

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: P331832-927

Luminaire Tested: **S122RDIW-S865D710U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331832-927
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-S865D710U927-4F0-1E-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: 4339.6 lumens
Efficiency: N/A
Efficacy: 81.0 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

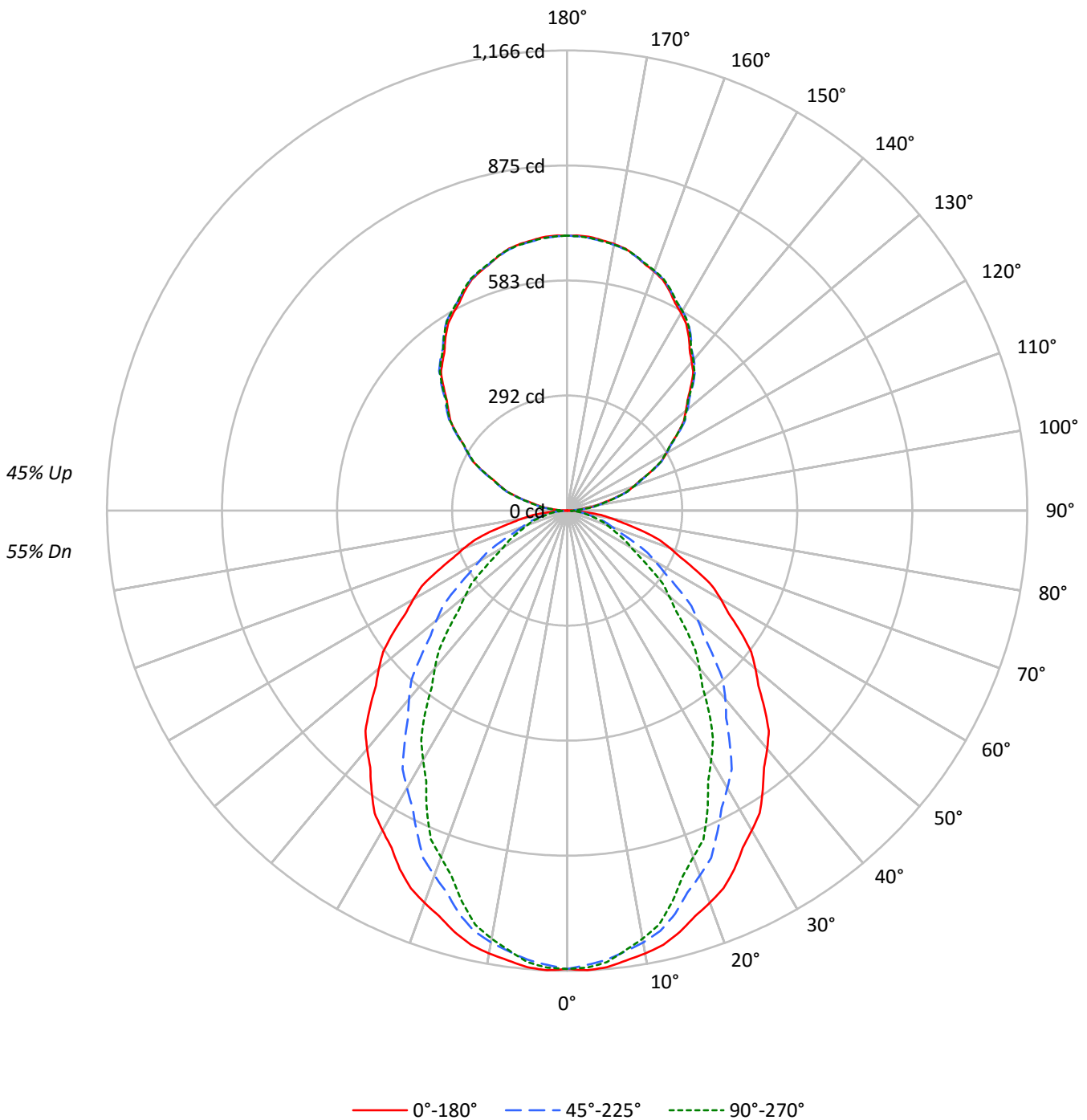
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	18755	18755	18755
5°	18827	18519	18621
10°	18682	18216	18061
15°	18467	17677	17167
20°	18170	16905	16057
25°	17865	16030	14982
30°	17443	15129	13601
35°	17030	14152	12390
40°	16617	13139	10989
45°	16130	12001	9720
50°	15631	10854	8475
55°	15122	9619	7279
60°	14528	8315	6042
65°	13857	6988	5501
70°	13053	5755	5061
75°	12071	5246	4722
80°	10646	4695	4305
85°	8373	3705	3705



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.7	2.5
10°-20°	298.5	6.9
20°-30°	419.2	9.7
30°-40°	457.1	10.5
40°-50°	420.3	9.7
50°-60°	330.1	7.6
60°-70°	215.2	5.0
70°-80°	111.0	2.6
80°-90°	31.6	0.7
90°-100°	44.1	1.0
100°-110°	137.1	3.2
110°-120°	234.3	5.4
120°-130°	308.1	7.1
130°-140°	345.9	8.0
140°-150°	339.1	7.8
150°-160°	284.5	6.6
160°-170°	188.7	4.3
170°-180°	65.9	1.5
0°-30°	826.5	19.0
0°-40°	1283.6	29.6
0°-60°	2034.0	46.9
0°-90°	2391.8	55.1
90°-120°	415.5	9.6
90°-150°	1408.7	32.5
90°-180°	1948.0	44.9
0°-180°	4339.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1162	1156	1143	1151	1149	110
15°	1105	1092	1058	1038	1027	311
25°	1003	967	900	858	841	461
35°	864	808	718	654	629	541
45°	706	634	526	454	426	545
55°	537	453	342	281	259	480
65°	363	277	183	149	144	359
75°	194	122	84	77	76	205
85°	45	24	20	20	20	53
90°	1	8	21	20	20	3
95°	31	36	38	38	36	35
105°	126	128	129	130	130	133
115°	235	238	238	237	235	233
125°	342	347	346	344	343	306
135°	443	449	450	450	448	342
145°	537	541	545	545	543	336
155°	614	616	618	620	619	283
165°	668	668	668	672	669	188
175°	695	694	692	696	693	66
180°	697	697	697	697	697	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6
2.5°	1165.8	1164.8	1163.9	1162.9	1162.1	1160.5	1158.5	1156.4	1154.4	1152.3	1154.2
5°	1161.6	1160.4	1159.2	1158.0	1156.9	1154.8	1151.8	1148.7	1145.7	1142.6	1144.7
