

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: P331935-940

Luminaire Tested: **S123DIP-S560D805U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331935-940
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-S560D805U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH 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: 4528.7 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

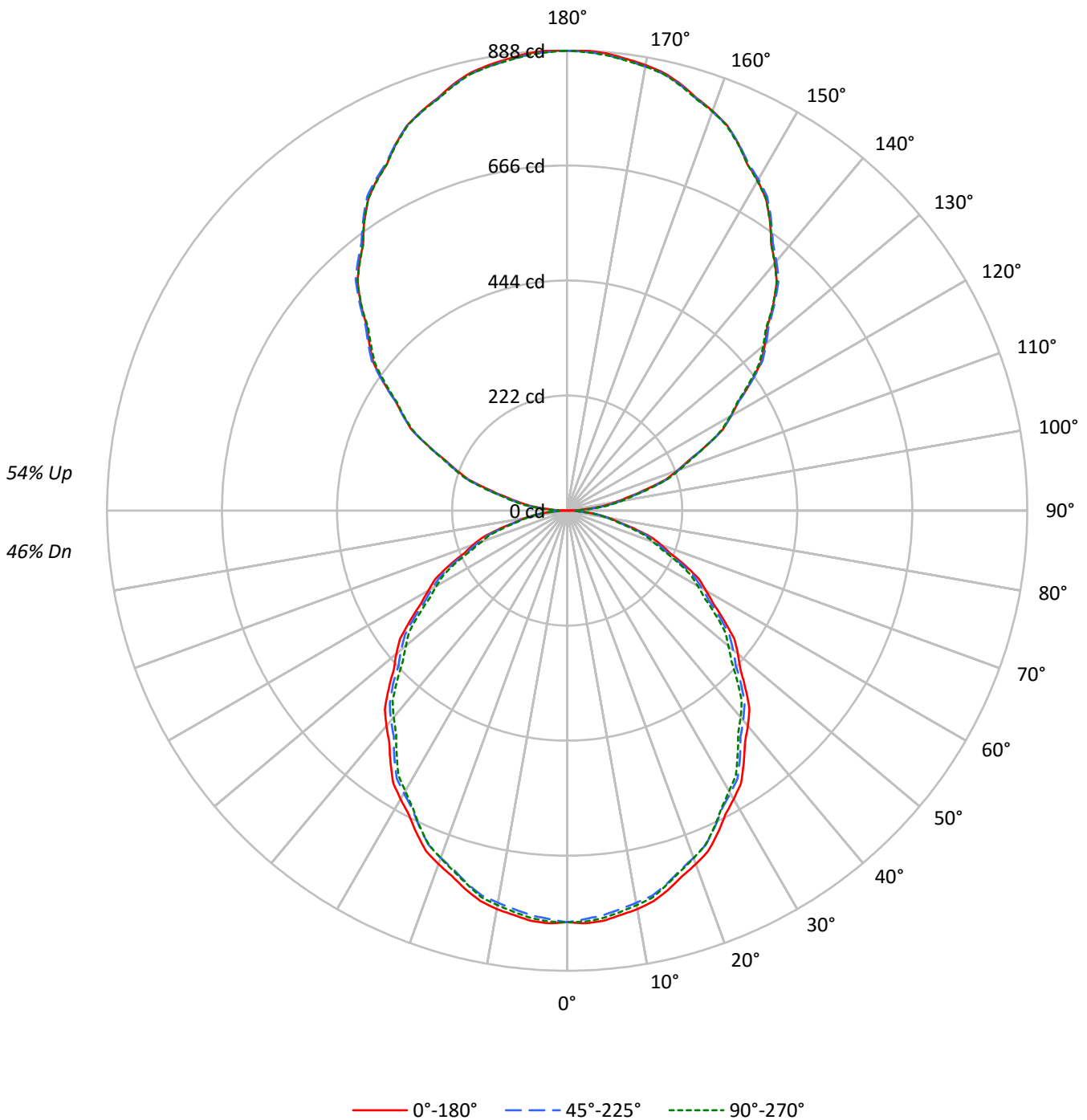
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	97	92	89	85	89	85	82	79	71	68	66	58	56	55	46	45	44	38
2	88	81	75	69	81	74	69	64	62	58	55	51	48	46	40	39	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	73	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23
5	67	56	48	42	62	52	44	39	43	38	34	36	32	29	29	26	24	20
6	62	50	42	36	57	46	39	34	39	34	29	32	28	25	26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8551	8551	8551
5°	8590	8473	8532
10°	8534	8400	8451
15°	8433	8304	8320
20°	8317	8168	8176
25°	8162	8007	7991
30°	7988	7828	7768
35°	7808	7638	7540
40°	7620	7429	7314
45°	7415	7237	7060
50°	7206	7000	6805
55°	6934	6756	6549
60°	6661	6469	6265
65°	6421	6159	5968
70°	6061	5803	5545
75°	5540	5340	5115
80°	4996	4785	4742
85°	4384	4224	4051



TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	1.7
10°-20°	211.3	4.7
20°-30°	312.1	6.9
30°-40°	364.6	8.1
40°-50°	366.5	8.1
50°-60°	322.0	7.1
60°-70°	239.9	5.3
70°-80°	136.7	3.0
80°-90°	41.9	0.9
90°-100°	57.8	1.3
100°-110°	173.1	3.8
110°-120°	294.3	6.5
120°-130°	387.1	8.5
130°-140°	435.1	9.6
140°-150°	427.7	9.4
150°-160°	360.1	8.0
160°-170°	239.7	5.3
170°-180°	83.9	1.9
0°-30°	598.2	13.2
0°-40°	962.8	21.3
0°-60°	1651.3	36.5
0°-90°	2069.7	45.7
90°-120°	525.2	11.6
90°-150°	1775.2	39.2
90°-180°	2459.0	54.3
0°-180°	4528.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	795	791	784	791	790	75
15°	757	754	745	750	747	213
25°	687	683	674	675	673	316
35°	594	590	581	577	574	372
45°	487	484	475	467	464	376
55°	370	368	360	353	349	331
65°	252	248	242	236	234	249
75°	133	131	128	125	123	142
85°	36	34	34	33	33	39
90°	1	8	17	19	21	4
95°	41	46	52	54	54	46
105°	157	159	164	165	166	168
115°	296	298	297	298	297	293
125°	434	436	434	432	429	387
135°	563	567	566	563	562	433
145°	682	684	686	685	682	426
155°	782	782	782	785	780	360
165°	851	849	849	853	848	240
175°	885	883	883	886	882	84
180°	888	888	888	888	888	



TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4
2.5°	797.1	796.7	796.2	795.7	795.2	794.2	792.9	791.6	790.3	789.0	790.1
5°	795.0	794.3	793.5	792.8	792.0	790.9	789.2	787.5	785.9	784.2	785.7
7.5°	787.3	786.6	785.8	785.1	784.3	783.0	781.3	779.5	777.8	776.1	777.5
10°	780.8	780.0	779.3	778.5	777.8	776.3	774.4	772.4	770.4	768.5	769.8
12.5°	772.0	771.3	770.7	770.1	769.5	768.2	766.3	764.5	762.7	760.8	761.8
15°	756.8	756.3	755.6	755.0	754.4	753.1	751.2	749.2	747.2	745.2	746.5
17.5°	739.2	738.4	737.6	736.8	736.0	734.7	732.7	730.8	728.8	726.7	727.6
20°	726.1	725.2	724.2	723.4	722.5	721.0	719.1	717.1	715.1	713.1	713.7
22.5°	711.3	710.4	709.5	708.6	707.7	706.2	704.3	702.3	700.3	698.4	698.8
25°	687.2	686.3	685.4	684.5	683.5	682.1	680.1	678.1	676.2	674.2	674.3
27.5°	661.4	660.5	659.6	658.7	657.8	656.3	654.2	652.1	650.0	647.8	647.9
30°	642.7	642.0	641.2	640.5	639.7	638.3	636.1	634.0	632.0	629.8	629.8
32.5°	624.2	623.2	622.1	621.2	620.2	618.8	617.2	615.5	613.9	612.3	611.4
35°	594.2	593.3	592.5	591.6	590.7	589.2	587.2	585.2	583.3	581.3	580.4
37.5°	563.7	562.5	561.3	560.2	559.0	557.5	555.4	553.5	551.4	549.5	548.4
40°	542.3	541.4	540.6	539.7	538.7	537.2	535.0	533.0	530.8	528.7	527.4
42.5°	521.0	520.0	519.0	517.9	516.9	515.3	513.2	511.1	509.0	506.8	505.6
45°	487.1	486.4	485.8	485.2	484.6	483.3	481.3	479.4	477.4	475.4	473.6
47.5°	453.3	452.4	451.6	450.7	449.8	448.4	446.6	444.7	442.8	441.0	439.2
50°	430.3	429.5	428.8	428.0	427.3	426.0	423.9	422.0	420.0	418.0	416.3
52.5°	406.3	405.7	405.3	404.7	404.2	402.9	400.8	398.8	396.6	394.6	393.2
55°	369.5	369.3	369.3	369.1	368.9	367.8	365.9	363.9	361.9	360.0	358.3
57.5°	334.6	334.0	333.5	333.1	332.5	331.4	329.8	328.3	326.7	325.1	323.7
60°	309.4	309.2	309.2	309.0	308.8	307.8	306.0	304.2	302.4	300.5	299.2
62.5°	287.0	286.6	286.2	285.9	285.4	284.4	282.5	280.7	278.8	277.1	275.7
65°	252.1	251.3	250.6	249.8	249.1	247.9	246.4	244.9	243.3	241.8	240.6
67.5°	215.0	214.4	213.7	213.0	212.3	211.4	210.3	209.1	207.9	206.9	205.8
70°	192.6	191.7	190.8	189.9	189.0	188.1	187.2	186.3	185.3	184.4	183.3
72.5°	169.2	168.4	167.8	167.1	166.5	165.6	164.6	163.5	162.5	161.5	160.5
75°	133.2	132.6	132.0	131.3	130.8	130.3	129.7	129.3	128.9	128.4	127.7
77.5°	101.4	101.0	100.7	100.4	100.0	99.6	99.1	98.5	97.9	97.4	96.9
80°	80.6	80.2	79.7	79.3	78.7	78.4	78.1	77.8	77.5	77.2	77.0
82.5°	60.4	60.3	60.2	60.1	60.0	59.9	59.9	59.8	59.7	59.7	59.4
85°	35.5	35.2	35.0	34.6	34.3	34.2	34.2	34.2	34.2	34.2	33.9
87.5°	14.4	14.3	14.3	14.2	14.1	14.3	14.5	14.8	15.1	15.3	15.3
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	16.9	17.9	19.0	20.1	21.0	22.2	23.4	24.5	25.6	26.8	27.3
95°	41.1	42.2	43.3	44.4	45.5	46.6	47.9	49.1	50.4	51.6	52.3
97.5°	73.0	73.8	74.6	75.4	76.3	77.1	78.0	78.9	79.8	80.7	81.4
100°	94.8	95.8	96.7	97.6	98.5	99.4	100.1	100.9	101.7	102.5	103.0
102.5°	119.9	120.5	121.0	121.6	122.2	123.0	123.9	125.0	126.0	127.1	127.5
105°	156.9	157.2	157.5	157.8	158.1	159.0	160.3	161.8	163.2	164.5	164.5
107.5°	199.8	200.0	200.2	200.4	200.5	200.9	201.5	202.1	202.6	203.1	203.7
110°	226.6	226.9	227.2	227.5	227.8	228.1	228.5	228.7	229.1	229.3	230.0



TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.5	254.7	254.9	255.0	255.2	255.3	255.4	255.5	255.6	255.6	256.4
115°	296.3	296.8	297.2	297.7	298.2	298.3	297.9	297.7	297.3	297.0	297.1
117.5°	338.4	338.8	339.0	339.3	339.7	339.6	339.2	338.8	338.4	338.0	338.0
120°	364.6	365.5	366.5	367.4	368.4	368.5	367.7	366.8	366.1	365.3	365.2
122.5°	392.0	392.6	393.3	394.0	394.7	394.8	394.4	394.0	393.6	393.2	392.8
125°	433.6	434.1	434.5	435.1	435.5	435.6	435.2	435.0	434.6	434.4	433.7
127.5°	472.2	473.1	474.1	475.1	476.1	476.4	476.1	475.7	475.4	475.0	474.2
130°	497.8	499.0	500.2	501.5	502.7	503.1	502.7	502.2	501.8	501.2	500.6
132.5°	523.4	524.7	525.9	527.2	528.4	528.9	528.5	528.2	527.8	527.4	526.7
135°	562.6	563.6	564.5	565.4	566.3	566.8	566.6	566.4	566.2	566.1	565.5
137.5°	598.9	599.7	600.4	601.2	602.0	602.5	603.0	603.3	603.8	604.1	603.5
140°	623.9	624.7	625.5	626.3	627.1	627.5	627.7	627.9	628.0	628.1	628.0
142.5°	646.8	647.6	648.4	649.2	650.0	650.5	650.8	651.0	651.3	651.6	651.4
145°	682.5	682.9	683.1	683.5	683.8	684.1	684.7	685.1	685.5	686.0	685.9
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	718.3
150°	735.5	735.8	736.1	736.5	736.7	737.1	737.4	737.7	738.0	738.3	738.3
152.5°	753.4	753.8	754.2	754.7	755.1	755.5	755.6	755.8	756.0	756.2	756.4
155°	781.5	781.5	781.5	781.5	781.5	781.6	781.8	781.9	782.1	782.2	782.8
157.5°	805.5	805.3	805.1	804.9	804.8	804.8	804.9	805.0	805.1	805.2	805.9
160°	820.6	820.3	819.9	819.7	819.3	819.2	819.2	819.2	819.2	819.2	819.9
162.5°	833.9	833.6	833.1	832.7	832.2	832.1	832.2	832.3	832.4	832.6	833.3
165°	851.2	850.8	850.3	849.9	849.4	849.2	849.2	849.2	849.2	849.2	850.1
167.5°	865.0	864.4	863.8	863.2	862.6	862.4	862.5	862.6	862.7	862.8	863.8
170°	872.9	872.3	871.6	871.0	870.4	870.0	870.0	870.0	870.0	870.0	871.2
172.5°	879.0	878.4	877.8	877.2	876.6	876.2	876.2	876.2	876.2	876.2	877.2
175°	885.4	884.8	884.2	883.6	883.0	882.6	882.6	882.6	882.6	882.6	883.6
177.5°	888.1	887.6	887.1	886.5	886.1	885.8	885.8	885.8	885.8	885.8	886.5
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4
2.5°	791.4	792.6	793.8	794.3	794.2	794.1	794.0	793.9
5°	787.2	788.7	790.2	790.9	790.5	790.2	790.0	789.6
7.5°	778.8	780.2	781.6	782.1	781.9	781.8	781.6	781.4
10°	771.2	772.6	773.9	774.5	774.2	773.8	773.6	773.2
12.5°	762.8	763.8	764.8	765.2	765.0	764.8	764.6	764.5
15°	747.7	748.9	750.1	750.2	749.3	748.4	747.5	746.6
17.5°	728.5	729.3	730.2	730.4	730.1	729.8	729.4	729.1
20°	714.3	715.0	715.5	715.6	715.2	714.7	714.3	713.8
22.5°	699.4	699.8	700.3	700.3	699.7	699.1	698.6	697.9
25°	674.5	674.7	674.8	674.7	674.2	673.8	673.2	672.8
27.5°	648.1	648.2	648.3	648.1	647.5	646.9	646.3	645.8
30°	629.8	629.8	629.8	629.3	628.2	627.1	626.1	625.0
32.5°	610.6	609.8	608.9	608.1	607.6	607.1	606.5	605.9
35°	579.4	578.5	577.7	576.8	576.0	575.3	574.5	573.8
37.5°	547.2	546.2	545.1	544.3	543.9	543.3	542.9	542.3
40°	526.3	525.0	523.9	522.9	522.3	521.7	521.1	520.5
42.5°	504.4	503.2	501.9	501.1	500.4	499.9	499.3	498.6
45°	471.8	469.9	468.1	466.8	466.1	465.3	464.6	463.8
47.5°	437.4	435.6	433.8	432.6	431.9	431.2	430.6	429.9
50°	414.7	413.0	411.3	410.1	409.1	408.2	407.3	406.4
52.5°	391.7	390.3	388.9	387.6	386.7	385.8	385.0	384.1
55°	356.6	355.0	353.3	352.0	351.3	350.5	349.8	349.0
57.5°	322.2	320.7	319.2	318.0	317.1	316.3	315.4	314.5
60°	297.8	296.5	295.1	294.0	293.3	292.5	291.8	291.0
62.5°	274.3	273.0	271.6	270.6	270.1	269.7	269.1	268.6
65°	239.3	238.2	236.9	236.1	235.7	235.2	234.8	234.3
67.5°	204.7	203.7	202.6	201.7	201.1	200.5	199.8	199.2
70°	182.3	181.3	180.2	179.2	178.5	177.7	177.0	176.2
72.5°	159.6	158.6	157.7	157.0	156.7	156.2	155.9	155.4
75°	126.9	126.2	125.4	124.8	124.3	123.9	123.4	123.0
77.5°	96.4	95.9	95.3	95.1	95.1	95.1	95.1	95.1
80°	76.9	76.7	76.6	76.5	76.5	76.5	76.5	76.5
82.5°	59.1	58.9	58.6	58.4	58.3	58.1	58.1	58.0
85°	33.5	33.3	32.9	32.8	32.8	32.8	32.8	32.8
87.5°	15.3	15.3	15.3	15.4	15.5	15.5	15.6	15.7
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	27.7	28.3	28.7	28.9	28.7	28.5	28.4	28.2
95°	52.8	53.4	54.0	54.4	54.4	54.4	54.4	54.4
97.5°	82.1	82.8	83.6	83.9	83.8	83.8	83.7	83.6
100°	103.4	103.9	104.3	104.8	105.0	105.3	105.7	105.9
102.5°	128.0	128.4	128.9	129.1	129.0	128.9	128.9	128.9
105°	164.5	164.5	164.5	164.7	165.0	165.3	165.6	165.9
107.5°	204.1	204.6	205.2	205.3	205.1	204.9	204.7	204.6
110°	230.6	231.2	231.8	232.0	231.7	231.4	231.0	230.8



