

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: P332218-927

Luminaire Tested: **S123DIW-S1165D755U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332218-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIW-S1165D755U927-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 755 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6236.4 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

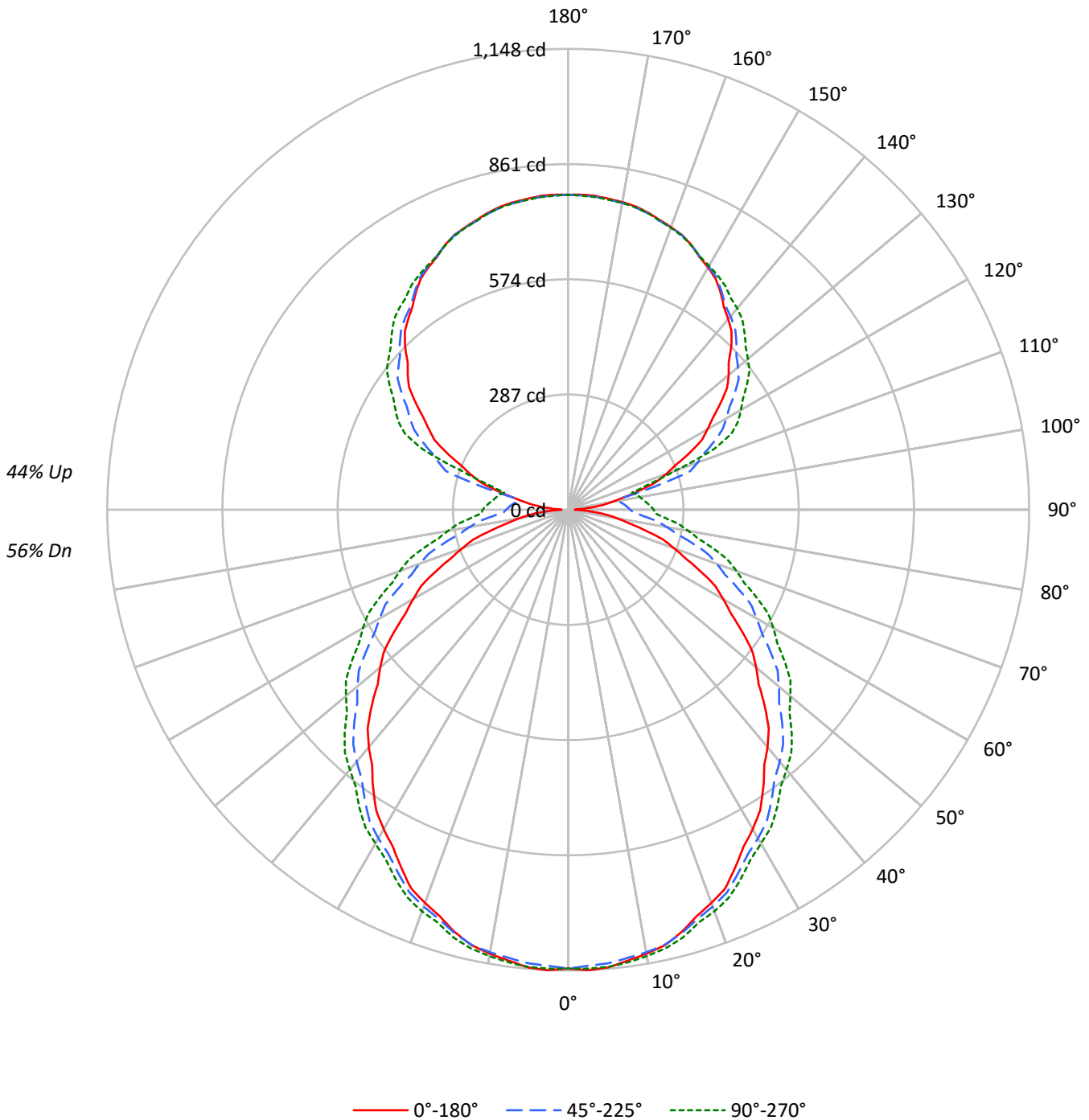
Input Watts (W): 59.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332218-927

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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	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	43	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26	22
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	19
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14	12

