

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: P331949

Luminaire Tested: **S123DIP-S560D1195U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331949
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-S560D1195U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7136.3 lumens
Efficiency: N/A
Efficacy: 144.5 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

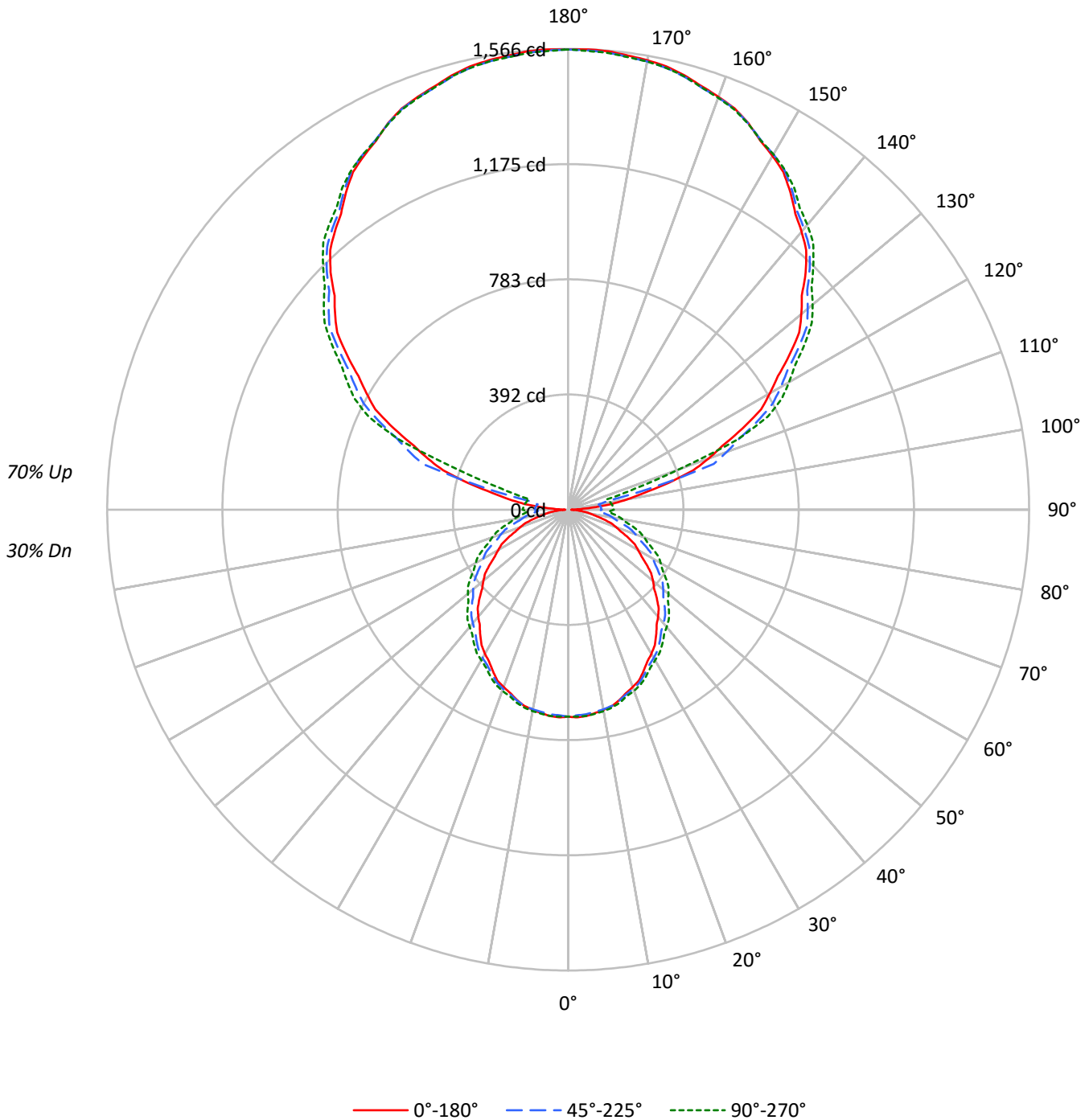
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331949