7.5°	1149.5	1148.1	1146.7	1145.3	1143.8	1141.3	1137.7	1134.2	1130.6	1127.0	1127.7
10°	1139.5	1137.8	1136.2	1134.6	1132.9	1129.8	1125.1	1120.5	1115.8	1111.1	1110.4
12.5°	1126.9	1124.8	1122.8	1120.9	1118.8	1114.8	1108.8	1102.9	1096.9	1090.9	1089.6
15°	1104.8	1102.2	1099.6	1097.1	1094.5	1089.3	1081.3	1073.4	1065.4	1057.5	1053.0
17.5°	1077.7	1073.7	1069.8	1065.9	1062.0	1054.9	1044.7	1034.5	1024.4	1014.2	1008.9
20°	1057.5	1052.8	1048.1	1043.5	1038.8	1030.6	1018.9	1007.3	995.6	983.9	978.0
22.5°	1035.6	1030.4	1025.2	1019.9	1014.7	1005.5	992.3	979.1	966.0	952.8	945.2
25°	1002.8	995.4	987.9	980.4	973.0	961.5	946.0	930.7	915.2	899.8	890.3
27.5°	963.3	955.1	947.1	938.9	930.8	918.1	900.6	883.3	865.9	848.5	837.3
30°	935.6	926.7	917.8	908.9	900.1	886.3	867.6	848.9	830.2	811.5	799.6
32.5°	908.6	898.3	887.9	877.5	867.1	852.5	833.4	814.3	795.3	776.2	762.6
35°	864.0	852.2	840.3	828.3	816.4	800.2	779.6	759.1	738.6	718.0	703.2
37.5°	819.5	806.4	793.4	780.2	767.1	749.6	727.8	705.8	684.0	662.0	645.8
40°	788.4	774.4	760.3	746.3	732.3	714.0	691.3	668.7	646.0	623.4	606.7
42.5°	756.5	741.6	726.9	712.2	697.4	678.3	654.9	631.4	608.1	584.6	567.5
45°	706.4	690.7	675.1	659.4	643.8	623.7	599.2	574.6	550.1	525.6	509.0
47.5°	657.6	641.0	624.5	607.8	591.3	570.3	545.0	519.7	494.3	469.1	452.6
50°	622.3	605.7	589.1	572.5	556.0	534.8	509.1	483.4	457.7	432.1	415.9
52.5°	587.8	570.5	553.2	535.8	518.5	497.3	472.1	446.9	421.8	396.7	381.1
55°	537.2	519.0	500.7	482.5	464.3	442.5	417.3	392.1	366.9	341.7	327.6
57.5°	485.2	466.5	447.8	429.1	410.5	389.0	364.7	340.5	316.2	292.0	279.2
60°	449.9	431.2	412.6	393.9	375.2	353.8	329.7	305.6	281.6	257.5	245.7
62.5°	415.4	396.7	378.0	359.3	340.6	319.9	296.9	274.0	251.0	228.1	216.7
65°	362.7	343.7	324.8	305.9	287.0	267.0	246.0	225.0	203.9	182.9	175.0
67.5°	311.8	293.0	274.3	255.4	236.6	217.8	198.9	180.0	161.1	142.1	138.5
70°	276.5	258.3	240.0	221.8	203.6	186.4	170.3	154.2	138.1	121.9	119.6
72.5°	242.8	225.4	207.9	190.4	172.9	157.7	144.8	131.8	118.9	106.0	104.0
75°	193.5	177.1	160.7	144.3	128.0	115.9	107.9	100.0	92.1	84.1	82.5
77.5°	144.9	130.5	116.1	101.8	87.5	78.4	74.5	70.7	66.9	63.1	62.1
80°	114.5	102.7	90.8	78.8	66.9	59.8	57.4	55.1	52.8	50.5	49.5
82.5°	86.8	77.6	68.2	58.9	49.7	44.2	42.6	41.0	39.5	37.9	37.3