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

	0°	45°	90°
0°	12304	12304	12304
5°	12343	11994	12001
10°	12232	11718	11659
15°	12075	11405	11287
20°	11849	11047	10876
25°	11571	10634	10444
30°	11287	10264	10006
35°	10967	9871	9658
40°	10663	9514	9284
45°	10325	9172	8985
50°	9990	8832	8655
55°	9622	8486	8359
60°	9263	8134	8056
65°	8896	7758	7694
70°	8341	7336	7323
75°	7640	6853	6946
80°	6835	6380	6515
85°	6085	6053	6268



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.4	1.7
10°-20°	308.9	5.0
20°-30°	462.0	7.4
30°-40°	551.8	8.8
40°-50°	577.3	9.3
50°-60°	541.7	8.7
60°-70°	452.5	7.3
70°-80°	323.7	5.2
80°-90°	195.3	3.1
90°-100°	149.6	2.4
100°-110°	225.0	3.6
110°-120°	386.0	6.2
120°-130°	449.8	7.2
130°-140°	459.6	7.4
140°-150°	418.8	6.7
150°-160°	335.2	5.4
160°-170°	216.3	3.5
170°-180°	74.5	1.2
0°-30°	879.3	14.1
0°-40°	1431.1	22.9
0°-60°	2550.1	40.9
0°-90°	3521.5	56.5
90°-120°	760.6	12.2
90°-150°	2088.8	33.5
90°-180°	2715.0	43.5
0°-180°	6236.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1144	1142	1134	1144	1143	108
15°	1090	1093	1092	1104	1103	307
25°	984	996	1000	1015	1016	453
35°	847	866	883	901	906	529
45°	692	722	753	776	787	534
55°	528	569	614	646	658	473
65°	365	414	468	504	518	360
75°	198	257	319	358	375	212
85°	61	124	189	230	244	64
90°	17	84	155	198	213	13
95°	49	76	141	182	196	55
105°	184	218	221	157	165	194
115°	332	352	401	435	449	328
125°	463	470	506	532	543	414
135°	574	577	593	616	621	442
145°	661	664	665	676	681	413
155°	727	726	726	729	726	335
165°	767	765	764	768	765	216
175°	785	782	782	786	782	75
180°	785	785	785	785	785	



