

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: P332098

Luminaire Tested: **S123DIW-S340D755U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332098
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-S340D755U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 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: 4460.6 lumens
Efficiency: N/A
Efficacy: 146.7 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-Indirect

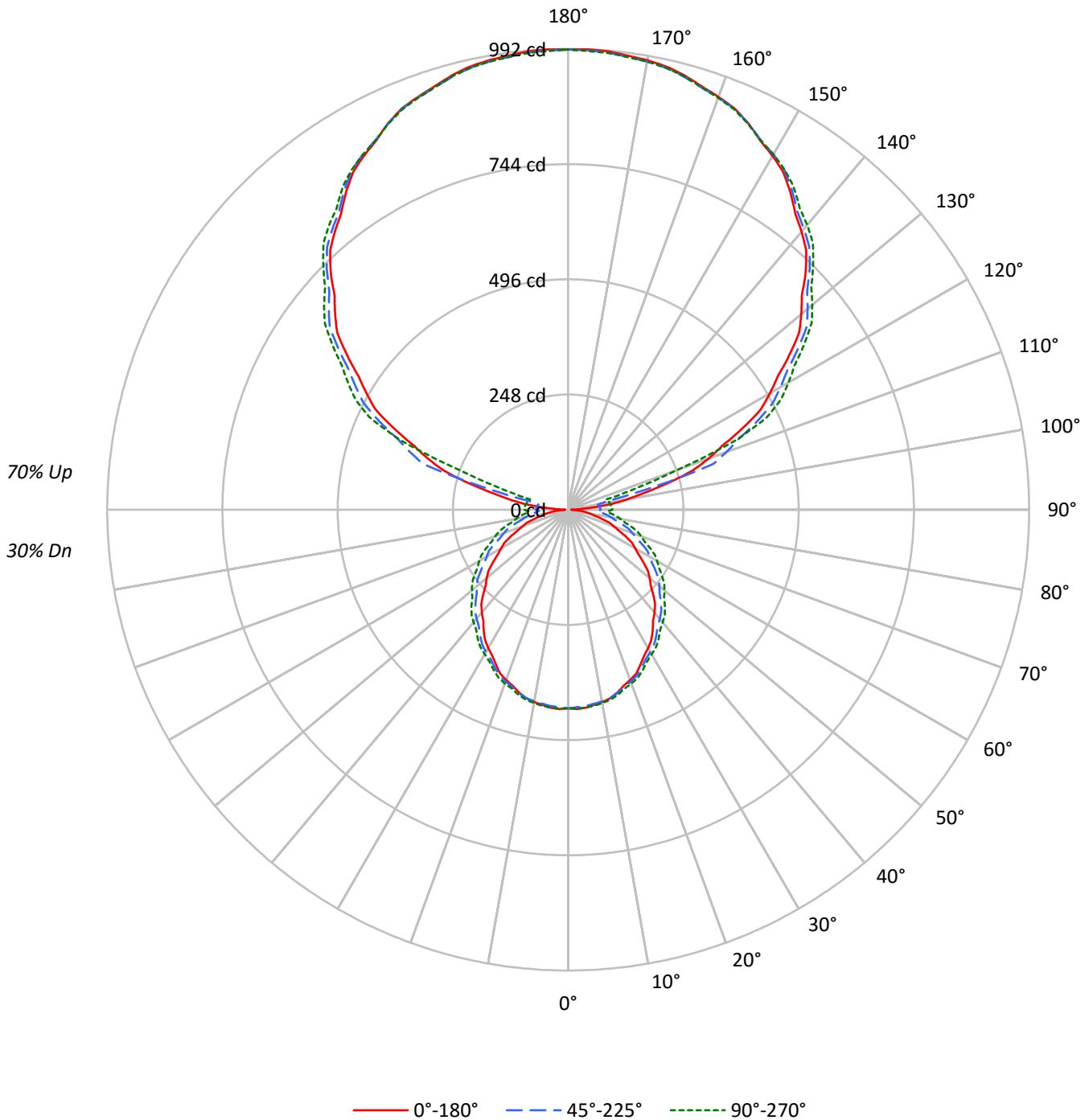
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332098

CATALOG NUMBER: S123DIW-S340D755U835-4F0-1E-UDD-D

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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	37	37	37	30
1	93	88	84	80	83	79	76	73	62	60	58	46	45	43	32	31	30	24
2	84	77	70	65	75	69	63	59	54	50	47	40	38	36	28	26	25	19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	19	17	15	12
6	59	47	39	33	52	42	35	30	33	28	25	25	22	19	18	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	23	19	17	16	14	12	9
8	50	38	30	25	45	34	28	23	27	22	19	21	17	15	15	12	11	8
9	47	35	27	22	42	31	25	20	25	20	17	19	16	13	13	11	10	7
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



