

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: P331886-830

Luminaire Tested: **S123DIP-S340D805U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331886-830
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-S340D805U830-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4382.2 lumens
Efficiency: N/A
Efficacy: 140.5 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

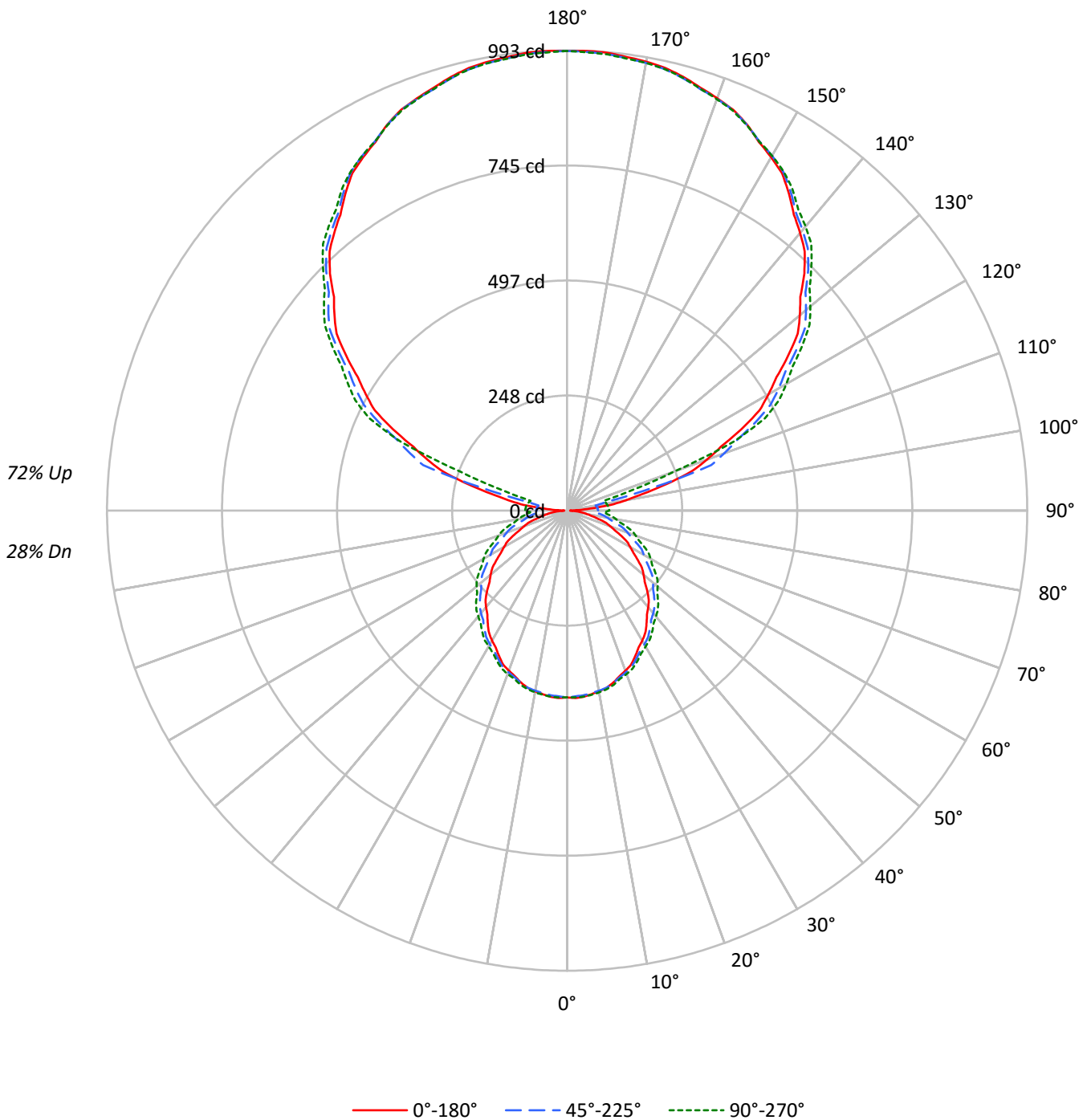
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331886-830

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Luminous Intensity Polar Plot