TEST NUMBER: P332218-927

CATALOG NUMBER: S123DIW-S1165D755U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1148.1	1147.5	1146.8	1146.1	1145.4	1144.2	1142.5	1140.7	1138.9	1137.2	1138.9
5°	1144.4	1143.8	1143.3	1142.7	1142.2	1141.1	1139.4	1137.7	1136.1	1134.4	1136.6
7.5°	1133.1	1133.3	1133.4	1133.5	1133.6	1132.9	1131.2	1129.7	1128.1	1126.4	1129.2
10°	1123.2	1123.8	1124.3	1124.9	1125.5	1125.0	1123.6	1122.2	1120.9	1119.4	1122.2
12.5°	1111.3	1112.0	1112.8	1113.6	1114.4	1114.3	1113.3	1112.4	1111.4	1110.5	1113.0
15°	1089.6	1090.4	1091.2	1092.1	1092.9	1093.2	1092.9	1092.7	1092.3	1092.1	1094.9
17.5°	1062.2	1063.8	1065.5	1067.1	1068.8	1069.6	1069.5	1069.4	1069.3	1069.1	1071.7
20°	1042.3	1043.9	1045.6	1047.3	1048.9	1050.0	1050.6	1051.1	1051.7	1052.3	1054.7
22.5°	1021.4	1023.0	1024.7	1026.4	1028.0	1029.2	1030.0	1030.8	1031.5	1032.3	1035.5
25°	983.7	986.5	989.3	992.0	994.8	996.6	997.4	998.2	999.1	999.9	1003.5
27.5°	945.9	949.0	952.2	955.4	958.5	961.0	962.7	964.5	966.3	968.0	971.1
30°	919.0	922.6	926.1	929.8	933.3	936.3	938.5	940.7	942.9	945.2	948.5
32.5°	889.1	893.1	897.1	901.2	905.2	908.7	911.6	914.5	917.3	920.2	923.8
35°	846.8	851.2	855.6	860.1	864.5	868.5	872.1	875.7	879.2	882.9	887.0
37.5°	801.9	806.9	811.9	816.9	821.9	826.6	831.0	835.4	839.9	844.3	849.0
40°	772.1	777.1	782.0	787.0	791.9	797.3	802.8	808.3	813.8	819.4	824.1
42.5°	739.2	745.3	751.4	757.4	763.5	769.4	775.2	780.9	786.7	792.5	797.6
45°	692.4	699.0	705.6	712.3	718.9	725.7	732.6	739.5	746.5	753.4	758.6
47.5°	643.3	650.8	658.3	665.9	673.4	681.1	689.0	697.0	704.9	712.8	718.7
50°	611.4	619.2	626.9	634.6	642.4	650.5	659.2	667.7	676.3	684.8	691.3
52.5°	577.6	585.7	593.9	602.1	610.3	619.2	628.6	638.0	647.5	657.0	663.6
55°	528.0	537.1	546.2	555.4	564.5	574.0	584.0	594.0	604.0	613.9	621.4
57.5°	479.7	489.2	498.7	508.2	517.8	528.0	538.8	549.8	560.6	571.6	579.1
60°	445.8	455.7	465.7	475.7	485.6	496.3	507.6	519.0	530.4	541.7	549.5
62.5°	413.9	424.1	434.3	444.5	454.6	465.7	477.8	489.7	501.8	513.8	521.5
65°	364.9	375.7	386.4	397.2	408.1	419.5	431.7	443.9	456.1	468.2	476.5
67.5°	315.1	326.5	337.9	349.4	360.8	372.8	385.2	397.6	410.0	422.4	431.4
70°	280.2	292.1	304.0	315.8	327.8	340.4	353.6	366.9	380.2	393.5	402.3
72.5°	248.3	260.2	272.1	284.0	295.9	308.7	322.4	336.1	349.9	363.6	372.7
75°	198.0	211.0	224.0	237.0	250.0	263.4	277.3	291.1	304.9	318.8	327.9
77.5°	154.2	167.3	180.4	193.5	206.6	220.1	234.1	248.0	262.0	275.9	285.6
80°	123.3	136.8	150.4	164.0	177.5	191.5	205.9	220.3	234.6	249.1	258.5
82.5°	96.4	110.2	124.0	137.8	151.5	165.7	180.3	195.0	209.5	224.1	233.5
85°	61.0	74.9	88.7	102.5	116.4	130.6	145.3	159.9	174.6	189.3	198.7
87.5°	33.3	47.3	61.3	75.3	89.4	103.6	118.1	132.5	147.0	161.4	171.0
90°	16.8	31.6	46.5	61.3	76.2	91.5	107.3	123.1	138.9	154.7	164.6
92.5°	26.1	37.9	49.7	61.6	73.5	87.1	102.2	117.3	132.5	147.7	157.6
95°	49.3	54.7	60.2	65.7	71.2	81.4	96.4	111.4	126.4	141.3	150.8
97.5°	83.7	91.0	98.4	105.8	113.1	118.6	122.2	125.8	129.4	133.1	142.4
100°	109.7	121.2	132.6	144.1	155.5	157.5	150.0	142.5	135.1	127.5	136.7
102.5°	139.5	149.3	159.1	169.0	178.9	179.0	169.4	159.9	150.3	140.7	145.3
105°	183.7	191.7	199.8	207.9	215.9	220.1	220.3	220.5	220.8	221.0	205.9
107.5°	229.0	235.8	242.6	249.4	256.2	266.2	279.2	292.4	305.5	318.7	309.3
110°	259.3	265.3	271.3	277.3	283.4	292.6	305.1	317.6	330.1	342.6	345.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	289.1	294.1	299.2	304.2	309.3	317.8	329.9	341.9	353.9	366.0	373.0
115°	332.1	336.2	340.3	344.4	348.5	356.1	367.3	378.3	389.4	400.6	408.5
117.5°	374.6	377.6	380.6	383.7	386.7	393.2	403.1	413.0	422.9	432.9	440.5
120°	400.2	402.7	405.3	407.9	410.4	416.5	426.0	435.5	445.0	454.6	461.9
122.5°	427.2	429.0	430.6	432.3	434.0	439.4	448.6	457.8	466.9	476.1	483.0
125°	463.1	464.1	465.2	466.2	467.2	472.1	480.5	489.1	497.6	506.2	512.3
127.5°	499.0	499.8	500.5	501.3	502.0	506.0	513.3	520.5	527.8	535.1	541.0
