

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: P332287

Luminaire Tested: **S123RDIP-S560D805U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332287
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D805U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5042.4 lumens
Efficiency: N/A
Efficacy: 131.3 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: General Diffuse

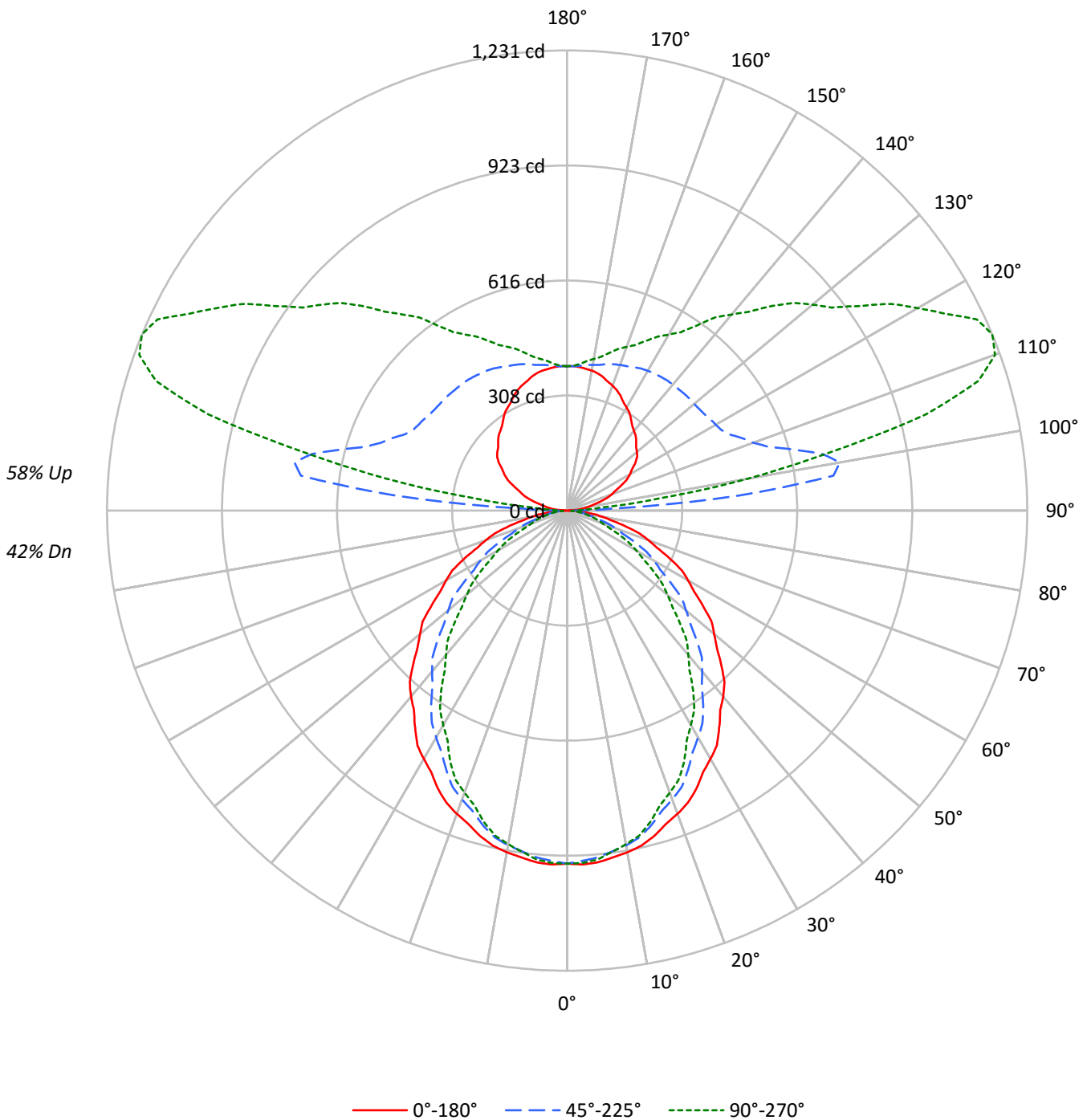
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

