

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: NEO-RAY

Report Number: P331566-940

Luminaire Tested: **S122DIW-S865D710U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331566-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D710U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5326.4 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

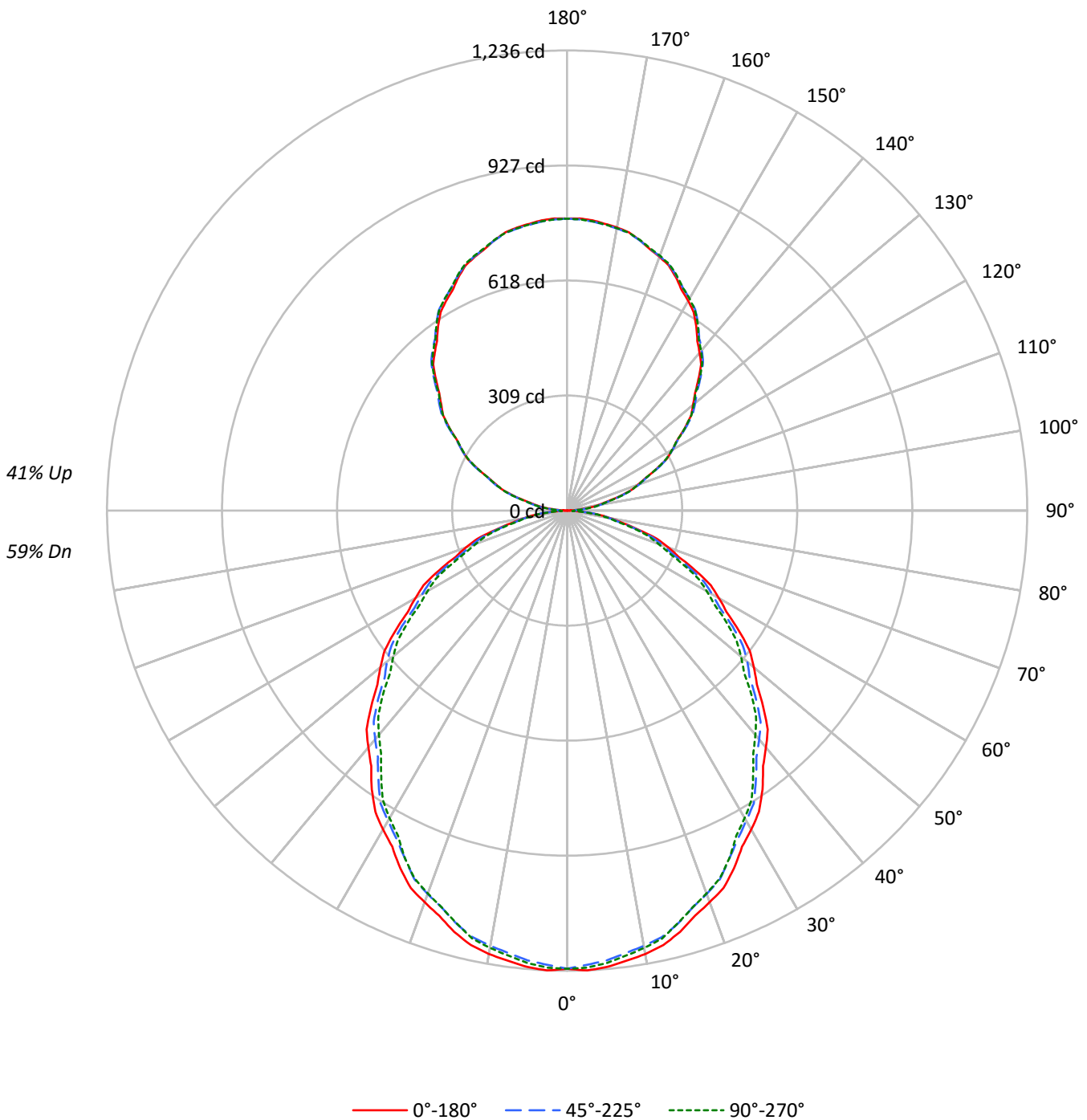
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																				
0	109	109	109	109	102	102	102	102	88	88	88		76	76	76		64	64	64	59
1	100	95	91	88	93	89	86	83	77	75	73		67	65	63		57	55	54	50
2	91	83	77	72	84	78	72	68	68	64	60		59	55	53		50	48	46	41
3	83	73	66	60	77	69	62	57	60	55	51		52	48	45		44	41	39	35
4	76	65	57	51	70	61	54	48	53	48	43		46	42	38		40	36	34	30
5	70	58	50	43	65	54	47	41	48	42	37		41	37	33		36	32	29	26
6	64	52	44	38	60	49	41	36	43	37	33		38	33	29		32	29	26	23
7	59	47	39	33	55	44	37	32	39	33	29		34	29	26		30	26	23	20
8	55	43	35	29	51	40	33	28	36	30	26		31	27	23		27	23	21	18
9	51	39	31	26	48	37	30	25	33	27	23		29	24	21		25	21	19	16
10	48	36	29	24	45	34	27	23	30	25	21		27	22	19		23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19869	19869	19869
5°	19945	19656	19772
10°	19825	19457	19556
15°	19580	19206	19184
20°	19234	18826	18806
25°	18887	18360	18360
30°	18442	17935	17780
35°	18027	17422	17164
40°	17506	16910	16583
45°	16993	16401	15995
50°	16435	15872	15307
55°	15854	15254	14688
60°	15206	14518	13986
65°	14514	13788	13154
70°	13629	12902	12288
75°	12402	11884	11584
80°	11000	10674	10126
85°	8985	8559	7669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.7	2.2
10°-20°	325.6	6.1
20°-30°	478.6	9.0
30°-40°	555.9	10.4
40°-50°	555.3	10.4
50°-60°	484.3	9.1
60°-70°	358.1	6.7
70°-80°	202.8	3.8
80°-90°	57.7	1.1
90°-100°	49.7	0.9
100°-110°	154.3	2.9
110°-120°	263.8	5.0
120°-130°	346.9	6.5
130°-140°	389.3	7.3
140°-150°	381.7	7.2
150°-160°	320.2	6.0
160°-170°	212.4	4.0
170°-180°	74.2	1.4
0°-30°	919.9	17.3
0°-40°	1475.8	27.7
0°-60°	2515.4	47.2
0°-90°	3133.9	58.8
90°-120°	467.8	8.8
90°-150°	1585.7	29.8
90°-180°	2193.0	41.2
0°-180°	5326.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1231	1225	1213	1222	1220	117
15°	1171	1164	1149	1153	1148	330
25°	1060	1050	1031	1033	1031	488
35°	915	902	884	877	871	571
45°	744	735	718	706	700	574
55°	563	556	542	528	522	503
65°	380	372	361	350	344	376
75°	199	196	190	184	186	212
