

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: P295278

Luminaire Tested: **UHB-30-UNV-L840-CD-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P295278
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-30-UNV-L840-CD-U
Description: UHB 240W 4000K ROUND HIGH BAY LED WITH CLEAR RING LENS
Light Source: 4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

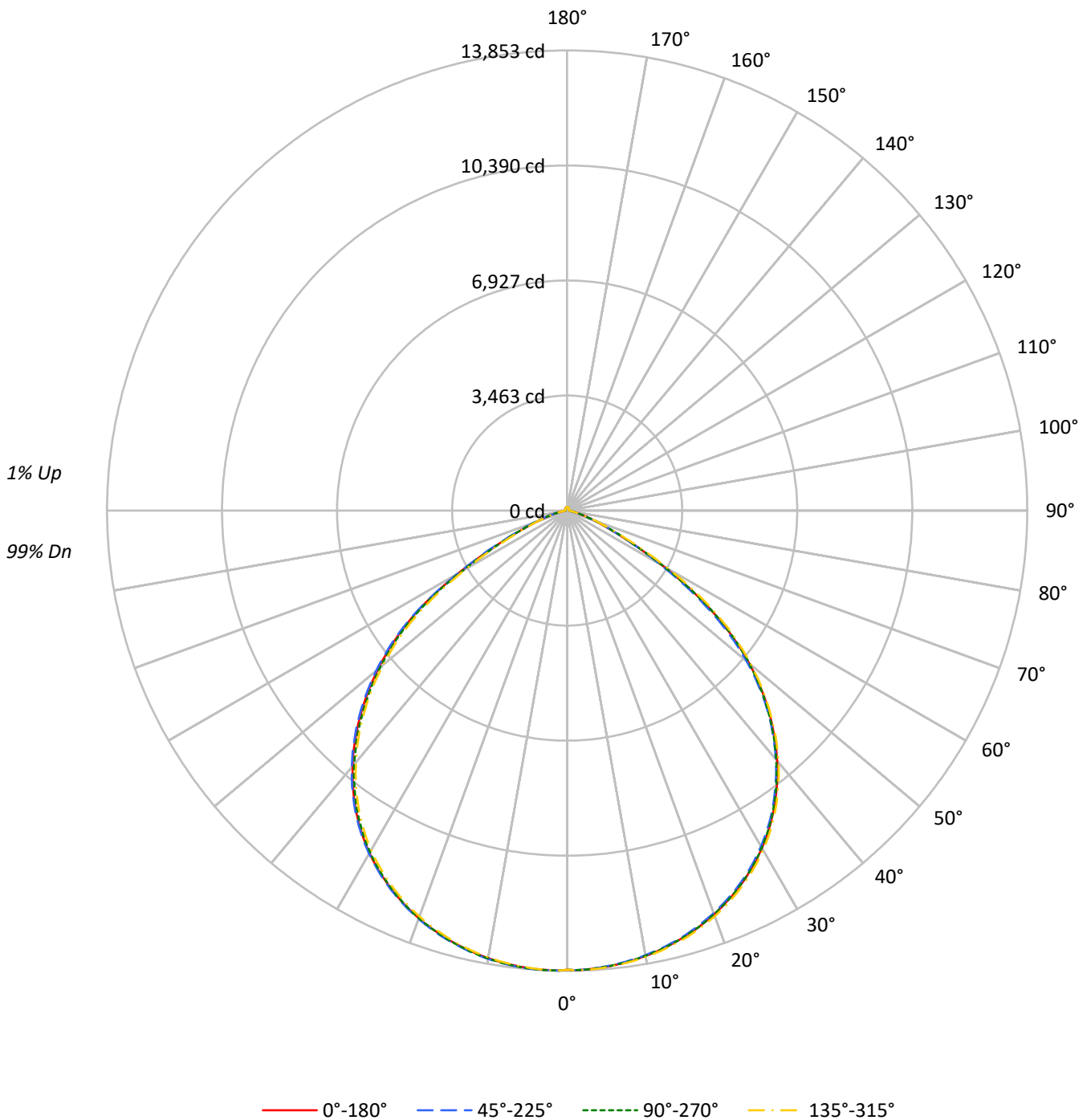
Lumens per Lamp: N/A
Luminaire Lumens: 32235.1 lumens
Efficiency: N/A
Efficacy: 136.6 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.34
Luminous Opening: Circular (Dia: 0.36m x H: 0m)
CIE Type: Direct