85°	45.2	40.3	35.4	30.5	25.6	22.8	22.1	21.4	20.7	20.0	20.0
87.5°	13.5	12.4	11.2	10.1	8.9	8.6	9.1	9.7	10.3	10.9	10.6
90°	0.6	2.1	3.7	5.3	6.9	9.1	12.0	14.8	17.7	20.6	20.3
92.5°	10.5	11.6	12.8	13.9	15.1	16.0	16.6	17.3	18.0	18.7	18.8
95°	30.6	31.8	33.2	34.5	35.8	36.6	36.8	37.1	37.4	37.6	37.6
97.5°	55.8	57.0	58.1	59.3	60.4	61.2	61.8	62.3	62.7	63.2	63.2
100°	74.6	75.7	76.8	77.8	78.8	79.5	79.9	80.3	80.7	81.1	81.1
102.5°	94.4	95.2	96.1	96.9	97.8	98.4	98.9	99.4	99.9	100.4	100.5
105°	126.4	126.7	127.1	127.5	127.9	128.3	128.6	128.8	129.0	129.4	129.6
107.5°	158.6	159.1	159.8	160.3	160.9	161.2	161.2	161.2	161.2	161.2	161.3
110°	179.3	180.1	180.9	181.6	182.4	182.8	182.8	182.8	182.8	182.8	182.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.8	202.6	203.4	204.2	205.0	205.3	205.3	205.1	205.0	204.9	204.6
115°	235.1	235.9	236.7	237.5	238.3	238.5	238.3	238.0	237.7	237.5	237.3
117.5°	268.3	269.3	270.4	271.4	272.4	272.6	271.9	271.2	270.5	269.7	269.4
120°	290.4	291.4	292.5	293.5	294.5	294.5	293.5	292.5	291.4	290.4	290.4
122.5°	310.6	311.9	313.1	314.3	315.6	315.9	315.1	314.4	313.7	313.0	312.7
125°	342.1	343.3	344.4	345.6	346.8	347.2	346.8	346.4	346.0	345.6	345.2
127.5°	372.8	374.3	375.8	377.2	378.7	379.3	378.8	378.3	377.9	377.4	376.9
130°	392.1	393.8	395.5	397.2	398.9	399.6	399.3	399.1	398.8	398.5	398.3
132.5°	413.8	415.1	416.5	417.9	419.2	420.0	420.0	420.1	420.2	420.2	419.6
135°	442.7	444.1	445.5	446.9	448.4	449.2	449.5	449.8	450.0	450.3	450.1
137.5°	473.1	474.3	475.5	476.7	477.8	478.6	478.9	479.3	479.6	479.9	479.8
140°	491.5	492.6	493.8	495.0	496.1	497.0	497.7	498.4	499.0	499.6	499.6
142.5°	510.2	511.4	512.6	513.8	514.9	515.8	516.2	516.7	517.1	517.5	517.6
145°	537.3	538.2	539.1	540.0	541.0	541.8	542.6	543.4	544.2	544.9	545.0
147.5°	561.4	562.4	563.6	564.7	565.8	566.6	567.1	567.6	568.2	568.7	568.9
150°	577.8	578.6	579.4	580.2	581.0	581.6	582.2	582.7	583.2	583.8	584.2
152.5°	592.4	593.2	594.0	594.8	595.6	596.3	596.9	597.5	598.2	598.8	599.3
155°	614.3	614.7	615.1	615.4	615.8	616.2	616.6	617.0	617.4	617.8	618.5
157.5°	633.0	633.3	633.5	633.7	634.1	634.3	634.5	634.8	635.0	635.3	636.1
160°	644.3	644.5	644.8	645.1	645.3	645.5	645.6	645.8	645.9	646.0	646.8
162.5°	654.6	654.7	654.7	654.7	654.8	654.9	655.1	655.2	655.3	655.5	656.3