TEST NUMBER: P332098

CATALOG NUMBER: S123DIW-S340D755U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	0.9
10°-20°	115.6	2.6
20°-30°	172.9	3.9
30°-40°	206.5	4.6
40°-50°	216.0	4.8
50°-60°	202.7	4.5
60°-70°	169.3	3.8
70°-80°	121.1	2.7
80°-90°	75.0	1.7
90°-100°	81.3	1.8
100°-110°	204.9	4.6
110°-120°	434.5	9.7
120°-130°	537.7	12.1
130°-140°	566.6	12.7
140°-150°	525.7	11.8
150°-160°	423.1	9.5
160°-170°	273.1	6.1
170°-180°	94.1	2.1
0°-30°	329.0	7.4
0°-40°	535.5	12.0
0°-60°	954.2	21.4
0°-90°	1319.7	29.6
90°-120°	720.8	16.2
90°-150°	2350.7	52.7
90°-180°	3141.0	70.4
0°-180°	4460.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	7	37	70	88	95	6
95°	50	40	69	88	93	59
105°	223	239	196	86	85	236
115°	414	424	447	465	472	408
125°	581	588	604	614	620	519
135°	723	727	735	745	746	556
145°	834	838	840	845	847	521
155°	918	916	917	920	916	423
165°	968	966	965	970	965	273
175°	990	987	988	992	987	94
180°	990	990	990	990	990	



TEST NUMBER: P332098

CATALOG NUMBER: S123DIW-S340D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.5	18.0	23.5	29.0	34.5	40.1	45.8	51.5	57.2	62.9	66.5
90°	6.8	13.5	20.2	26.9	33.6	40.7	48.1	55.5	62.9	70.3	74.5
92.5°	19.4	23.5	27.6	31.7	35.8	41.3	48.1	54.9	61.7	68.5	73.0
95°	50.0	47.3	44.7	42.0	39.3	41.5	48.3	55.2	62.1	68.9	73.3
97.5°	94.8	95.4	96.1	96.7	97.3	94.2	87.3	80.3	73.4	66.5	70.9
100°	128.6	135.1	141.7	148.3	154.9	147.8	127.1	106.3	85.6	64.8	69.1
102.5°	167.0	172.4	177.7	183.0	188.4	179.5	156.3	133.1	109.9	86.7	85.6
105°	223.0	227.3	231.6	235.9	240.1	237.2	226.9	216.6	206.4	196.1	170.1
107.5°	281.6	285.2	288.7	292.3	295.8	300.9	307.4	314.0	320.5	327.1	308.6
110°	320.7	323.9	327.0	330.2	333.4	337.9	343.9	349.8	355.8	361.7	359.0



TEST NUMBER: P332098

CATALOG NUMBER: S123DIW-S340D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	358.4	361.1	363.8	366.5	369.2	373.4	379.2	385.0	390.8	396.5	399.3
115°	413.7	415.9	418.1	420.3	422.6	426.3	431.5	436.7	441.9	447.1	451.2
117.5°	467.6	469.6	471.5	473.5	475.5	478.6	482.9	487.1	491.4	495.6	499.4
120°	500.8	502.8	504.8	506.7	508.7	511.7	515.6	519.5	523.4	527.3	531.0
122.5°	534.9	536.4	537.9	539.4	540.8	543.5	547.4	551.3	555.1	559.0	562.2
125°	581.3	582.6	583.9	585.2	586.5	589.0	592.6	596.3	599.9	603.6	606.1
127.5°	626.6	627.8	629.0	630.2	631.4	633.6	636.9	640.2	643.5	646.7	649.3
130°	654.8	656.0	657.3	658.5	659.7	661.6	664.3	667.1	669.8	672.5	675.1
132.5°	681.5	682.8	684.1	685.4	686.7	688.4	690.6	692.8	695.0	697.2	699.7
135°	722.8	723.7	724.6	725.4	726.3	727.7	729.4	731.2	733.0	734.8	737.2
137.5°	758.0	759.2	760.4	761.5	762.7	763.8	764.8	765.8	766.8	767.8	770.2
140°	781.2	782.2	783.2	784.2	785.1	786.0	786.8	787.6	788.4	789.2	791.4
142.5°	803.0	803.9	804.8	805.7	806.6	807.3	807.9	808.4	809.0	809.5	811.4
145°	833.5	834.5	835.5	836.6	837.6	838.3	838.6	839.0	839.3	839.6	840.8
147.5°	861.7	862.4	863.2	863.9	864.7	865.2	865.6	865.9	866.2	866.5	867.1
150°	879.4	879.8	880.3	880.8	881.3	881.7	882.1	882.4	882.7	883.0	883.4
152.5°	895.2	895.5	895.7	895.9	896.2	896.4	896.6	896.8	897.0	897.2	897.7
155°	917.6	917.3	917.0	916.6	916.3	916.2	916.4	916.6	916.7	916.9	917.7
157.5°	935.0	935.0	934.9	934.9	934.9	934.8	934.6	934.4	934.3	934.1	935.1
160°	945.6	945.4	945.3	945.1	944.9	944.8	944.6	944.4	944.3	944.1	945.1
162.5°	955.6	955.2	954.7	954.3	953.9	953.6	953.4	953.3	953.1	952.9	954.1
165°	967.7	967.2	966.7	966.2	965.7	965.4	965.2	965.0	964.9	964.7	966.0
167.5°	977.1	976.4	975.8	975.1	974.5	974.1	974.1	974.1	974.1	974.1	975.4
170°	982.4	981.7	981.1	980.4	979.8	979.4	979.4	979.4	979.4	979.4	980.7
172.5°	985.9	985.1	984.3	983.6	982.8	982.4	982.6	982.7	982.8	983.0	984.3
175°	990.5	989.6	988.8	988.0	987.2	986.9	987.0	987.2	987.4	987.5	988.7
177.5°	991.6	991.0	990.3	989.7	989.0	988.8	988.9	989.0	989.2	989.3	990.3
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5