Input Watts (W): 236
Input Voltage (V): 120
Input Current (A_{in}): 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	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	85	100	93	88	84	90	85	81	86	83	79	83	80	78	76
3	94	85	78	72	92	83	77	72	80	75	70	78	73	69	75	71	68	66
4	87	76	68	63	85	75	68	62	72	66	61	70	65	60	68	63	59	57
5	80	69	61	55	78	68	60	54	65	59	54	63	57	53	61	56	52	50
6	74	62	54	48	73	61	54	48	59	53	47	58	52	47	56	51	46	45
7	69	57	49	43	67	56	48	43	54	47	42	53	47	42	51	46	42	40
8	64	52	44	38	63	51	44	38	50	43	38	48	42	38	47	42	37	36
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32
10	57	44	37	32	55	43	36	31	42	36	31	41	35	31	40	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	139640	139640	139640	139640
5°	139787	139742	140161	140225
10°	139666	139607	140374	140474
15°	139490	139439	140499	140537
20°	139079	139031	140412	140389
25°	138300	138249	139957	139787
30°	136847	136702	138849	138499
35°	134136	133840	136551	135934
40°	129665	129136	132496	131481
45°	122877	122299	126212	124852
50°	112480	112428	116925	115405
55°	95044	95626	102766	101074
60°	67224	67529	76614	74276
65°	41063	42110	47441	47202
70°	25460	25534	28612	30018
75°	15517	15310	18046	18331
80°	10368	10240	12503	12102
85°	7767	7975	9134	8856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1312.6	4.1
10°-20°	3777.5	11.7
20°-30°	5744.2	17.8
30°-40°	6834.3	21.2
40°-50°	6670.7	20.7
50°-60°	4909.3	15.2
60°-70°	1962.4	6.1
70°-80°	498.6	1.5
80°-90°	100.8	0.3
90°-100°	56.3	0.2
100°-110°	57.2	0.2
110°-120°	59.1	0.2
120°-130°	60.7	0.2
130°-140°	58.8	0.2
140°-150°	52.6	0.2
150°-160°	42.4	0.1
160°-170°	27.8	0.1
170°-180°	9.7	0.0
0°-30°	10834.3	33.6
0°-40°	17668.6	54.8
0°-60°	29248.6	90.7
0°-90°	31810.4	98.7
90°-120°	172.6	0.5
90°-150°	344.7	1.1
90°-180°	425.0	1.3
0°-180°	32235.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	13822	13822	13822	13822	13822	
5°	13783	13779	13820	13827	13783	###
15°	13336	13331	13433	13436	13336	3764
25°	12406	12402	12555	12540	12406	5714
35°	10876	10852	11072	11022	10876	6787
45°	8600	8560	8834	8738	8600	6603
55°	5396	5429	5834	5738	5396	4752
65°	1718	1762	1984	1974	1718	1818
75°	398	392	462	470	398	465
85°	67	69	79	76	67	78
90°	51	52	52	51	51	28
95°	51	53	52	50	51	41
105°	52	56	56	52	52	56
115°	57	62	62	57	57	57
125°	66	71	70	64	66	59
135°	74	79	78	73	74	57
145°	82	87	86	81	82	51
155°	90	95	94	89	90	42
165°	98	100	99	97	98	28
175°	102	102	102	102	102	10
180°	103	103	103	103	103	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5
1°	13843.2	13842.2	13840.3	13840.9	13842.0	13843.2	13845.7	13847.1	13850.5	13851.5	13852.5
2°	13834.2	13831.9	13828.0	13829.4	13831.9	13834.0	13839.4	13842.4	13848.8	13850.7	13853.2
3°	13821.5	13818.0	13812.5	13814.3	13818.1	13821.5	13829.6	13834.2	13842.9	13846.1	13850.8
4°	13804.4	13800.1	13792.7	13795.4	13800.6	13804.7	13815.5	13822.4	13833.9	13837.5	13843.6
5°	13783.4	13778.7	13769.6	13772.5	13779.0	13784.1	13797.8	13806.3	13820.3	13824.9	13832.2
6°	13758.8	13752.0	13741.0	13744.8	13752.8	13758.8	13775.7	13785.4	13801.7	13807.7	13816.6
7°	13728.9	13721.1	13709.2	13713.3	13722.5	13729.8	13749.3	13759.8	13779.2	13786.1	13796.2