165°	668.4	668.2	668.1	668.0	667.9	667.8	667.8	667.8	667.8	667.8	668.7
167.5°	679.9	679.5	679.1	678.7	678.3	678.1	678.1	678.0	678.0	678.0	678.9
170°	686.0	685.6	685.2	684.8	684.4	684.2	684.0	683.9	683.8	683.7	684.6
172.5°	690.2	689.8	689.4	689.0	688.6	688.4	688.2	688.2	688.0	687.9	688.8
175°	695.4	695.1	694.7	694.3	693.9	693.6	693.2	693.0	692.8	692.4	693.4
177.5°	697.5	697.2	696.9	696.6	696.2	696.0	695.8	695.6	695.4	695.1	695.8
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6
2.5°	1156.0	1157.9	1159.8	1160.5	1160.2	1159.8	1159.4	1159.0
5°	1146.8	1148.9	1151.0	1151.8	1151.0	1150.3	1149.6	1148.9
7.5°	1128.3	1128.9	1129.5	1129.2	1128.0	1126.8	1125.5	1124.3
10°	1109.7	1109.0	1108.3	1107.2	1105.8	1104.5	1103.0	1101.6
12.5°	1088.4	1087.1	1085.8	1084.1	1081.7	1079.4	1077.1	1074.8
15°	1048.6	1044.2	1039.7	1036.3	1034.0	1031.7	1029.4	1027.0
17.5°	1003.6	998.3	993.1	988.4	984.4	980.4	976.4	972.3
20°	972.2	966.4	960.5	955.1	949.9	944.8	939.6	934.5
22.5°	937.8	930.3	922.7	917.0	913.2	909.3	905.5	901.7
25°	880.7	871.1	861.5	854.9	851.4	848.0	844.5	841.0
27.5°	826.2	815.0	803.8	795.5	790.0	784.3	778.8	773.2
30°	787.7	775.8	763.8	754.7	748.5	742.1	735.9	729.5
32.5°	749.0	735.4	721.8	712.0	706.2	700.2	694.3	688.3
35°	688.5	673.8	659.1	649.2	644.0	638.9	633.7	628.6
37.5°	629.6	613.4	597.2	586.1	580.3	574.3	568.5	562.6
40°	590.2	573.6	557.0	545.7	539.6	533.5	527.4	521.4
42.5°	550.4	533.2	516.1	504.5	498.7	492.8	486.9	481.0
45°	492.4	475.9	459.2	448.1	442.5	437.0	431.3	425.7
47.5°	436.0	419.5	403.1	392.3	387.2	382.1	377.0	371.9
50°	399.8	383.7	367.6	357.0	352.1	347.2	342.3	337.4
52.5°	365.6	350.1	334.5	324.5	319.9	315.4	310.9	306.3
55°	313.6	299.6	285.6	276.3	271.9	267.4	263.0	258.6
57.5°	266.3	253.5	240.7	232.3	228.6	224.8	221.1	217.4
60°	233.7	221.8	209.8	202.1	198.3	194.6	190.8	187.1
62.5°	205.4	194.1	182.7	175.9	173.6	171.4	169.1	166.9
65°	167.0	159.1	151.1	146.8	146.1	145.4	144.7	144.0
67.5°	134.8	131.2	127.5	125.3	124.6	123.8	123.1	122.4
70°	117.2	114.9	112.6	111.0	110.0	109.1	108.1	107.2
72.5°	102.0	100.1	98.1	96.9	96.3	95.7	95.1	94.6
75°	80.8	79.2	77.6	76.6	76.4	76.1	75.9	75.7
77.5°	61.2	60.3	59.3	58.7	58.3	57.9	57.6	57.2
80°	48.6	47.7	46.7	46.3	46.3	46.3	46.3	46.3
