

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: P332048-927

Luminaire Tested: **S123DIP-S1165D365U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332048-927
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: S123DIP-S1165D365U927-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4991.5 lumens
Efficiency: N/A
Efficacy: 100.2 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

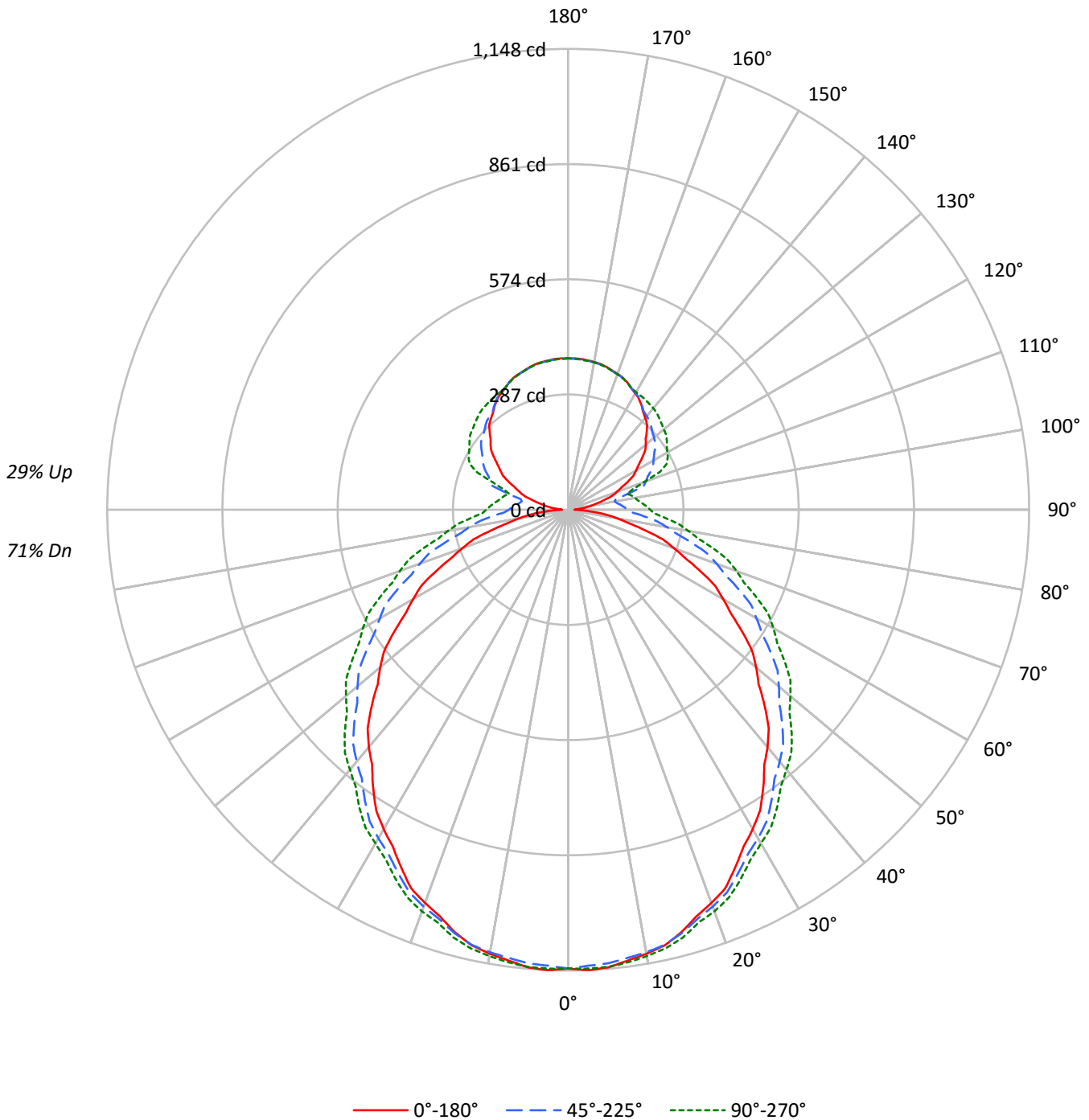
Input Watts (W): 49.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332048-927

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-D

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	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	71
1	101	96	91	87	95	91	87	83	81	78	75	72	70	67	64	62	60	56
2	91	83	76	70	86	78	72	67	70	65	61	63	59	55	55	52	50	46
3	83	72	64	58	78	69	61	55	61	55	51	55	50	46	49	45	42	38
4	76	64	55	49	71	61	53	47	54	48	43	49	43	39	43	39	36	32
5	70	57	48	41	65	54	46	40	49	42	37	44	38	34	39	34	31	28
6	64	51	42	36	60	48	40	35	44	37	32	39	34	29	35	31	27	24
7	59	46	38	32	56	44	36	30	40	33	28	36	30	26	32	27	24	21
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	19
9	51	38	30	25	48	37	29	24	33	27	22	30	25	21	27	23	19	17
10	48	35	28	22	45	34	27	22	31	25	20	28	23	19	25	21	17	16

