55.4	55.7	55.8	55.8	55.5	55.5	55.9
172°	55.6	54.8	55.4	56.0	55.4	55.5	55.6	55.5	55.3	55.2	55.6
173°	55.8	54.9	55.6	56.2	55.2	55.1	55.4	55.2	55.1	55.0	55.4
174°	56.0	55.1	55.8	56.2	55.2	55.0	55.6	55.2	55.1	54.9	55.4
175°	56.1	55.4	55.9	56.3	55.3	55.1	55.6	55.3	55.2	55.0	55.4
176°	56.1	55.5	55.9	56.2	55.4	55.1	55.6	55.4	55.3	55.0	55.4
177°	56.1	55.5	55.8	56.1	55.5	55.2	55.6	55.5	55.3	55.0	55.3
178°	55.9	55.4	55.8	55.9	55.6	55.2	55.7	55.6	55.4	55.0	55.3
179°	55.9	55.4	55.7	55.8	55.8	55.3	55.9	55.7	55.5	55.1	55.5



TEST NUMBER: P295274

CATALOG NUMBER: UHB-18-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6



TEST NUMBER: P295274

CATALOG NUMBER: UHB-18-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8169.8	8169.8	8169.8	8169.8	8169.8	8169.8
1°	8188.9	8188.5	8189.2	8188.8	8188.4	8187.7
2°	8188.1	8187.7	8188.0	8186.9	8186.9	8185.4
3°	8184.9	8184.7	8184.9	8183.5	8183.4	8181.1
4°	8179.6	8179.0	8179.3	8177.3	8177.0	8174.2
5°	8171.2	8170.6	8171.3	8168.9	8168.9	8164.8
6°	8160.7	8159.7	8161.0	8157.5	8157.8	8152.9
7°	8147.3	8146.0	8147.5	8143.4	8144.5	8138.3
8°	8131.2	8129.9	8131.4	8127.6	8127.9	8121.6
9°	8113.1	8111.2	8112.6	8108.4	8109.4	8102.1
10°	8092.4	8090.1	8092.5	8087.3	8088.5	8080.1
11°	8069.1	8067.1	8068.8	8063.5	8064.9	8056.2
12°	8044.5	8041.8	8043.3	8036.7	8039.1	8029.4
13°	8016.8	8013.0	8015.1	8008.5	8010.9	8000.6
14°	7986.3	7982.6	7984.6	7977.7	7980.1	7969.7
15°	7953.7	7949.3	7951.3	7943.7	7948.1	7935.9
16°	7917.9	7912.9	7915.5	7908.6	7911.6	7899.7
17°	7880.0	7875.1	7877.7	7870.1	7874.1	7861.2
18°	7839.9	7834.1	7837.0	7827.9	7832.9	7819.9
19°	7796.6	7790.9	7793.1	7784.3	7789.9	7775.9
20°	7751.1	7744.3	7747.7	7737.7	7744.4	7729.3
21°	7701.5	7694.4	7697.7	7688.3	7695.3	7680.6
22°	7649.7	7642.0	7645.9	7636.2	7643.8	7627.9
23°	7594.3	7585.4	7590.2	7580.8	7589.5	7573.0
24°	7535.9	7527.3	7531.6	7522.8	7532.4	7515.5
25°	7474.4	7464.5	7469.9	7460.7	7472.2	7454.5
26°	7409.1	7398.9	7405.6	7396.7	7408.7	7390.8
27°	7340.8	7330.4	7336.6	7329.5	7343.1	7324.5
28°	7267.4	7257.6	7264.9	7257.4	7272.1	7253.3
29°	7192.5	7181.2	7188.8	7182.6	7198.9	7180.0
30°	7112.2	7100.1	7109.3	7103.2	7121.7	7101.2
31°	7027.7	7016.0	7026.3	7021.2	7040.9	7020.1
32°	6938.4	6927.5	6938.5	6933.8	6955.7	6933.7
33°	6846.3	6833.9	6847.2	6843.3	6865.2	6843.5
34°	6750.1	6737.0	6751.0	6747.1	6770.6	6748.7
35°	6646.7	6634.3	6649.1	6646.5	6671.4	6647.1
36°	6542.1	6527.7	6544.5	6541.2	6567.8	6542.9
37°	6431.1	6416.0	6434.0	6432.4	6458.2	6430.5
38°	6314.1	6298.8	6319.3	6318.6	6344.9	6315.2
39°	6192.3	6176.0	6197.9	6196.4	6223.4	6193.6
40°	6065.0	6049.2	6072.6	6072.4	6097.2	6065.7
41°	5932.3	5915.3	5939.3	5939.0	5965.0	5931.9
42°	5793.7	5776.2	5800.7	5800.6	5826.0	5789.5
43°	5649.0	5629.8	5658.1	5656.5	5682.9	5645.9
44°	5497.6	5478.9	5504.6	5502.6	5528.7	5490.2



