

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: P331396-830

Luminaire Tested: **S122DIP-S865D725U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331396-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S865D725U830-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

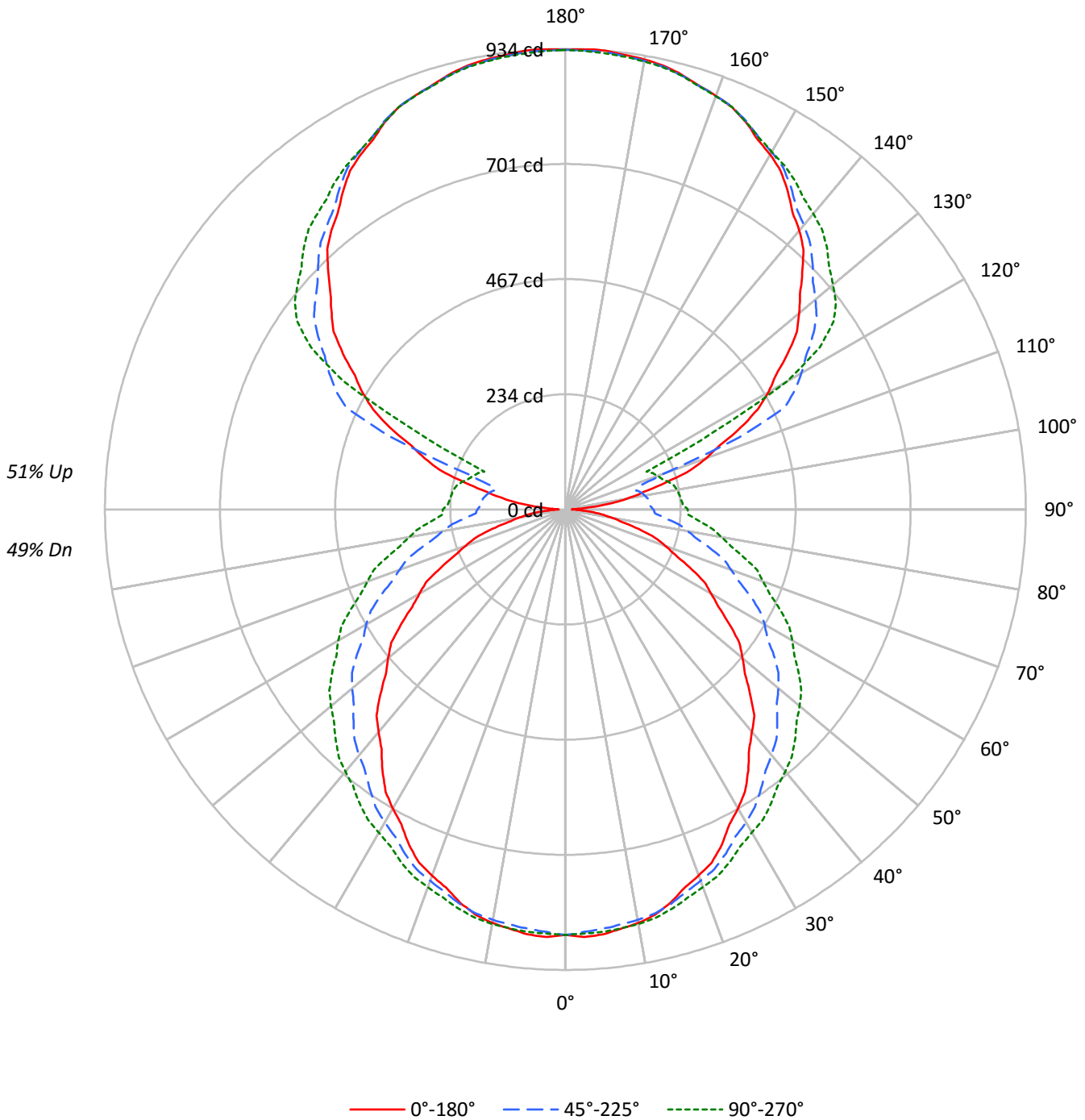
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6025.3 lumens  
Efficiency: N/A  
Efficacy: 110.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 54.4  
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: P331396-830  
CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331396-830

CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

**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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	76	70	67	65	58	56	54	46	45	43	38
2	87	79	72	66	79	72	67	62	61	56	52	50	47	44	40	37	35	31
3	79	69	61	55	72	63	56	51	53	48	43	44	40	36	35	32	29	25
4	72	60	52	46	66	56	48	43	47	41	37	38	34	31	31	28	25	21
5	66	54	45	39	60	49	42	36	42	36	31	34	30	26	28	24	22	18
6	61	48	40	33	55	44	37	31	37	31	27	31	26	23	25	21	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	23	20	23	19	17	14
8	52	39	31	26	47	36	29	24	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