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	2.2
10°-20°	308.9	6.2
20°-30°	462.0	9.3
30°-40°	551.8	11.1
40°-50°	577.3	11.6
50°-60°	541.7	10.9
60°-70°	452.5	9.1
70°-80°	323.7	6.5
80°-90°	194.1	3.9
90°-100°	134.8	2.7
100°-110°	154.3	3.1
110°-120°	216.3	4.3
120°-130°	233.7	4.7
130°-140°	228.6	4.6
140°-150°	202.8	4.1
150°-160°	161.0	3.2
160°-170°	103.9	2.1
170°-180°	35.8	0.7
0°-30°	879.3	17.6
0°-40°	1431.1	28.7
0°-60°	2550.1	51.1
0°-90°	3520.4	70.5
90°-120°	505.4	10.1
90°-150°	1170.5	23.4
90°-180°	1471.0	29.5
0°-180°	4991.5	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°	16	80	147	189	204	12
95°	31	69	132	171	185	32
105°	93	126	155	141	152	99
115°	163	181	227	258	270	161
125°	224	228	264	290	300	201
135°	277	278	292	315	321	213
145°	318	319	319	330	335	199
155°	349	349	349	350	348	161
165°	368	367	367	369	367	104
175°	377	376	376	377	375	36
180°	377	377	377	377	377	



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CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-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°	33.2	47.1	61.0	74.9	88.8	102.9	117.2	131.4	145.7	160.0	169.4
90°	16.5	30.7	44.8	59.0	73.2	87.8	102.7	117.6	132.5	147.4	157.1
92.5°	20.4	32.5	44.5	56.6	68.6	81.9	96.4	110.9	125.4	139.9	149.5
95°	30.7	39.1	47.3	55.5	63.8	75.0	89.2	103.5	117.7	132.0	141.0
97.5°	46.5	55.1	63.7	72.3	80.9	89.4	97.9	106.4	114.9	123.3	132.1
100°	58.5	68.6	78.7	88.8	98.9	105.4	108.5	111.5	114.5	117.6	126.1
102.5°	72.3	81.2	90.0	98.9	107.7	113.1	115.0	116.9	118.9	120.8	127.1
105°	93.4	100.7	108.1	115.3	122.7	129.5	135.8	142.1	148.4	154.7	151.5
107.5°	114.4	120.6	126.7	133.0	139.2	148.4	160.5	172.7	184.9	197.0	196.4
110°	128.4	133.9	139.3	144.8	150.4	158.9	170.7	182.4	194.2	206.0	211.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.8	147.3	151.8	156.4	160.9	168.8	180.1	191.5	202.8	214.0	221.1
115°	162.7	166.4	170.1	173.8	177.4	184.6	195.1	205.7	216.2	226.6	233.9
117.5°	183.0	185.5	188.0	190.5	193.1	199.1	208.7	218.4	228.1	237.7	244.8
120°	194.8	196.7	198.7	200.6	202.6	208.2	217.5	226.8	236.1	245.4	252.3
122.5°	207.8	209.0	210.1	211.3	212.5	217.5	226.5	235.4	244.3	253.3	259.8
125°	224.3	224.8	225.3	225.9	226.3	230.7	239.0	247.2	255.6	263.8	269.7
127.5°	241.5	241.8	242.0	242.2	242.5	246.1	252.9	259.9	266.9	273.8	279.5
130°	252.3	252.5	252.8	252.9	253.2	256.2	262.0	267.8	273.5	279.3	284.9
132.5°	261.7	262.1	262.5	262.9	263.4	265.9	270.5	275.2	279.8	284.4	289.7
135°	277.1	277.2	277.3	277.4	277.5	279.2	282.5	285.7	289.1	292.4	297.5
137.5°	290.3	290.6	290.8	291.0	291.3	292.3	294.2	296.0	297.9	299.8	304.4
140°	298.3	298.7	299.0	299.4	299.8	300.5	301.4	302.5	303.5	304.5	308.9
142.5°	306.6	306.7	306.8	307.0	307.1	307.4	307.8	308.1	308.5	308.8	312.8
145°	318.1	318.3	318.5	318.6	318.8	318.9	319.0	319.2	319.2	319.4	321.7
147.5°	327.8	328.1	328.4	328.7	328.9	329.2	329.3	329.4	329.5	329.6	330.4
150°	334.5	334.7	334.9	335.1	335.3	335.4	335.6	335.6	335.8	335.9	336.0
152.5°	340.6	340.6	340.7	340.8	340.9	341.0	341.0	341.1	341.2	341.3	341.5
155°	349.1	349.0	348.8	348.7	348.6	348.6	348.6	348.6	348.7	348.8	349.1
157.5°	355.7	355.7	355.7	355.6	355.6	355.6	355.5	355.5	355.4	355.4	355.7
160°	359.7	359.7	359.6	359.5	359.5	359.4	359.3	359.3	359.3	359.2	359.5
162.5°	363.5	363.4	363.2	363.1	362.9	362.7	362.7	362.7	362.6	362.5	362.9
165°	368.1	367.9	367.7	367.6	367.3	367.3	367.2	367.1	367.0	367.0	367.5
167.5°	371.7	371.5	371.2	371.0	370.7	370.6	370.6	370.6	370.6	370.6	371.1
170°	373.7	373.4	373.2	373.0	372.7	372.6	372.6	372.6	372.6	372.6	373.1
172.5°	375.0	374.8	374.5	374.1	373.8	373.8	373.8	373.8	373.9	373.9	374.5
175°	376.8	376.4	376.1	375.9	375.6	375.4	375.5	375.6	375.6	375.7	376.1
177.5°	377.2	377.0	376.8	376.5	376.2	376.1	376.2	376.2	376.3	376.4	376.8
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