8°	13694.6	13686.9	13672.7	13676.8	13689.0	13695.6	13718.0	13729.6	13751.9	13759.1	13770.3
9°	13656.9	13647.8	13632.8	13637.0	13650.4	13657.6	13682.6	13694.8	13719.5	13726.9	13739.8
10°	13614.1	13605.6	13588.6	13593.7	13608.3	13615.8	13642.7	13656.5	13683.1	13690.8	13704.8
11°	13567.3	13558.1	13540.2	13546.0	13561.3	13569.6	13598.8	13613.8	13641.4	13649.5	13664.0
12°	13516.5	13507.2	13487.6	13493.7	13510.4	13520.0	13550.8	13566.0	13595.5	13602.4	13618.3
13°	13460.3	13451.8	13430.6	13438.0	13456.3	13465.3	13498.4	13514.1	13545.9	13552.4	13569.0
14°	13401.0	13391.8	13368.1	13376.1	13396.3	13405.4	13440.5	13457.8	13491.4	13497.0	13513.7
15°	13336.2	13326.8	13301.6	13310.2	13331.4	13342.0	13380.1	13396.5	13432.7	13437.8	13454.6
16°	13265.4	13256.0	13230.6	13238.7	13262.1	13273.2	13313.7	13330.3	13369.5	13373.1	13389.9
17°	13192.0	13180.6	13154.0	13162.4	13187.0	13197.8	13241.1	13259.3	13299.5	13303.6	13320.7
18°	13111.5	13101.0	13073.0	13080.5	13106.6	13117.6	13164.4	13183.0	13225.9	13228.5	13245.6
19°	13027.0	13015.7	12985.9	12994.6	13021.9	13032.9	13081.8	13102.2	13145.8	13148.0	13164.7
20°	12935.8	12925.6	12895.0	12904.0	12931.4	12943.0	12993.9	13016.1	13059.8	13063.7	13080.8
21°	12841.4	12830.4	12798.6	12806.9	12835.2	12846.7	12899.8	12921.8	12970.3	12971.9	12989.8
22°	12739.9	12730.4	12697.3	12705.9	12736.1	12746.6	12803.0	12826.0	12874.9	12878.1	12895.3
23°	12634.6	12625.6	12590.4	12598.9	12631.3	12640.4	12699.1	12722.7	12773.2	12776.7	12793.8
24°	12523.4	12514.9	12478.3	12487.3	12519.6	12529.4	12588.2	12614.7	12666.8	12670.0	12687.0
25°	12406.4	12398.6	12360.3	12368.0	12401.8	12410.5	12472.8	12499.5	12555.0	12557.6	12575.8
26°	12285.0	12276.1	12236.1	12244.0	12279.4	12287.4	12352.8	12380.0	12437.4	12439.4	12459.2
27°	12156.7	12147.8	12105.2	12114.4	12151.0	12155.9	12224.6	12254.6	12314.0	12315.5	12335.9
28°	12020.3	12013.1	11965.6	11976.7	12014.4	12017.6	12089.5	12120.8	12182.3	12185.2	12205.9
29°	11879.4	11871.6	11823.5	11833.8	11870.6	11874.4	11947.6	11981.6	12047.0	12048.4	12070.5
30°	11730.4	11723.8	11673.2	11680.8	11718.0	11723.5	11798.6	11834.7	11902.0	11903.6	11926.6
31°	11573.6	11566.9	11515.0	11523.7	11561.6	11563.3	11642.9	11679.6	11752.5	11753.7	11776.7
32°	11410.4	11406.9	11348.2	11359.1	11396.9	11396.9	11480.9	11518.3	11593.1	11595.4	11621.1
33°	11239.8	11235.6	11179.0	11186.4	11223.3	11222.9	11310.1	11348.6	11426.4	11429.0	11454.5
34°	11061.8	11058.4	10999.2	11004.5	11042.7	11042.0	11130.3	11172.8	11253.8	11255.8	11284.4
35°	10875.7	10871.6	10812.0	10817.8	10851.7	10849.5	10945.6	10984.6	11071.5	11073.0	11103.4
36°	10681.0	10682.4	10619.0	10622.7	10656.0	10653.6	10750.9	10791.8	10882.4	10884.0	10915.4
37°	10482.0	10483.1	10418.2	10421.5	10450.1	10448.6	10548.6	10590.1	10683.5	10686.7	10720.2
38°	10272.4	10275.4	10210.9	10210.0	10238.1	10235.0	10339.6	10381.9	10479.4	10483.7	10515.0
39°	10056.4	10061.0	9993.0	9992.9	10019.4	10015.0	10120.7	10166.8	10267.6	10272.2	10305.3
40°	9831.6	9839.0	9770.2	9767.5	9791.5	9787.6	9896.8	9941.5	10046.2	10053.8	10088.1
41°	9601.2	9611.4	9539.5	9539.1	9560.0	9557.4	9664.9	9713.5	9820.8	9826.5	9864.0
42°	9358.7	9374.8	9301.1	9296.6	9320.5	9315.4	9426.8	9476.8	9584.5	9593.7	9631.6
