

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: PORTFOLIO

Report Number: P843447

Luminaire Tested: **LD4C20DE010B2750 EU4C20B30 4LBSWLI**

Issue Date: 5/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P843447  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C20DE010B2750 EU4C20B30 4LBSWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

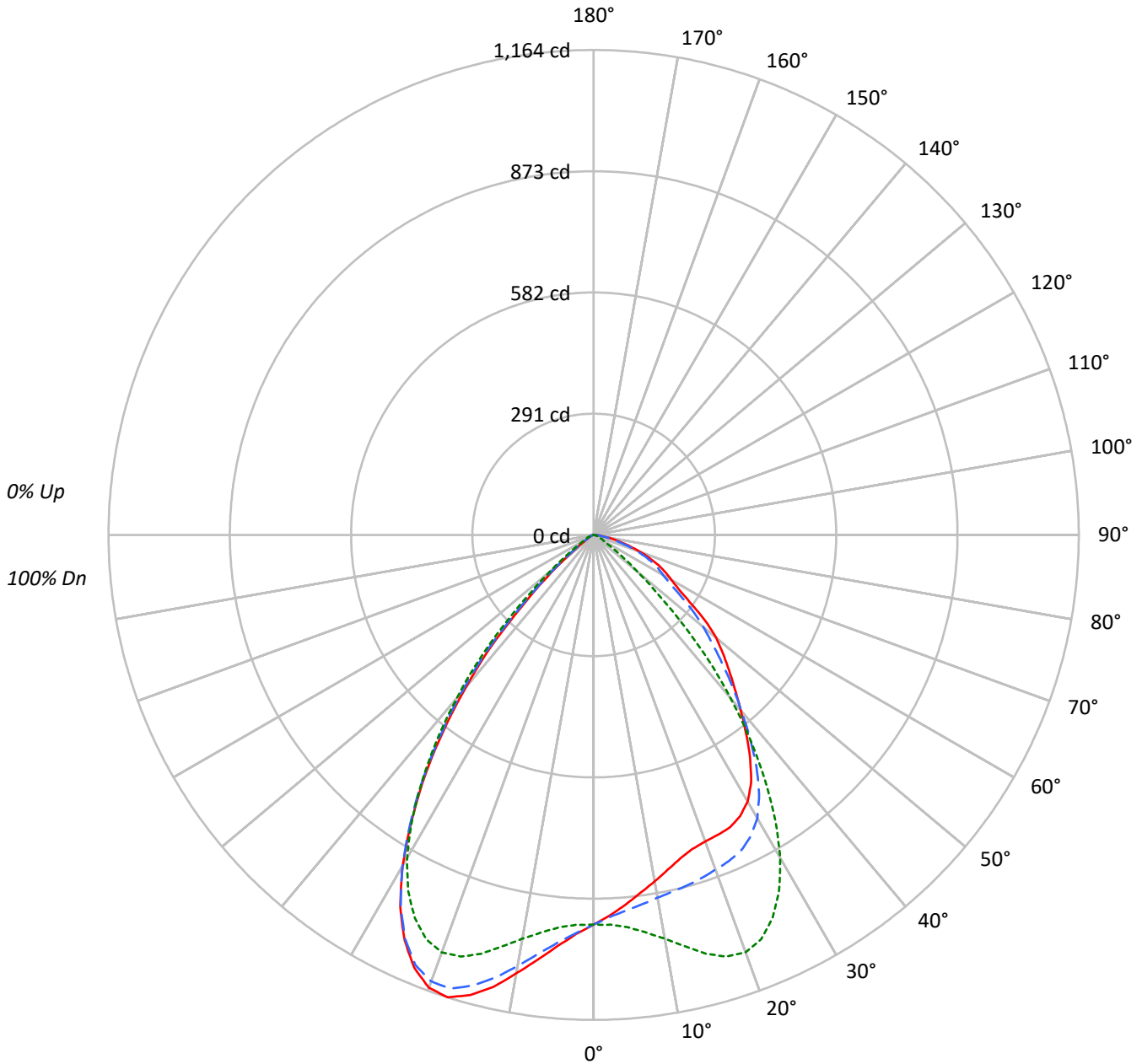
Lumens per Lamp: N/A  
Luminaire Lumens: 1726.1 lumens  
Efficiency: N/A  
Efficacy: 79.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.8  
Input Voltage (V):  
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									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48																			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44																			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40																			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	114917	114917	114917
5°	109770	116552	122127
10°	105263	122778	133281
15°	102195	132326	145375
20°	102342	139367	151185
25°	104946	137546	145490
30°	104805	126978	129914
35°	98160	107308	105853
40°	87933	81855	76386
45°	79765	51966	42636
50°	73278	26375	18214
55°	60166	11780	6019
60°	52802	6610	3292
65°	49680	4942	2500
70°	42565	3951	2191
75°	32420	2895	1756
80°	23347	1698	920
85°	17197	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.9	5.3
10°-20°	283.2	16.4
20°-30°	438.1	25.4
30°-40°	431.6	25.0
40°-50°	265.0	15.4
50°-60°	117.9	6.8
60°-70°	65.8	3.8
70°-80°	28.5	1.7
80°-90°	5.1	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	812.1	47.0
0°-40°	1243.7	72.1
0°-60°	1626.6	94.2
0°-90°	1726.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1726.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	935	935	935	935	935	
5°	890	905	945	982	990	84
15°	804	871	1040	1120	1143	228
25°	774	836	1015	1070	1073	355
35°	654	681	716	713	706	406
45°	459	436	299	261	245	356
55°	281	254	55	32	28	258
65°	171	154	17	10	9	167
75°	68	59	6	4	4	75
85°	12	10	0	0	0	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4
2.5°	913.4	913.4	913.4	913.4	915.8	912.2	915.8	915.8	919.5	920.7	917.1
5°	890.1	888.9	890.1	890.1	892.6	891.4	895.1	897.5	902.4	904.8	904.8