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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°	178.9	188.4	197.8	203.9	206.8	209.5	212.3	215.1
90°	166.8	176.4	186.1	192.3	195.2	198.1	201.0	203.9
92.5°	159.1	168.7	178.2	184.3	187.0	189.6	192.2	194.8
95°	150.0	159.0	168.0	173.9	176.7	179.4	182.2	185.0
97.5°	140.9	149.6	158.3	164.1	166.9	169.8	172.6	175.4
100°	134.6	143.1	151.7	157.3	160.2	163.0	165.8	168.7
102.5°	133.3	139.6	145.8	150.4	153.3	156.1	159.0	161.9
105°	148.1	144.9	141.6	141.3	143.9	146.6	149.2	151.8
107.5°	195.7	195.0	194.4	191.2	185.3	179.4	173.6	167.7
110°	216.3	221.3	226.5	225.8	219.0	212.4	205.7	199.0



TEST NUMBER: P332048-927

CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	228.1	235.1	242.1	245.9	246.4	247.0	247.6	248.1
115°	241.2	248.5	255.7	260.6	263.1	265.5	268.0	270.5
117.5°	251.8	258.9	266.0	270.7	272.8	275.0	277.3	279.5
120°	259.2	266.0	272.9	277.3	279.2	281.1	283.1	285.0
122.5°	266.3	272.7	279.2	283.4	285.4	287.4	289.4	291.4
125°	275.7	281.6	287.6	291.5	293.6	295.6	297.7	299.8
127.5°	285.2	290.8	296.5	300.2	302.0	303.7	305.5	307.3
130°	290.3	295.9	301.3	304.9	306.4	307.9	309.5	311.0
132.5°	295.0	300.3	305.5	309.0	310.8	312.5	314.2	315.9
135°	302.7	307.8	313.0	316.2	317.4	318.6	319.8	321.0
137.5°	309.1	313.8	318.5	321.4	322.7	323.9	325.2	326.5
140°	313.3	317.7	322.1	325.0	326.2	327.5	328.7	329.9
142.5°	316.6	320.5	324.5	327.0	328.2	329.4	330.7	331.8
145°	324.1	326.4	328.8	330.5	331.6	332.7	333.8	334.9
147.5°	331.2	332.0	332.8	333.6	334.3	334.9	335.6	336.4
150°	336.2	336.3	336.4	336.7	337.0	337.4	337.8	338.1
152.5°	341.7	342.0	342.2	342.2	342.1	341.8	341.7	341.5
155°	349.4	349.7	350.1	350.0	349.7	349.3	348.9	348.5
157.5°	356.1	356.5	356.9	356.8	356.3	355.8	355.3	354.8
160°	359.9	360.3	360.7	360.6	360.2	359.7	359.3	358.9
162.5°	363.4	363.8	364.2	364.2	363.8	363.5	363.1	362.7
165°	368.0	368.5	369.0	369.0	368.6	368.1	367.7	367.3
167.5°	371.5	372.1	372.6	372.6	372.1	371.5	371.1	370.6
170°	373.6	374.1	374.5	374.5	374.1	373.6	373.1	372.6
172.5°	374.9	375.4	375.9	375.9	375.3	374.8	374.2	373.7
175°	376.5	377.0	377.4	377.4	376.9	376.4	375.9	375.4
177.5°	377.2	377.6	378.0	377.9	377.4	376.9	376.4	375.9
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8

(END OF REPORT)