

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: P332004-927

Luminaire Tested: **S123DIP-S1000D365U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332004-927  
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-S1000D365U927-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

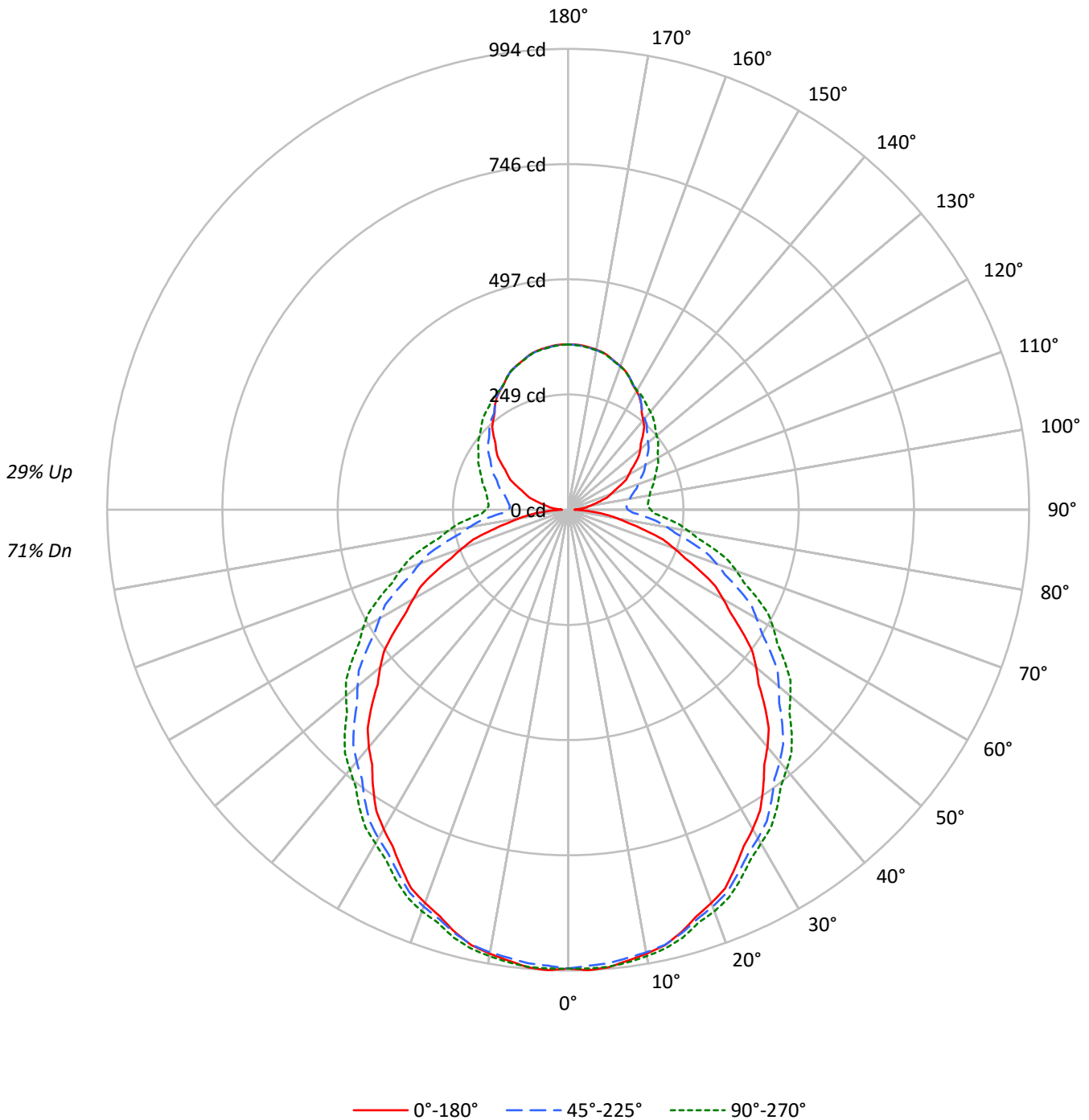
Lumens per Lamp: N/A  
Luminaire Lumens: 4314.5 lumens  
Efficiency: N/A  
Efficacy: 99.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 43.5  
Input Voltage (V): 120  
Input 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



TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

**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	85	85	85	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	56	53	50	46
3	83	72	64	58	78	69	61	55	61	56	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	33
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	49	40	35	44	37	32	39	34	30	35	31	27	24
7	59	46	38	32	56	44	36	30	40	33	28	36	30	26	32	27	24	22
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°	10654	10654	10654
5°	10687	10385	10392
10°	10592	10146	10095
15°	10455	9874	9773
20°	10260	9565	9418
25°	10019	9208	9043
30°	9772	8886	8665
35°	9496	8547	8362
40°	9231	8238	8039
45°	8938	7941	7779
50°	8650	7648	7494
55°	8332	7348	7238
60°	8020	7044	6974
65°	7702	6718	6661
70°	7222	6352	6341
75°	6614	5933	6016
80°	5915	5522	5642
85°	5267	5241	5428



TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.8	2.2
10°-20°	267.5	6.2
20°-30°	400.0	9.3
30°-40°	477.7	11.1
40°-50°	499.9	11.6
50°-60°	469.1	10.9
60°-70°	391.8	9.1
70°-80°	280.3	6.5
80°-90°	168.2	3.9
90°-100°	128.1	3.0
100°-110°	146.6	3.4
110°-120°	169.7	3.9
120°-130°	184.9	4.3
130°-140°	187.9	4.4
140°-150°	174.6	4.0
150°-160°	144.6	3.4
160°-170°	96.3	2.2
170°-180°	33.7	0.8
0°-30°	761.3	17.6
0°-40°	1239.1	28.7
0°-60°	2208.0	51.2
0°-90°	3048.3	70.7
90°-120°	444.3	10.3
90°-150°	991.7	23.0
90°-180°	1266.0	29.3
0°-180°	4314.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	991	988	982	990	990	94
15°	943	946	946	956	955	266
25°	852	862	866	879	880	392
35°	733	750	764	780	785	458
45°	599	625	652	672	681	462
55°	457	493	532	560	569	409
65°	316	358	405	436	448	312
75°	171	222	276	310	325	183
85°	53	107	164	199	211	55
90°	14	70	129	165	178	11
95°	28	73	128	161	173	28
105°	72	99	147	176	187	76
115°	124	140	176	202	211	123
125°	177	180	209	230	237	159
135°	228	229	240	258	263	176
145°	275	275	275	284	287	172
155°	314	314	314	315	313	144
165°	342	341	341	342	341	96
175°	356	354	354	356	354	34
180°	356	356	356	356	356	



TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	994.1	993.6	992.9	992.4	991.8	990.7	989.2	987.7	986.1	984.6	986.1
5°	990.9	990.4	989.9	989.4	989.0	988.0	986.6	985.1	983.7	982.2	984.1
7.5°	981.1	981.3	981.4	981.4	981.5	980.9	979.5	978.1	976.7	975.3	977.7
10°	972.6	973.0	973.5	974.0	974.5	974.1	972.9	971.7	970.5	969.3	971.7
12.5°	962.2	962.8	963.5	964.2	964.9	964.8	964.0	963.1	962.3	961.6	963.8
15°	943.4	944.1	944.8	945.5	946.3	946.5	946.3	946.0	945.8	945.5	948.0
17.5°	919.7	921.1	922.6	924.0	925.4	926.1	926.1	925.9	925.8	925.7	927.9
20°	902.5	903.9	905.3	906.7	908.2	909.2	909.7	910.1	910.6	911.1	913.2
22.5°	884.3	885.7	887.2	888.7	890.1	891.1	891.8	892.5	893.2	893.8	896.5
25°	851.8	854.1	856.6	859.0	861.3	862.9	863.6	864.4	865.1	865.8	868.9
27.5°	819.0	821.7	824.4	827.2	829.9	832.0	833.6	835.1	836.6	838.2	840.9
30°	795.7	798.8	801.9	805.0	808.2	810.6	812.6	814.5	816.4	818.3	821.3
32.5°	769.8	773.3	776.8	780.3	783.8	786.8	789.3	791.8	794.3	796.8	799.9
35°	733.2	737.0	740.8	744.7	748.5	751.9	755.1	758.2	761.3	764.5	768.0
37.5°	694.3	698.7	703.0	707.3	711.6	715.7	719.5	723.3	727.1	731.0	735.1
40°	668.4	672.8	677.1	681.4	685.7	690.3	695.1	699.9	704.6	709.5	713.5
42.5°	640.0	645.3	650.5	655.8	661.1	666.2	671.2	676.2	681.2	686.2	690.6
45°	599.4	605.2	611.0	616.7	622.5	628.4	634.3	640.3	646.3	652.3	656.9
47.5°	557.0	563.5	570.1	576.6	583.0	589.8	596.6	603.5	610.3	617.2	622.3
50°	529.4	536.1	542.8	549.5	556.2	563.3	570.7	578.1	585.6	593.0	598.5
52.5°	500.0	507.2	514.3	521.3	528.5	536.1	544.3	552.5	560.6	568.9	574.6
55°	457.2	465.1	472.9	480.9	488.8	497.0	505.6	514.3	522.9	531.6	538.1
57.5°	415.3	423.6	431.8	440.1	448.3	457.2	466.6	476.0	485.4	494.9	501.4
60°	386.0	394.6	403.2	411.9	420.5	429.7	439.5	449.4	459.2	469.1	475.7
62.5°	358.4	367.2	376.0	384.8	393.6	403.3	413.7	424.1	434.4	444.9	451.5
65°	315.9	325.3	334.6	344.0	353.3	363.2	373.8	384.3	394.8	405.4	412.6
67.5°	272.7	282.7	292.6	302.5	312.4	322.8	333.5	344.3	355.0	365.8	373.6
70°	242.6	252.9	263.2	273.5	283.8	294.7	306.2	317.7	329.2	340.7	348.4
72.5°	215.0	225.3	235.6	245.9	256.2	267.3	279.2	291.0	302.9	314.8	322.7
75°	171.4	182.7	193.9	205.3	216.5	228.1	240.1	252.1	264.0	276.0	283.9
77.5°	133.5	144.8	156.2	167.5	178.9	190.6	202.7	214.8	226.9	238.9	247.2
80°	106.7	118.5	130.2	142.0	153.7	165.8	178.2	190.8	203.2	215.6	223.8
82.5°	83.4	95.4	107.3	119.2	131.2	143.5	156.1	168.7	181.4	194.1	202.2
85°	52.8	64.8	76.8	88.8	100.8	113.1	125.8	138.5	151.1	163.9	172.1
87.5°	28.8	40.8	52.8	64.9	77.0	89.2	101.6	113.9	126.4	138.7	146.9
90°	14.3	26.7	39.1	51.4	63.8	76.4	89.4	102.5	115.5	128.6	137.0
92.5°	20.0	31.0	42.0	53.0	64.0	75.7	88.2	100.7	113.2	125.7	133.8
95°	28.4	38.2	47.9	57.8	67.5	78.5	90.7	103.0	115.2	127.5	135.1
97.5°	39.9	48.6	57.4	66.1	74.9	85.1	96.6	108.2	119.9	131.4	138.8
100°	47.8	55.8	63.8	71.9	79.9	89.6	100.9	112.3	123.7	135.0	142.1
102.5°	57.0	64.1	71.2	78.3	85.5	94.7	105.9	117.2	128.4	139.7	146.6
105°	71.6	77.5	83.3	89.2	95.1	103.5	114.3	125.2	136.1	146.9	153.6
107.5°	87.5	92.5	97.5	102.4	107.4	114.9	124.9	134.9	144.9	154.9	161.5
110°	97.4	101.9	106.3	110.7	115.2	122.3	132.0	141.7	151.4	161.1	167.6



TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	108.7	112.3	115.9	119.5	123.1	129.5	138.8	148.0	157.2	166.4	172.8
115°	124.4	127.5	130.5	133.6	136.7	142.4	150.9	159.4	167.9	176.4	182.2
117.5°	141.1	143.0	144.9	146.8	148.6	153.6	161.5	169.4	177.4	185.3	191.0
120°	150.8	152.3	153.8	155.4	157.0	161.6	169.2	176.8	184.4	191.9	197.4
122.5°	161.7	162.6	163.5	164.4	165.2	169.4	176.8	184.1	191.5	198.8	204.0
125°	177.4	177.5	177.8	177.9	178.1	181.6	188.5	195.3	202.1	208.9	213.7
127.5°	192.8	193.0	193.1	193.3	193.5	196.3	201.9	207.6	213.2	218.8	223.2
130°	203.1	203.4	203.7	203.9	204.1	206.6	211.2	215.8	220.4	225.0	229.3
132.5°	212.5	213.0	213.5	213.9	214.4	216.4	220.1	223.8	227.5	231.2	235.3
135°	228.1	228.2	228.3	228.5	228.6	230.0	232.5	235.1	237.7	240.3	244.3
137.5°	242.4	242.6	242.6	242.8	242.9	243.8	245.4	247.1	248.7	250.3	253.9
140°	251.6	251.9	252.2	252.5	252.9	253.4	254.2	255.0	255.8	256.5	260.1
142.5°	260.8	260.9	261.0	261.2	261.3	261.5	261.7	262.0	262.2	262.5	265.6
145°	275.1	275.0	274.9	274.8	274.6	274.7	274.9	275.1	275.3	275.4	277.3
147.5°	286.6	286.8	287.1	287.3	287.5	287.7	287.9	288.0	288.2	288.4	289.0
150°	295.3	295.5	295.6	295.7	295.9	296.0	296.1	296.2	296.4	296.4	296.4
152.5°	302.5	302.7	302.9	303.0	303.2	303.3	303.4	303.5	303.6	303.6	303.7
155°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	314.0	314.1	314.3
157.5°	323.4	323.4	323.3	323.2	323.1	323.1	323.2	323.2	323.3	323.4	323.6
160°	329.5	329.4	329.2	329.2	329.0	328.9	328.9	328.9	328.9	328.9	329.2
162.5°	334.9	334.7	334.5	334.4	334.1	334.1	334.1	334.2	334.3	334.3	334.6
165°	341.8	341.7	341.4	341.3	341.0	341.0	341.0	341.0	341.0	341.0	341.4
167.5°	347.4	347.1	346.9	346.6	346.3	346.3	346.3	346.3	346.4	346.5	346.8
170°	350.5	350.2	350.0	349.7	349.5	349.4	349.4	349.4	349.4	349.4	349.8
172.5°	353.0	352.7	352.4	352.2	352.0	351.8	351.8	351.8	351.8	351.8	352.2
175°	355.5	355.3	355.1	354.8	354.6	354.4	354.4	354.4	354.4	354.4	354.8
177.5°	356.6	356.4	356.2	356.0	355.8	355.7	355.7	355.7	355.7	355.7	356.0
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4



TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	987.7	989.2	990.7	991.4	991.2	991.0	990.9	990.6
5°	986.0	988.0	989.9	990.7	990.5	990.2	990.0	989.8
7.5°	980.1	982.5	984.9	986.0	985.7	985.4	985.1	984.8
10°	974.1	976.4	978.9	979.9	979.4	978.9	978.4	977.9
12.5°	965.9	968.1	970.3	971.2	970.7	970.3	969.8	969.3
15°	950.4	952.8	955.1	956.2	956.0	955.8	955.5	955.3
17.5°	930.0	932.2	934.4	935.3	934.9	934.6	934.3	933.9
20°	915.4	917.5	919.7	920.9	921.1	921.4	921.6	921.9
22.5°	899.3	902.0	904.8	906.0	905.9	905.8	905.6	905.5
25°	872.0	875.1	878.2	879.8	879.8	879.8	879.8	879.8
27.5°	843.5	846.2	848.9	850.3	850.6	850.7	851.0	851.1
30°	824.1	827.0	829.8	831.3	831.3	831.3	831.3	831.3
32.5°	803.0	806.0	809.1	810.9	811.4	812.0	812.6	813.2
35°	771.6	775.2	778.8	781.1	782.0	783.0	783.9	784.9
37.5°	739.2	743.2	747.3	749.7	750.5	751.2	752.0	752.8
40°	717.6	721.7	725.7	728.3	729.2	730.2	731.1	732.1
42.5°	695.1	699.5	704.0	706.9	708.2	709.6	710.9	712.3
45°	661.4	666.0	670.5	673.8	675.7	677.6	679.5	681.4
47.5°	627.4	632.6	637.6	641.0	642.5	644.0	645.4	646.9
50°	604.0	609.5	615.1	618.6	620.4	622.0	623.7	625.3
52.5°	580.3	586.0	591.7	595.6	597.6	599.7	601.7	603.8
55°	544.5	551.0	557.5	561.6	563.6	565.5	567.4	569.3
57.5°	507.9	514.4	520.9	525.4	527.6	529.8	532.1	534.3
60°	482.4	489.2	495.8	500.5	503.2	505.8	508.4	511.0
62.5°	458.3	465.0	471.7	476.3	478.7	481.2	483.6	486.1
65°	419.8	427.0	434.1	438.9	441.3	443.7	446.2	448.5
67.5°	381.4	389.3	397.1	402.1	404.1	406.2	408.1	410.1
70°	356.0	363.7	371.4	376.4	378.8	381.2	383.6	386.0
72.5°	330.6	338.4	346.3	351.4	353.8	356.2	358.6	361.0
75°	291.8	299.8	307.6	313.1	315.9	318.8	321.6	324.6
77.5°	255.6	264.0	272.3	277.6	279.7	281.9	284.2	286.4
80°	232.0	240.1	248.2	253.5	255.9	258.3	260.7	263.1
82.5°	210.4	218.5	226.6	232.0	234.3	236.7	239.1	241.5
85°	180.1	188.3	196.5	201.8	204.1	206.5	208.9	211.4
87.5°	155.1	163.3	171.5	176.8	179.2	181.6	184.0	186.5
90°	145.4	153.8	162.2	167.6	170.1	172.6	175.2	177.7
92.5°	142.0	150.1	158.3	163.4	165.6	167.7	169.8	172.0
95°	142.8	150.5	158.2	163.2	165.6	168.0	170.4	172.8
97.5°	146.2	153.7	161.1	166.0	168.3	170.7	173.1	175.5
100°	149.2	156.4	163.5	168.3	170.9	173.3	175.9	178.4
102.5°	153.5	160.5	167.4	172.1	174.4	176.8	179.2	181.6
105°	160.3	167.1	173.8	178.2	180.5	182.8	185.1	187.4
107.5°	168.1	174.8	181.4	185.7	187.7	189.8	191.8	193.8
110°	174.0	180.5	187.0	191.2	193.0	194.7	196.5	198.4