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	96	92	88	85	88	84	81	78	70	67	65	56	55	53	44	43	42	36
2	88	81	75	70	80	74	69	65	61	58	55	50	47	45	39	37	36	31
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	26
4	74	63	55	50	67	58	51	46	48	43	40	39	36	33	31	29	27	23
5	68	56	48	43	62	52	45	40	43	38	34	36	32	29	28	26	23	20
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18
7	58	46	38	32	53	42	35	30	36	30	26	29	25	22	23	21	18	16
8	53	41	34	29	49	38	32	27	32	27	23	27	23	20	22	19	17	14
9	50	38	31	26	45	35	29	24	30	25	21	25	21	18	20	17	15	13
10	46	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10167	10167	10167
5°	10205	10065	10122
10°	10147	9939	9905
15°	10038	9706	9604
20°	9889	9415	9196
25°	9734	9089	8797
30°	9531	8712	8236
35°	9320	8335	7720
40°	9128	7890	7082
45°	8873	7451	6506
50°	8594	6953	5863
55°	8310	6382	5262
60°	8047	5772	4600
65°	7707	5112	3940
70°	7279	4293	3182
75°	6658	3377	2994
80°	5938	2994	2752
85°	5014	2643	2458



TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	1.8
10°-20°	246.8	4.9
20°-30°	355.3	7.0
30°-40°	400.3	7.9
40°-50°	382.9	7.6
50°-60°	313.6	6.2
60°-70°	211.6	4.2
70°-80°	106.4	2.1
80°-90°	31.1	0.6
90°-100°	214.9	4.3
100°-110°	608.6	12.1
110°-120°	598.7	11.9
120°-130°	477.5	9.5
130°-140°	376.5	7.5
140°-150°	281.0	5.6
150°-160°	195.9	3.9
160°-170°	115.1	2.3
170°-180°	37.4	0.7
0°-30°	690.8	13.7
0°-40°	1091.1	21.6
0°-60°	1787.6	35.5
0°-90°	2136.7	42.4
90°-120°	1422.2	28.2
90°-150°	2557.3	50.7
90°-180°	2906.0	57.6
0°-180°	5042.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	944	940	932	938	937	90
15°	901	892	871	867	862	254
25°	820	800	765	750	741	377
35°	709	681	634	602	588	444
45°	583	547	490	447	427	450
55°	443	404	340	297	280	397
65°	303	259	201	165	155	299
75°	160	123	81	74	72	171
85°	41	25	21	20	20	46
90°	2	9	20	22	23	4
95°	27	86	464	135	91	29
105°	91	134	629	1099	994	96
115°	160	200	481	1054	1210	159
125°	223	263	449	813	954	198
135°	261	312	442	670	773	202
145°	298	341	437	549	604	187
155°	338	365	423	481	501	156
165°	370	380	405	430	437	104
175°	385	386	389	394	393	37
180°	386	386	386	386	386	



TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	947.6	947.0	946.5	945.9	945.4	944.3	942.7	941.0	939.4	937.8	939.3
5°	944.5	943.7	942.8	942.0	941.1	939.7	937.6	935.6	933.5	931.5	933.0
7.5°	935.8	934.9	933.9	933.0	932.1	930.3	927.7	925.0	922.3	919.7	920.5
10°	928.4	927.2	926.0	924.8	923.7	921.5	918.5	915.4	912.3	909.3	909.4
12.5°	918.0	916.7	915.3	914.0	912.7	910.2	906.4	902.7	898.9	895.2	895.1
15°	900.8	899.0	897.1	895.2	893.4	890.0	885.3	880.5	875.7	871.0	870.1
17.5°	879.2	877.1	874.9	872.7	870.5	866.4	860.3	854.3	848.2	842.2	840.4
20°	863.3	860.6	857.9	855.1	852.4	847.8	841.3	834.9	828.4	821.9	819.7
22.5°	845.5	842.4	839.3	836.1	833.0	828.0	821.1	814.2	807.4	800.5	797.7
25°	819.6	815.4	811.1	806.9	802.6	796.6	788.7	780.9	773.1	765.3	761.7
27.5°	788.2	783.5	778.8	774.1	769.4	762.7	754.0	745.3	736.6	727.9	722.9
30°	766.8	761.7	756.6	751.5	746.4	739.0	729.5	720.0	710.4	700.9	695.1
32.5°	745.3	739.6	733.8	728.0	722.2	714.3	704.2	694.1	684.0	673.9	667.6
35°	709.3	703.2	697.1	691.0	684.8	676.5	665.9	655.4	644.8	634.3	626.9
37.5°	672.9	666.1	659.3	652.4	645.6	636.6	625.3	614.1	602.8	591.5	583.2
40°	649.6	642.1	634.6	627.1	619.6	609.8	597.8	585.7	573.6	561.5	552.6
42.5°	623.2	615.7	608.3	600.8	593.3	583.3	570.8	558.3	545.8	533.3	523.6
45°	582.9	575.3	567.6	560.0	552.3	541.9	528.8	515.7	502.6	489.5	479.8
47.5°	542.6	534.2	525.8	517.4	509.0	498.3	485.1	472.0	458.9	445.8	435.3
50°	513.2	505.2	497.2	489.2	481.2	470.3	456.5	442.8	429.0	415.2	404.6
52.5°	486.9	478.2	469.5	460.8	452.2	441.0	427.3	413.7	400.0	386.4	375.4
55°	442.8	434.4	426.1	417.7	409.4	398.0	383.5	369.1	354.6	340.1	330.2
57.5°	402.0	392.9	383.8	374.7	365.6	353.8	339.3	324.8	310.2	295.7	286.4
60°	373.8	364.5	355.1	345.7	336.4	324.6	310.5	296.4	282.2	268.1	258.9
62.5°	345.6	336.3	326.9	317.5	308.2	296.4	282.3	268.2	254.0	239.9	231.3
65°	302.6	293.2	283.9	274.5	265.1	253.8	240.5	227.3	214.0	200.7	192.4
67.5°	259.5	250.1	240.6	231.1	221.7	210.6	197.8	185.1	172.4	159.6	153.4
70°	231.3	222.1	213.0	203.8	194.6	184.0	172.1	160.2	148.3	136.4	130.4
72.5°	203.1	194.1	185.0	176.0	166.9	157.0	146.2	135.3	124.5	113.7	108.8
75°	160.1	151.9	143.8	135.6	127.4	118.6	109.3	99.9	90.6	81.2	79.5
77.5°	120.9	113.5	106.1	98.7	91.3	84.6	78.6	72.6	66.5	60.5	59.6
80°	95.8	88.8	81.8	74.8	67.8	62.6	59.0	55.4	51.8	48.3	47.7
82.5°	71.9	65.8	59.8	53.8	47.7	43.9	42.2	40.6	38.9	37.2	36.7
85°	40.6	36.9	33.1	29.4	25.6	23.5	23.0	22.5	22.0	21.4	21.1
87.5°	15.0	13.8	12.6	11.6	10.4	10.0	10.5	10.9	11.4	11.9	11.6
90°	1.6	3.1	4.7	7.0	8.6	10.2	12.5	14.9	17.2	19.5	18.8
92.5°	9.7	14.4	21.0	27.1	33.6	45.2	65.7	99.3	132.3	120.2	90.7
95°	26.6	28.9	37.5	50.8	71.1	101.6	168.1	284.6	412.8	463.6	376.1
97.5°	45.3	46.1	52.9	64.4	84.4	117.4	180.9	312.3	526.0	718.5	768.7
100°	57.9	58.6	64.1	75.1	93.8	124.3	179.0	294.7	500.4	740.4	894.4
102.5°	71.0	72.4	77.2	87.6	104.5	132.4	181.5	279.7	462.8	699.7	900.7
105°	90.7	93.0	97.7	107.1	122.0	146.2	188.4	268.9	416.7	628.6	853.0
107.5°	111.6	114.0	118.5	127.7	141.7	164.2	201.2	268.2	387.3	565.7	769.5
110°	126.7	129.0	132.9	141.5	154.8	176.7	211.9	271.3	376.1	530.1	716.9



TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	140.4	142.8	146.7	155.3	168.6	189.8	222.5	277.5	369.8	506.3	671.3
115°	160.3	163.4	168.1	175.9	189.2	210.3	240.0	287.7	367.5	480.8	616.1
117.5°	180.1	183.7	187.6	194.8	209.7	229.2	258.6	301.2	368.9	465.8	582.8
120°	193.9	196.2	200.1	208.0	222.8	242.4	270.5	311.2	371.4	458.9	565.3
122.5°	205.8	208.1	212.0	220.5	234.7	255.5	283.0	320.5	375.7	454.6	550.9
125°	222.8	224.4	229.1	237.7	252.5	273.6	301.0	335.4	382.3	448.8	532.4
127.5°	235.8	238.1	243.9	252.7	269.1	290.2	316.6	347.6	389.8	446.0	516.2
130°	243.9	246.3	253.3	262.7	279.1	300.2	326.0	355.7	394.8	444.1	507.4
132.5°	250.2	253.2	260.8	272.1	288.5	309.0	334.1	363.2	398.6	443.4	499.3
135°	261.1	264.3	272.9	284.6	301.0	322.1	346.3	372.9	404.2	442.5	488.6
137.5°	271.4	274.7	283.2	295.7	311.9	331.5	354.8	380.1	408.0	440.8	479.4
140°	278.3	282.2	290.1	302.6	318.2	337.7	360.4	383.9	410.5	440.2	473.8
142.5°	285.8	289.1	297.6	308.8	324.5	342.7	364.8	387.6	412.3	438.9	468.8
145°	297.9	300.2	307.3	319.0	332.3	350.3	370.6	391.7	413.6	437.0	462.1
147.5°	310.1	311.5	318.4	328.5	341.3	356.7	375.3	394.2	413.6	434.1	455.5
150°	318.2	319.0	325.2	335.4	346.3	360.4	378.4	394.8	413.6	431.6	451.1
152.5°	326.3	326.5	332.7	341.7	351.3	364.8	380.3	396.1	411.7	428.4	446.1
155°	338.5	338.5	343.2	351.0	359.6	370.6	383.9	396.4	409.7	423.0	438.6
157.5°	348.2	348.8	352.6	359.5	366.8	375.3	385.9	397.2	407.0	418.1	430.2
160°	355.7	355.7	358.9	365.1	370.6	378.4	387.8	397.2	405.8	414.4	424.5
162.5°	361.4	361.4	363.9	368.9	373.7	380.3	388.4	396.5	403.3	410.6	418.9
165°	369.8	369.0	370.6	374.5	377.6	383.1	389.3	394.8	399.5	405.0	411.2
167.5°	376.2	375.3	376.1	379.0	381.2	384.7	389.2	393.6	395.8	399.4	403.9
170°	380.0	378.4	379.2	381.5	383.1	384.7	388.6	391.7	393.3	395.6	399.5
172.5°	382.5	381.5	381.7	383.4	384.3	385.3	388.6	391.1	391.4	392.5	395.1
175°	385.4	384.7	383.9	385.4	385.4	386.2	387.8	389.3	388.6	388.6	390.1
177.5°	386.8	386.2	385.6	386.2	386.2	386.2	386.8	388.1	386.8	386.2	386.8
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2



TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	940.8	942.3	943.8	944.4	944.1	943.8	943.6	943.3
5°	934.5	936.1	937.6	938.2	937.9	937.5	937.2	936.8
7.5°	921.4	922.2	923.1	923.2	922.6	922.1	921.5	920.9
10°	909.6	909.8	909.9	909.6	908.8	907.9	907.1	906.2
12.5°	895.0	894.9	894.8	894.2	893.2	892.2	891.3	890.3
15°	869.3	868.4	867.6	866.5	865.3	864.2	863.0	861.8
17.5°	838.6	836.8	834.9	833.2	831.4	829.6	827.8	826.1
20°	817.5	815.3	813.1	811.0	808.9	806.9	804.8	802.8
22.5°	795.0	792.2	789.5	787.1	785.2	783.3	781.4	779.5
25°	758.1	754.5	751.0	748.2	746.4	744.5	742.6	740.7
27.5°	717.9	713.0	708.0	704.1	701.2	698.4	695.5	692.6
30°	689.3	683.5	677.8	673.5	670.8	668.1	665.3	662.6
32.5°	661.3	654.9	648.6	644.0	641.2	638.3	635.4	632.6
35°	619.6	612.3	605.0	599.8	596.7	593.7	590.6	587.5
37.5°	574.9	566.6	558.3	552.3	548.5	544.7	540.9	537.1
40°	543.8	534.9	526.1	519.7	515.8	511.9	508.0	504.0
42.5°	514.0	504.3	494.6	488.0	484.5	481.0	477.5	474.0
45°	470.1	460.4	450.7	443.8	439.7	435.6	431.5	427.4
47.5°	424.7	414.2	403.6	396.5	392.9	389.2	385.6	381.9
50°	394.1	383.5	373.0	365.7	361.8	357.9	354.0	350.1
52.5°	364.5	353.5	342.5	335.3	331.8	328.3	324.8	321.3
55°	320.4	310.5	300.6	294.0	290.6	287.2	283.8	280.4
57.5°	277.0	267.7	258.4	252.3	249.4	246.5	243.6	240.7
60°	249.7	240.5	231.3	225.3	222.4	219.5	216.6	213.7
62.5°	222.6	214.0	205.3	199.5	196.5	193.4	190.4	187.4
65°	184.0	175.7	167.3	162.2	160.4	158.5	156.6	154.7
67.5°	147.2	140.9	134.7	130.6	128.6	126.6	124.6	122.6
70°	124.4	118.5	112.5	108.6	106.7	104.9	103.0	101.1
72.5°	103.9	99.1	94.2	91.4	90.6	89.8	89.0	88.2
75°	77.8	76.1	74.4	73.4	73.0	72.7	72.3	72.0
77.5°	58.7	57.8	56.8	56.2	55.9	55.5	55.2	54.8
80°	47.2	46.7	46.2	45.8	45.5	45.1	44.8	44.4
82.5°	36.2	35.7	35.2	34.9	34.8	34.8	34.7	34.6
85°	20.8	20.4	20.1	19.9	19.9	19.9	19.9	19.9
87.5°	11.6	11.6	11.6	11.8	11.5	11.5	11.6	11.3
90°	19.5	20.3	21.1	22.7	21.9	22.7	23.5	22.7
92.5°	65.8	52.2	46.1	42.1	40.7	38.3	39.1	37.7
95°	281.5	190.8	149.3	121.2	106.3	99.3	93.8	90.7
97.5°	701.6	562.0	461.1	367.6	309.9	274.7	253.6	246.9
100°	921.8	858.4	767.0	655.9	577.0	519.9	489.4	490.2
102.5°	994.9	992.9	939.6	869.2	807.8	762.6	737.1	719.1
105°	1016.4	1094.5	1109.4	1089.1	1053.1	1023.4	998.4	994.5
107.5°	954.8	1081.7	1150.2	1178.0	1178.7	1168.7	1160.2	1153.0
110°	896.0	1039.8	1138.3	1193.1	1214.9	1221.2	1219.6	1218.1