TEST NUMBER: P331396-830

CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.8	1.4
10°-20°	234.5	3.9
20°-30°	355.3	5.9
30°-40°	432.8	7.2
40°-50°	465.6	7.7
50°-60°	452.2	7.5
60°-70°	394.8	6.6
70°-80°	304.0	5.0
80°-90°	206.3	3.4
90°-100°	171.6	2.8
100°-110°	216.6	3.6
110°-120°	372.5	6.2
120°-130°	540.8	9.0
130°-140°	550.7	9.1
140°-150°	499.9	8.3
150°-160°	399.7	6.6
160°-170°	257.6	4.3
170°-180°	88.7	1.5
0°-30°	671.6	11.1
0°-40°	1104.4	18.3
0°-60°	2022.2	33.6
0°-90°	2927.3	48.6
90°-120°	760.7	12.6
90°-150°	2352.1	39.0
90°-180°	3098.0	51.4
0°-180°	6025.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	13	93	179	230	248	10
95°	54	93	170	219	235	62
105°	211	258	149	198	216	226
115°	393	421	491	230	182	386
125°	551	562	612	649	664	491
135°	680	691	709	740	750	525
145°	787	787	798	809	813	492
155°	866	861	868	872	867	399
165°	913	909	911	915	911	258
175°	934	929	930	934	928	89
180°	932	932	932	932	932	



TEST NUMBER: P331396-830  
 CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.7	41.6	58.4	75.3	92.2	109.7	127.7	145.7	163.8	181.8	193.3
90°	13.2	30.9	48.7	66.4	84.3	102.6	121.6	140.6	159.6	178.6	190.5
92.5°	25.2	40.0	54.9	69.7	84.5	100.9	118.6	136.3	154.0	171.7	183.0
95°	53.8	61.9	70.0	78.2	86.3	99.2	117.0	134.7	152.4	170.1	181.4
97.5°	95.8	93.4	91.1	88.8	86.4	94.5	112.9	131.4	149.9	168.2	179.2
100°	128.1	117.8	107.6	97.4	87.1	91.0	109.1	127.2	145.4	163.5	175.0
102.5°	162.7	167.8	172.8	177.9	182.9	182.3	176.2	169.9	163.7	157.6	169.2
105°	211.2	223.8	236.3	248.9	261.5	254.5	228.0	201.6	175.1	148.7	160.0
107.5°	268.0	278.1	288.1	298.2	308.3	295.8	260.5	225.3	190.1	154.9	162.6
110°	303.7	312.4	321.1	329.8	338.5	328.0	298.3	268.6	238.9	209.3	203.2



TEST NUMBER: P331396-830

CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	338.2	345.6	353.1	360.6	368.1	372.9	375.1	377.4	379.7	381.9	336.1
115°	392.7	398.3	403.9	409.5	415.1	426.0	442.2	458.5	474.8	491.1	430.0
117.5°	440.1	445.0	449.8	454.7	459.5	469.0	483.1	497.3	511.4	525.6	517.0
120°	475.7	479.1	482.4	485.8	489.2	497.8	511.5	525.4	539.1	553.0	562.6
122.5°	506.0	508.7	511.5	514.3	517.2	525.3	538.7	552.0	565.4	578.8	587.5
125°	550.6	552.6	554.6	556.5	558.5	565.2	577.0	588.8	600.5	612.3	620.8
127.5°	592.3	594.2	596.1	597.9	599.8	605.4	614.7	624.1	633.3	642.6	651.0
130°	618.8	620.9	623.0	625.1	627.3	632.1	639.5	647.0	654.5	661.9	670.2
132.5°	645.7	647.4	649.2	651.0	652.8	656.7	662.9	669.0	675.1	681.3	689.2
135°	679.6	681.9	684.3	686.7	689.1	692.4	696.5	700.6	704.7	708.9	716.2
137.5°	715.0	716.6	718.2	719.8	721.5	723.7	726.4	729.2	731.9	734.7	741.2
140°	738.2	739.1	740.0	740.9	741.9	743.5	745.6	747.8	750.1	752.2	758.1
142.5°	757.6	758.4	759.2	760.0	760.8	762.2	764.2	766.2	768.2	770.2	775.0
145°	786.8	786.6	786.6	786.4	786.3	787.4	789.9	792.5	795.0	797.6	800.3
147.5°	813.4	812.8	812.3	811.7	811.2	812.1	814.6	817.1	819.6	822.2	823.1
150°	830.7	829.6	828.6	827.6	826.4	827.2	829.5	831.9	834.3	836.7	837.6
152.5°	845.2	844.0	842.9	841.7	840.6	841.1	843.4	845.6	847.9	850.2	851.1
155°	866.4	865.1	863.7	862.3	861.0	861.2	863.0	864.8	866.6	868.4	869.3
157.5°	883.0	881.8	880.7	879.6	878.4	878.4	879.8	881.0	882.2	883.5	884.6
160°	892.7	891.7	890.9	889.9	889.1	889.1	889.9	890.9	891.7	892.7	893.6
162.5°	901.4	900.4	899.6	898.6	897.7	897.7	898.4	899.2	900.0	900.8	901.8
165°	912.9	912.0	911.2	910.2	909.3	909.1	909.6	910.0	910.4	910.9	911.9
167.5°	921.5	920.7	919.7	918.9	917.9	917.7	918.1	918.5	919.0	919.4	920.4
170°	926.4	925.5	924.6	923.7	922.8	922.5	922.8	923.1	923.4	923.7	924.7
172.5°	929.6	928.7	927.8	926.9	926.0	925.8	926.0	926.3	926.6	926.9	928.0
175°	933.8	932.7	931.7	930.7	929.6	929.3	929.5	929.8	930.1	930.5	931.5
177.5°	934.5	933.7	932.8	932.0	931.1	930.8	930.9	931.0	931.1	931.2	932.1
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8