TEST NUMBER: P331886-830

CATALOG NUMBER: S123DIP-S340D805U830-4F0-1E-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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23
2	84	76	70	65	75	68	63	59	53	50	47	40	37	35	27	26	24	18
3	76	67	60	54	68	60	54	49	47	43	39	35	32	29	24	22	20	15
4	70	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	16	13	12	9
8	50	38	30	25	45	34	28	23	27	22	19	20	17	14	14	12	10	8
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7
10	43	31	24	20	39	28	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4339	4339	4339
5°	4353	4230	4232
10°	4315	4133	4112
15°	4259	4022	3980
20°	4179	3896	3836
25°	4080	3751	3684
30°	3980	3620	3529
35°	3867	3481	3406
40°	3760	3356	3274
45°	3641	3235	3169
50°	3525	3116	3054
55°	3393	2993	2948
60°	3266	2869	2842
65°	3138	2736	2714
70°	2941	2586	2582
75°	2693	2416	2450
80°	2412	2249	2299
85°	2145	2133	2211



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	0.9
10°-20°	108.9	2.5
20°-30°	163.0	3.7
30°-40°	194.6	4.4
40°-50°	203.6	4.6
50°-60°	191.1	4.4
60°-70°	159.6	3.6
70°-80°	114.2	2.6
80°-90°	70.9	1.6
90°-100°	78.8	1.8
100°-110°	203.3	4.6
110°-120°	433.8	9.9
120°-130°	537.7	12.3
130°-140°	567.0	12.9
140°-150°	526.4	12.0
150°-160°	423.7	9.7
160°-170°	273.4	6.2
170°-180°	94.2	2.2
0°-30°	310.1	7.1
0°-40°	504.7	11.5
0°-60°	899.4	20.5
0°-90°	1244.0	28.4
90°-120°	715.8	16.3
90°-150°	2346.9	53.6
90°-180°	3138.0	71.6
0°-180°	4382.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	403	403	403	403	403	
5°	404	403	400	403	403	38
15°	384	386	385	389	389	108
25°	347	351	353	358	358	160
35°	299	306	311	318	320	187
45°	244	255	266	274	278	188
55°	186	201	216	228	232	167
65°	129	146	165	178	183	127
75°	70	91	112	126	132	75
85°	22	44	67	81	86	23
90°	6	36	67	85	91	6
95°	50	39	66	84	89	59
105°	223	238	194	83	82	236
115°	414	424	446	464	471	409
125°	582	588	604	614	619	520
135°	724	728	736	745	746	557
145°	835	839	841	846	848	522
155°	919	918	918	921	917	423
165°	969	967	966	971	967	274
175°	992	988	989	993	988	94
180°	992	992	992	992	992	