85°	48	47	46	43	41	56
90°	1	9	23	22	22	4
95°	34	41	42	42	41	39
105°	142	144	146	147	147	150
115°	265	268	267	267	265	262
125°	385	391	389	387	386	344
135°	498	505	507	506	504	385
145°	605	609	613	614	611	378
155°	691	693	695	698	697	318
165°	752	752	752	756	753	212
175°	783	781	779	784	780	74
180°	784	784	784	784	784	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6
2.5°	1236.3	1235.2	1234.1	1233.1	1232.1	1230.4	1228.1	1225.7	1223.4	1221.1	1223.2
5°	1230.6	1229.5	1228.5	1227.4	1226.4	1224.4	1221.6	1218.6	1215.8	1212.8	1215.0
7.5°	1219.7	1218.1	1216.5	1214.8	1213.2	1210.9	1207.9	1205.0	1202.0	1199.1	1201.2
10°	1209.2	1207.5	1205.6	1203.7	1201.9	1199.4	1196.2	1193.1	1190.0	1186.8	1188.9
12.5°	1195.1	1193.5	1191.9	1190.2	1188.6	1186.2	1183.0	1179.8	1176.7	1173.6	1175.0
15°	1171.4	1169.8	1168.2	1166.7	1165.1	1162.6	1159.2	1155.7	1152.4	1149.0	1150.0
17.5°	1141.1	1139.5	1138.0	1136.4	1134.8	1132.3	1128.8	1125.3	1121.9	1118.4	1119.6
20°	1119.4	1117.8	1116.2	1114.6	1113.0	1110.4	1106.7	1103.0	1099.4	1095.7	1096.4
22.5°	1097.6	1095.4	1093.1	1090.9	1088.8	1085.9	1082.4	1079.0	1075.5	1072.0	1072.2
25°	1060.2	1058.1	1056.0	1053.9	1051.8	1048.5	1044.0	1039.6	1035.1	1030.6	1031.2
27.5°	1017.6	1015.7	1013.8	1011.9	1010.0	1007.3	1003.8	1000.2	996.8	993.2	992.5
30°	989.2	987.1	985.0	982.9	980.8	977.8	973.8	969.9	965.9	962.0	961.2
32.5°	958.9	957.3	955.6	953.9	952.2	949.2	945.1	940.9	936.8	932.6	931.2
35°	914.6	912.0	909.4	906.8	904.1	900.7	896.5	892.3	888.1	883.9	882.3
37.5°	864.7	862.4	860.1	857.7	855.5	852.2	848.0	843.8	839.5	835.4	833.4
40°	830.6	828.6	826.4	824.3	822.2	819.0	814.8	810.7	806.5	802.3	799.9
42.5°	797.5	795.4	793.3	791.2	789.1	786.0	781.8	777.6	773.3	769.1	766.5
45°	744.2	742.4	740.6	738.8	736.9	734.0	730.0	726.1	722.2	718.3	715.3
47.5°	691.3	689.6	687.8	686.1	684.3	681.4	677.3	673.2	669.1	664.9	661.9
50°	654.3	653.0	651.8	650.4	649.1	646.6	642.9	639.2	635.5	631.9	628.2
52.5°	618.4	616.6	614.9	613.1	611.4	608.9	605.4	601.9	598.4	594.9	591.9
55°	563.2	561.7	560.1	558.5	556.9	554.6	551.4	548.2	545.1	541.9	538.8
57.5°	507.8	506.6	505.3	504.1	502.8	500.4	497.0	493.5	490.0	486.5	483.5
60°	470.9	469.8	468.9	467.8	466.7	464.4	460.7	457.0	453.3	449.6	446.7
62.5°	435.0	433.3	431.6	429.9	428.2	426.0	423.1	420.3	417.4	414.6	412.0
65°	379.9	378.3	376.7	375.1	373.5	371.4	368.8	366.1	363.6	360.9	358.6
67.5°	323.8	322.4	321.2	319.9	318.7	316.9	314.5	312.1	309.8	307.4	305.6
