

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: P331932

Luminaire Tested: **S123DIP-S560D805U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331932
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-S560D805U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5123.6 lumens
Efficiency: N/A
Efficacy: 133.4 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: General Diffuse

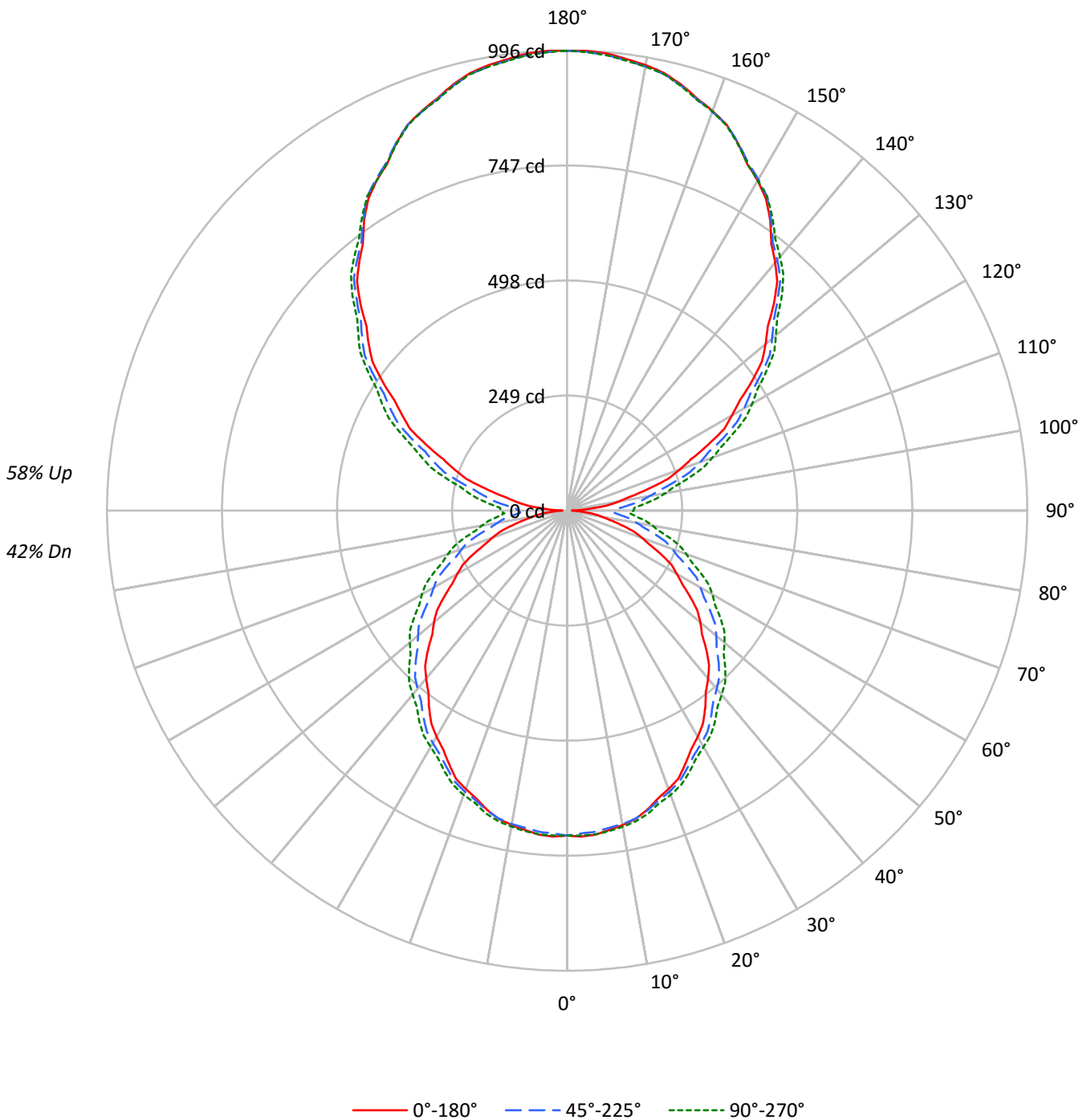
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331932

