

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: P332058-927

Luminaire Tested: **S123DIP-S1165D585U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332058-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D585U927-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

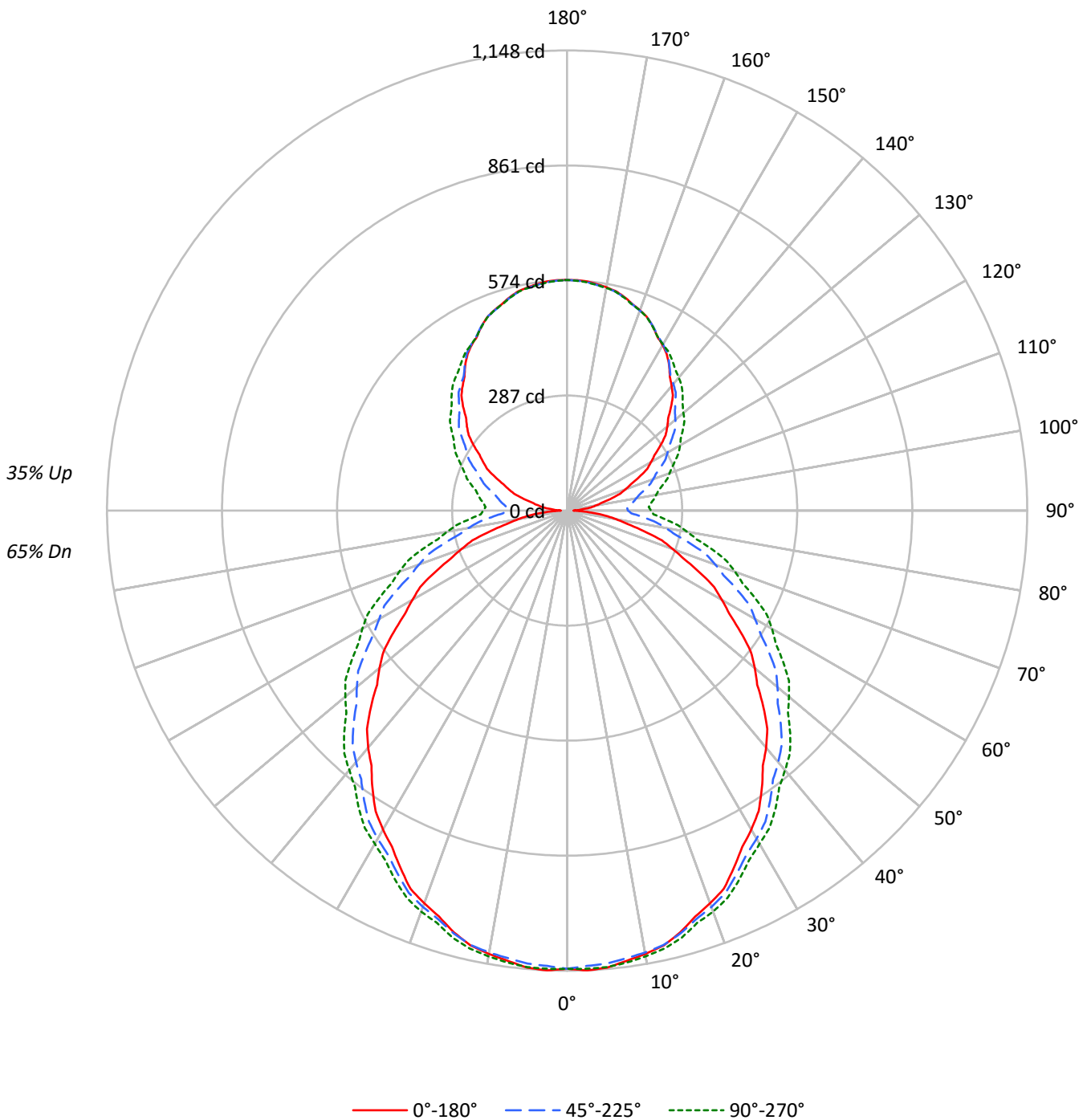
Lumens per Lamp: N/A  
Luminaire Lumens: 5436.8 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 55.1  
Input Voltage (V): 120  
Input 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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65
1	100	95	90	86	93	89	85	81	78	75	72	68	66	64	59	58	56	52
2	90	82	75	69	84	77	71	66	68	63	59	59	56	52	52	49	46	42
3	82	72	64	57	77	67	60	54	59	54	49	52	48	44	45	42	39	35
4	75	63	55	48	70	60	52	46	53	46	41	46	41	37	40	36	33	30
5	69	56	47	41	64	53	45	39	47	41	36	41	36	32	36	32	29	26
6	63	50	42	36	59	48	40	34	42	36	31	37	32	28	33	28	25	22
7	59	45	37	31	55	43	35	30	38	32	27	34	29	25	30	25	22	20
8	54	41	33	28	51	39	32	26	35	29	24	31	26	22	27	23	20	18
9	51	38	30	25	47	36	29	24	32	26	22	29	23	20	25	21	18	16
10	47	35	27	22	44	33	26	21	30	24	20	26	21	18	23	19	16	14