TEST NUMBER: P332004-927

CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	179.1	185.4	191.8	196.0	198.1	200.2	202.2	204.4
115°	188.1	193.8	199.6	203.5	205.3	207.2	209.1	210.9
117.5°	196.7	202.4	208.1	211.8	213.5	215.2	216.8	218.6
120°	202.9	208.3	213.8	217.3	218.8	220.4	222.0	223.5
122.5°	209.2	214.4	219.5	222.8	224.3	225.9	227.4	228.9
125°	218.5	223.2	228.1	231.2	232.6	234.0	235.4	236.9
127.5°	227.6	232.0	236.4	239.2	240.6	241.9	243.3	244.6
130°	233.6	237.9	242.2	244.9	245.9	246.8	247.9	248.9
132.5°	239.3	243.4	247.5	250.2	251.4	252.7	254.1	255.3
135°	248.3	252.5	256.5	259.0	260.2	261.3	262.3	263.4
137.5°	257.4	260.9	264.4	266.7	267.7	268.6	269.6	270.5
140°	263.6	267.1	270.7	272.8	273.6	274.3	275.1	275.8
142.5°	268.8	272.0	275.1	277.1	278.0	278.8	279.7	280.5
145°	279.2	281.1	282.9	284.2	284.9	285.6	286.3	287.0
147.5°	289.5	290.1	290.7	291.2	291.8	292.2	292.7	293.2
150°	296.4	296.4	296.4	296.5	296.6	296.8	296.8	296.9
152.5°	303.8	304.0	304.0	304.0	303.7	303.5	303.2	303.1
155°	314.6	314.8	315.1	315.0	314.6	314.1	313.7	313.2
157.5°	323.8	324.2	324.4	324.3	324.0	323.7	323.3	323.0
160°	329.5	329.9	330.2	330.2	329.9	329.7	329.5	329.2
162.5°	334.9	335.3	335.6	335.5	335.1	334.7	334.3	333.9
165°	341.7	342.1	342.5	342.5	342.0	341.6	341.1	340.7
167.5°	347.2	347.6	348.0	348.0	347.6	347.2	346.8	346.5
170°	350.2	350.7	351.1	351.1	350.7	350.2	349.8	349.4
172.5°	352.6	353.0	353.4	353.4	352.9	352.5	352.0	351.6
175°	355.1	355.5	355.9	355.8	355.5	355.0	354.6	354.1
177.5°	356.3	356.6	356.9	356.9	356.6	356.2	355.8	355.5
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4

(END OF REPORT)