82.5°	36.8	36.1	35.6	35.3	35.3	35.3	35.3	35.3
85°	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
87.5°	10.4	10.1	9.9	9.7	9.8	9.8	9.8	9.9
90°	20.0	19.8	19.6	19.5	19.6	19.7	19.9	20.0
92.5°	18.8	18.9	18.9	18.9	18.9	19.0	19.0	19.0
95°	37.6	37.6	37.6	37.5	37.2	37.0	36.7	36.4
97.5°	63.2	63.2	63.2	63.2	63.2	63.2	63.1	63.1
100°	81.1	81.1	81.1	81.0	81.0	80.8	80.6	80.6
102.5°	100.6	100.7	100.8	100.8	100.7	100.5	100.4	100.3
105°	129.8	130.1	130.4	130.5	130.5	130.5	130.5	130.5
107.5°	161.4	161.5	161.6	161.4	160.7	160.2	159.5	159.0
110°	182.8	182.8	182.8	182.6	182.2	181.8	181.4	181.1



TEST NUMBER: P331832-927

CATALOG NUMBER: S122RDIW-S865D710U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	204.3	204.0	203.7	203.4	203.1	202.8	202.5	202.2
115°	237.3	237.1	236.9	236.7	236.3	235.9	235.5	235.1
117.5°	269.1	268.8	268.5	268.1	267.7	267.3	266.9	266.5
120°	290.4	290.4	290.4	290.2	289.8	289.4	289.0	288.6
122.5°	312.4	312.0	311.7	311.4	311.1	310.9	310.5	310.3
125°	344.8	344.4	344.0	343.8	343.7	343.6	343.4	343.3
127.5°	376.4	376.0	375.5	375.1	374.6	374.2	373.8	373.4
130°	398.1	397.8	397.5	397.1	396.6	396.1	395.5	395.1
132.5°	419.1	418.4	417.9	417.4	417.0	416.5	416.1	415.7
135°	450.0	449.9	449.8	449.5	449.1	448.7	448.3	447.9
137.5°	479.7	479.6	479.5	479.2	478.6	478.2	477.6	477.1
140°	499.6	499.6	499.6	499.4	498.9	498.4	497.8	497.3
142.5°	517.8	517.8	517.9	517.8	517.2	516.7	516.2	515.6
145°	545.2	545.3	545.4	545.3	544.7	544.2	543.7	543.2
147.5°	569.3	569.5	569.8	569.7	569.3	568.7	568.2	567.8
150°	584.5	584.9	585.3	585.3	584.9	584.5	584.2	583.8
152.5°	599.8	600.2	600.8	600.8	600.2	599.8	599.3	598.8
155°	619.1	619.8	620.4	620.6	620.2	619.8	619.4	619.0
157.5°	637.0	637.9	638.7	638.9	638.3	637.6	637.0	636.4
160°	647.6	648.4	649.2	649.3	648.8	648.2	647.8	647.2
162.5°	657.2	658.1	659.0	659.1	658.5	657.9	657.3	656.6
165°	669.6	670.5	671.5	671.6	670.9	670.3	669.6	669.0
167.5°	679.9	680.7	681.7	681.8	681.1	680.4	679.8	679.1
170°	685.5	686.4	687.3	687.4	686.6	685.8	685.0	684.2
172.5°	689.8	690.6	691.6	691.6	690.9	690.1	689.3	688.5
175°	694.3	695.2	696.2	696.2	695.4	694.7	693.9	693.1
177.5°	696.4	697.0	697.7	697.7	697.0	696.4	695.8	695.1
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6

(END OF REPORT)