TEST NUMBER: P331935-940

CATALOG NUMBER: S123DIP-S560D805U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.1	257.8	258.6	258.9	258.9	258.8	258.7	258.7
115°	297.3	297.5	297.7	297.7	297.5	297.3	297.1	297.0
117.5°	338.0	337.9	337.9	337.6	337.2	336.8	336.4	335.9
120°	365.0	364.9	364.7	364.4	364.2	363.8	363.6	363.2
122.5°	392.4	392.0	391.6	391.2	390.7	390.3	389.9	389.4
125°	433.1	432.5	431.9	431.2	430.6	430.0	429.4	428.7
127.5°	473.3	472.4	471.6	470.8	470.1	469.4	468.7	468.0
130°	500.1	499.4	498.8	497.9	496.9	495.8	494.7	493.6
132.5°	526.0	525.2	524.5	523.7	522.9	522.0	521.2	520.4
135°	564.9	564.3	563.7	563.2	562.8	562.6	562.2	562.0
137.5°	602.9	602.3	601.5	600.9	600.4	599.8	599.2	598.6
140°	627.9	627.7	627.5	627.0	625.8	624.7	623.7	622.6
142.5°	651.3	651.1	650.9	650.5	649.6	648.8	647.9	647.1
145°	685.7	685.5	685.4	685.0	684.4	683.8	683.1	682.5
147.5°	718.3	718.3	718.3	717.7	716.8	715.9	715.0	714.1
150°	738.3	738.3	738.3	737.9	736.9	736.0	735.0	734.1
152.5°	756.6	756.9	757.2	756.9	756.1	755.3	754.5	753.7
155°	783.5	784.1	784.7	784.4	783.4	782.3	781.2	780.2
157.5°	806.6	807.2	807.8	807.7	806.9	806.0	805.1	804.2
160°	820.7	821.5	822.2	822.3	821.7	821.1	820.5	819.8
162.5°	834.1	834.9	835.7	835.5	834.6	833.6	832.6	831.6
165°	851.0	851.9	852.9	852.8	851.8	850.6	849.5	848.5
167.5°	864.8	865.7	866.7	866.7	865.7	864.8	863.8	862.8
170°	872.3	873.3	874.4	874.4	873.3	872.3	871.2	870.0
172.5°	878.2	879.1	880.0	880.0	878.9	877.8	876.7	875.7
175°	884.5	885.4	886.4	886.3	885.2	884.1	883.0	881.9
177.5°	887.3	888.1	888.8	888.8	887.9	887.0	886.2	885.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5

(END OF REPORT)