70°	288.7	287.7	286.6	285.5	284.5	282.8	280.4	278.0	275.7	273.3	271.5
72.5°	252.7	251.7	250.7	249.6	248.5	247.3	245.8	244.2	242.6	241.1	239.3
75°	198.8	198.2	197.7	197.2	196.7	195.7	194.5	193.1	191.8	190.5	189.0
77.5°	150.5	149.6	148.7	147.8	147.0	146.2	145.7	145.2	144.6	144.1	143.3
80°	118.3	118.1	117.8	117.5	117.3	116.9	116.4	115.8	115.3	114.8	114.0
82.5°	88.0	88.0	87.9	87.8	87.8	87.7	87.3	87.0	86.7	86.4	85.3
85°	48.5	48.2	48.0	47.7	47.4	47.2	46.9	46.6	46.4	46.2	45.4
87.5°	17.2	17.1	17.0	16.9	16.9	16.9	17.2	17.4	17.7	17.9	17.2
90°	0.6	2.4	4.2	6.0	7.8	10.3	13.5	16.7	19.9	23.2	22.8
92.5°	11.8	13.1	14.4	15.7	16.9	18.0	18.7	19.5	20.2	21.0	21.1
95°	34.4	35.8	37.4	38.8	40.3	41.2	41.5	41.7	42.1	42.4	42.4
97.5°	62.9	64.1	65.5	66.7	68.0	68.9	69.6	70.1	70.6	71.2	71.2
100°	84.0	85.2	86.4	87.6	88.7	89.5	90.0	90.4	90.9	91.3	91.3
102.5°	106.3	107.2	108.2	109.1	110.0	110.8	111.4	111.9	112.4	113.0	113.2
105°	142.2	142.7	143.1	143.6	144.0	144.4	144.7	145.0	145.3	145.6	145.9
107.5°	178.5	179.1	179.9	180.5	181.1	181.5	181.5	181.5	181.5	181.5	181.6
110°	201.8	202.7	203.6	204.5	205.4	205.8	205.8	205.8	205.8	205.8	205.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	227.2	228.1	229.0	229.9	230.8	231.1	231.0	230.9	230.8	230.7	230.3
115°	264.7	265.6	266.4	267.3	268.2	268.5	268.2	267.9	267.6	267.3	267.2
117.5°	302.0	303.2	304.3	305.5	306.7	306.8	306.0	305.2	304.4	303.6	303.3
120°	326.9	328.1	329.2	330.4	331.5	331.5	330.4	329.2	328.1	326.9	326.9
122.5°	349.6	351.1	352.5	353.8	355.3	355.6	354.7	353.9	353.1	352.3	352.0
125°	385.1	386.5	387.7	389.1	390.4	390.8	390.4	389.9	389.5	389.1	388.6
127.5°	419.6	421.3	423.0	424.6	426.3	427.0	426.4	425.9	425.3	424.8	424.3
130°	441.3	443.3	445.1	447.1	449.0	449.8	449.5	449.2	448.9	448.6	448.4
132.5°	465.7	467.3	468.9	470.4	471.9	472.8	472.8	472.9	473.0	473.0	472.3
135°	498.3	499.9	501.5	503.1	504.7	505.7	506.0	506.3	506.6	506.8	506.7
137.5°	532.5	533.9	535.2	536.5	537.8	538.7	539.0	539.5	539.8	540.2	540.1
140°	553.2	554.5	555.8	557.1	558.5	559.5	560.3	561.0	561.7	562.4	562.4
142.5°	574.4	575.7	577.0	578.4	579.6	580.6	581.0	581.6	582.0	582.6	582.6
145°	604.8	605.8	606.8	607.9	608.9	609.8	610.7	611.6	612.5	613.4	613.5
147.5°	632.0	633.1	634.4	635.6	636.9	637.8	638.4	638.9	639.5	640.2	640.4
150°	650.4	651.3	652.2	653.1	654.0	654.7	655.3	655.9	656.5	657.1	657.5
152.5°	666.8	667.7	668.6	669.5	670.4	671.2	671.9	672.6	673.3	674.0	674.6