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D1

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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	90	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	28	22	19	22	18	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7569	7569	7569
5°	7593	7378	7383
10°	7525	7209	7173
15°	7428	7016	6943
20°	7289	6795	6690
25°	7119	6541	6425
30°	6943	6313	6156
35°	6746	6072	5942
40°	6558	5852	5711
45°	6351	5641	5527
50°	6145	5433	5325
55°	5919	5219	5143
60°	5697	5003	4956
65°	5471	4772	4733
70°	5132	4514	4504
75°	4700	4216	4274
80°	4202	3924	4008
85°	3741	3722	3854



TEST NUMBER: P331932

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.3
10°-20°	190.0	3.7
20°-30°	284.2	5.5
30°-40°	339.4	6.6
40°-50°	355.1	6.9
50°-60°	333.2	6.5
60°-70°	278.3	5.4
70°-80°	199.1	3.9
80°-90°	121.7	2.4
90°-100°	139.4	2.7
100°-110°	248.8	4.9
110°-120°	366.6	7.2
120°-130°	455.1	8.9
130°-140°	497.4	9.7
140°-150°	481.7	9.4
150°-160°	403.8	7.9
160°-170°	268.8	5.2
170°-180°	94.1	1.8
0°-30°	540.9	10.6
0°-40°	880.3	17.2
0°-60°	1568.7	30.6
0°-90°	2167.9	42.3
90°-120°	754.8	14.7
90°-150°	2188.9	42.7
90°-180°	2956.0	57.7
0°-180°	5123.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	704	702	698	704	703	67
15°	670	672	672	679	679	189
25°	605	613	615	625	625	279
35°	521	533	543	554	558	326
45°	426	444	463	478	484	328
55°	325	350	378	398	404	291
65°	224	255	288	310	319	222
75°	122	158	196	220	231	130
85°	38	76	116	141	150	39
90°	11	56	105	133	144	10
95°	55	90	134	160	168	58
105°	182	203	242	263	272	195
115°	336	348	374	392	398	333
125°	489	492	512	524	527	436
135°	632	637	644	654	657	487
145°	766	767	769	774	775	478
155°	876	876	877	880	875	403
165°	955	952	952	956	952	269
175°	993	990	990	994	989	94
180°	995	995	995	995	995	