**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	2.0
10°-20°	308.9	5.7
20°-30°	462.0	8.5
30°-40°	551.8	10.1
40°-50°	577.3	10.6
50°-60°	541.7	10.0
60°-70°	452.5	8.3
70°-80°	323.7	6.0
80°-90°	194.8	3.6
90°-100°	158.6	2.9
100°-110°	201.2	3.7
110°-120°	250.2	4.6
120°-130°	284.9	5.2
130°-140°	297.3	5.5
140°-150°	280.5	5.2
150°-160°	233.4	4.3
160°-170°	155.4	2.9
170°-180°	54.4	1.0
0°-30°	879.3	16.2
0°-40°	1431.1	26.3
0°-60°	2550.1	46.9
0°-90°	3521.0	64.8
90°-120°	610.0	11.2
90°-150°	1472.6	27.1
90°-180°	1916.0	35.2
0°-180°	5436.8	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	82	152	194	209	13
95°	40	93	157	196	210	41
105°	112	144	200	234	247	119
115°	198	216	258	288	298	196
125°	285	288	321	345	353	254
135°	367	369	382	402	408	283
145°	444	443	445	454	457	277
155°	506	507	507	508	506	233
165°	552	550	550	553	550	155
175°	574	572	572	574	572	54
180°	575	575	575	575	575	



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**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°	33.2	47.2	61.2	75.2	89.1	103.3	117.7	132.1	146.5	160.8	170.3
90°	16.6	31.2	45.8	60.4	74.9	89.9	105.3	120.7	136.2	151.5	161.4
92.5°	26.1	39.1	52.0	64.9	77.8	91.6	106.2	120.8	135.5	150.1	159.6
95°	40.3	51.9	63.4	74.9	86.3	99.3	113.6	128.0	142.4	156.7	165.7
97.5°	59.6	69.8	80.1	90.3	100.6	112.5	126.0	139.6	153.1	166.7	175.3
100°	72.6	82.1	91.6	101.0	110.5	121.8	135.1	148.3	161.5	174.8	183.1
102.5°	87.9	96.3	104.6	112.9	121.3	132.0	145.2	158.4	171.5	184.7	192.8
105°	111.6	118.5	125.3	132.1	139.0	148.9	161.6	174.4	187.2	200.0	207.8
107.5°	138.0	143.7	149.5	155.3	161.1	169.8	181.4	193.1	204.7	216.3	224.1
110°	154.3	159.5	164.7	169.8	175.1	183.3	194.6	205.8	217.1	228.4	235.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.4	176.6	180.9	185.1	189.3	196.7	207.4	218.0	228.7	239.4	246.8
115°	198.3	201.8	205.5	209.1	212.8	219.4	229.2	239.0	248.7	258.5	265.2
117.5°	225.3	227.6	229.8	232.0	234.3	240.0	249.1	258.2	267.3	276.3	282.9
120°	241.3	243.3	245.3	247.2	249.2	254.5	263.2	271.8	280.4	289.1	295.3
122.5°	259.0	260.2	261.3	262.5	263.6	268.5	276.9	285.3	293.7	302.1	308.1
125°	284.8	285.1	285.4	285.7	286.0	290.0	297.9	305.7	313.5	321.4	326.8
127.5°	309.7	310.1	310.5	310.9	311.2	314.6	321.0	327.4	333.8	340.2	345.2
130°	326.4	326.9	327.4	328.0	328.4	331.4	336.6	341.8	347.1	352.3	357.1
132.5°	342.0	342.8	343.5	344.2	345.0	347.5	351.6	355.8	360.0	364.3	368.8
135°	367.1	367.5	367.8	368.1	368.4	370.1	373.0	376.0	378.9	381.8	386.4
137.5°	390.4	390.6	390.9	391.3	391.5	392.6	394.6	396.6	398.5	400.5	404.5
140°	405.7	406.2	406.6	407.2	407.7	408.4	409.3	410.3	411.1	412.1	416.1
142.5°	420.5	420.7	421.0	421.3	421.6	421.9	422.2	422.6	422.9	423.3	426.9
145°	443.6	443.5	443.5	443.4	443.3	443.4	443.7	444.0	444.3	444.7	446.7
147.5°	462.6	463.0	463.3	463.7	464.1	464.4	464.7	464.9	465.2	465.5	466.2
150°	476.7	476.9	477.1	477.3	477.5	477.7	477.9	478.1	478.3	478.5	478.5
152.5°	488.3	488.5	488.9	489.1	489.4	489.6	489.7	489.8	490.0	490.0	490.2
155°	506.5	506.5	506.5	506.5	506.5	506.6	506.7	506.8	506.9	507.0	507.4
157.5°	522.0	522.0	521.8	521.7	521.6	521.6	521.7	521.7	521.8	521.9	522.3
160°	531.8	531.6	531.4	531.2	531.0	530.9	530.9	530.9	530.9	530.9	531.4
162.5°	540.5	540.2	540.0	539.6	539.4	539.3	539.4	539.5	539.6	539.6	540.1
165°	551.7	551.4	551.1	550.8	550.5	550.3	550.3	550.3	550.3	550.3	551.0
167.5°	560.6	560.2	559.8	559.4	559.0	558.9	559.0	559.0	559.1	559.2	559.8
170°	565.7	565.3	564.9	564.5	564.1	563.9	563.9	563.9	563.9	563.9	564.6
172.5°	569.7	569.3	568.9	568.5	568.1	567.9	567.9	567.9	567.9	567.9	568.5
175°	573.9	573.5	573.1	572.7	572.3	572.0	572.0	572.0	572.0	572.0	572.7
177.5°	575.6	575.3	575.0	574.6	574.3	574.1	574.1	574.1	574.1	574.1	574.6
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



