

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: P331832-930

Luminaire Tested: **S122RDIW-S865D710U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331832-930
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: S122RDIW-S865D710U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4466.2 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

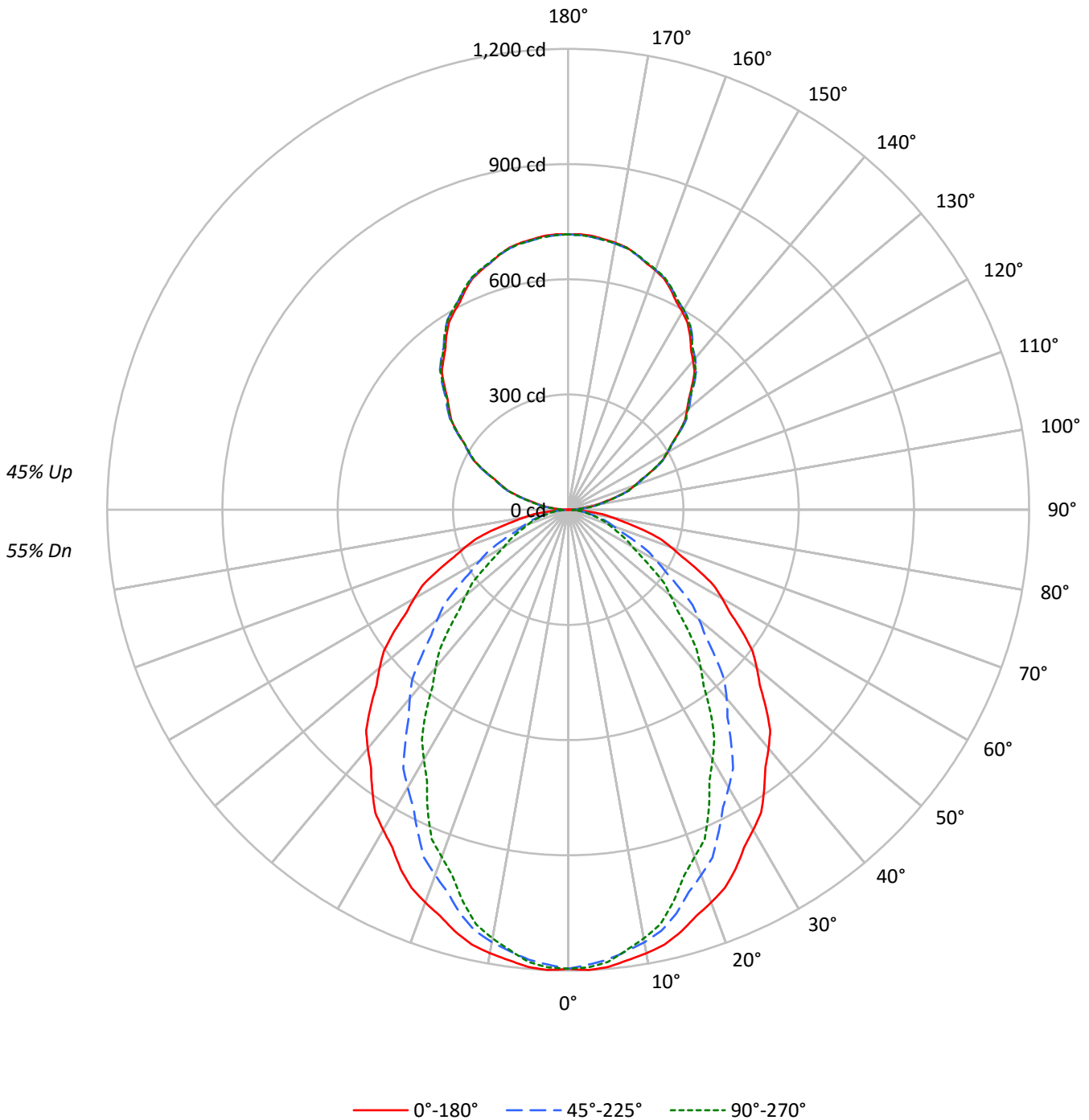
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	92	88	92	89	85	83	76	74	72	65	63	62	55	53	52	47
2	91	84	78	73	84	78	73	69	68	64	60	58	55	52	49	47	45	41
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	41	39	35
4	77	66	58	52	71	62	55	50	54	48	44	46	42	39	39	36	34	31
5	70	59	51	45	65	55	48	43	48	43	39	42	38	34	36	32	30	27
6	65	53	45	40	60	50	43	38	44	38	34	38	34	30	33	29	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	26	24	21
8	56	44	36	31	52	41	35	30	37	31	27	32	27	24	28	24	22	19
9	52	40	33	28	49	38	31	27	34	28	24	29	25	22	26	22	20	18
10	49	37	30	25	46	35	29	24	31	26	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19302	19302	19302
5°	19376	19060	19164
10°	19226	18748	18589
15°	19005	18191	17668
20°	18699	17399	16526
25°	18387	16498	15419
30°	17952	15571	13998
35°	17527	14564	12751
40°	17102	13523	11310
45°	16600	12353	10003
50°	16088	11170	8721
55°	15564	9897	7491
60°	14951	8561	6219
65°	14258	7194	5662
70°	13430	5925	5207
75°	12420	5402	4860
80°	10962	4826	4426
85°	8633	3798	3798



TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	2.5
10°-20°	307.2	6.9
20°-30°	431.5	9.7
30°-40°	470.5	10.5
40°-50°	432.6	9.7
50°-60°	339.7	7.6
60°-70°	221.5	5.0
70°-80°	114.2	2.6
80°-90°	32.5	0.7
90°-100°	45.4	1.0
100°-110°	141.1	3.2
110°-120°	241.2	5.4
120°-130°	317.1	7.1
130°-140°	356.0	8.0
140°-150°	349.0	7.8
150°-160°	292.8	6.6
160°-170°	194.2	4.3
170°-180°	67.9	1.5
0°-30°	850.6	19.0
0°-40°	1321.1	29.6
0°-60°	2093.4	46.9
0°-90°	2461.6	55.1
90°-120°	427.7	9.6
90°-150°	1449.8	32.5
90°-180°	2005.0	44.9
0°-180°	4466.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1190	1176	1185	1182	113
15°	1137	1124	1088	1068	1057	320
25°	1032	995	926	883	866	474
35°	889	832	739	673	647	556
45°	727	652	541	467	438	561
55°	553	467	352	289	266	494
65°	373	285	188	153	148	370
75°	199	126	87	79	78	211
85°	47	25	20	20	20	55
90°	1	8	21	20	20	4
95°	32	37	39	39	38	36
105°	130	132	133	134	134	137
115°	242	245	244	244	242	239
125°	352	357	356	354	353	315
135°	456	462	463	463	461	352
145°	553	557	561	561	559	345
155°	632	634	636	639	637	291
165°	688	687	687	691	688	194
175°	716	714	713	716	713	68
180°	717	717	717	717	717	



TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1199.8	1198.8	1197.8	1196.9	1196.0	1194.4	1192.3	1190.2	1188.1	1185.9	1187.9
5°	1195.5	1194.3	1193.0	1191.8	1190.7	1188.5	1185.4	1182.3	1179.1	1176.0	1178.1
7.5°	1183.1	1181.6	1180.1	1178.7	1177.1	1174.6	1170.9	1167.3	1163.6	1159.9	1160.6
10°	1172.7	1171.0	1169.4	1167.7	1166.0	1162.8	1158.0	1153.2	1148.3	1143.5	1142.8
12.5°	1159.8	1157.6	1155.6	1153.6	1151.4	1147.4	1141.2	1135.1	1128.9	1122.7	1121.4
15°	1137.0	1134.4	1131.7	1129.1	1126.4	1121.0	1112.9	1104.7	1096.5	1088.3	1083.8
17.5°	1109.1	1105.1	1101.1	1097.0	1093.0	1085.7	1075.2	1064.7	1054.3	1043.7	1038.4
20°	1088.3	1083.5	1078.7	1073.9	1069.1	1060.7	1048.6	1036.7	1024.7	1012.6	1006.6
22.5°	1065.8	1060.5	1055.1	1049.7	1044.3	1034.9	1021.2	1007.7	994.2	980.6	972.8
25°	1032.1	1024.4	1016.7	1009.0	1001.4	989.5	973.6	957.8	941.9	926.1	916.2
27.5°	991.4	983.0	974.7	966.3	958.0	944.9	926.9	909.1	891.1	873.3	861.8
30°	962.9	953.7	944.6	935.5	926.3	912.2	892.9	873.7	854.4	835.2	823.0
32.5°	935.1	924.5	913.8	903.1	892.4	877.3	857.7	838.0	818.5	798.8	784.9
35°	889.2	877.0	864.8	852.5	840.2	823.5	802.3	781.2	760.1	738.9	723.7
37.5°	843.4	830.0	816.5	803.0	789.5	771.5	749.0	726.4	703.9	681.3	664.6
40°	811.4	797.0	782.5	768.1	753.7	734.8	711.5	688.2	664.9	641.6	624.4
42.5°	778.5	763.3	748.1	733.0	717.7	698.1	674.0	649.9	625.8	601.7	584.1
45°	727.0	710.9	694.8	678.7	662.6	641.9	616.7	591.4	566.1	541.0	523.8
47.5°	676.8	659.7	642.7	625.6	608.5	586.9	560.9	534.8	508.7	482.7	465.8
50°	640.5	623.4	606.3	589.2	572.2	550.4	524.0	497.5	471.1	444.7	428.0
52.5°	605.0	587.1	569.3	551.5	533.6	511.8	485.9	460.0	434.1	408.3	392.2
55°	552.9	534.1	515.4	496.6	477.8	455.4	429.5	403.5	377.6	351.6	337.2
57.5°	499.4	480.1	460.9	441.6	422.5	400.4	375.4	350.4	325.5	300.5	287.3
60°	463.0	443.8	424.6	405.4	386.1	364.1	339.3	314.5	289.8	265.1	252.8
62.5°	427.5	408.3	389.1	369.8	350.6	329.2	305.6	282.0	258.4	234.7	223.1
65°	373.2	353.8	334.3	314.8	295.4	274.8	253.2	231.5	209.9	188.3	180.1
67.5°	320.9	301.6	282.3	262.9	243.5	224.1	204.7	185.2	165.8	146.3	142.5
70°	284.5	265.8	247.0	228.3	209.5	191.8	175.3	158.7	142.1	125.5	123.1
72.5°	249.9	232.0	213.9	196.0	178.0	162.3	149.0	135.7	122.4	109.1	107.0
75°	199.1	182.2	165.4	148.5	131.8	119.3	111.0	102.9	94.7	86.6	84.9
77.5°	149.1	134.3	119.5	104.8	90.0	80.7	76.7	72.8	68.9	64.9	63.9
80°	117.9	105.7	93.4	81.1	68.9	61.6	59.1	56.7	54.3	51.9	51.0
82.5°	89.4	79.8	70.2	60.7	51.1	45.5	43.9	42.2	40.6	39.0	38.4
85°	46.6	41.5	36.4	31.4	26.3	23.5	22.7	22.0	21.3	20.5	20.5
87.5°	13.9	12.7	11.6	10.4	9.1	8.8	9.4	9.9	10.6	11.2	10.9
90°	0.6	2.2	3.8	5.5	7.1	9.4	12.3	15.2	18.2	21.2	20.9
92.5°	10.8	12.0	13.1	14.3	15.5	16.5	17.1	17.9	18.5	19.2	19.3
95°	31.5	32.8	34.2	35.5	36.9	37.7	37.9	38.2	38.5	38.7	38.7
97.5°	57.5	58.6	59.8	61.0	62.2	63.0	63.6	64.1	64.6	65.1	65.1
100°	76.8	77.9	79.0	80.1	81.1	81.9	82.3	82.7	83.1	83.5	83.5
102.5°	97.2	98.0	98.9	99.7	100.6	101.3	101.8	102.3	102.8	103.3	103.5
105°	130.0	130.4	130.9	131.3	131.7	132.0	132.3	132.6	132.8	133.1	133.4
107.5°	163.2	163.8	164.4	165.0	165.6	165.9	165.9	165.9	165.9	165.9	166.0
110°	184.5	185.3	186.1	186.9	187.8	188.2	188.2	188.2	188.2	188.2	188.2



TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	207.7	208.6	209.4	210.2	211.0	211.3	211.2	211.1	211.0	210.9	210.6
115°	242.0	242.8	243.6	244.4	245.2	245.5	245.2	244.9	244.7	244.4	244.3
117.5°	276.1	277.2	278.3	279.3	280.4	280.5	279.8	279.1	278.3	277.6	277.3
120°	298.9	299.9	301.0	302.1	303.1	303.1	302.1	301.0	299.9	298.9	298.9
122.5°	319.7	321.0	322.3	323.5	324.8	325.1	324.3	323.6	322.9	322.1	321.8
125°	352.1	353.4	354.5	355.7	356.9	357.3	356.9	356.5	356.1	355.7	355.3
127.5°	383.7	385.2	386.8	388.2	389.8	390.4	389.9	389.4	388.9	388.4	387.9
130°	403.5	405.3	407.0	408.8	410.5	411.2	411.0	410.7	410.4	410.2	409.9
132.5°	425.8	427.2	428.7	430.1	431.5	432.3	432.3	432.4	432.4	432.4	431.9
135°	455.6	457.1	458.5	460.0	461.5	462.4	462.6	462.9	463.2	463.4	463.3
137.5°	486.9	488.1	489.3	490.6	491.7	492.5	492.8	493.3	493.6	493.9	493.8
140°	505.8	507.0	508.2	509.4	510.6	511.5	512.3	512.9	513.6	514.2	514.2
142.5°	525.1	526.4	527.6	528.8	529.9	530.8	531.2	531.7	532.1	532.6	532.7
145°	552.9	553.9	554.8	555.8	556.8	557.6	558.4	559.2	560.0	560.8	560.9
147.5°	577.8	578.9	580.0	581.1	582.3	583.1	583.7	584.2	584.7	585.3	585.5
150°	594.7	595.5	596.3	597.1	597.9	598.6	599.2	599.7	600.2	600.8	601.2
152.5°	609.7	610.5	611.3	612.1	612.9	613.7	614.3	615.0	615.6	616.3	616.8
155°	632.2	632.6	633.0	633.4	633.8	634.2	634.6	635.0	635.4	635.9	636.5
157.5°	651.4	651.8	652.0	652.2	652.6	652.8	653.1	653.3	653.5	653.8	654.7
160°	663.1	663.3	663.6	663.9	664.1	664.4	664.5	664.6	664.7	664.9	665.7
162.5°	673.7	673.8	673.8	673.8	673.9	674.0	674.2	674.3	674.4	674.6	675.5
165°	687.9	687.7	687.6	687.5	687.4	687.3	687.3	687.3	687.3	687.3	688.2
167.5°	699.8	699.4	699.0	698.5	698.1	697.9	697.9	697.8	697.8	697.8	698.7
170°	706.0	705.6	705.2	704.8	704.4	704.2	704.0	703.8	703.8	703.6	704.6
172.5°	710.4	710.0	709.6	709.1	708.7	708.5	708.3	708.3	708.1	707.9	708.9
175°	715.7	715.3	714.9	714.5	714.1	713.8	713.5	713.2	713.0	712.7	713.6
177.5°	717.9	717.5	717.2	716.9	716.6	716.3	716.1	715.9	715.7	715.4	716.1
180°	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9



TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1189.8	1191.7	1193.6	1194.4	1194.0	1193.6	1193.3	1192.9
5°	1180.3	1182.4	1184.6	1185.4	1184.6	1183.9	1183.2	1182.4
7.5°	1161.2	1161.8	1162.5	1162.1	1160.9	1159.7	1158.4	1157.2
10°	1142.1	1141.3	1140.6	1139.5	1138.1	1136.7	1135.2	1133.8
12.5°	1120.1	1118.8	1117.5	1115.7	1113.3	1110.9	1108.5	1106.1
15°	1079.2	1074.6	1070.1	1066.6	1064.2	1061.8	1059.4	1057.0
17.5°	1032.9	1027.4	1022.1	1017.2	1013.1	1009.0	1004.9	1000.7
20°	1000.6	994.6	988.6	982.9	977.6	972.3	967.0	961.8
22.5°	965.2	957.4	949.7	943.8	939.9	935.9	932.0	928.1
25°	906.4	896.5	886.6	879.9	876.3	872.7	869.1	865.5
27.5°	850.3	838.8	827.3	818.7	813.0	807.2	801.5	795.8
30°	810.7	798.4	786.1	776.7	770.3	763.8	757.3	750.8
32.5°	770.9	756.8	742.9	732.8	726.8	720.6	714.5	708.4
35°	708.6	693.5	678.3	668.1	662.8	657.5	652.2	646.9
37.5°	648.0	631.3	614.7	603.2	597.2	591.1	585.1	579.0
40°	607.4	590.4	573.2	561.6	555.4	549.1	542.8	536.6
42.5°	566.5	548.8	531.2	519.3	513.2	507.2	501.1	495.0
45°	506.8	489.8	472.6	461.2	455.4	449.7	443.9	438.1
47.5°	448.7	431.8	414.8	403.7	398.5	393.2	388.0	382.8
50°	411.5	394.8	378.3	367.5	362.4	357.3	352.3	347.2
52.5°	376.3	360.3	344.2	333.9	329.2	324.6	319.9	315.3
55°	322.8	308.3	293.9	284.4	279.8	275.2	270.7	266.1
57.5°	274.1	260.9	247.7	239.1	235.3	231.4	227.6	223.7
60°	240.5	228.3	216.0	208.0	204.1	200.2	196.4	192.6
62.5°	211.4	199.7	188.0	181.0	178.7	176.4	174.1	171.8
65°	171.9	163.7	155.6	151.1	150.3	149.7	149.0	148.2
67.5°	138.8	135.0	131.3	129.0	128.2	127.4	126.7	126.0
70°	120.7	118.3	115.9	114.2	113.2	112.3	111.3	110.3
72.5°	105.0	103.0	100.9	99.7	99.1	98.5	97.9	97.3
75°	83.2	81.5	79.8	78.8	78.6	78.4	78.1	77.9
77.5°	63.0	62.0	61.1	60.4	60.0	59.6	59.3	58.9
80°	50.0	49.1	48.1	47.6	47.6	47.6	47.6	47.6
82.5°	37.8	37.2	36.6	36.4	36.4	36.4	36.4	36.4
85°	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
87.5°	10.7	10.4	10.2	10.0	10.1	10.1	10.1	10.2
90°	20.6	20.4	20.1	20.1	20.1	20.3	20.5	20.5
92.5°	19.3	19.4	19.5	19.5	19.5	19.6	19.6	19.6
95°	38.7	38.7	38.7	38.6	38.3	38.1	37.7	37.5
97.5°	65.1	65.1	65.1	65.1	65.1	65.1	65.0	65.0
100°	83.5	83.5	83.5	83.4	83.3	83.2	83.0	82.9
102.5°	103.5	103.6	103.8	103.8	103.6	103.5	103.4	103.2
105°	133.6	133.9	134.2	134.3	134.3	134.3	134.3	134.3
107.5°	166.1	166.2	166.3	166.1	165.4	164.9	164.2	163.6
110°	188.2	188.2	188.2	187.9	187.5	187.1	186.7	186.4