7.5°	865.8	865.8	865.8	868.2	871.8	870.6	874.2	877.9	885.2	890.1	893.8
10°	843.8	842.5	846.2	847.5	851.1	851.1	857.2	860.9	869.4	879.2	884.1
12.5°	822.9	821.8	824.2	827.9	833.9	833.9	838.9	844.9	857.2	868.2	876.7
15°	803.5	804.8	808.3	810.8	818.1	818.1	824.2	831.5	844.9	858.5	870.6
17.5°	790.1	791.2	793.8	797.4	804.8	804.8	810.8	819.3	833.9	848.6	863.3
20°	782.8	783.9	786.4	790.1	796.2	797.4	802.3	812.1	825.4	841.3	854.8
22.5°	779.1	781.5	783.9	786.4	792.5	792.5	798.6	805.9	819.3	835.2	847.5
25°	774.2	776.6	777.8	781.5	786.4	786.4	790.1	798.6	810.8	824.2	836.4
27.5°	760.8	763.2	764.4	768.1	772.9	771.6	776.6	782.8	793.8	805.9	815.6
30°	738.8	740.0	742.5	743.6	747.3	747.3	750.9	757.1	764.4	775.4	785.2
32.5°	703.3	705.8	707.0	708.2	711.9	710.6	711.9	715.5	722.9	732.6	738.8
35°	654.5	659.3	659.3	661.8	663.0	661.8	661.8	666.7	670.3	677.7	681.3
37.5°	600.7	604.4	603.2	605.6	606.9	603.2	605.6	606.9	611.7	615.4	616.6
40°	548.3	549.4	549.4	549.4	549.4	548.3	549.4	550.7	554.4	554.4	550.7
42.5°	500.7	501.8	501.8	499.4	501.8	500.7	500.7	500.7	500.7	495.7	492.1
45°	459.1	460.4	460.4	459.1	459.1	456.7	455.5	454.3	450.6	444.5	436.0
47.5°	420.0	422.5	423.7	421.3	420.0	417.6	417.6	410.3	405.4	398.1	385.8
50°	383.4	385.8	385.8	383.4	383.4	379.8	376.1	373.7	366.3	357.8	343.1
52.5°	337.1	340.7	340.7	339.5	339.5	334.6	333.4	328.5	322.4	312.6	300.4
55°	280.9	285.8	284.5	283.3	280.9	280.9	280.9	277.2	273.5	266.2	253.9
57.5°	240.5	241.8	241.8	240.5	240.5	238.1	238.1	234.5	233.2	225.9	216.2
60°	214.9	214.9	216.2	214.9	213.7	212.5	211.2	208.8	205.2	200.2	192.9
62.5°	194.2	195.3	195.3	194.2	192.9	191.6	190.5	188.0	185.6	181.9	174.6
65°	170.9	173.3	172.2	170.9	169.8	168.5	168.5	166.0	163.6	161.2	153.9
67.5°	145.3	146.5	147.8	145.3	145.3	144.0	144.0	141.6	140.5	135.5	130.6
70°	118.5	119.6	119.6	118.5	118.5	117.2	117.2	116.0	114.8	111.2	106.3
72.5°	92.9	94.0	92.9	91.6	91.6	91.6	90.3	89.2	87.9	85.5	81.8
75°	68.3	68.3	69.6	68.3	67.2	67.2	65.9	65.9	63.5	62.3	58.6
77.5°	48.9	50.0	48.9	48.9	47.6	46.4	46.4	45.2	45.2	44.0	41.6
80°	33.0	33.0	34.2	33.0	31.7	33.0	31.7	30.6	30.6	29.3	26.9
82.5°	20.7	22.0	20.7	20.7	20.7	20.7	20.7	19.6	19.6	18.3	17.0
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	11.0	11.0	11.0	9.7