TEST NUMBER: P331886-830

CATALOG NUMBER: S123DIP-S340D805U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	404.9	404.7	404.4	404.3	404.0	403.6	402.9	402.3	401.7	401.1	401.7
5°	403.6	403.4	403.2	403.0	402.8	402.5	401.8	401.2	400.7	400.1	400.9
7.5°	399.6	399.7	399.7	399.7	399.8	399.5	399.0	398.4	397.8	397.3	398.2
10°	396.2	396.3	396.5	396.7	396.9	396.8	396.2	395.8	395.3	394.8	395.8
12.5°	391.9	392.2	392.5	392.8	393.0	392.9	392.7	392.3	392.0	391.6	392.6
15°	384.3	384.6	384.8	385.1	385.4	385.6	385.4	385.3	385.2	385.1	386.2
17.5°	374.7	375.2	375.8	376.4	376.9	377.2	377.2	377.1	377.1	377.1	378.0
20°	367.6	368.2	368.7	369.4	369.9	370.3	370.5	370.7	370.9	371.1	372.0
22.5°	360.2	360.8	361.4	361.9	362.6	363.0	363.3	363.5	363.8	364.1	365.2
25°	346.9	347.9	348.9	349.9	350.8	351.5	351.8	352.0	352.3	352.7	353.9
27.5°	333.6	334.7	335.8	337.0	338.1	338.9	339.5	340.2	340.8	341.4	342.5
30°	324.1	325.4	326.7	327.9	329.2	330.2	331.0	331.8	332.5	333.4	334.5
32.5°	313.6	315.0	316.4	317.8	319.2	320.5	321.5	322.5	323.6	324.5	325.8
35°	298.6	300.2	301.8	303.3	304.9	306.3	307.6	308.9	310.1	311.4	312.8
37.5°	282.9	284.6	286.3	288.1	289.8	291.5	293.0	294.6	296.2	297.7	299.4
40°	272.3	274.1	275.8	277.6	279.3	281.2	283.1	285.1	287.0	289.0	290.7
42.5°	260.7	262.9	264.9	267.1	269.3	271.4	273.4	275.4	277.5	279.5	281.3
45°	244.2	246.6	248.8	251.2	253.5	255.9	258.4	260.8	263.3	265.7	267.6
47.5°	226.9	229.5	232.1	234.9	237.5	240.3	243.0	245.8	248.5	251.4	253.4
50°	215.7	218.4	221.1	223.9	226.6	229.4	232.4	235.5	238.6	241.6	243.8
52.5°	203.7	206.6	209.4	212.4	215.3	218.4	221.7	225.1	228.4	231.7	234.0
55°	186.2	189.5	192.7	195.9	199.1	202.5	205.9	209.5	213.0	216.5	219.1
57.5°	169.2	172.5	175.9	179.3	182.6	186.2	190.0	193.9	197.7	201.6	204.2
60°	157.2	160.7	164.3	167.8	171.3	175.0	179.1	183.0	187.0	191.1	193.8
62.5°	146.0	149.6	153.2	156.7	160.3	164.3	168.5	172.8	177.0	181.3	183.9
65°	128.7	132.5	136.3	140.1	143.9	148.0	152.2	156.6	160.8	165.1	168.1
67.5°	111.1	115.2	119.2	123.2	127.2	131.5	135.8	140.3	144.6	149.0	152.1
70°	98.8	103.0	107.2	111.4	115.6	120.1	124.7	129.4	134.1	138.7	141.9
72.5°	87.6	91.8	96.0	100.2	104.3	108.9	113.7	118.6	123.4	128.3	131.5
75°	69.8	74.5	79.0	83.6	88.2	92.9	97.8	102.6	107.5	112.4	115.6
77.5°	54.4	59.0	63.6	68.2	72.9	77.7	82.6	87.5	92.4	97.4	100.8
80°	43.5	48.3	53.1	57.9	62.6	67.6	72.6	77.7	82.8	87.8	91.1
82.5°	34.0	38.8	43.7	48.5	53.4	58.4	63.6	68.7	73.9	79.1	82.4
85°	21.5	26.4	31.3	36.2	41.0	46.1	51.3	56.4	61.5	66.7	70.0
87.5°	11.9	17.1	22.2	27.4	32.6	37.9	43.3	48.6	54.1	59.5	63.0
90°	6.4	12.9	19.3	25.7	32.1	38.9	46.0	53.1	60.2	67.3	71.3
92.5°	19.0	22.9	26.8	30.6	34.5	39.7	46.2	52.7	59.2	65.7	69.9
95°	49.8	46.8	43.9	41.1	38.2	40.0	46.6	53.2	59.8	66.4	70.5
97.5°	94.6	95.1	95.5	96.0	96.3	92.9	85.7	78.5	71.3	64.0	68.2
100°	128.5	134.9	141.3	147.7	154.1	146.8	125.7	104.6	83.6	62.5	66.6
102.5°	167.0	172.2	177.4	182.6	187.8	178.5	155.0	131.6	108.1	84.5	83.3
105°	223.1	227.2	231.4	235.5	239.7	236.5	225.9	215.4	204.8	194.4	168.1
107.5°	281.8	285.2	288.7	292.1	295.6	300.4	306.7	313.0	319.3	325.6	307.0
110°	320.9	324.0	327.1	330.2	333.2	337.6	343.4	349.0	354.8	360.4	357.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	358.7	361.3	363.9	366.6	369.2	373.2	378.8	384.4	389.9	395.5	398.0
115°	414.2	416.2	418.4	420.6	422.7	426.3	431.3	436.3	441.3	446.2	450.3
117.5°	468.1	470.0	471.9	473.9	475.9	478.8	482.9	486.9	491.0	495.0	498.7
120°	501.3	503.3	505.3	507.3	509.2	512.1	515.8	519.4	523.2	526.9	530.5
122.5°	535.6	537.1	538.5	540.0	541.4	543.9	547.7	551.4	555.1	558.7	561.8
125°	582.0	583.2	584.6	585.9	587.2	589.7	593.1	596.6	600.0	603.5	606.0
127.5°	627.4	628.6	629.8	631.0	632.3	634.4	637.5	640.6	643.8	646.9	649.3
130°	655.6	656.9	658.1	659.3	660.5	662.4	665.1	667.6	670.2	672.9	675.3
132.5°	682.4	683.7	685.0	686.3	687.6	689.3	691.4	693.4	695.5	697.6	700.0
135°	723.8	724.6	725.6	726.4	727.3	728.6	730.3	732.1	733.8	735.5	737.7
137.5°	759.0	760.2	761.4	762.5	763.7	764.8	765.7	766.7	767.7	768.6	771.0
140°	782.2	783.3	784.2	785.2	786.2	787.1	787.9	788.6	789.5	790.2	792.3
142.5°	804.1	805.0	805.9	806.8	807.7	808.4	809.0	809.5	810.1	810.6	812.5
145°	834.6	835.7	836.7	837.7	838.8	839.4	839.8	840.1	840.5	840.7	841.9
147.5°	862.9	863.7	864.4	865.2	865.9	866.5	866.8	867.0	867.4	867.7	868.3
150°	880.5	881.1	881.6	882.0	882.5	883.0	883.3	883.6	883.9	884.3	884.6
152.5°	896.5	896.7	896.9	897.2	897.4	897.6	897.8	898.0	898.2	898.4	899.0
155°	918.9	918.6	918.2	917.9	917.6	917.5	917.7	917.8	917.9	918.1	919.0
157.5°	936.2	936.2	936.2	936.1	936.1	936.0	935.9	935.8	935.6	935.4	936.4
160°	946.9	946.7	946.6	946.4	946.2	946.0	945.9	945.7	945.6	945.4	946.4
162.5°	956.9	956.5	956.0	955.6	955.2	954.9	954.7	954.6	954.4	954.2	955.4
165°	969.0	968.5	968.0	967.5	967.0	966.7	966.6	966.4	966.2	966.0	967.3
167.5°	978.5	977.8	977.1	976.5	975.8	975.4	975.4	975.4	975.4	975.4	976.8
170°	983.7	983.1	982.4	981.8	981.1	980.8	980.8	980.8	980.8	980.8	982.1
172.5°	987.2	986.5	985.7	984.9	984.1	983.8	983.9	984.0	984.2	984.3	985.6
175°	991.8	991.0	990.2	989.4	988.5	988.3	988.4	988.5	988.7	988.9	990.0
177.5°	993.0	992.4	991.7	991.1	990.4	990.1	990.2	990.4	990.5	990.6	991.7
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