43°	9116.9	9132.7	9058.8	9052.3	9073.0	9069.0	9177.9	9232.4	9344.1	9353.6	9389.1
44°	8861.4	8877.6	8800.9	8799.0	8823.5	8812.8	8925.6	8982.4	9093.3	9103.8	9144.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	8600.1	8613.6	8536.5	8542.4	8559.6	8552.4	8662.7	8721.8	8833.5	8850.0	8890.7
46°	8330.4	8341.9	8259.2	8275.0	8296.6	8283.4	8391.8	8457.4	8568.0	8585.9	8628.8
47°	8052.3	8052.9	7975.5	8001.5	8018.6	8002.1	8114.6	8181.0	8296.0	8315.1	8358.6
48°	7767.0	7757.2	7677.3	7716.2	7745.7	7721.9	7831.3	7903.6	8019.7	8040.5	8082.6
49°	7466.8	7449.9	7365.4	7412.4	7452.3	7429.3	7540.8	7614.1	7729.8	7753.3	7799.4
50°	7156.3	7136.3	7050.5	7099.3	7153.0	7123.9	7241.9	7315.1	7439.1	7461.9	7506.2
51°	6832.6	6814.2	6717.4	6767.4	6841.3	6810.3	6934.9	7008.3	7140.0	7164.1	7211.0
52°	6497.4	6484.0	6376.1	6427.7	6514.1	6482.0	6615.4	6692.7	6831.6	6852.9	6899.7
53°	6150.0	6132.5	6020.4	6065.2	6171.1	6147.0	6284.2	6362.3	6516.6	6529.5	6580.9
54°	5779.8	5767.2	5641.4	5681.2	5809.9	5789.4	5938.1	6016.8	6181.2	6191.4	6246.1
55°	5395.9	5385.5	5249.9	5284.8	5428.9	5423.3	5575.3	5658.0	5834.3	5835.9	5888.7
56°	4992.9	4980.6	4845.8	4865.2	5027.8	5037.2	5192.8	5276.7	5459.1	5456.6	5506.6
57°	4578.0	4567.5	4434.0	4447.9	4609.7	4636.2	4798.2	4873.1	5065.5	5056.5	5099.8
58°	4156.4	4146.5	4011.9	4024.6	4183.5	4228.4	4388.6	4458.1	4650.8	4640.4	4678.0
59°	3732.8	3726.8	3604.1	3614.6	3756.3	3810.9	3972.7	4031.0	4217.4	4209.5	4247.6
60°	3326.9	3317.7	3214.1	3224.6	3342.0	3407.4	3563.8	3608.4	3791.6	3778.4	3825.0
61°	2941.4	2967.9	2848.0	2892.6	2953.4	3016.0	3171.2	3194.8	3373.4	3360.8	3416.3
62°	2580.2	2618.1	2517.6	2560.6	2616.9	2658.5	2827.6	2809.9	2986.5	2971.1	3037.5
63°	2257.0	2270.6	2213.2	2229.0	2282.4	2329.1	2484.1	2449.9	2633.7	2617.8	2717.1
64°	1971.5	2000.5	1944.0	1958.4	2010.1	2032.1	2140.8	2141.3	2282.3	2304.8	2396.6
65°	1717.7	1757.7	1705.5	1715.9	1761.5	1774.9	1868.6	1864.9	1984.5	2023.6	2078.1
66°	1495.5	1540.8	1494.8	1492.6	1539.0	1548.2	1628.0	1627.4	1717.7	1779.4	1820.6
67°	1302.7	1335.8	1308.5	1295.0	1341.7	1349.3	1413.2	1414.6	1489.6	1556.9	1598.5
68°	1128.3	1157.7	1140.0	1119.4	1165.0	1173.5	1222.1	1228.5	1287.4	1352.4	1400.4
69°	994.9	995.4	995.0	970.0	1006.2	1030.4	1054.3	1081.2	1115.2	1170.4	1226.6
70°	861.9	856.6	850.4	834.1	864.4	887.8	907.9	934.5	968.6	1029.3	1065.7
71°	748.6	730.3	726.2	719.4	757.6	745.1	775.0	787.7	843.3	888.8	917.1
72°	651.7	624.6	617.3	614.2	639.8	641.3	669.4	676.2	732.0	748.4	783.6
73°	551.5	528.9	529.6	528.8	546.8	548.4	572.7	585.2	634.6	645.8	673.7
74°	464.6	450.5	449.8	448.4	462.3	460.9	488.8	500.9	548.5	542.1	574.1
75°	397.5	376.2	378.2	378.4	392.2	393.9	414.6	424.4	462.3	458.4	489.4
76°	337.3	320.4	323.0	322.9	332.0	335.2	350.6	358.9	391.6	391.6	410.2
77°	288.1	281.2	279.0	283.4	283.6	287.2	300.0	306.2	334.9	338.1	352.6
78°	248.3	242.0	240.8	243.8	247.6	247.6	263.2	263.5	287.9	293.8	304.2
79°	211.6	202.9	206.5	204.4	211.7	213.2	226.5	226.8	251.4	253.3	267.0
80°	178.2	173.2	175.2	174.3	176.0	182.9	189.8	194.6	214.9	216.8	229.8
81°	148.7	146.0	145.5	146.4	147.8	153.9	160.8	164.2	178.6	185.0	192.7
82°	122.2	119.7	118.2	120.1	121.8	125.8	133.9	135.9	148.8	154.2	160.9