87.5°	6.1	6.1	4.9	4.9	6.1	6.1	6.1	4.9	4.9	4.9	4.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4
2.5°	921.9	923.1	925.5	929.2	929.2	926.8	932.9	932.9	935.4	936.5	941.4
5°	912.2	914.6	919.5	925.5	926.8	925.5	934.1	937.8	941.4	945.1	952.4
7.5°	903.6	908.5	917.1	925.5	929.2	929.2	942.7	947.5	954.8	962.2	970.8
10°	898.7	906.1	918.2	931.7	935.4	939.0	954.8	964.7	974.4	984.2	996.4
12.5°	892.6	906.1	921.9	939.0	946.3	951.2	973.2	985.4	998.8	1011.0	1027.0
15°	891.4	907.2	928.1	950.0	959.8	967.1	991.5	1008.6	1024.5	1040.4	1056.3
17.5°	886.5	906.1	931.7	956.1	968.4	978.1	1006.1	1027.0	1045.3	1061.1	1079.4
20°	880.4	902.4	930.5	957.4	970.8	980.5	1011.0	1030.6	1051.3	1066.0	1083.1
22.5°	871.8	893.8	921.9	948.8	961.0	969.5	1000.0	1017.1	1035.5	1050.1	1066.0
25°	857.2	877.9	902.4	924.4	936.5	943.8	970.8	986.7	1000.0	1014.7	1029.4
27.5°	836.4	852.3	873.1	888.9	896.2	903.6	925.5	939.0	951.2	963.4	973.2
30°	799.8	812.1	826.6	840.1	847.5	848.6	869.4	876.7	886.5	895.1	902.4
32.5°	750.9	760.8	769.2	776.6	781.5	782.8	798.6	801.1	810.8	810.8	821.8
35°	688.7	693.6	699.6	699.6	703.3	699.6	710.6	713.1	714.3	715.5	724.1
37.5°	617.9	620.3	624.0	616.6	616.6	613.0	616.6	619.1	614.2	614.2	620.3
40°	550.7	545.8	540.9	533.6	530.0	522.6	522.6	516.5	512.8	510.4	511.7
42.5°	486.0	475.0	464.0	448.1	440.8	433.5	426.1	417.6	415.1	409.1	405.4
45°	423.7	407.8	393.2	367.5	352.9	345.5	329.7	312.6	301.6	299.1	289.4
47.5°	371.2	348.0	323.6	293.1	278.5	264.9	241.8	227.2	212.5	205.2	199.0
50°	324.8	304.1	272.3	239.3	221.0	207.6	181.9	164.9	149.0	138.0	130.6
52.5°	284.5	261.3	232.0	194.2	175.9	161.2	133.1	113.6	100.2	89.2	80.6
55°	239.3	221.0	191.6	156.3	138.0	120.9	96.5	75.7	62.3	55.0	48.9
57.5°	206.3	190.5	162.5	128.2	111.2	95.3	70.8	53.7	42.7	35.4	31.7
60°	184.3	169.8	145.3	112.3	96.5	81.8	58.6	42.7	33.0	26.9	24.4
62.5°	166.0	151.5	129.5	98.9	85.5	70.8	50.0	35.4	26.9	22.0	18.3
65°	145.3	131.9	112.3	85.5	73.3	61.0	42.7	29.3	22.0	17.0	14.6
67.5°	123.3	111.2	94.0	70.8	61.0	51.3	34.2	24.4	18.3	14.6	12.2
70°	100.2	90.3	74.5	57.4	48.9	40.3	28.1	19.6	13.4	11.0	9.7
72.5°	76.9	68.3	57.4	44.0	36.6	30.6	20.7	14.6	11.0	8.6	7.3
75°	55.0	48.9	40.3	31.7	26.9	22.0	15.9	11.0	7.3	6.1	4.9