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CATALOG NUMBER: S123DIP-S340D805U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	402.3	402.9	403.6	403.8	403.8	403.7	403.6	403.5
5°	401.6	402.5	403.2	403.6	403.5	403.3	403.2	403.1
7.5°	399.3	400.2	401.1	401.6	401.5	401.3	401.2	401.1
10°	396.8	397.8	398.7	399.1	398.9	398.7	398.5	398.3
12.5°	393.4	394.4	395.2	395.6	395.4	395.2	395.0	394.8
15°	387.1	388.0	389.1	389.5	389.4	389.3	389.2	389.1
17.5°	378.8	379.8	380.6	381.0	380.8	380.7	380.6	380.4
20°	372.9	373.7	374.7	375.1	375.2	375.3	375.4	375.5
22.5°	366.3	367.4	368.5	369.1	369.0	368.9	368.9	368.8
25°	355.2	356.5	357.7	358.4	358.4	358.4	358.4	358.4
27.5°	343.6	344.7	345.8	346.4	346.5	346.6	346.6	346.7
30°	335.6	336.9	338.0	338.6	338.6	338.6	338.6	338.6
32.5°	327.1	328.3	329.5	330.3	330.5	330.7	331.0	331.2
35°	314.3	315.8	317.3	318.2	318.6	319.0	319.3	319.7
37.5°	301.0	302.7	304.4	305.4	305.7	306.0	306.3	306.6
40°	292.3	294.0	295.6	296.6	297.0	297.5	297.8	298.2
42.5°	283.1	284.9	286.7	287.9	288.5	289.0	289.5	290.1
45°	269.4	271.3	273.1	274.5	275.2	276.0	276.8	277.6
47.5°	255.5	257.7	259.8	261.1	261.6	262.3	262.9	263.5
50°	246.0	248.3	250.5	252.0	252.7	253.4	254.0	254.8
52.5°	236.4	238.7	241.0	242.6	243.5	244.3	245.1	245.9
55°	221.8	224.4	227.1	228.8	229.5	230.4	231.1	231.9
57.5°	206.9	209.5	212.2	214.0	214.9	215.8	216.8	217.6
60°	196.5	199.3	202.0	203.9	204.9	206.0	207.1	208.2
62.5°	186.6	189.4	192.1	194.0	195.0	196.0	197.0	198.0
65°	171.0	173.9	176.8	178.8	179.7	180.8	181.7	182.7
67.5°	155.3	158.5	161.7	163.8	164.6	165.4	166.3	167.0
70°	145.1	148.2	151.3	153.4	154.3	155.2	156.3	157.2
72.5°	134.6	137.8	141.0	143.2	144.1	145.1	146.1	147.0
75°	118.9	122.1	125.4	127.5	128.7	129.9	131.0	132.2
77.5°	104.2	107.5	110.9	113.0	114.0	114.9	115.7	116.7
80°	94.4	97.8	101.1	103.2	104.2	105.2	106.2	107.2
82.5°	85.7	89.0	92.4	94.4	95.5	96.4	97.4	98.4
85°	73.4	76.7	80.0	82.2	83.1	84.2	85.1	86.1
87.5°	66.4	69.8	73.3	75.5	76.5	77.6	78.6	79.7
90°	75.2	79.3	83.2	85.9	87.2	88.4	89.7	91.0
92.5°	74.3	78.5	82.8	85.5	86.6	87.8	88.8	89.9
95°	74.6	78.8	83.0	85.6	86.5	87.6	88.5	89.4
97.5°	72.5	76.7	80.9	83.6	84.7	85.9	87.0	88.1
100°	70.8	74.9	79.1	81.7	82.8	84.0	85.1	86.2
102.5°	82.0	80.7	79.4	79.4	80.6	81.9	83.1	84.5
105°	141.9	115.6	89.4	76.8	77.9	79.2	80.4	81.6
107.5°	288.3	269.8	251.1	231.3	210.3	189.3	168.3	147.3
110°	354.7	351.9	348.9	336.2	313.6	291.0	268.3	245.7