TEST NUMBER: P295274

CATALOG NUMBER: UHB-18-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	5338.3	5318.6	5346.0	5345.0	5370.1	5332.4
46°	5173.2	5151.0	5182.7	5179.8	5206.9	5167.1
47°	5000.9	4980.9	5012.4	5006.8	5037.3	4995.1
48°	4820.5	4800.0	4835.3	4830.5	4862.3	4818.0
49°	4635.2	4613.4	4652.0	4645.1	4678.7	4635.8
50°	4438.7	4423.5	4462.3	4459.9	4493.2	4448.0
51°	4240.9	4221.8	4266.9	4264.0	4298.6	4253.0
52°	4035.3	4018.3	4068.4	4065.2	4104.1	4054.7
53°	3828.5	3813.5	3864.5	3861.6	3901.7	3852.7
54°	3614.5	3602.4	3651.0	3652.6	3693.6	3643.9
55°	3400.9	3388.5	3435.9	3437.9	3480.7	3427.9
56°	3182.1	3172.4	3213.2	3212.3	3259.8	3206.8
57°	2957.8	2953.1	2988.2	2985.4	3035.5	2979.2
58°	2730.5	2721.4	2747.9	2745.3	2797.1	2743.9
59°	2494.5	2485.5	2507.6	2503.2	2558.7	2502.8
60°	2255.7	2239.8	2267.3	2258.8	2320.2	2252.6
61°	2013.2	1992.6	2024.2	2015.7	2074.8	2003.1
62°	1780.4	1756.7	1794.4	1791.6	1840.1	1770.2
63°	1560.9	1534.0	1577.8	1581.0	1619.8	1552.3
64°	1367.8	1335.6	1385.8	1392.0	1418.6	1358.5
65°	1196.0	1160.7	1214.9	1222.4	1243.2	1188.2
66°	1056.2	1026.2	1061.9	1082.7	1086.9	1036.8
67°	917.2	891.9	923.6	943.3	947.5	916.7
68°	778.1	757.7	794.4	803.9	824.3	797.6
69°	671.4	654.0	683.4	697.2	709.8	678.4
70°	577.9	566.7	591.1	596.3	615.9	581.0
71°	498.0	487.1	515.2	517.3	528.2	504.3
72°	425.5	417.8	438.8	441.0	453.0	422.0
73°	357.6	355.3	369.9	373.1	384.1	358.1
74°	302.5	303.7	310.1	315.8	331.1	302.9
75°	254.5	255.3	267.7	262.2	286.1	252.8
76°	212.7	214.8	225.3	220.7	241.2	214.1
77°	181.2	181.6	183.2	186.2	196.6	182.4
78°	154.6	154.0	153.8	158.2	165.1	154.4
79°	130.5	129.7	129.8	132.9	138.2	128.9
80°	109.1	108.3	107.8	110.3	112.8	106.2
81°	87.8	86.9	86.8	87.8	87.8	83.5
82°	66.4	65.6	65.8	65.3	66.7	60.7
83°	52.5	52.4	53.1	51.9	51.6	49.4
84°	46.1	46.0	46.7	45.7	45.3	43.2
85°	41.0	40.9	41.4	40.0	39.6	37.9
86°	36.7	36.3	36.4	35.8	35.7	35.3
87°	35.3	34.9	34.9	34.8	34.7	34.4
88°	34.4	33.9	34.0	33.7	33.7	33.3
89°	33.2	32.5	32.6	32.2	32.3	31.7



