

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: P331396-840

Luminaire Tested: **SA2XXDIP-C865D725U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331396-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D725U840-4F0-1E-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

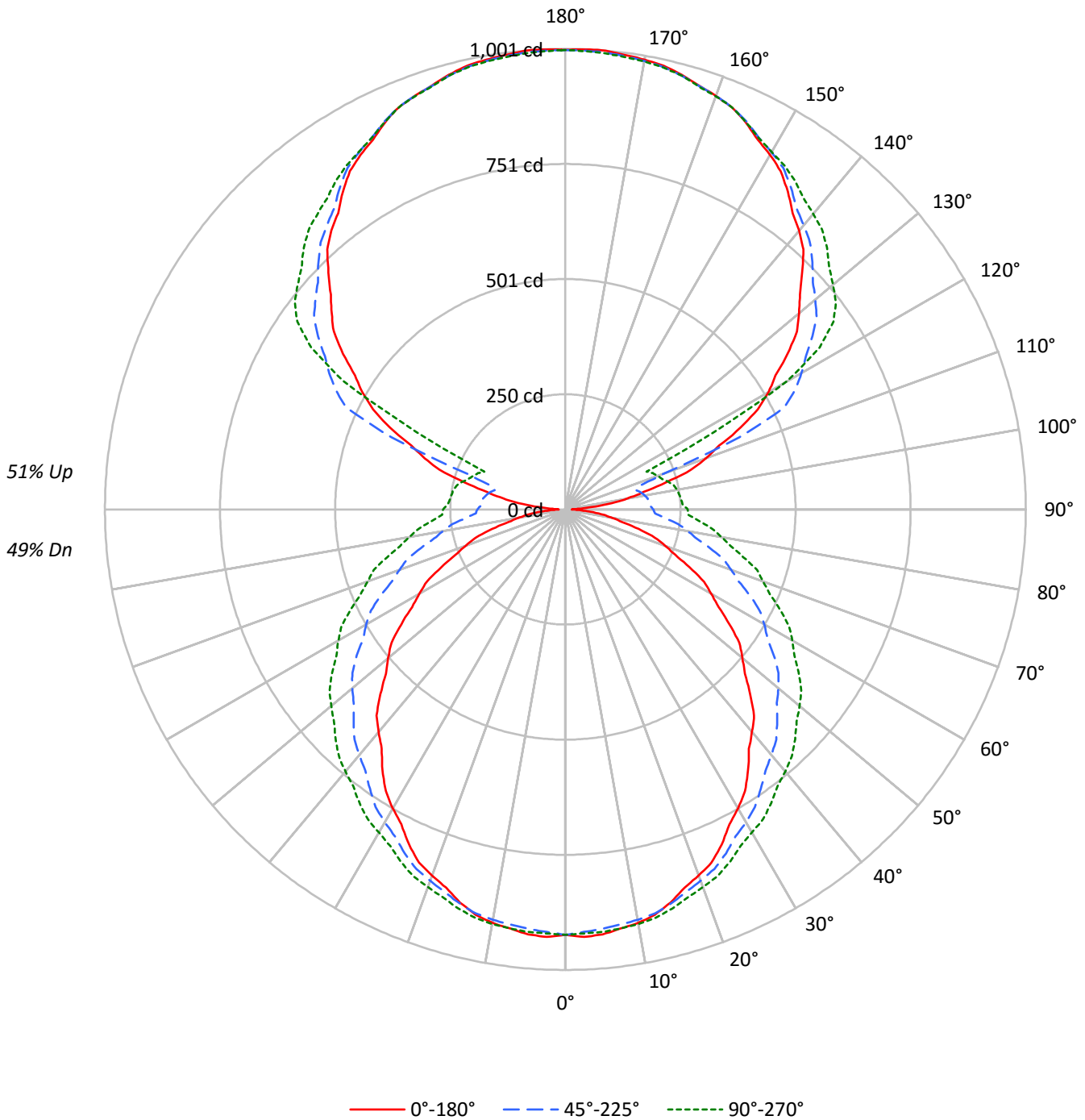
Lumens per Lamp: N/A
Luminaire Lumens: 6455.7 lumens
Efficiency: N/A
Efficacy: 118.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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