155°	691.4	691.9	692.3	692.8	693.2	693.7	694.1	694.6	695.0	695.4	696.2
157.5°	712.5	712.8	713.1	713.4	713.7	714.0	714.3	714.5	714.8	715.1	716.0
160°	725.2	725.5	725.8	726.1	726.4	726.7	726.7	726.9	727.0	727.2	728.1
162.5°	736.8	736.9	737.0	737.0	737.1	737.2	737.4	737.5	737.6	737.8	738.8
165°	752.3	752.2	752.1	751.9	751.8	751.7	751.7	751.7	751.7	751.7	752.7
167.5°	765.4	764.9	764.5	764.0	763.6	763.3	763.3	763.2	763.2	763.2	764.2
170°	772.2	771.8	771.3	770.9	770.4	770.2	770.0	769.8	769.7	769.5	770.6
172.5°	776.9	776.5	776.1	775.6	775.2	774.9	774.7	774.6	774.5	774.3	775.3
175°	782.7	782.4	781.9	781.5	781.0	780.7	780.3	780.1	779.8	779.4	780.5
177.5°	785.2	784.8	784.4	784.1	783.7	783.5	783.2	783.0	782.7	782.5	783.2
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6
2.5°	1225.3	1227.4	1229.5	1230.4	1229.9	1229.5	1229.1	1228.7
5°	1217.0	1219.1	1221.3	1222.0	1221.6	1221.0	1220.5	1219.9
7.5°	1203.3	1205.4	1207.6	1208.3	1207.7	1207.1	1206.6	1205.9
10°	1191.0	1193.1	1195.2	1195.9	1195.1	1194.3	1193.5	1192.8
12.5°	1176.5	1177.9	1179.5	1179.9	1179.3	1178.8	1178.1	1177.6
15°	1151.0	1152.1	1153.2	1153.0	1151.7	1150.4	1149.1	1147.7
17.5°	1120.8	1122.0	1123.3	1123.2	1122.0	1120.7	1119.5	1118.2
20°	1097.3	1098.1	1098.9	1098.7	1097.7	1096.6	1095.6	1094.5
22.5°	1072.4	1072.5	1072.6	1072.5	1071.7	1071.1	1070.5	1069.9
25°	1031.7	1032.2	1032.7	1032.7	1032.2	1031.7	1031.2	1030.6
27.5°	991.7	990.9	990.1	989.1	987.7	986.5	985.3	984.0
30°	960.4	959.7	958.9	957.9	956.9	955.8	954.8	953.7
32.5°	929.8	928.4	926.9	925.7	924.7	923.6	922.6	921.5
35°	880.7	879.1	877.6	876.1	874.9	873.5	872.2	870.8
37.5°	831.5	829.6	827.6	826.0	824.7	823.5	822.2	820.9
40°	797.5	795.1	792.8	791.0	790.1	789.0	787.9	786.8
42.5°	763.9	761.3	758.8	756.8	755.3	753.9	752.3	750.9
45°	712.5	709.5	706.7	704.7	703.6	702.6	701.5	700.5
47.5°	658.9	655.9	652.8	650.5	649.0	647.5	646.0	644.4
50°	624.5	620.8	617.2	614.7	613.3	612.0	610.7	609.4
52.5°	588.8	585.8	582.7	580.3	578.6	576.8	575.2	573.4
55°	535.7	532.4	529.3	527.1	525.8	524.4	523.2	521.8
57.5°	480.4	477.2	474.1	472.1	471.1	470.1	469.1	468.1
60°	443.9	441.0	438.1	436.2	435.4	434.6	433.8	433.1
62.5°	409.2	406.5	403.9	402.1	401.0	400.0	399.0	398.1
65°	356.1	353.8	351.4	349.6	348.3	347.0	345.6	344.3
67.5°	303.7	301.8	300.1	298.6	297.6	296.5	295.4	294.4
70°	269.7	267.8	266.0	264.5	263.5	262.4	261.4	260.3
72.5°	237.5	235.6	233.8	232.5	231.6	230.8	229.9	229.1