CATALOG NUMBER: S123DIP-S560D1195U835-4F0-1E-UDD-D

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	102	102	102	102	92	92	92	92	72	72	72	55	55	55	38	38	38	30
1	93	88	84	81	83	79	76	73	62	60	58	47	45	44	33	32	31	24
2	84	77	70	65	75	69	64	59	54	51	47	41	38	36	28	27	25	20
3	77	67	60	54	68	60	54	49	48	43	40	36	33	30	25	23	21	16
4	70	59	51	45	62	53	47	41	42	37	33	32	28	26	22	20	18	14
5	64	52	44	39	57	47	40	35	37	32	29	28	25	22	20	18	16	12
6	59	47	39	33	52	42	35	30	34	29	25	25	22	19	18	16	14	10
7	54	42	34	29	48	38	31	26	30	25	22	23	20	17	16	14	12	9
8	50	38	31	25	45	34	28	23	28	23	19	21	17	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	11	10	7
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	10	9	7

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: P331949

CATALOG NUMBER: S123DIP-S560D1195U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	0.9
10°-20°	190.0	2.7
20°-30°	284.2	4.0
30°-40°	339.4	4.8
40°-50°	355.1	5.0
50°-60°	333.2	4.7
60°-70°	278.3	3.9
70°-80°	199.1	2.8
80°-90°	123.1	1.7
90°-100°	131.4	1.8
100°-110°	325.7	4.6
110°-120°	687.4	9.6
120°-130°	849.7	11.9
130°-140°	894.9	12.5
140°-150°	830.1	11.6
150°-160°	668.0	9.4
160°-170°	431.1	6.0
170°-180°	148.6	2.1
0°-30°	540.9	7.6
0°-40°	880.3	12.3
0°-60°	1568.7	22.0
0°-90°	2169.3	30.4
90°-120°	1144.5	16.0
90°-150°	3719.3	52.1
90°-180°	4967.0	69.6
0°-180°	7136.3	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	61	114	144	155	10
95°	79	65	112	142	151	94
105°	352	378	312	138	137	373
115°	653	671	708	736	748	645
125°	918	928	954	972	980	820
135°	1141	1148	1160	1177	1178	878
145°	1316	1323	1326	1334	1337	823
155°	1449	1447	1448	1453	1446	667
165°	1528	1524	1523	1531	1524	431
175°	1564	1558	1559	1566	1558	149
180°	1564	1564	1564	1564	1564	



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CATALOG NUMBER: S123DIP-S560D1195U835-4F0-1E-UDD-D

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°	20.6	29.6	38.6	47.6	56.6	65.8	75.1	84.5	93.8	103.2	109.2
90°	11.1	22.0	33.0	43.9	54.8	66.3	78.3	90.4	102.4	114.4	121.3
92.5°	31.0	37.8	44.6	51.4	58.2	67.1	78.2	89.2	100.3	111.4	118.7
95°	79.3	75.4	71.4	67.5	63.5	67.1	78.3	89.5	100.7	111.9	118.9
97.5°	149.9	151.2	152.4	153.7	154.9	150.2	139.6	129.0	118.4	107.7	114.9
100°	203.2	213.9	224.5	235.1	245.7	234.8	202.3	169.9	137.4	105.0	112.0
102.5°	264.0	272.6	281.2	289.8	298.5	284.6	248.3	212.0	175.7	139.4	137.8
105°	352.3	359.3	366.2	373.1	380.0	375.6	359.6	343.7	327.8	311.9	271.0
107.5°	444.8	450.6	456.3	462.1	467.8	476.0	486.6	497.2	507.8	518.4	489.5
110°	506.5	511.6	516.8	521.9	527.0	534.4	544.1	553.7	563.4	573.0	568.9