TEST NUMBER: P332287

CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	837.8	984.8	1095.2	1165.5	1205.6	1225.0	1230.9	1231.2
115°	760.7	896.7	1011.7	1096.9	1155.5	1189.9	1205.6	1209.5
117.5°	704.9	822.3	925.5	1012.0	1073.1	1112.5	1135.0	1140.4
120°	675.5	781.0	874.9	953.8	1015.6	1059.4	1078.1	1082.8
122.5°	652.4	747.9	834.8	908.2	963.0	1002.4	1023.1	1029.0
125°	621.5	706.8	781.8	844.4	894.4	928.8	948.3	953.8
127.5°	594.7	670.6	738.4	795.3	839.8	869.2	886.9	891.9
130°	577.8	648.1	711.5	764.6	806.1	834.2	850.6	856.9
132.5°	562.1	626.9	685.8	736.5	775.4	803.6	818.1	822.5
135°	541.0	596.5	647.3	691.9	730.2	753.7	767.7	773.2
137.5°	521.8	567.3	611.1	649.7	681.9	705.7	717.6	721.2
140°	510.5	550.4	587.9	621.5	651.3	673.1	685.7	684.9
142.5°	499.9	534.1	566.7	595.9	621.2	640.6	651.9	651.1
145°	487.1	512.9	537.9	560.6	580.1	596.5	602.8	604.3
147.5°	476.6	497.1	517.3	533.4	548.2	559.3	565.3	565.9
150°	469.1	487.1	503.5	518.3	530.1	538.7	543.4	543.4
152.5°	462.2	477.7	492.2	504.6	513.8	521.8	524.6	524.6
155°	451.9	464.4	476.1	485.5	492.5	498.8	500.4	501.1
157.5°	440.9	451.4	460.5	467.8	473.9	478.6	479.9	479.7
160°	434.7	443.3	451.1	456.6	462.1	466.7	466.7	466.0
162.5°	427.2	434.5	441.7	446.6	450.2	454.2	454.2	453.5
165°	417.5	422.2	427.7	431.6	434.7	437.8	437.0	437.0
167.5°	409.0	412.6	415.8	418.6	420.0	422.2	421.4	421.4
170°	403.4	405.8	408.9	410.5	411.2	412.8	412.0	412.0
172.5°	398.4	400.1	402.6	403.6	403.7	405.3	403.9	403.3
175°	391.7	392.5	394.0	394.0	394.0	394.8	394.0	393.3
177.5°	387.5	388.1	388.7	388.7	388.1	388.7	387.5	387.5
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2

(END OF REPORT)