83°	100.1	95.4	97.2	97.1	98.4	103.2	108.0	115.1	121.3	125.1	132.1
84°	78.0	78.0	76.3	79.8	80.6	80.8	87.5	94.6	96.5	102.0	103.0
85°	67.0	67.3	66.5	68.5	68.8	69.8	72.9	74.1	78.8	79.0	82.9
86°	59.1	59.4	58.2	59.4	60.3	60.6	63.6	64.1	67.5	68.2	70.7
87°	55.3	55.3	55.2	55.3	56.2	56.3	56.9	57.3	59.0	59.1	61.1
88°	54.0	54.0	53.6	53.9	55.0	55.0	55.5	55.7	56.2	56.3	56.5
89°	51.8	51.9	51.2	51.7	53.0	53.0	53.8	54.0	54.7	54.6	55.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	50.8	50.8	50.7	50.6	51.9	51.8	51.9	51.9	52.4	52.2	52.8
91°	50.7	50.7	50.6	50.5	52.0	51.9	51.9	51.9	51.9	51.8	51.7
92°	50.7	50.7	50.6	50.5	52.1	52.0	52.0	52.0	52.0	51.9	51.8
93°	50.7	50.7	50.6	50.5	52.2	52.1	52.2	52.1	52.1	52.0	51.9
94°	50.6	50.7	50.6	50.5	52.4	52.3	52.3	52.2	52.2	52.1	52.0
95°	50.6	50.7	50.6	50.5	52.6	52.5	52.5	52.4	52.4	52.3	52.2
96°	50.6	50.7	50.6	50.5	52.8	52.7	52.7	52.6	52.6	52.5	52.4
97°	50.7	50.8	50.6	50.6	53.0	53.0	52.9	52.8	52.8	52.7	52.6
98°	50.8	50.8	50.7	50.6	53.2	53.2	53.1	53.1	53.0	52.9	52.8
99°	50.9	50.9	50.8	50.8	53.5	53.5	53.4	53.3	53.3	53.2	53.1
100°	51.0	51.1	51.0	50.9	53.8	53.8	53.7	53.6	53.6	53.5	53.3
101°	51.2	51.2	51.2	51.0	54.1	54.1	54.0	53.9	53.8	53.8	53.6
102°	51.4	51.5	51.4	51.2	54.5	54.4	54.4	54.2	54.2	54.2	54.0
103°	51.7	51.7	51.7	51.5	54.9	54.8	54.8	54.6	54.6	54.5	54.4
104°	52.1	52.2	52.1	51.9	55.4	55.4	55.3	55.2	55.1	55.1	54.8
105°	52.4	52.6	52.5	52.3	55.9	55.9	55.9	55.6	55.8	55.8	55.4
106°	52.8	53.0	52.9	52.7	56.4	56.4	56.3	56.1	56.3	56.2	55.9
107°	53.2	53.4	53.2	53.0	56.9	56.9	56.8	56.6	56.8	56.8	56.4
108°	53.7	53.8	53.7	53.4	57.5	57.4	57.4	57.1	57.4	57.3	57.0
109°	54.1	54.3	54.2	53.8	58.0	58.0	58.0	57.7	58.0	57.9	57.6
110°	54.6	54.8	54.6	54.2	58.5	58.5	58.5	58.4	58.6	58.6	58.2
111°	55.2	55.3	55.1	54.7	59.1	59.0	59.1	58.9	59.2	59.3	58.8
112°	55.7	55.8	55.5	55.2	59.7	59.7	59.6	59.4	59.7	59.9	59.5
113°	56.3	56.4	56.0	55.8	60.4	60.4	60.3	60.1	60.2	60.5	60.1
114°	56.8	56.9	56.6	56.4	61.2	61.2	61.0	60.7	60.8	61.0	60.8
115°	57.4	57.5	57.3	57.1	62.0	61.9	61.7	61.5	61.5	61.6	61.5
116°	58.1	58.1	58.0	57.9	62.9	62.8	62.5	62.2	62.3	62.2	62.1
117°	58.8	58.8	58.8	58.7	63.8	63.7	63.4	63.1	63.1	63.0	62.9
118°	59.5	59.6	59.7	59.5	64.8	64.7	64.4	64.0	63.9	63.8	63.7
119°	60.3	60.5	60.6	60.3	65.7	65.7	65.3	64.9	64.8	64.6	64.5
120°	61.1	61.4	61.5	61.1	66.5	66.5	66.2	65.9	65.6	65.5	65.4
121°	62.0	62.3	62.3	61.9	67.3	67.2	67.0	66.7	66.5	66.4	66.2
122°	62.9	63.1	63.0	62.8	68.1	68.0	67.8	67.6	67.4	67.2	67.1
123°	63.8	63.9	63.8	63.7	69.0	68.8	68.6	68.5	68.2	68.1	68.0
124°	64.7	64.8	64.8	64.6	69.9	69.7	69.5	69.4	69.2	69.0	68.8
125°	65.6	65.7	65.7	65.5	70.8	70.6	70.5	70.3	70.1	69.9	69.7
126°	66.5	66.6	66.5	66.4	71.7	71.5	71.4	71.2	71.0	70.8	70.6
127°	67.4	67.5	67.4	67.2	72.6	72.4	72.3	72.1	71.9	71.7	71.4
128°	68.2	68.4	68.4	68.2	73.4	73.2	73.1	72.9	72.7	72.5	72.2
129°	69.1	69.3	69.3	69.1	74.3	74.0	73.9	73.7	73.5	73.4	73.0
130°	70.0	70.2	70.2	70.0	75.1	74.9	74.8	74.5	74.3	74.1	73.9
131°	70.9	71.0	71.0	70.9	76.0	75.8	75.6	75.4	75.2	74.9	74.8
132°	71.7	71.8	71.8	71.7	76.8	76.6	76.5	76.2	76.0	75.8	75.6
133°	72.5	72.6	72.7	72.5	77.6	77.4	77.2	77.0	76.7	76.6	76.4
134°	73.2	73.4	73.5	73.4	78.4	78.2	78.0	77.8	77.5	77.3	77.2