TEST NUMBER: P331949

CATALOG NUMBER: S123DIP-S560D1195U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	566.0	570.4	574.7	579.1	583.5	590.4	599.7	609.1	618.5	627.9	632.3
115°	653.3	656.9	660.5	664.1	667.6	673.7	682.1	690.6	699.0	707.5	714.1
117.5°	738.4	741.6	744.7	747.9	751.1	756.1	763.1	770.0	777.0	783.9	790.0
120°	790.8	793.9	797.1	800.3	803.5	808.3	814.6	821.0	827.4	833.8	839.8
122.5°	844.7	847.0	849.4	851.7	854.1	858.4	864.8	871.1	877.4	883.7	889.0
125°	917.8	919.9	921.9	924.0	926.1	930.1	936.1	942.0	948.0	954.0	958.1
127.5°	989.4	991.3	993.2	995.1	997.0	1000.6	1005.9	1011.2	1016.5	1021.9	1026.1
130°	1034.0	1035.9	1037.8	1039.7	1041.6	1044.7	1049.2	1053.6	1058.0	1062.5	1066.7
132.5°	1076.1	1078.2	1080.2	1082.2	1084.3	1087.0	1090.6	1094.1	1097.7	1101.2	1105.4
135°	1141.3	1142.6	1144.0	1145.4	1146.8	1148.9	1151.8	1154.7	1157.6	1160.5	1164.4
137.5°	1196.9	1198.7	1200.5	1202.4	1204.2	1205.9	1207.5	1209.2	1210.8	1212.4	1216.3
140°	1233.4	1235.0	1236.5	1238.1	1239.6	1241.1	1242.3	1243.6	1244.9	1246.2	1249.8
142.5°	1267.8	1269.2	1270.7	1272.1	1273.5	1274.6	1275.5	1276.4	1277.3	1278.1	1281.2
145°	1315.9	1317.6	1319.2	1320.8	1322.5	1323.6	1324.1	1324.6	1325.1	1325.6	1327.5
147.5°	1360.5	1361.7	1362.9	1364.0	1365.2	1366.1	1366.6	1367.1	1367.6	1368.1	1369.1
150°	1388.4	1389.1	1389.9	1390.7	1391.5	1392.1	1392.6	1393.1	1393.7	1394.2	1394.7
152.5°	1413.5	1413.8	1414.2	1414.5	1414.9	1415.2	1415.5	1415.9	1416.2	1416.5	1417.4
155°	1448.8	1448.3	1447.7	1447.2	1446.7	1446.6	1446.8	1447.1	1447.4	1447.6	1448.9
157.5°	1476.2	1476.1	1476.1	1476.0	1476.0	1475.8	1475.6	1475.3	1475.1	1474.8	1476.4
160°	1492.9	1492.7	1492.4	1492.2	1491.9	1491.6	1491.4	1491.1	1490.9	1490.6	1492.2
162.5°	1508.7	1508.1	1507.4	1506.7	1506.0	1505.6	1505.3	1505.1	1504.8	1504.5	1506.3
165°	1527.8	1527.0	1526.2	1525.5	1524.7	1524.2	1523.9	1523.6	1523.4	1523.1	1525.2
167.5°	1542.7	1541.6	1540.6	1539.6	1538.5	1538.0	1538.0	1538.0	1538.0	1538.0	1540.1
170°	1551.0	1550.0	1549.0	1547.9	1546.9	1546.4	1546.4	1546.4	1546.4	1546.4	1548.4
172.5°	1556.6	1555.4	1554.1	1552.9	1551.6	1551.1	1551.3	1551.5	1551.7	1551.9	1554.0
175°	1563.8	1562.5	1561.2	1559.9	1558.6	1558.1	1558.4	1558.6	1558.9	1559.1	1561.0
177.5°	1565.7	1564.6	1563.6	1562.6	1561.5	1561.1	1561.3	1561.5	1561.7	1561.9	1563.6
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8