75°	187.3	185.7	184.2	183.7	184.2	184.8	185.2	185.7
77.5°	142.6	141.8	141.0	140.2	139.5	138.8	138.0	137.2
80°	113.2	112.4	111.6	110.9	110.4	109.9	109.4	108.9
82.5°	84.4	83.4	82.4	81.9	81.7	81.6	81.5	81.4
85°	44.6	43.8	43.0	42.4	42.2	41.9	41.6	41.4
87.5°	16.5	15.8	15.2	14.7	14.5	14.4	14.2	14.0
90°	22.6	22.3	22.0	21.9	22.0	22.2	22.4	22.5
92.5°	21.1	21.2	21.3	21.3	21.3	21.4	21.4	21.4
95°	42.4	42.4	42.4	42.2	41.9	41.6	41.3	41.0
97.5°	71.2	71.2	71.2	71.2	71.2	71.2	71.1	71.1
100°	91.3	91.3	91.3	91.2	91.1	91.0	90.8	90.7
102.5°	113.2	113.3	113.5	113.5	113.3	113.2	113.1	112.9
105°	146.2	146.4	146.8	146.9	146.9	146.9	146.9	146.9
107.5°	181.6	181.8	181.9	181.6	180.9	180.3	179.6	179.0
110°	205.8	205.8	205.8	205.5	205.1	204.6	204.2	203.8



TEST NUMBER: P331566-940

CATALOG NUMBER: S122DIW-S865D710U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	230.0	229.6	229.3	228.9	228.6	228.3	227.9	227.7
115°	267.1	266.9	266.7	266.4	266.0	265.6	265.1	264.7
117.5°	302.9	302.6	302.2	301.8	301.3	300.9	300.4	300.0
120°	326.9	326.9	326.9	326.6	326.2	325.7	325.3	324.9
122.5°	351.6	351.2	350.9	350.5	350.2	349.9	349.6	349.3
125°	388.2	387.7	387.3	387.0	386.9	386.7	386.6	386.5
127.5°	423.7	423.2	422.7	422.2	421.7	421.2	420.8	420.4
130°	448.1	447.7	447.5	447.0	446.4	445.9	445.2	444.7
132.5°	471.7	471.0	470.4	469.8	469.4	468.9	468.4	468.0
135°	506.6	506.4	506.3	506.0	505.5	505.1	504.6	504.2
137.5°	539.9	539.8	539.8	539.4	538.8	538.2	537.6	537.0
140°	562.4	562.4	562.4	562.1	561.6	561.0	560.4	559.8
142.5°	582.8	582.9	583.0	582.8	582.2	581.6	581.0	580.4
145°	613.7	613.9	613.9	613.8	613.1	612.6	612.0	611.4
147.5°	640.8	641.1	641.4	641.3	640.8	640.2	639.6	639.1
150°	657.9	658.4	658.8	658.8	658.4	657.9	657.5	657.1
152.5°	675.1	675.6	676.3	676.3	675.6	675.1	674.6	674.0
155°	696.9	697.7	698.4	698.6	698.1	697.7	697.2	696.8
157.5°	717.0	718.0	719.0	719.2	718.5	717.7	717.0	716.3
160°	729.0	729.9	730.8	730.8	730.3	729.7	729.2	728.5
162.5°	739.8	740.8	741.8	741.9	741.2	740.6	739.9	739.1
165°	753.8	754.7	755.8	756.0	755.2	754.5	753.8	753.0
167.5°	765.3	766.2	767.3	767.4	766.7	765.9	765.2	764.4
170°	771.6	772.7	773.6	773.7	772.8	772.0	771.1	770.2
172.5°	776.4	777.4	778.5	778.5	777.7	776.8	775.9	775.0
175°	781.5	782.6	783.6	783.6	782.7	781.9	781.0	780.2
177.5°	783.9	784.6	785.3	785.3	784.6	783.9	783.2	782.5
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1

(END OF REPORT)