77.5°	37.9	34.2	28.1	22.0	18.3	15.9	11.0	7.3	6.1	4.9	3.7
80°	24.4	22.0	18.3	13.4	11.0	9.7	6.1	4.9	3.7	2.4	2.4
82.5°	14.6	13.4	11.0	7.3	6.1	4.9	3.7	2.4	2.4	1.3	1.3
85°	8.6	7.3	4.9	3.7	3.7	2.4	2.4	1.3	1.3	0.0	0.0
87.5°	3.7	2.4	2.4	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4
2.5°	939.0	945.1	943.8	947.5	946.3	946.3	952.4	950.0	956.1	956.1	957.4
5°	952.4	961.0	961.0	967.1	965.8	968.4	974.4	974.4	981.8	984.2	984.2
7.5°	972.0	983.0	985.4	991.5	992.7	997.6	1002.5	1003.7	1013.5	1016.0	1017.1
10°	998.8	1012.3	1016.0	1022.1	1024.5	1029.4	1035.5	1038.0	1050.1	1051.3	1056.3
12.5°	1031.8	1046.4	1050.1	1057.4	1058.7	1064.7	1073.3	1075.7	1088.0	1091.7	1095.3
15°	1063.6	1077.0	1083.1	1090.4	1091.7	1099.0	1106.3	1108.7	1119.7	1124.6	1128.3
17.5°	1085.6	1101.4	1105.1	1114.9	1114.9	1120.9	1128.3	1130.7	1141.7	1145.4	1147.8
20°	1090.4	1105.1	1110.0	1117.3	1118.4	1122.1	1128.3	1130.7	1140.4	1141.7	1145.4
22.5°	1072.1	1086.8	1089.3	1096.6	1097.7	1101.4	1106.3	1105.1	1117.3	1116.0	1117.3
25°	1033.1	1046.4	1046.4	1055.0	1053.8	1057.4	1059.9	1058.7	1069.7	1069.7	1069.7
27.5°	976.8	989.1	990.3	996.4	992.7	994.0	996.4	995.1	1002.5	1002.5	1002.5
30°	907.2	917.1	913.4	918.2	915.8	918.2	915.8	914.6	917.1	919.5	918.2
32.5°	820.5	827.9	827.9	829.1	829.1	821.8	819.3	819.3	818.1	816.9	816.9
35°	720.5	726.5	724.1	724.1	722.9	715.5	711.9	709.5	713.1	705.8	710.6
37.5°	617.9	619.1	615.4	614.2	608.1	608.1	602.0	597.0	599.6	598.3	593.4
40°	505.5	510.4	503.1	500.7	504.3	499.4	493.3	487.3	492.1	486.0	488.4
42.5°	395.7	394.4	392.0	392.0	392.0	384.7	383.4	382.2	383.4	378.5	374.8
45°	285.8	282.1	278.5	278.5	273.5	271.1	271.1	267.5	261.3	261.3	253.9
47.5°	192.9	184.3	181.9	180.7	178.3	178.3	175.9	173.3	172.2	166.0	166.0
50°	125.8	117.2	114.8	113.6	114.8	112.3	109.9	107.5	105.0	103.9	101.3
52.5°	75.7	72.0	69.6	68.3	65.9	64.7	63.5	61.0	59.9	59.9	58.6
55°	45.2	41.6	36.6	36.6	36.6	35.4	34.2	33.0	31.7	31.7	30.6
57.5°	28.1	25.6	23.2	22.0	22.0	22.0	20.7	20.7	20.7	20.7	19.6
60°	20.7	18.3	17.0	17.0	17.0	15.9	15.9	15.9	15.9	14.6	14.6
62.5°	15.9	14.6	13.4	13.4	12.2	12.2	12.2	12.2	12.2	12.2	11.0
65°	13.4	11.0	11.0	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