TEST NUMBER: P331886-830

CATALOG NUMBER: S123DIP-S340D805U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.6	403.1	405.7	404.9	400.9	396.7	392.7	388.6
115°	454.2	458.2	462.1	464.9	466.3	467.8	469.2	470.6
117.5°	502.3	506.0	509.5	511.8	512.7	513.6	514.5	515.4
120°	534.0	537.5	541.1	543.2	543.9	544.6	545.3	545.9
122.5°	564.9	568.0	571.1	573.0	573.8	574.7	575.4	576.3
125°	608.3	610.7	613.0	614.7	615.8	616.8	617.7	618.8
127.5°	651.8	654.3	656.8	658.1	658.5	658.8	659.1	659.5
130°	677.9	680.4	682.9	684.3	684.6	684.8	685.0	685.3
132.5°	702.5	704.9	707.4	708.7	708.9	709.1	709.3	709.5
135°	740.0	742.3	744.5	745.6	745.6	745.6	745.6	745.6
137.5°	773.3	775.6	778.0	779.2	779.4	779.5	779.7	779.9
140°	794.5	796.5	798.7	799.8	800.0	800.1	800.3	800.5
142.5°	814.3	816.1	817.9	818.9	818.9	819.0	819.0	819.0
145°	843.0	844.1	845.2	845.9	846.3	846.8	847.2	847.5
147.5°	868.8	869.4	870.0	870.1	869.7	869.3	868.8	868.5
150°	884.9	885.2	885.5	885.6	885.2	885.0	884.7	884.4
152.5°	899.6	900.1	900.8	900.7	899.9	899.3	898.5	897.9
155°	919.8	920.6	921.4	921.3	920.4	919.4	918.4	917.4
157.5°	937.4	938.3	939.3	939.1	937.9	936.6	935.4	934.1
160°	947.3	948.4	949.3	949.2	948.1	947.0	945.8	944.7
162.5°	956.5	957.6	958.7	958.8	957.7	956.7	955.7	954.7
165°	968.7	970.0	971.3	971.4	970.3	969.0	967.9	966.8
167.5°	978.1	979.4	980.7	980.7	979.4	978.1	976.8	975.4
170°	983.4	984.7	986.0	986.0	984.7	983.4	982.1	980.8
172.5°	986.9	988.3	989.6	989.5	988.1	986.7	985.1	983.7
175°	991.2	992.3	993.4	993.3	992.1	990.8	989.5	988.2
177.5°	992.8	993.8	994.9	994.8	993.4	992.1	990.8	989.5
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8

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