TEST NUMBER: P331396-830

CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	204.8	216.2	227.7	235.4	238.9	242.5	246.2	249.8
90°	202.3	214.1	226.0	233.8	237.4	241.1	244.7	248.4
92.5°	194.3	205.6	216.9	224.2	227.8	231.3	234.8	238.4
95°	192.7	204.1	215.4	222.6	225.8	228.9	232.1	235.4
97.5°	190.0	201.0	211.8	219.0	222.4	225.9	229.3	232.8
100°	186.4	197.9	209.4	216.9	220.2	223.6	227.0	230.3
102.5°	180.8	192.5	204.1	211.6	215.1	218.6	222.1	225.6
105°	171.4	182.9	194.2	201.7	205.4	209.1	212.6	216.3
107.5°	170.2	177.9	185.5	191.1	194.8	198.5	202.2	205.9
110°	197.1	191.1	184.9	183.7	187.4	191.1	194.7	198.3





TEST NUMBER: P331396-830

CATALOG NUMBER: S122DIP-S865D725U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	290.4	244.6	198.9	177.8	181.3	184.8	188.3	191.9
115°	369.0	307.9	246.9	212.5	204.8	197.1	189.4	181.6
117.5°	508.4	499.9	491.3	470.8	438.2	405.5	372.9	340.3
120°	572.1	581.7	591.4	587.5	570.3	553.2	536.0	518.9
122.5°	596.1	604.7	613.4	617.0	615.8	614.4	613.1	611.8
125°	629.3	637.9	646.5	652.2	655.2	658.1	661.1	664.0
127.5°	659.5	667.9	676.3	681.7	684.3	686.8	689.4	691.9
130°	678.6	686.9	695.2	700.4	702.5	704.6	706.6	708.7
132.5°	697.0	704.9	712.8	717.7	719.8	721.9	724.0	726.0
135°	723.6	730.9	738.2	742.8	744.8	746.7	748.7	750.5
137.5°	747.8	754.4	761.0	765.0	766.4	767.7	769.1	770.5
140°	763.8	769.7	775.4	778.8	779.7	780.6	781.6	782.5
142.5°	779.8	784.6	789.4	792.1	792.8	793.5	794.2	794.8
145°	803.0	805.8	808.5	810.1	810.8	811.4	812.1	812.8
147.5°	824.2	825.2	826.1	826.7	826.7	826.8	826.8	826.8
150°	838.5	839.4	840.3	840.4	839.6	838.9	838.1	837.4
152.5°	852.0	852.9	853.8	853.8	852.8	851.8	850.8	849.8
155°	870.2	871.1	872.0	871.9	870.6	869.5	868.3	867.0
157.5°	885.5	886.6	887.6	887.5	886.4	885.1	884.0	882.9
160°	894.5	895.4	896.3	896.2	895.1	894.1	893.1	892.0
162.5°	902.8	903.8	904.8	904.7	903.4	902.1	900.9	899.6
165°	912.9	914.1	915.1	915.1	914.1	912.9	911.9	910.9
167.5°	921.5	922.6	923.6	923.4	922.1	920.8	919.4	918.0
170°	925.8	926.8	927.9	927.7	926.4	925.0	923.7	922.4
172.5°	929.1	930.1	931.1	930.9	929.6	928.3	926.9	925.6
175°	932.6	933.6	934.6	934.4	932.9	931.4	929.9	928.4
177.5°	932.9	933.8	934.6	934.5	933.4	932.4	931.2	930.2
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8

(END OF REPORT)