130°	521.4	522.1	522.9	523.6	524.4	527.8	533.9	540.0	546.0	552.1	557.8
132.5°	541.9	542.8	543.8	544.8	545.7	548.7	553.5	558.3	563.2	568.1	573.6
135°	574.3	574.9	575.4	575.8	576.3	578.4	581.9	585.5	589.1	592.6	598.0
137.5°	602.1	602.9	603.6	604.4	605.1	606.5	608.6	610.5	612.5	614.5	619.5
140°	619.7	620.5	621.3	622.1	622.8	623.8	625.0	626.3	627.5	628.8	633.4
142.5°	637.0	637.5	638.1	638.7	639.2	639.8	640.3	640.9	641.4	642.0	646.1
145°	661.2	661.8	662.4	663.1	663.6	664.1	664.3	664.6	664.9	665.1	667.6
147.5°	682.6	683.2	683.8	684.4	685.0	685.4	685.7	686.0	686.2	686.4	687.4
150°	696.6	697.0	697.4	697.8	698.2	698.5	698.8	699.0	699.3	699.5	699.8
152.5°	709.2	709.4	709.6	709.7	710.0	710.1	710.3	710.4	710.6	710.7	711.1
155°	726.9	726.7	726.4	726.1	725.9	725.8	726.0	726.1	726.2	726.4	727.0
157.5°	740.7	740.7	740.6	740.6	740.6	740.5	740.4	740.2	740.1	740.0	740.8
160°	749.1	748.9	748.8	748.7	748.5	748.5	748.3	748.1	748.1	747.9	748.7
162.5°	757.0	756.7	756.3	756.0	755.7	755.4	755.3	755.2	755.0	754.9	755.8
165°	766.6	766.2	765.8	765.4	765.0	764.8	764.6	764.5	764.4	764.2	765.2
167.5°	774.0	773.5	773.0	772.5	772.0	771.7	771.7	771.7	771.7	771.7	772.7
170°	778.2	777.7	777.2	776.7	776.2	775.9	775.9	775.9	775.9	775.9	776.9
172.5°	781.0	780.4	779.7	779.2	778.6	778.2	778.4	778.5	778.6	778.7	779.7
175°	784.7	783.9	783.3	782.7	782.0	781.8	781.9	782.0	782.2	782.3	783.2
177.5°	785.5	785.1	784.5	784.0	783.5	783.3	783.4	783.5	783.6	783.7	784.5
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1140.7	1142.5	1144.2	1145.0	1144.8	1144.5	1144.3	1144.1
5°	1138.8	1141.1	1143.3	1144.2	1144.0	1143.7	1143.4	1143.1
7.5°	1131.9	1134.7	1137.5	1138.8	1138.4	1138.0	1137.7	1137.4
10°	1125.0	1127.8	1130.5	1131.6	1131.1	1130.5	1130.0	1129.4
12.5°	1115.6	1118.2	1120.7	1121.7	1121.1	1120.5	1120.0	1119.4
15°	1097.6	1100.3	1103.1	1104.4	1104.1	1103.8	1103.6	1103.3
17.5°	1074.1	1076.7	1079.1	1080.1	1079.8	1079.4	1079.0	1078.6
20°	1057.2	1059.7	1062.2	1063.6	1063.8	1064.1	1064.4	1064.7
22.5°	1038.6	1041.8	1044.9	1046.4	1046.2	1046.1	1045.9	1045.8
25°	1007.1	1010.7	1014.3	1016.1	1016.1	1016.1	1016.1	1016.1
27.5°	974.2	977.3	980.4	982.1	982.3	982.5	982.8	983.0
30°	951.8	955.1	958.4	960.0	960.0	960.0	960.0	960.0
32.5°	927.3	930.9	934.4	936.5	937.2	937.9	938.5	939.1
35°	891.2	895.3	899.4	902.1	903.2	904.4	905.5	906.5
37.5°	853.7	858.4	863.1	865.9	866.8	867.7	868.5	869.4
40°	828.8	833.5	838.2	841.1	842.2	843.3	844.4	845.5
42.5°	802.8	807.9	813.1	816.4	817.9	819.5	821.0	822.6
45°	763.9	769.1	774.4	778.2	780.4	782.6	784.8	787.0
47.5°	724.6	730.6	736.5	740.3	742.0	743.7	745.4	747.1
50°	697.6	704.0	710.3	714.5	716.4	718.4	720.3	722.2
52.5°	670.2	676.8	683.3	687.9	690.2	692.6	695.0	697.4
55°	628.8	636.3	643.8	648.6	650.9	653.1	655.3	657.5
57.5°	586.6	594.1	601.7	606.7	609.3	612.0	614.6	617.1
60°	557.1	564.9	572.7	578.1	581.1	584.2	587.2	590.3
62.5°	529.3	537.0	544.8	550.1	552.9	555.7	558.6	561.3
65°	484.8	493.1	501.5	506.9	509.7	512.5	515.2	518.0
67.5°	440.5	449.6	458.7	464.4	466.8	469.1	471.3	473.7
70°	411.2	420.1	428.9	434.7	437.5	440.3	443.0	445.8
72.5°	381.8	390.9	399.9	405.8	408.6	411.4	414.2	416.9
75°	337.1	346.2	355.3	361.6	364.9	368.2	371.5	374.8
77.5°	295.2	304.8	314.5	320.5	323.1	325.7	328.2	330.7
80°	267.8	277.3	286.7	292.8	295.6	298.3	301.1	303.8
82.5°	243.0	252.4	261.7	267.8	270.6	273.4	276.2	278.9
85°	208.1	217.5	226.9	233.0	235.8	238.5	241.3	244.1
87.5°	180.5	190.0	199.5	205.7	208.5	211.3	214.1	216.9
90°	174.5	184.5	194.4	200.9	203.9	206.9	209.9	213.0
92.5°	167.7	177.7	187.7	194.1	196.8	199.5	202.2	204.9
95°	160.3	169.8	179.3	185.4	188.2	190.9	193.7	196.5
97.5°	151.6	160.9	170.2	176.3	179.2	182.1	185.0	187.9
100°	145.7	154.8	163.8	169.8	172.7	175.6	178.5	181.4
102.5°	149.9	154.5	159.1	162.9	165.9	168.9	171.9	174.9
105°	190.7	175.5	160.3	154.1	156.9	159.6	162.4	165.1
107.5°	299.8	290.5	281.1	268.9	254.1	239.2	224.4	209.5
110°	348.4	351.3	354.3	347.6	331.3	315.0	298.7	282.3