67.5°	9.7	8.6	8.6	8.6	8.6	7.3	7.3	7.3	7.3	7.3	7.3
70°	7.3	7.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
72.5°	6.1	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
75°	4.9	4.9	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
77.5°	3.7	3.7	3.7	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
80°	2.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P843447

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B30 4LBSWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4
2.5°	957.4	963.4	957.4	957.4	961.0	959.8	962.2	958.5
5°	985.4	994.0	987.8	986.7	992.7	991.5	992.7	990.3
7.5°	1019.6	1028.1	1022.1	1022.1	1028.1	1027.0	1030.6	1028.1
10°	1058.7	1068.4	1059.9	1061.1	1069.7	1068.4	1068.4	1068.4
12.5°	1099.0	1108.7	1103.9	1103.9	1110.0	1111.1	1112.4	1111.1
15°	1132.0	1141.7	1135.6	1135.6	1144.1	1143.0	1144.1	1143.0
17.5°	1151.4	1161.3	1154.0	1154.0	1161.3	1161.3	1162.4	1163.7
20°	1146.6	1157.6	1151.4	1149.0	1157.6	1157.6	1156.4	1156.4
22.5°	1118.4	1128.3	1123.4	1120.9	1127.0	1124.6	1123.4	1124.6
25°	1069.7	1079.4	1069.7	1069.7	1074.6	1073.3	1074.6	1073.3
27.5°	1003.7	1011.0	1001.3	1000.0	1005.0	1002.5	1001.3	1005.0
30°	915.8	923.1	918.2	914.6	920.7	917.1	914.6	915.8
32.5°	815.6	820.5	818.1	812.1	815.6	813.2	812.1	813.2
35°	705.8	711.9	702.2	700.9	707.0	702.2	699.6	705.8
37.5°	592.2	599.6	591.0	592.2	588.6	589.7	587.3	591.0
40°	484.7	483.6	481.1	479.8	481.1	477.4	479.8	476.3
42.5°	368.8	371.2	370.0	368.8	370.0	365.1	362.7	367.5
45°	256.4	255.2	252.8	250.3	250.3	249.1	249.1	245.4
47.5°	164.9	163.6	158.8	160.0	162.5	160.0	156.3	161.2
50°	100.2	98.9	98.9	97.7	100.2	97.7	95.3	95.3
52.5°	56.2	56.2	55.0	55.0	55.0	55.0	53.7	52.6
55°	30.6	29.3	29.3	29.3	28.1	28.1	28.1	28.1
57.5°	19.6	19.6	19.6	19.6	19.6	19.6	18.3	18.3
60°	14.6	14.6	14.6	14.6	13.4	14.6	13.4	13.4
62.5°	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
65°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
67.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
70°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
72.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
75°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
77.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)