TEST NUMBER: P331932

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	706.3	705.9	705.5	705.0	704.6	703.9	702.8	701.7	700.6	699.5	700.6
5°	704.0	703.6	703.3	703.0	702.6	701.9	700.9	699.9	698.9	697.8	699.2
7.5°	697.1	697.1	697.2	697.3	697.4	696.9	695.9	694.9	693.9	692.9	694.6
10°	691.0	691.3	691.6	692.0	692.3	692.1	691.2	690.4	689.5	688.7	690.4
12.5°	683.6	684.1	684.6	685.0	685.5	685.5	684.9	684.3	683.7	683.1	684.7
15°	670.3	670.8	671.3	671.8	672.3	672.5	672.3	672.1	672.0	671.8	673.5
17.5°	653.4	654.4	655.5	656.5	657.5	658.0	657.9	657.8	657.8	657.7	659.2
20°	641.2	642.2	643.2	644.2	645.2	645.9	646.3	646.6	646.9	647.3	648.8
22.5°	628.3	629.3	630.3	631.4	632.4	633.1	633.6	634.1	634.6	635.0	637.0
25°	605.2	606.9	608.6	610.3	612.0	613.1	613.6	614.1	614.6	615.1	617.3
27.5°	581.9	583.8	585.8	587.7	589.6	591.1	592.2	593.3	594.4	595.5	597.4
30°	565.3	567.5	569.7	572.0	574.2	576.0	577.3	578.7	580.0	581.4	583.5
32.5°	546.9	549.4	551.9	554.4	556.9	559.0	560.8	562.5	564.3	566.1	568.3
35°	520.9	523.6	526.3	529.1	531.8	534.3	536.5	538.7	540.9	543.1	545.7
37.5°	493.3	496.4	499.4	502.5	505.6	508.5	511.2	513.9	516.6	519.4	522.3
40°	474.9	478.0	481.1	484.1	487.2	490.4	493.8	497.2	500.6	504.0	506.9
42.5°	454.7	458.5	462.2	465.9	469.7	473.3	476.9	480.4	484.0	487.5	490.7
45°	425.9	430.0	434.1	438.2	442.2	446.4	450.7	454.9	459.2	463.4	466.7
47.5°	395.7	400.4	405.0	409.6	414.2	419.0	423.9	428.7	433.6	438.5	442.1
50°	376.1	380.9	385.6	390.4	395.2	400.2	405.5	410.8	416.0	421.3	425.2
52.5°	355.3	360.3	365.4	370.4	375.4	380.9	386.7	392.5	398.3	404.2	408.2
55°	324.8	330.4	336.0	341.6	347.3	353.1	359.3	365.4	371.5	377.6	382.2
57.5°	295.1	300.9	306.8	312.6	318.5	324.8	331.5	338.2	344.9	351.6	356.2
60°	274.2	280.4	286.5	292.6	298.7	305.3	312.3	319.3	326.2	333.2	338.0
62.5°	254.6	260.9	267.2	273.4	279.7	286.5	293.9	301.3	308.7	316.1	320.8
65°	224.4	231.1	237.7	244.4	251.0	258.1	265.6	273.0	280.5	288.0	293.1
67.5°	193.8	200.9	207.9	214.9	222.0	229.3	237.0	244.6	252.2	259.8	265.4
70°	172.4	179.7	187.0	194.3	201.6	209.4	217.5	225.7	233.9	242.1	247.5
72.5°	152.7	160.1	167.4	174.7	182.0	189.9	198.3	206.8	215.2	223.7	229.3
75°	121.8	129.8	137.8	145.8	153.8	162.1	170.6	179.1	187.6	196.1	201.7
77.5°	94.8	102.9	111.0	119.0	127.1	135.4	144.0	152.6	161.2	169.8	175.7
80°	75.8	84.2	92.5	100.9	109.2	117.8	126.6	135.5	144.4	153.2	159.0
82.5°	59.3	67.8	76.2	84.7	93.2	101.9	110.9	119.9	128.9	137.9	143.7
85°	37.5	46.0	54.6	63.1	71.6	80.3	89.4	98.4	107.4	116.4	122.2
87.5°	20.5	29.4	38.2	47.0	55.8	64.8	73.9	83.1	92.2	101.3	107.3
90°	10.7	20.8	30.9	41.0	51.1	61.6	72.5	83.4	94.4	105.3	111.8
92.5°	28.3	37.0	45.7	54.4	63.1	72.4	82.2	92.0	101.8	111.7	117.9
95°	54.6	62.4	70.3	78.1	86.0	94.8	104.5	114.2	124.0	133.7	139.7
97.5°	89.4	96.3	103.2	110.1	117.0	125.0	133.9	142.9	151.9	160.9	166.7
100°	113.2	119.7	126.2	132.7	139.2	146.8	155.5	164.2	172.9	181.6	187.0
102.5°	140.8	146.3	151.8	157.3	162.9	170.1	178.9	187.7	196.6	205.4	210.7
105°	182.0	186.5	190.9	195.3	199.8	206.4	215.3	224.2	233.1	242.0	246.7
107.5°	229.3	233.0	236.6	240.3	244.0	249.6	257.2	264.8	272.3	279.9	285.0
110°	258.7	262.1	265.5	268.9	272.3	277.6	284.8	291.9	299.1	306.3	311.4