TEST NUMBER: P332218-927

CATALOG NUMBER: S123DIW-S1165D755U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	380.1	387.1	394.2	397.0	395.5	394.0	392.5	391.1
115°	416.5	424.5	432.4	437.7	440.5	443.1	445.8	448.6
117.5°	448.1	455.8	463.4	468.3	470.6	472.9	475.2	477.4
120°	469.3	476.7	484.1	488.8	490.8	492.7	494.6	496.5
122.5°	489.9	496.7	503.6	508.0	510.1	512.1	514.2	516.2
125°	518.3	524.4	530.4	534.6	536.8	539.0	541.2	543.4
127.5°	546.9	552.8	558.6	562.4	564.0	565.7	567.3	568.9
130°	563.6	569.3	575.1	578.8	580.1	581.5	583.0	584.3
132.5°	579.2	584.7	590.3	593.8	595.3	596.8	598.3	599.8
135°	603.4	608.7	614.1	617.3	618.3	619.2	620.3	621.3
137.5°	624.5	629.5	634.5	637.5	638.7	639.8	641.0	642.1
140°	638.0	642.7	647.4	650.3	651.4	652.5	653.6	654.8
142.5°	650.2	654.3	658.5	661.1	662.1	663.1	664.1	665.1
145°	670.1	672.6	675.0	676.8	677.9	679.1	680.2	681.3
147.5°	688.3	689.2	690.1	690.8	691.3	691.7	692.1	692.4
150°	700.1	700.3	700.5	700.8	700.9	701.1	701.2	701.4
152.5°	711.6	712.1	712.6	712.6	712.1	711.6	711.1	710.7
155°	727.6	728.3	729.0	728.9	728.1	727.3	726.5	725.7
157.5°	741.6	742.3	743.1	743.0	742.0	740.9	740.0	738.9
160°	749.5	750.3	751.0	751.0	750.0	749.2	748.2	747.3
162.5°	756.7	757.6	758.4	758.4	757.6	756.9	756.1	755.3
165°	766.3	767.3	768.3	768.4	767.5	766.6	765.7	764.8
167.5°	773.7	774.8	775.9	775.9	774.8	773.7	772.7	771.7
170°	777.9	779.0	780.1	780.1	779.0	777.9	776.9	775.9
172.5°	780.8	781.8	782.8	782.8	781.6	780.5	779.3	778.2
175°	784.1	785.1	785.9	785.8	784.8	783.8	782.8	781.7
177.5°	785.4	786.2	787.0	786.9	785.8	784.8	783.8	782.8
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7

(END OF REPORT)