TEST NUMBER: P295278

CATALOG NUMBER: UHB-30-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	74.0	74.2	74.3	74.2	79.2	79.1	78.8	78.5	78.3	78.1	77.9
136°	74.8	75.0	75.1	75.0	80.0	79.9	79.6	79.3	79.0	78.9	78.7
137°	75.6	75.7	75.9	75.8	80.8	80.7	80.4	80.1	79.8	79.7	79.5
138°	76.3	76.5	76.8	76.6	81.6	81.4	81.2	80.8	80.7	80.4	80.3
139°	77.1	77.3	77.5	77.4	82.4	82.2	82.0	81.6	81.4	81.2	81.1
140°	77.9	78.0	78.1	78.1	83.1	82.8	82.7	82.3	82.2	81.9	81.8
141°	78.6	78.8	78.9	78.8	83.8	83.6	83.4	83.1	82.9	82.7	82.5
142°	79.4	79.6	79.8	79.6	84.6	84.4	84.2	84.0	83.7	83.5	83.3
143°	80.2	80.4	80.5	80.5	85.4	85.1	85.0	84.8	84.5	84.3	84.1
144°	80.9	81.2	81.2	81.1	86.2	85.8	85.7	85.5	85.2	85.0	84.9
145°	81.5	81.8	81.8	81.6	86.9	86.7	86.5	86.2	85.9	85.6	85.5
146°	82.3	82.6	82.7	82.6	87.7	87.5	87.4	87.1	86.7	86.4	86.3
147°	83.2	83.6	83.6	83.6	88.5	88.4	88.2	87.8	87.6	87.3	87.1
148°	84.0	84.4	84.4	84.3	89.4	89.2	89.0	88.6	88.4	88.1	88.0
149°	84.8	85.0	85.0	84.9	90.3	90.1	89.8	89.5	89.2	89.0	88.8
150°	85.7	85.8	85.8	85.7	91.1	90.9	90.6	90.2	90.0	89.8	89.6
151°	86.5	86.6	86.7	86.6	91.9	91.7	91.4	91.1	90.8	90.6	90.4
152°	87.4	87.5	87.6	87.5	92.8	92.6	92.3	91.9	91.6	91.4	91.3
153°	88.3	88.4	88.4	88.3	93.6	93.3	93.2	92.7	92.5	92.2	92.1
154°	89.2	89.2	89.3	89.2	94.4	94.1	94.0	93.5	93.3	93.0	92.9
155°	90.0	90.1	90.1	90.0	95.1	94.9	94.8	94.3	94.1	93.8	93.7
156°	90.8	90.9	90.9	90.8	95.9	95.6	95.5	95.0	94.9	94.6	94.5
157°	91.7	91.8	91.8	91.6	96.5	96.3	96.2	95.8	95.5	95.2	95.1
158°	92.6	92.6	92.6	92.6	97.1	96.9	96.8	96.5	96.1	95.9	95.7
159°	93.4	93.5	93.5	93.4	97.6	97.4	97.3	97.0	96.6	96.4	96.2
160°	94.2	94.3	94.3	94.2	98.1	97.8	97.7	97.5	97.2	96.8	96.7
161°	95.0	95.1	95.1	94.8	98.5	98.2	98.2	97.9	97.6	97.2	97.1
162°	95.8	95.9	95.8	95.5	98.9	98.6	98.6	98.3	98.0	97.7	97.5
163°	96.6	96.6	96.6	96.5	99.3	99.0	99.0	98.7	98.5	98.1	97.9
164°	97.5	97.5	97.6	97.4	99.7	99.5	99.4	99.1	98.9	98.5	98.3
165°	98.3	98.4	98.5	98.4	100.1	99.8	99.9	99.6	99.4	98.9	98.8
166°	99.0	99.2	99.1	99.0	100.4	100.1	100.2	99.8	99.7	99.2	99.1
167°	99.7	99.8	99.7	99.6	100.6	100.4	100.5	100.2	100.1	99.6	99.4
168°	100.2	100.3	100.2	100.2	100.8	100.6	100.6	100.3	100.3	99.8	99.6
169°	100.7	100.8	100.7	100.6	101.0	100.7	100.8	100.5	100.5	100.0	99.8
170°	101.1	101.2	101.0	101.0	101.3	101.1	101.1	100.9	100.8	100.3	100.2
171°	101.4	101.5	101.4	101.4	101.7	101.4	101.6	101.3	101.2	100.8	100.6
172°	101.7	101.8	101.7	101.7	102.0	101.8	101.9	101.6	101.7	101.2	100.9
173°	101.9	102.0	101.8	101.8	102.3	102.0	102.2	101.9	101.9	101.5	101.2
174°	102.2	102.3	102.1	102.1	102.4	102.2	102.4	102.1	102.2	101.8	101.5
175°	102.4	102.5	102.3	102.3	102.5	102.3	102.5	102.2	102.3	102.0	101.7
176°	102.5	102.7	102.5	102.5	102.6	102.4	102.6	102.3	102.5	102.1	101.9
177°	103.0	103.1	103.0	102.8	102.7	102.4	102.7	102.4	102.6	102.3	102.0
178°	103.2	103.3	103.0	102.8	102.9	102.6	102.8	102.6	102.8	102.5	102.2
179°	103.3	103.4	103.1	102.8	103.2	102.9	103.2	103.0	103.2	102.9	102.6



TEST NUMBER: P295278

CATALOG NUMBER: UHB-30-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0



TEST NUMBER: P295278

CATALOG NUMBER: UHB-30-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	13821.5	13821.5	13821.5	13821.5	13821.5	13821.5
1°	13851.9	13850.7	13850.1	13847.4	13845.9	13843.2
2°	13852.4	13850.0	13848.2	13843.3	13839.4	13834.2
3°	13848.9	13846.1	13842.6	13835.0	13830.1	13821.5
4°	13841.9	13838.5	13834.1	13822.8	13816.5	13804.4
5°	13829.6	13826.6	13821.4	13807.0	13799.0	13783.4
6°	13812.5	13809.3	13803.6	13786.6	13776.4	13758.8
7°	13791.4	13787.4	13780.8	13762.1	13749.6	13728.9
8°	13764.6	13760.9	13753.4	13731.9	13718.5	13694.6
9°	13732.8	13729.6	13721.5	13697.0	13682.3	13656.9
10°	13696.0	13692.9	13684.5	13657.8	13642.9	13614.1
11°	13653.7	13651.5	13642.0	13614.6	13598.0	13567.3
12°	13606.7	13604.6	13595.5	13566.4	13548.6	13516.5
13°	13555.1	13552.8	13543.1	13512.4	13495.4	13460.3
14°	13498.7	13497.8	13488.1	13454.9	13436.9	13401.0
15°	13437.0	13436.3	13427.8	13392.0	13374.3	13336.2
16°	13371.1	13370.7	13362.1	13323.5	13306.5	13265.4
17°	13300.2	13300.5	13291.4	13251.9	13233.2	13192.0
18°	13223.4	13225.2	13215.1	13174.0	13155.4	13111.5
19°	13142.9	13143.4	13133.2	13090.3	13072.3	13027.0
20°	13055.4	13057.7	13046.3	13002.1	12983.3	12935.8
21°	12962.7	12964.2	12953.6	12907.9	12888.6	12841.4
22°	12864.8	12866.9	12856.0	12808.3	12789.7	12739.9
23°	12762.1	12763.2	12752.3	12703.2	12685.4	12634.6
24°	12651.7	12655.8	12644.5	12593.7	12576.8	12523.4
25°	12538.2	12539.8	12528.5	12477.1	12459.5	12406.4
26°	12417.3	12418.8	12408.8	12355.1	12338.8	12285.0
27°	12293.0	12292.5	12281.6	12225.7	12213.2	12156.7
28°	12159.5	12159.3	12146.9	12091.8	12079.2	12020.3
29°	12022.8	12019.1	12007.4	11948.9	11938.5	11879.4
30°	11878.1	11872.0	11859.6	11799.8	11791.3	11730.4
31°	11724.1	11717.5	11705.0	11644.5	11635.9	11573.6
32°	11563.8	11553.5	11542.2	11480.2	11472.7	11410.4
33°	11396.0	11381.8	11370.6	11310.2	11301.4	11239.8
34°	11222.0	11206.4	11193.2	11130.7	11125.7	11061.8
35°	11036.2	11021.5	11007.4	10944.2	10938.6	10875.7
36°	10847.2	10827.1	10814.3	10748.4	10747.8	10681.0
37°	10648.3	10623.5	10613.6	10545.9	10545.5	10482.0
38°	10442.0	10413.8	10402.5	10336.6	10338.7	10272.4
39°	10229.9	10195.9	10184.0	10119.3	10121.6	10056.4
40°	10006.9	9969.3	9954.6	9893.5	9899.8	9831.6
41°	9780.1	9736.7	9722.1	9660.3	9667.4	9601.2
42°	9545.4	9498.5	9478.6	9420.9	9430.4	9358.7
43°	9301.0	9254.2	9233.6	9176.2	9188.1	9116.9
44°	9052.9	9000.6	8974.0	8919.5	8934.6	8861.4