TEST NUMBER: P331932

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	290.0	292.7	295.4	298.2	300.9	305.5	312.2	318.8	325.4	332.0	337.1
115°	336.1	338.7	341.2	343.8	346.4	350.5	356.3	362.1	367.9	373.7	377.9
117.5°	383.2	384.8	386.4	388.0	389.6	393.1	398.4	403.7	409.0	414.3	418.3
120°	412.0	413.9	415.8	417.6	419.5	422.9	427.6	432.4	437.1	441.9	445.6
122.5°	442.6	443.8	445.0	446.2	447.4	450.5	455.4	460.3	465.2	470.1	473.4
125°	488.6	489.1	489.6	490.2	490.7	493.2	497.8	502.4	507.0	511.6	514.5
127.5°	531.8	532.7	533.6	534.6	535.5	537.9	541.6	545.3	549.0	552.7	555.1
130°	560.5	561.8	563.0	564.2	565.4	567.5	570.3	573.2	576.1	579.0	581.5
132.5°	588.7	590.0	591.4	592.8	594.1	596.0	598.3	600.6	603.0	605.3	607.6
135°	632.5	633.4	634.2	635.1	636.0	637.3	639.0	640.7	642.3	644.0	646.4
137.5°	673.0	673.7	674.4	675.2	675.9	677.0	678.5	680.0	681.6	683.1	685.0
140°	700.5	701.4	702.3	703.1	704.0	704.8	705.5	706.1	706.8	707.5	709.9
142.5°	726.2	726.9	727.6	728.4	729.1	729.7	730.1	730.5	730.9	731.3	733.4
145°	766.2	766.4	766.5	766.7	766.9	767.2	767.8	768.3	768.8	769.3	770.5
147.5°	800.5	801.1	801.7	802.3	803.0	803.5	804.0	804.5	805.0	805.5	805.9
150°	824.8	825.2	825.5	825.9	826.2	826.6	826.9	827.3	827.6	828.0	828.0
152.5°	844.9	845.3	845.8	846.3	846.8	847.2	847.4	847.6	847.8	848.0	848.3
155°	876.4	876.4	876.4	876.4	876.4	876.5	876.7	876.9	877.1	877.2	877.9
157.5°	903.3	903.1	902.9	902.7	902.5	902.5	902.6	902.8	902.9	903.0	903.8
160°	920.2	919.9	919.5	919.2	918.8	918.7	918.7	918.7	918.7	918.7	919.5
162.5°	935.2	934.8	934.3	933.8	933.3	933.1	933.3	933.4	933.5	933.7	934.5
165°	954.6	954.1	953.6	953.1	952.5	952.3	952.3	952.3	952.3	952.3	953.3
167.5°	970.1	969.4	968.7	968.0	967.3	967.1	967.2	967.3	967.5	967.6	968.7
170°	978.9	978.2	977.5	976.8	976.1	975.7	975.7	975.7	975.7	975.7	977.0
172.5°	985.7	985.1	984.4	983.7	983.0	982.6	982.6	982.6	982.6	982.6	983.7
175°	992.9	992.2	991.6	990.9	990.2	989.8	989.8	989.8	989.8	989.8	990.9
177.5°	995.9	995.4	994.8	994.2	993.7	993.4	993.4	993.4	993.4	993.4	994.2
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



TEST NUMBER: P331932

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	701.7	702.8	703.9	704.4	704.2	704.1	704.0	703.8
5°	700.6	701.9	703.3	703.9	703.7	703.5	703.4	703.2
7.5°	696.3	698.0	699.8	700.5	700.3	700.1	699.9	699.7
10°	692.1	693.8	695.5	696.1	695.8	695.5	695.1	694.8
12.5°	686.3	687.8	689.4	690.0	689.7	689.3	689.0	688.7
15°	675.2	676.9	678.6	679.4	679.2	679.0	678.9	678.7
17.5°	660.8	662.3	663.8	664.5	664.2	664.0	663.8	663.5
20°	650.4	651.9	653.4	654.3	654.4	654.6	654.8	654.9
22.5°	638.9	640.9	642.8	643.7	643.6	643.5	643.4	643.3
25°	619.5	621.8	624.0	625.1	625.1	625.1	625.1	625.1
27.5°	599.3	601.2	603.1	604.2	604.3	604.4	604.6	604.7
30°	585.5	587.5	589.6	590.6	590.6	590.6	590.6	590.6
32.5°	570.4	572.6	574.8	576.1	576.5	576.9	577.3	577.7
35°	548.2	550.8	553.3	554.9	555.6	556.3	557.0	557.7
37.5°	525.1	528.0	530.9	532.7	533.2	533.7	534.3	534.8
40°	509.8	512.7	515.6	517.4	518.1	518.8	519.4	520.1
42.5°	493.8	497.0	500.2	502.2	503.2	504.1	505.1	506.0
45°	469.9	473.1	476.4	478.7	480.0	481.4	482.8	484.1
47.5°	445.8	449.4	453.0	455.4	456.4	457.5	458.6	459.6
50°	429.1	433.1	437.0	439.5	440.7	441.9	443.1	444.3
52.5°	412.3	416.3	420.4	423.1	424.6	426.0	427.5	429.0
55°	386.8	391.4	396.0	399.0	400.4	401.7	403.1	404.5
57.5°	360.9	365.5	370.1	373.2	374.8	376.4	378.0	379.6
60°	342.8	347.5	352.3	355.6	357.5	359.3	361.2	363.1
62.5°	325.6	330.4	335.1	338.4	340.1	341.8	343.6	345.3
65°	298.2	303.3	308.5	311.9	313.6	315.3	317.0	318.7
67.5°	271.0	276.6	282.2	285.7	287.1	288.5	290.0	291.4
70°	253.0	258.4	263.9	267.4	269.1	270.8	272.5	274.2
72.5°	234.8	240.4	246.0	249.7	251.4	253.1	254.8	256.5
75°	207.3	213.0	218.6	222.4	224.4	226.5	228.5	230.6
77.5°	181.6	187.5	193.4	197.2	198.8	200.3	201.9	203.5
80°	164.8	170.6	176.4	180.1	181.8	183.5	185.2	186.9
82.5°	149.5	155.2	161.0	164.8	166.5	168.2	169.9	171.6
85°	128.0	133.8	139.6	143.3	145.0	146.7	148.4	150.1
87.5°	113.2	119.1	125.1	128.9	130.7	132.4	134.2	136.0
90°	118.3	124.8	131.3	135.5	137.6	139.6	141.7	143.7
92.5°	124.1	130.3	136.5	140.3	141.7	143.0	144.4	145.7
95°	145.6	151.6	157.6	161.4	163.1	164.8	166.5	168.2
97.5°	172.6	178.5	184.3	188.1	189.7	191.4	193.0	194.6
100°	192.5	197.9	203.4	207.2	209.2	211.3	213.3	215.4
102.5°	216.1	221.4	226.7	230.2	231.8	233.4	235.1	236.7
105°	251.5	256.3	261.0	264.4	266.2	268.1	270.0	271.9
107.5°	290.2	295.3	300.4	303.6	304.9	306.2	307.5	308.8
110°	316.5	321.6	326.7	329.8	330.8	331.8	332.8	333.9