TEST NUMBER: P331949

CATALOG NUMBER: S123DIP-S560D1195U835-4F0-1E-UDD-D

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°	115.2	121.2	127.1	131.0	132.9	134.7	136.5	138.3
90°	128.1	134.9	141.7	146.2	148.5	150.7	152.9	155.1
92.5°	126.0	133.3	140.6	145.2	147.1	149.0	150.8	152.7
95°	126.0	133.1	140.2	144.6	146.3	148.0	149.7	151.4
97.5°	122.0	129.1	136.3	140.8	142.8	144.8	146.7	148.7
100°	119.0	126.0	133.0	137.5	139.4	141.4	143.4	145.3
102.5°	136.2	134.6	133.0	133.3	135.5	137.6	139.8	142.0
105°	230.0	189.1	148.2	128.7	130.8	132.8	134.9	136.9
107.5°	460.5	431.6	402.6	371.7	338.8	305.8	272.9	239.9
110°	564.8	560.7	556.6	536.8	501.2	465.7	430.1	394.6



TEST NUMBER: P331949

CATALOG NUMBER: S123DIP-S560D1195U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	636.8	641.2	645.7	644.7	638.4	632.1	625.8	619.5
115°	720.8	727.5	734.1	738.7	741.1	743.5	745.9	748.3
117.5°	796.1	802.3	808.4	812.2	813.7	815.3	816.8	818.3
120°	845.8	851.8	857.7	861.3	862.5	863.7	864.9	866.1
122.5°	894.2	899.4	904.6	907.9	909.3	910.7	912.1	913.5
125°	962.1	966.2	970.3	973.2	974.9	976.6	978.3	980.1
127.5°	1030.3	1034.5	1038.6	1041.1	1041.7	1042.3	1043.0	1043.6
130°	1071.0	1075.3	1079.5	1081.9	1082.4	1082.9	1083.5	1084.0
132.5°	1109.5	1113.6	1117.8	1120.0	1120.5	1120.9	1121.4	1121.8
135°	1168.2	1172.1	1175.9	1177.9	1177.9	1178.0	1178.1	1178.2
137.5°	1220.3	1224.2	1228.1	1230.3	1230.6	1230.9	1231.3	1231.6
140°	1253.4	1257.0	1260.5	1262.5	1262.8	1263.2	1263.5	1263.8
142.5°	1284.4	1287.5	1290.6	1292.2	1292.3	1292.4	1292.6	1292.7
145°	1329.4	1331.3	1333.1	1334.4	1335.1	1335.8	1336.5	1337.1
147.5°	1370.0	1370.9	1371.8	1372.0	1371.4	1370.9	1370.3	1369.7
150°	1395.2	1395.7	1396.2	1396.3	1395.8	1395.4	1395.0	1394.5
152.5°	1418.3	1419.3	1420.2	1420.1	1419.0	1417.9	1416.7	1415.6
155°	1450.2	1451.5	1452.8	1452.6	1451.1	1449.6	1448.0	1446.5
157.5°	1477.9	1479.4	1481.0	1480.8	1478.8	1476.7	1474.7	1472.7
160°	1493.7	1495.2	1496.8	1496.7	1494.9	1493.1	1491.2	1489.4
162.5°	1508.1	1509.8	1511.6	1511.6	1510.0	1508.4	1506.8	1505.2
165°	1527.3	1529.3	1531.4	1531.5	1529.7	1527.9	1526.1	1524.3
167.5°	1542.1	1544.2	1546.3	1546.3	1544.2	1542.1	1540.1	1538.0
170°	1550.5	1552.6	1554.6	1554.6	1552.6	1550.5	1548.4	1546.4
172.5°	1556.1	1558.1	1560.2	1560.1	1557.8	1555.6	1553.3	1551.0
175°	1562.8	1564.6	1566.4	1566.2	1564.2	1562.1	1560.1	1558.0
177.5°	1565.2	1566.9	1568.5	1568.3	1566.3	1564.2	1562.1	1560.1
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

(END OF REPORT)