

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: P332292-830

Luminaire Tested: **S123RDIP-S560D1025U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332292-830
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: S123RDIP-S560D1025U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5333.1 lumens
Efficiency: N/A
Efficacy: 119.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

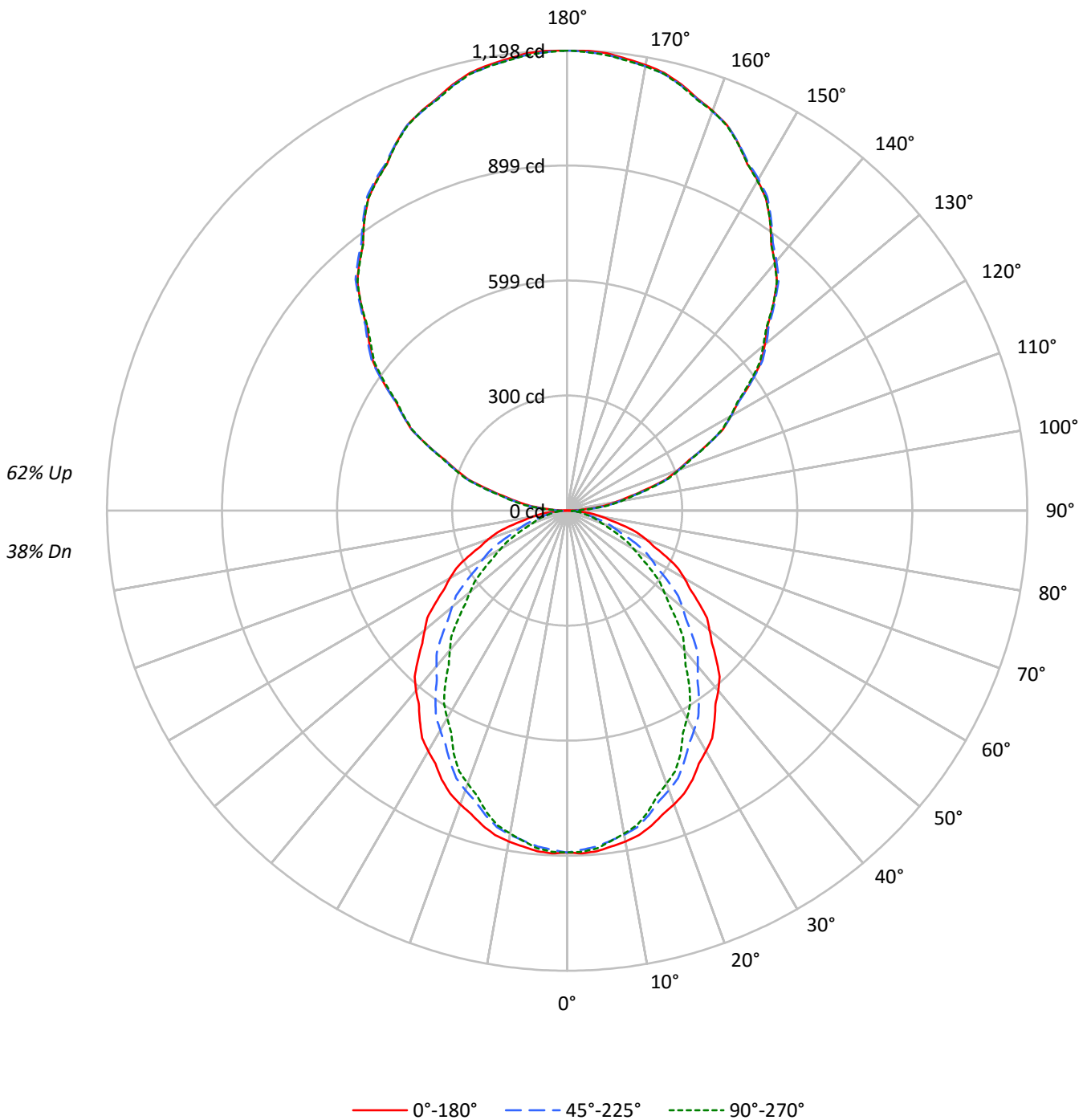
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	87	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32
2	87	80	74	69	79	73	68	63	59	56	53	47	45	42	35	34	33	27
3	79	70	63	58	72	64	58	53	52	48	45	42	39	36	32	30	28	23
4	73	62	55	49	66	57	50	45	47	42	38	37	34	31	28	26	24	20
5	67	56	48	42	60	51	44	39	42	37	33	33	30	27	26	23	21	18
6	61	50	42	36	56	46	39	34	38	33	29	30	27	24	23	21	19	16
7	57	45	37	32	51	41	34	30	34	29	25	28	24	21	21	19	17	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	20	17	15	13
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	18	16	14	11
10	46	34	27	22	42	31	25	21	26	21	18	21	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9582	9582	9582
5°	9619	9487	9541
10°	9565	9368	9335
15°	9461	9149	9052
20°	9321	8874	8668
25°	9175	8567	8291
30°	8983	8211	7762
35°	8784	7857	7276
40°	8604	7436	6674
45°	8363	7024	6132
50°	8100	6553	5526
55°	7833	6016	4960
60°	7584	5440	4336
65°	7264	4819	3713
70°	6861	4047	2999
75°	6276	3182	2824
80°	5597	2820	2591
85°	4730	2495	2322



TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	1.6
10°-20°	232.6	4.4
20°-30°	334.9	6.3
30°-40°	377.3	7.1
40°-50°	360.9	6.8
50°-60°	295.6	5.5
60°-70°	199.4	3.7
70°-80°	100.3	1.9
80°-90°	30.1	0.6
90°-100°	78.0	1.5
100°-110°	233.5	4.4
110°-120°	397.2	7.4
120°-130°	522.5	9.8
130°-140°	587.2	11.0
140°-150°	577.2	10.8
150°-160°	486.0	9.1
160°-170°	323.5	6.1
170°-180°	113.3	2.1
0°-30°	651.1	12.2
0°-40°	1028.4	19.3
0°-60°	1684.8	31.6
0°-90°	2014.7	37.8
90°-120°	708.8	13.3
90°-150°	2395.7	44.9
90°-180°	3318.0	62.2
0°-180°	5333.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	890	886	878	884	883	84
15°	849	840	821	817	812	239
25°	772	754	721	706	698	355
35°	668	642	598	568	554	418
45°	549	516	461	422	403	424
55°	417	380	321	280	264	374
65°	285	245	189	155	146	282
75°	151	116	76	70	68	161
85°	38	23	20	19	19	43
90°	1	10	23	26	28	5
95°	56	62	70	73	73	62
105°	212	214	222	222	224	227
115°	400	402	401	402	401	395
125°	585	588	586	582	579	522
135°	759	765	764	760	758	585
145°	921	923	926	925	921	575
155°	1055	1055	1056	1059	1053	485
165°	1149	1146	1146	1151	1145	324
175°	1195	1191	1191	1196	1190	113
180°	1198	1198	1198	1198	1198	



TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2
2.5°	893.2	892.6	892.1	891.6	891.1	890.0	888.5	886.9	885.4	883.9	885.3
5°	890.2	889.5	888.6	887.9	887.0	885.7	883.7	881.8	879.9	878.0	879.4
7.5°	882.0	881.2	880.2	879.4	878.5	876.8	874.4	871.9	869.3	866.9	867.6
10°	875.1	873.9	872.8	871.7	870.6	868.6	865.7	862.8	859.9	857.1	857.1
12.5°	865.3	864.0	862.7	861.5	860.3	857.9	854.3	850.8	847.3	843.8	843.7
15°	849.0	847.3	845.6	843.8	842.1	838.9	834.4	829.9	825.4	821.0	820.1
17.5°	828.7	826.7	824.6	822.6	820.5	816.6	810.9	805.2	799.5	793.8	792.1
20°	813.7	811.2	808.6	806.0	803.4	799.1	793.0	786.9	780.8	774.7	772.6
22.5°	796.9	794.0	791.1	788.1	785.1	780.4	773.9	767.4	761.0	754.5	751.9
25°	772.5	768.5	764.5	760.5	756.5	750.8	743.4	736.0	728.7	721.3	717.9
27.5°	742.9	738.5	734.1	729.6	725.2	718.9	710.7	702.5	694.3	686.1	681.4
30°	722.7	717.9	713.1	708.3	703.5	696.5	687.6	678.6	669.6	660.6	655.2
32.5°	702.5	697.1	691.6	686.2	680.7	673.3	663.7	654.2	644.7	635.2	629.2
35°	668.5	662.8	657.0	651.3	645.5	637.6	627.6	617.7	607.8	597.9	590.9
37.5°	634.2	627.8	621.4	614.9	608.5	600.0	589.4	578.8	568.2	557.5	549.7
40°	612.3	605.2	598.1	591.1	584.0	574.8	563.5	552.0	540.6	529.2	520.8
42.5°	587.4	580.3	573.3	566.3	559.2	549.8	538.0	526.2	514.4	502.7	493.5
45°	549.4	542.2	535.0	527.8	520.6	510.8	498.4	486.1	473.7	461.4	452.2
47.5°	511.4	503.5	495.6	487.7	479.8	469.7	457.2	444.9	432.5	420.2	410.3
50°	483.7	476.2	468.6	461.1	453.6	443.3	430.3	417.4	404.4	391.3	381.4
52.5°	458.9	450.7	442.5	434.3	426.2	415.7	402.7	389.9	377.0	364.2	353.8
55°	417.4	409.4	401.6	393.7	385.9	375.1	361.5	347.9	334.2	320.6	311.2
57.5°	378.9	370.3	361.7	353.2	344.6	333.5	319.8	306.1	292.4	278.7	269.9
60°	352.3	343.6	334.7	325.8	317.1	305.9	292.7	279.4	266.0	252.7	244.0
62.5°	325.7	317.0	308.1	299.3	290.5	279.4	266.1	252.8	239.4	226.1	218.0
65°	285.2	276.4	267.6	258.7	249.9	239.2	226.7	214.2	201.7	189.2	181.3
67.5°	244.6	235.7	226.8	217.8	209.0	198.5	186.4	174.5	162.5	150.4	144.6
70°	218.0	209.3	200.8	192.1	183.4	173.4	162.2	151.0	139.8	128.6	122.9
72.5°	191.4	182.9	174.4	165.9	157.3	148.0	137.8	127.5	117.3	107.2	102.5
75°	150.9	143.2	135.5	127.8	120.1	111.8	103.0	94.2	85.4	76.5	74.9
77.5°	114.0	107.0	100.0	93.0	86.1	79.7	74.1	68.4	62.7	57.0	56.2
80°	90.3	83.7	77.1	70.5	63.9	59.0	55.6	52.2	48.8	45.5	45.0
82.5°	67.8	62.0	56.4	50.7	45.0	41.4	39.8	38.3	36.7	35.1	34.6
85°	38.3	34.8	31.2	27.7	24.1	22.1	21.7	21.2	20.7	20.2	19.9
87.5°	14.0	13.1	12.1	11.0	10.1	9.9	10.4	10.9	11.5	12.1	12.1
90°	0.9	3.0	5.1	7.3	9.3	11.7	14.4	17.2	19.9	22.6	23.4
92.5°	22.8	24.2	25.6	27.1	28.5	30.0	31.5	33.0	34.6	36.1	36.8
95°	55.5	56.9	58.4	59.9	61.4	63.0	64.6	66.3	68.0	69.7	70.5
97.5°	98.6	99.7	100.8	101.9	102.9	104.1	105.3	106.5	107.7	109.0	109.9
100°	128.0	129.2	130.4	131.7	133.0	134.1	135.2	136.2	137.2	138.3	138.9
102.5°	161.8	162.6	163.3	164.1	164.9	165.9	167.3	168.6	170.0	171.4	172.0
105°	211.7	212.1	212.5	212.9	213.4	214.5	216.4	218.3	220.2	222.1	222.1
107.5°	269.7	269.9	270.1	270.4	270.7	271.2	271.9	272.7	273.4	274.2	274.8
110°	305.8	306.2	306.6	307.0	307.5	307.8	308.3	308.7	309.2	309.5	310.4



TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.4	343.7	343.9	344.1	344.4	344.6	344.7	344.8	344.9	344.9	345.9
115°	399.8	400.5	401.1	401.7	402.4	402.5	402.1	401.6	401.2	400.8	401.1
117.5°	456.7	457.1	457.5	458.0	458.4	458.3	457.8	457.2	456.7	456.1	456.1
120°	492.1	493.3	494.6	495.9	497.1	497.2	496.2	495.1	494.1	493.0	492.8
122.5°	529.0	529.9	530.7	531.7	532.6	532.8	532.3	531.7	531.2	530.7	530.1
125°	585.2	585.9	586.4	587.1	587.7	587.9	587.4	587.0	586.5	586.2	585.3
127.5°	637.2	638.5	639.8	641.1	642.5	642.9	642.4	642.1	641.6	641.1	639.9
130°	671.8	673.4	675.1	676.7	678.4	679.0	678.3	677.7	677.1	676.5	675.6
132.5°	706.4	708.0	709.7	711.4	713.1	713.7	713.2	712.8	712.3	711.8	710.9
135°	759.3	760.5	761.8	763.0	764.3	764.8	764.6	764.4	764.2	763.9	763.2
137.5°	808.2	809.3	810.3	811.3	812.4	813.1	813.7	814.3	814.8	815.3	814.5
140°	842.1	843.1	844.1	845.2	846.2	846.9	847.1	847.3	847.5	847.7	847.5
142.5°	872.9	873.9	875.1	876.1	877.1	877.8	878.2	878.5	878.9	879.3	879.1
145°	921.1	921.5	921.9	922.4	922.7	923.3	923.9	924.5	925.2	925.8	925.6
147.5°	963.3	964.0	964.8	965.5	966.3	967.0	967.5	968.1	968.7	969.3	969.3
150°	992.6	993.1	993.4	993.8	994.3	994.7	995.1	995.5	996.0	996.4	996.4
152.5°	1016.7	1017.3	1017.9	1018.4	1019.0	1019.5	1019.7	1019.9	1020.2	1020.5	1020.8
155°	1054.7	1054.7	1054.7	1054.7	1054.7	1054.8	1055.0	1055.2	1055.5	1055.6	1056.5
157.5°	1087.0	1086.8	1086.6	1086.3	1086.1	1086.0	1086.2	1086.4	1086.6	1086.7	1087.6
160°	1107.4	1106.9	1106.5	1106.2	1105.7	1105.5	1105.5	1105.5	1105.5	1105.5	1106.5
162.5°	1125.5	1124.8	1124.3	1123.7	1123.1	1122.9	1123.0	1123.2	1123.4	1123.6	1124.6
165°	1148.8	1148.1	1147.5	1146.9	1146.3	1145.9	1145.9	1145.9	1145.9	1145.9	1147.2
167.5°	1167.4	1166.6	1165.7	1164.9	1164.0	1163.8	1163.9	1164.0	1164.2	1164.4	1165.7
170°	1178.0	1177.1	1176.3	1175.4	1174.6	1174.2	1174.2	1174.2	1174.2	1174.2	1175.6
172.5°	1186.2	1185.4	1184.6	1183.7	1182.9	1182.4	1182.4	1182.4	1182.4	1182.4	1183.7
175°	1194.9	1194.0	1193.2	1192.4	1191.6	1191.1	1191.1	1191.1	1191.1	1191.1	1192.4
177.5°	1198.4	1197.8	1197.1	1196.5	1195.8	1195.4	1195.4	1195.4	1195.4	1195.4	1196.5
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	890.2	890.2	890.2	890.2	890.2	890.2	890.2	890.2
2.5°	886.7	888.2	889.6	890.1	889.9	889.6	889.4	889.1
5°	880.8	882.3	883.7	884.3	884.0	883.6	883.4	883.0
7.5°	868.5	869.2	870.1	870.2	869.6	869.1	868.6	868.0
10°	857.3	857.5	857.6	857.3	856.6	855.7	855.0	854.1
12.5°	843.6	843.5	843.4	842.8	841.9	840.9	840.1	839.1
15°	819.4	818.5	817.7	816.7	815.6	814.5	813.4	812.3
17.5°	790.4	788.7	786.9	785.3	783.6	781.9	780.2	778.6
20°	770.5	768.5	766.4	764.4	762.4	760.5	758.6	756.7
22.5°	749.3	746.7	744.1	741.9	740.1	738.3	736.5	734.7
25°	714.5	711.1	707.8	705.2	703.5	701.7	699.9	698.1
27.5°	676.7	672.0	667.3	663.6	660.9	658.3	655.5	652.8
30°	649.7	644.2	638.9	634.8	632.3	629.7	627.1	624.5
32.5°	623.3	617.3	611.3	607.0	604.4	601.6	598.9	596.3
35°	584.0	577.1	570.2	565.3	562.4	559.6	556.7	553.7
37.5°	541.9	534.0	526.2	520.6	517.0	513.4	509.8	506.2
40°	512.6	504.2	495.9	489.8	486.2	482.5	478.8	475.0
42.5°	484.5	475.3	466.2	460.0	456.7	453.4	450.1	446.8
45°	443.1	433.9	424.8	418.3	414.4	410.6	406.7	402.8
47.5°	400.3	390.4	380.4	373.7	370.3	366.8	363.4	360.0
50°	371.5	361.5	351.6	344.7	341.0	337.3	333.7	330.0
52.5°	343.6	333.2	322.8	316.0	312.7	309.4	306.1	302.8
55°	302.0	292.7	283.3	277.1	273.9	270.7	267.5	264.3
57.5°	261.1	252.3	243.6	237.8	235.1	232.3	229.6	226.9
60°	235.4	226.7	218.0	212.4	209.6	206.9	204.2	201.4
62.5°	209.8	201.7	193.5	188.0	185.2	182.3	179.5	176.6
65°	173.4	165.6	157.7	152.9	151.2	149.4	147.6	145.8
67.5°	138.7	132.8	127.0	123.1	121.2	119.3	117.4	115.6
70°	117.3	111.7	106.0	102.4	100.6	98.9	97.1	95.3
72.5°	97.9	93.4	88.8	86.1	85.4	84.6	83.9	83.1
75°	73.3	71.7	70.1	69.2	68.8	68.5	68.1	67.9
77.5°	55.3	54.5	53.5	53.0	52.7	52.3	52.0	51.7
80°	44.5	44.0	43.5	43.2	42.9	42.5	42.2	41.8
82.5°	34.1	33.6	33.2	32.9	32.8	32.8	32.7	32.6
85°	19.6	19.2	18.9	18.8	18.8	18.8	18.8	18.8
87.5°	12.1	12.2	12.2	12.2	12.2	12.1	12.1	12.0
90°	24.2	25.1	25.9	26.6	27.0	27.4	27.8	28.2
92.5°	37.5	38.2	38.8	39.0	38.7	38.5	38.3	38.0
95°	71.3	72.1	73.0	73.4	73.4	73.4	73.4	73.4
97.5°	110.8	111.9	112.8	113.2	113.2	113.1	113.0	112.9
100°	139.6	140.2	140.8	141.4	141.8	142.1	142.6	143.0
102.5°	172.7	173.3	173.9	174.2	174.1	174.0	174.0	173.9
105°	222.1	222.1	222.1	222.3	222.6	223.1	223.5	223.9
107.5°	275.5	276.2	276.8	277.0	276.8	276.5	276.3	276.1
110°	311.2	312.1	312.9	313.1	312.6	312.3	311.9	311.4