TEST NUMBER: P295278

CATALOG NUMBER: UHB-30-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	8796.6	8738.3	8713.7	8657.4	8675.7	8600.1
46°	8535.2	8473.1	8447.0	8386.5	8407.2	8330.4
47°	8261.9	8201.9	8169.1	8113.7	8134.9	8052.3
48°	7988.3	7921.4	7889.2	7830.3	7855.8	7767.0
49°	7706.1	7633.1	7602.3	7541.8	7564.9	7466.8
50°	7416.4	7342.4	7308.8	7247.0	7264.4	7156.3
51°	7114.2	7042.1	7007.6	6936.3	6953.8	6832.6
52°	6805.7	6732.3	6702.3	6621.9	6628.9	6497.4
53°	6482.0	6413.8	6382.8	6292.1	6290.3	6150.0
54°	6138.5	6081.6	6050.2	5942.7	5932.1	5779.8
55°	5777.0	5738.2	5697.3	5577.6	5557.4	5395.9
56°	5385.8	5366.2	5324.9	5183.8	5161.3	4992.9
57°	4968.4	4969.8	4927.5	4777.0	4741.7	4578.0
58°	4535.1	4545.3	4518.9	4352.3	4307.5	4156.4
59°	4100.0	4111.0	4096.4	3930.9	3880.8	3732.8
60°	3676.6	3675.9	3681.1	3517.7	3462.9	3326.9
61°	3279.8	3257.4	3276.2	3119.3	3066.8	2941.4
62°	2919.4	2878.5	2932.5	2752.6	2732.8	2580.2
63°	2585.9	2537.1	2588.8	2410.5	2398.9	2257.0
64°	2284.3	2235.6	2246.5	2110.6	2066.0	1971.5
65°	2012.0	1974.5	1978.8	1845.6	1808.7	1717.7
66°	1759.8	1736.9	1735.4	1616.9	1579.6	1495.5
67°	1534.9	1524.0	1521.6	1416.8	1373.6	1302.7
68°	1337.1	1328.0	1325.1	1234.3	1192.4	1128.3
69°	1162.4	1152.2	1149.4	1086.4	1028.5	994.9
70°	1028.2	1016.2	990.0	939.2	890.4	861.9
71°	894.8	881.2	854.3	792.0	772.5	748.6
72°	761.5	746.3	733.5	695.5	665.8	651.7
73°	652.3	645.2	630.6	592.6	574.2	551.5
74°	563.1	554.2	539.4	507.1	493.6	464.6
75°	479.7	469.6	453.3	432.1	415.2	397.5
76°	408.3	393.7	383.8	365.2	352.4	337.3
77°	345.4	333.6	324.2	312.1	302.7	288.1
78°	296.8	285.1	284.4	269.8	264.5	248.3
79°	253.8	244.0	244.6	232.3	226.3	211.6
80°	217.2	208.0	205.0	199.2	188.2	178.2
81°	184.4	175.9	174.9	168.0	158.3	148.7
82°	153.7	146.5	145.9	138.5	130.2	122.2
83°	124.7	116.7	117.6	116.2	103.9	100.1
84°	102.5	96.5	93.1	94.0	84.1	78.0
85°	80.5	76.4	75.8	71.8	70.0	67.0
86°	69.2	66.2	65.5	62.1	61.2	59.1
87°	59.6	57.6	57.2	56.0	55.8	55.3
88°	56.3	55.3	55.1	54.6	54.5	54.0
89°	54.6	53.6	53.5	52.7	52.6	51.8