TEST NUMBER: P295274

CATALOG NUMBER: UHB-18-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	31.7	31.0	31.1	31.0	30.9	31.0
91°	31.5	30.8	30.8	30.9	30.9	30.9
92°	31.6	30.8	30.8	30.8	30.8	30.9
93°	31.6	30.8	30.8	30.8	30.8	30.9
94°	31.7	30.7	30.8	30.8	30.8	30.8
95°	31.8	30.7	30.8	30.8	30.8	30.8
96°	31.9	30.7	30.8	30.8	30.8	30.8
97°	32.0	30.7	30.8	30.8	30.9	30.8
98°	32.2	30.7	30.8	30.8	30.9	30.9
99°	32.3	30.8	30.8	30.8	31.0	30.9
100°	32.5	30.8	30.9	30.9	31.0	31.0
101°	32.7	30.9	31.0	31.0	31.1	31.1
102°	32.9	31.0	31.1	31.1	31.2	31.2
103°	33.1	31.1	31.2	31.2	31.3	31.3
104°	33.4	31.2	31.3	31.3	31.4	31.4
105°	33.6	31.4	31.4	31.5	31.5	31.5
106°	33.9	31.6	31.6	31.6	31.7	31.7
107°	34.2	31.8	31.8	31.8	31.9	31.9
108°	34.5	32.0	32.0	32.1	32.1	32.1
109°	34.8	32.3	32.2	32.3	32.4	32.3
110°	35.2	32.7	32.4	32.6	32.9	32.6
111°	35.5	33.2	32.7	32.8	33.0	33.1
112°	35.9	33.5	33.0	33.1	33.1	33.4
113°	36.2	33.8	33.3	33.4	33.4	33.6
114°	36.6	34.2	33.7	33.7	33.7	33.8
115°	37.0	34.5	34.0	34.1	34.1	34.1
116°	37.5	34.9	34.5	34.4	34.5	34.5
117°	38.0	35.3	35.0	34.8	34.9	34.9
118°	38.5	35.7	35.5	35.2	35.3	35.2
119°	39.0	36.1	36.0	35.6	35.7	35.6
120°	39.5	36.6	36.5	36.1	36.1	36.0
121°	40.0	37.0	36.9	36.5	36.6	36.4
122°	40.5	37.4	37.4	36.9	37.0	36.8
123°	41.0	37.8	37.9	37.4	37.4	37.2
124°	41.5	38.2	38.3	37.9	37.9	37.6
125°	42.1	38.6	38.5	38.3	38.3	38.0
126°	42.6	38.9	38.8	38.8	38.7	38.4
127°	43.0	39.3	39.2	39.3	39.2	38.9
128°	43.5	39.6	39.7	39.7	39.6	39.3
129°	43.9	39.9	40.1	40.1	40.0	39.7
130°	44.3	40.3	40.5	40.5	40.3	40.1
131°	44.7	40.6	40.9	41.0	40.7	40.5
132°	45.1	40.9	41.3	41.4	41.0	40.9
133°	45.5	41.2	41.6	41.8	41.3	41.2
134°	45.8	41.5	41.9	42.2	41.7	41.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
135°	46.1	41.9	42.3	42.5	42.0	41.9
136°	46.4	42.1	42.6	42.8	42.3	42.1
137°	46.7	42.4	42.9	43.2	42.6	42.4
138°	46.9	42.7	43.2	43.5	42.9	42.8
139°	47.2	42.9	43.6	43.8	43.3	43.1
140°	47.4	43.2	43.9	44.2	43.7	43.4
141°	47.6	43.6	44.2	44.5	44.0	43.8
142°	47.9	43.8	44.5	44.8	44.1	44.1
143°	48.1	44.0	44.8	45.1	44.2	44.4
144°	48.4	44.3	45.0	45.4	44.5	44.7
145°	48.9	44.6	45.4	45.8	44.7	45.0
146°	49.4	44.9	45.7	46.1	45.1	45.4
147°	49.8	45.2	46.2	46.4	45.5	45.7
148°	50.3	45.4	46.5	46.7	45.8	46.1
149°	50.7	45.7	46.9	47.1	46.3	46.5
150°	51.0	46.1	47.1	47.5	46.7	46.9
151°	51.2	46.5	47.3	47.9	47.0	47.3
152°	51.5	46.9	47.6	48.3	47.5	47.8
153°	51.9	47.4	47.9	48.7	48.0	48.2
154°	52.4	47.9	48.3	49.0	48.5	48.7
155°	52.8	48.3	48.7	49.4	49.0	49.2
156°	53.3	48.7	49.2	49.7	49.6	49.7
157°	53.6	49.2	49.7	50.1	50.2	50.3
158°	53.9	49.8	50.2	50.5	50.9	50.9
159°	54.2	50.3	50.6	51.0	51.5	51.3
160°	54.5	50.8	51.1	51.4	52.0	51.9
161°	54.8	51.4	51.6	51.9	52.6	52.4
162°	55.1	52.0	52.1	52.4	53.1	52.9
163°	55.4	52.6	52.5	52.9	53.5	53.3
164°	55.6	53.1	52.9	53.3	54.0	53.8
165°	55.9	53.6	53.3	53.8	54.4	54.3
166°	56.0	54.0	53.7	54.2	54.9	54.7
167°	56.2	54.4	54.1	54.6	55.3	55.0
168°	56.2	54.7	54.4	54.9	55.6	55.3
169°	56.1	54.8	54.6	55.1	55.9	55.5
170°	56.0	55.0	54.7	55.2	56.0	55.5
171°	55.9	55.2	54.8	55.3	56.1	55.5
172°	55.7	55.4	55.0	55.5	56.3	55.6
173°	55.4	55.6	55.2	55.7	56.6	55.8
174°	55.4	55.8	55.4	55.9	56.7	56.0
175°	55.4	56.0	55.5	56.0	56.8	56.1
176°	55.3	56.1	55.7	56.0	56.7	56.1
177°	55.3	56.1	55.7	56.1	56.5	56.1
178°	55.2	56.1	55.7	56.1	56.5	55.9
179°	55.3	56.0	55.7	56.1	56.4	55.9



TEST NUMBER: P295274

CATALOG NUMBER: UHB-18-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
180°	55.6	55.6	55.6	55.6	55.6	55.6

(END OF REPORT)