TEST NUMBER: P332292-830

CATALOG NUMBER: S123RDIP-S560D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	346.9	347.9	348.9	349.4	349.3	349.2	349.1	349.0
115°	401.2	401.4	401.6	401.6	401.4	401.2	401.1	400.8
117.5°	456.0	456.0	456.0	455.6	455.1	454.5	453.9	453.3
120°	492.6	492.4	492.2	491.8	491.4	491.1	490.6	490.2
122.5°	529.5	529.0	528.5	527.9	527.4	526.7	526.1	525.6
125°	584.5	583.6	582.8	581.9	581.2	580.3	579.5	578.6
127.5°	638.8	637.6	636.4	635.4	634.4	633.4	632.4	631.5
130°	674.8	673.9	673.2	671.9	670.5	669.0	667.6	666.1
132.5°	709.8	708.9	707.8	706.8	705.7	704.6	703.4	702.3
135°	762.3	761.5	760.6	760.0	759.6	759.1	758.7	758.4
137.5°	813.6	812.8	811.8	811.0	810.2	809.4	808.6	807.9
140°	847.3	847.1	846.9	846.0	844.6	843.1	841.7	840.2
142.5°	878.9	878.7	878.4	877.8	876.7	875.5	874.4	873.3
145°	925.4	925.2	924.9	924.4	923.6	922.7	921.9	921.1
147.5°	969.3	969.3	969.3	968.7	967.4	966.1	964.9	963.7
150°	996.4	996.4	996.4	995.7	994.5	993.3	991.9	990.7
152.5°	1021.2	1021.4	1021.8	1021.4	1020.3	1019.3	1018.1	1017.1
155°	1057.3	1058.2	1058.9	1058.7	1057.2	1055.7	1054.2	1052.8
157.5°	1088.4	1089.3	1090.2	1090.1	1088.9	1087.7	1086.6	1085.3
160°	1107.6	1108.6	1109.7	1109.7	1109.0	1108.1	1107.3	1106.5
162.5°	1125.7	1126.7	1127.8	1127.6	1126.2	1124.9	1123.6	1122.3
165°	1148.5	1149.7	1150.9	1150.8	1149.4	1147.9	1146.5	1145.0
167.5°	1167.0	1168.3	1169.6	1169.6	1168.3	1167.0	1165.7	1164.4
170°	1177.1	1178.6	1180.1	1180.1	1178.6	1177.1	1175.6	1174.2
172.5°	1185.1	1186.4	1187.6	1187.6	1186.1	1184.7	1183.2	1181.7
175°	1193.6	1194.9	1196.2	1196.0	1194.6	1193.1	1191.7	1190.1
177.5°	1197.5	1198.4	1199.5	1199.4	1198.3	1197.0	1195.9	1194.7
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7

(END OF REPORT)