TEST NUMBER: P295278

CATALOG NUMBER: UHB-30-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	52.1	51.1	51.1	50.8	50.8	50.8
91°	51.6	50.7	50.7	50.7	50.8	50.7
92°	51.6	50.6	50.7	50.7	50.7	50.7
93°	51.8	50.6	50.6	50.6	50.7	50.7
94°	51.9	50.6	50.6	50.6	50.7	50.6
95°	52.1	50.5	50.6	50.6	50.7	50.6
96°	52.2	50.5	50.6	50.6	50.7	50.6
97°	52.4	50.5	50.6	50.6	50.7	50.7
98°	52.7	50.6	50.7	50.7	50.8	50.8
99°	52.9	50.7	50.8	50.8	50.9	50.9
100°	53.2	50.8	50.9	50.9	51.0	51.0
101°	53.5	50.9	51.0	51.1	51.1	51.2
102°	53.9	51.1	51.2	51.2	51.3	51.4
103°	54.2	51.3	51.4	51.5	51.6	51.7
104°	54.8	51.6	51.8	51.9	52.0	52.1
105°	55.5	52.0	52.2	52.3	52.3	52.4
106°	56.0	52.3	52.5	52.6	52.6	52.8
107°	56.5	52.7	52.8	53.0	53.0	53.2
108°	57.0	53.1	53.2	53.4	53.4	53.7
109°	57.6	53.6	53.7	53.9	53.9	54.1
110°	58.2	54.1	54.2	54.4	54.4	54.6
111°	58.8	54.6	54.8	55.0	55.0	55.2
112°	59.3	55.1	55.4	55.5	55.5	55.7
113°	59.9	55.6	56.0	56.0	56.0	56.3
114°	60.5	56.2	56.5	56.6	56.6	56.8
115°	61.1	56.8	57.1	57.3	57.3	57.4
116°	61.8	57.4	57.8	58.0	57.9	58.1
117°	62.6	58.1	58.5	58.7	58.6	58.8
118°	63.5	58.9	59.2	59.5	59.4	59.5
119°	64.3	59.6	60.1	60.3	60.1	60.3
120°	65.2	60.4	60.9	61.1	61.0	61.1
121°	66.1	61.2	61.6	61.8	61.8	62.0
122°	67.0	62.0	62.3	62.5	62.7	62.9
123°	67.9	62.8	63.1	63.4	63.6	63.8
124°	68.8	63.6	64.0	64.2	64.5	64.7
125°	69.7	64.4	64.8	65.1	65.4	65.6
126°	70.5	65.3	65.6	66.0	66.2	66.5
127°	71.3	66.2	66.4	66.9	67.1	67.4
128°	72.2	67.1	67.4	67.7	68.0	68.2
129°	73.0	67.9	68.3	68.5	68.9	69.1
130°	73.8	68.9	69.2	69.4	69.8	70.0
131°	74.7	69.8	70.0	70.2	70.6	70.9
132°	75.6	70.7	70.8	71.0	71.4	71.7
133°	76.4	71.4	71.5	71.8	72.2	72.5
134°	77.1	72.2	72.3	72.6	73.0	73.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
135°	77.9	73.1	73.2	73.4	73.8	74.0
136°	78.7	73.9	74.1	74.1	74.5	74.8
137°	79.5	74.7	74.9	74.8	75.2	75.6
138°	80.2	75.5	75.6	75.6	75.9	76.3
139°	81.0	76.3	76.4	76.4	76.6	77.1
140°	81.7	77.1	77.1	77.3	77.4	77.9
141°	82.5	77.7	77.8	78.0	78.2	78.6
142°	83.3	78.5	78.6	78.8	78.9	79.4
143°	84.1	79.3	79.4	79.6	79.7	80.2
144°	84.8	80.0	80.2	80.3	80.5	80.9
145°	85.5	80.7	80.9	81.1	81.2	81.5
146°	86.2	81.3	81.6	81.7	82.0	82.3
147°	86.9	82.1	82.3	82.5	82.9	83.2
148°	87.8	83.0	83.2	83.4	83.8	84.0
149°	88.7	83.7	84.0	84.1	84.4	84.8
150°	89.6	84.6	84.8	84.9	85.2	85.7
151°	90.4	85.4	85.6	85.8	86.1	86.5
152°	91.2	86.2	86.5	86.7	87.0	87.4
153°	92.0	87.2	87.4	87.6	87.9	88.3
154°	92.7	88.0	88.3	88.5	88.9	89.2
155°	93.5	88.8	89.1	89.3	89.8	90.0
156°	94.3	89.7	89.9	90.1	90.6	90.8
157°	94.9	90.6	90.8	91.0	91.4	91.7
158°	95.5	91.4	91.6	91.9	92.3	92.6
159°	96.0	92.3	92.5	92.7	93.1	93.4
160°	96.4	93.1	93.3	93.6	94.0	94.2
161°	96.8	94.0	94.2	94.5	94.8	95.0
162°	97.3	94.8	95.1	95.3	95.7	95.8
163°	97.7	95.5	96.0	96.2	96.6	96.6
164°	98.1	96.5	97.0	97.1	97.4	97.5
165°	98.6	97.3	97.7	97.8	98.2	98.3
166°	98.8	98.1	98.5	98.6	99.0	99.0
167°	99.2	98.7	99.1	99.3	99.6	99.7
168°	99.3	99.3	99.7	99.8	100.2	100.2
169°	99.5	99.8	100.2	100.3	100.6	100.7
170°	99.8	100.2	100.7	100.7	101.1	101.1
171°	100.2	100.7	101.1	101.2	101.5	101.4
172°	100.6	101.0	101.4	101.5	101.8	101.7
173°	100.9	101.2	101.7	101.7	102.0	101.9
174°	101.1	101.6	102.0	102.0	102.3	102.2
175°	101.3	101.8	102.3	102.3	102.6	102.4
176°	101.4	102.1	102.5	102.4	102.7	102.5
177°	101.6	102.6	103.0	102.9	103.1	103.0
178°	101.7	102.8	103.2	103.1	103.4	103.2
179°	102.2	103.0	103.5	103.3	103.6	103.3



TEST NUMBER: P295278

CATALOG NUMBER: UHB-30-UNV-L840-CD-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
180°	103.0	103.0	103.0	103.0	103.0	103.0

(END OF REPORT)