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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°	179.8	189.3	198.8	204.9	207.7	210.6	213.3	216.1
90°	171.2	181.0	190.8	197.2	200.2	203.1	206.1	209.1
92.5°	169.1	178.6	188.1	194.1	196.5	198.9	201.4	203.8
95°	174.7	183.6	192.7	198.5	201.3	204.1	206.8	209.6
97.5°	184.0	192.7	201.5	207.2	209.9	212.6	215.4	218.1
100°	191.4	199.7	208.0	213.7	216.7	219.7	222.6	225.6
102.5°	200.9	209.0	217.1	222.5	225.2	228.0	230.7	233.5
105°	215.6	223.2	231.0	236.2	238.9	241.6	244.3	247.0
107.5°	231.8	239.6	247.3	252.3	254.6	257.0	259.3	261.6
110°	243.5	251.1	258.7	263.6	265.5	267.6	269.6	271.6





TEST NUMBER: P332058-927

CATALOG NUMBER: S123DIP-S1165D585U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	254.3	261.7	269.2	274.1	276.5	278.9	281.3	283.7
115°	272.0	278.7	285.4	289.9	292.0	294.1	296.2	298.3
117.5°	289.5	296.0	302.6	306.8	308.7	310.6	312.4	314.3
120°	301.6	307.8	314.1	318.1	319.9	321.6	323.4	325.1
122.5°	313.9	319.8	325.7	329.5	331.1	332.8	334.5	336.1
125°	332.2	337.5	343.0	346.5	348.0	349.5	351.1	352.6
127.5°	350.1	355.1	360.0	363.1	364.6	365.9	367.3	368.8
130°	362.0	366.9	371.7	374.6	375.6	376.5	377.5	378.4
132.5°	373.4	378.0	382.5	385.5	386.8	388.1	389.4	390.8
135°	391.0	395.6	400.1	403.1	404.3	405.4	406.6	407.8
137.5°	408.4	412.4	416.4	418.8	419.9	420.8	421.8	422.9
140°	420.2	424.2	428.3	430.6	431.3	432.1	432.7	433.4
142.5°	430.6	434.1	437.8	440.0	440.8	441.6	442.5	443.3
145°	448.9	451.0	453.0	454.5	455.2	455.9	456.6	457.3
147.5°	466.8	467.5	468.2	468.7	469.1	469.4	469.8	470.2
150°	478.5	478.5	478.5	478.5	478.5	478.4	478.3	478.3
152.5°	490.4	490.6	490.8	490.6	490.2	489.8	489.3	488.9
155°	507.8	508.2	508.6	508.4	507.7	507.0	506.4	505.6
157.5°	522.8	523.2	523.6	523.5	522.9	522.4	521.8	521.3
160°	532.0	532.4	532.9	533.0	532.6	532.2	531.8	531.4
162.5°	540.6	541.1	541.6	541.5	540.9	540.3	539.6	539.0
165°	551.6	552.2	552.8	552.7	552.0	551.3	550.6	549.9
167.5°	560.5	561.1	561.7	561.7	561.1	560.5	559.8	559.2
170°	565.3	566.0	566.7	566.7	566.0	565.3	564.6	563.9
172.5°	569.1	569.7	570.4	570.4	569.7	568.9	568.2	567.5
175°	573.2	573.9	574.5	574.4	573.7	573.0	572.3	571.6
177.5°	575.1	575.6	576.1	576.0	575.4	574.9	574.3	573.8
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

(END OF REPORT)