TEST NUMBER: P332098

CATALOG NUMBER: S123DIW-S340D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	70.2	73.8	77.5	79.9	81.0	82.1	83.2	84.3
90°	78.7	82.8	87.0	89.8	91.1	92.5	93.9	95.2
92.5°	77.5	82.0	86.4	89.3	90.4	91.6	92.7	93.9
95°	77.6	82.0	86.4	89.1	90.1	91.1	92.2	93.2
97.5°	75.3	79.7	84.0	86.8	88.0	89.2	90.4	91.6
100°	73.4	77.8	82.1	84.8	86.0	87.2	88.4	89.6
102.5°	84.4	83.3	82.2	82.3	83.6	84.9	86.3	87.6
105°	144.0	118.0	91.9	79.5	80.8	82.0	83.3	84.6
107.5°	290.2	271.7	253.3	233.6	212.7	191.8	170.9	150.0
110°	356.3	353.6	350.9	338.2	315.7	293.1	270.6	248.0



TEST NUMBER: P332098

CATALOG NUMBER: S123DIW-S340D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	402.0	404.7	407.4	406.7	402.7	398.7	394.6	390.6
115°	455.3	459.4	463.6	466.4	467.8	469.3	470.8	472.3
117.5°	503.2	506.9	510.7	513.1	514.0	514.9	515.9	516.8
120°	534.7	538.4	542.1	544.3	545.0	545.7	546.5	547.2
122.5°	565.4	568.6	571.9	573.9	574.8	575.6	576.5	577.3
125°	608.6	611.1	613.6	615.4	616.4	617.5	618.5	619.6
127.5°	651.9	654.4	657.0	658.5	658.9	659.2	659.6	660.0
130°	677.8	680.4	683.0	684.5	684.8	685.1	685.4	685.6
132.5°	702.2	704.8	707.3	708.7	708.9	709.2	709.4	709.7
135°	739.5	741.9	744.2	745.4	745.5	745.5	745.5	745.5
137.5°	772.6	775.0	777.4	778.8	778.9	779.1	779.3	779.5
140°	793.6	795.9	798.1	799.3	799.5	799.6	799.8	800.0
142.5°	813.3	815.3	817.2	818.2	818.2	818.3	818.3	818.4
145°	841.9	843.1	844.2	845.0	845.4	845.9	846.3	846.7
147.5°	867.7	868.3	868.9	868.9	868.6	868.2	867.8	867.4
150°	883.7	884.0	884.3	884.4	884.1	883.8	883.5	883.2
152.5°	898.3	898.9	899.5	899.5	898.7	898.0	897.3	896.6
155°	918.5	919.3	920.2	920.1	919.1	918.1	917.1	916.1
157.5°	936.1	937.0	938.0	937.9	936.6	935.3	934.1	932.8
160°	946.1	947.1	948.0	948.0	946.8	945.7	944.5	943.4
162.5°	955.2	956.3	957.4	957.4	956.4	955.4	954.4	953.4
165°	967.3	968.6	969.9	970.0	968.9	967.7	966.6	965.4
167.5°	976.7	978.1	979.4	979.4	978.1	976.7	975.4	974.1
170°	982.0	983.4	984.7	984.7	983.4	982.0	980.7	979.4
172.5°	985.6	986.9	988.2	988.1	986.7	985.3	983.8	982.4
175°	989.8	991.0	992.1	992.0	990.7	989.4	988.1	986.8
177.5°	991.4	992.4	993.5	993.3	992.0	990.7	989.4	988.1
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5

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