TEST NUMBER: P331832-930

CATALOG NUMBER: S122RDIW-S865D710U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	210.3	209.9	209.6	209.3	209.0	208.7	208.4	208.1
115°	244.2	244.0	243.9	243.6	243.2	242.8	242.4	242.0
117.5°	277.0	276.6	276.3	275.9	275.5	275.1	274.7	274.3
120°	298.9	298.9	298.9	298.6	298.2	297.8	297.4	297.0
122.5°	321.5	321.1	320.8	320.5	320.2	319.9	319.6	319.4
125°	354.9	354.5	354.1	353.8	353.8	353.6	353.4	353.4
127.5°	387.4	386.9	386.5	386.0	385.6	385.1	384.7	384.3
130°	409.7	409.4	409.1	408.7	408.1	407.6	407.1	406.6
132.5°	431.3	430.6	430.1	429.6	429.2	428.7	428.3	427.9
135°	463.2	463.0	462.9	462.6	462.2	461.8	461.4	461.0
137.5°	493.7	493.6	493.5	493.2	492.6	492.1	491.5	491.0
140°	514.2	514.2	514.2	514.0	513.5	512.9	512.3	511.8
142.5°	532.9	533.0	533.0	532.9	532.3	531.7	531.2	530.7
145°	561.1	561.3	561.3	561.2	560.6	560.1	559.5	559.1
147.5°	585.9	586.1	586.4	586.4	585.9	585.3	584.8	584.3
150°	601.5	601.9	602.3	602.3	601.9	601.5	601.2	600.8
152.5°	617.3	617.8	618.3	618.3	617.8	617.3	616.8	616.3
155°	637.2	637.9	638.5	638.7	638.3	637.9	637.5	637.1
157.5°	655.6	656.5	657.4	657.5	656.9	656.2	655.6	654.9
160°	666.5	667.3	668.1	668.2	667.7	667.2	666.7	666.1
162.5°	676.4	677.4	678.2	678.3	677.7	677.1	676.5	675.8
165°	689.2	690.1	691.0	691.2	690.5	689.8	689.2	688.5
167.5°	699.7	700.6	701.6	701.6	701.0	700.3	699.6	698.9
170°	705.5	706.5	707.4	707.4	706.6	705.8	705.0	704.2
172.5°	709.9	710.8	711.8	711.8	711.0	710.2	709.4	708.6
175°	714.5	715.5	716.5	716.5	715.7	714.9	714.1	713.3
177.5°	716.7	717.4	718.0	718.0	717.4	716.7	716.1	715.4
180°	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9

(END OF REPORT)