TEST NUMBER: P331932

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.2	347.3	352.5	355.7	357.2	358.6	360.0	361.5
115°	382.2	386.4	390.7	393.4	394.6	395.8	397.0	398.2
117.5°	422.3	426.3	430.3	432.8	433.6	434.5	435.3	436.1
120°	449.3	453.1	456.8	459.1	460.0	460.8	461.6	462.5
122.5°	476.7	480.0	483.4	485.4	486.1	486.8	487.5	488.2
125°	517.4	520.2	523.1	524.8	525.3	525.8	526.3	526.8
127.5°	557.5	559.9	562.3	563.6	564.0	564.3	564.7	565.1
130°	584.1	586.6	589.2	590.3	590.1	589.9	589.7	589.5
132.5°	609.9	612.1	614.4	615.6	615.8	616.1	616.3	616.5
135°	648.8	651.2	653.5	655.0	655.5	656.0	656.5	657.0
137.5°	687.0	688.9	690.9	692.0	692.2	692.4	692.5	692.7
140°	712.3	714.6	717.0	718.0	717.7	717.3	716.9	716.6
142.5°	735.5	737.6	739.8	740.8	740.7	740.6	740.5	740.4
145°	771.7	772.9	774.1	774.7	774.7	774.6	774.6	774.6
147.5°	806.3	806.7	807.1	807.1	806.6	806.2	805.8	805.4
150°	828.0	828.0	828.0	827.6	826.9	826.2	825.5	824.8
152.5°	848.5	848.8	849.1	848.8	848.0	847.1	846.3	845.5
155°	878.6	879.3	880.0	879.7	878.5	877.3	876.1	874.9
157.5°	904.5	905.2	905.9	905.8	904.9	903.9	902.9	901.9
160°	920.4	921.3	922.1	922.2	921.5	920.8	920.1	919.4
162.5°	935.4	936.3	937.2	937.0	935.9	934.8	933.7	932.6
165°	954.4	955.4	956.5	956.4	955.2	953.9	952.7	951.5
167.5°	969.8	970.8	971.9	971.9	970.8	969.8	968.7	967.6
170°	978.2	979.4	980.6	980.6	979.4	978.2	977.0	975.7
172.5°	984.8	985.9	986.9	986.9	985.6	984.4	983.2	982.0
175°	991.9	992.9	994.0	993.9	992.7	991.5	990.2	989.0
177.5°	995.1	995.9	996.7	996.7	995.7	994.7	993.8	992.8
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3

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