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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	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°	14928	14928	14928
5°	15002	14370	14315
10°	14907	13945	13789
15°	14701	13496	13236
20°	14442	13015	12701
25°	14187	12551	12216
30°	13824	12074	11729
35°	13459	11611	11386
40°	13075	11219	11044
45°	12709	10869	10750
50°	12316	10551	10462
55°	11908	10209	10166
60°	11404	9856	9857
65°	10880	9439	9485
70°	10292	8992	9089
75°	9539	8554	8722
80°	8357	8107	8349
85°	7227	7720	8061



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	1.4
10°-20°	251.2	3.9
20°-30°	380.7	5.9
30°-40°	463.7	7.2
40°-50°	498.9	7.7
50°-60°	484.5	7.5
60°-70°	423.0	6.6
70°-80°	325.7	5.0
80°-90°	221.0	3.4
90°-100°	183.9	2.8
100°-110°	232.1	3.6
110°-120°	399.1	6.2
120°-130°	579.4	9.0
130°-140°	590.1	9.1
140°-150°	535.6	8.3
150°-160°	428.3	6.6
160°-170°	276.0	4.3
170°-180°	95.0	1.5
0°-30°	719.6	11.1
0°-40°	1183.3	18.3
0°-60°	2166.6	33.6
0°-90°	3136.4	48.6
90°-120°	815.0	12.6
90°-150°	2520.1	39.0
90°-180°	3319.0	51.4
0°-180°	6455.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	927	923	915	923	922	88
15°	884	887	887	898	898	249
25°	804	814	826	841	846	369
35°	693	716	741	769	780	433
45°	568	605	651	691	706	438
55°	436	485	553	600	619	389
65°	298	364	442	495	514	295
75°	165	240	326	381	401	174
85°	48	132	217	271	292	52
90°	14	100	191	246	266	11
95°	58	99	182	235	252	66
105°	226	276	159	212	232	242
115°	421	451	526	246	195	414
125°	590	602	656	696	711	526
135°	728	740	760	793	804	563
145°	843	843	854	867	871	527
155°	928	923	930	934	929	428
165°	978	974	976	980	976	276
175°	1000	996	997	1001	995	95
180°	998	998	998	998	998	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	930.0	929.3	928.6	927.9	927.2	925.9	924.2	922.6	920.9	919.3	920.5
5°	927.3	926.5	925.5	924.6	923.7	922.4	920.6	918.8	917.1	915.2	917.1
7.5°	919.0	918.4	917.8	917.3	916.7	915.6	914.2	912.9	911.5	910.2	912.3
10°	912.6	912.0	911.4	910.8	910.2	909.5	908.6	907.7	906.8	905.8	908.3
12.5°	901.8	902.0	902.1	902.2	902.3	902.0	901.4	900.7	900.1	899.4	901.8
15°	884.4	885.0	885.7	886.3	886.8	887.1	887.1	887.1	887.1	887.1	889.8
17.5°	861.9	863.1	864.4	865.7	866.9	868.0	869.0	869.9	870.9	871.8	874.6
20°	846.9	848.4	849.9	851.4	852.8	854.2	855.4	856.6	857.8	859.0	862.2
22.5°	830.8	832.5	834.2	836.0	837.7	839.4	841.1	842.7	844.4	846.1	849.4
25°	804.1	806.1	808.2	810.3	812.3	814.8	817.4	820.1	822.7	825.5	829.0
27.5°	771.8	775.3	778.6	782.0	785.5	788.7	791.8	795.1	798.2	801.3	805.9
30°	750.4	754.3	758.2	762.0	765.9	769.8	773.7	777.5	781.4	785.3	790.0
32.5°	726.8	731.1	735.5	739.9	744.3	748.7	753.3	757.9	762.4	767.0	772.5
35°	692.8	697.8	703.0	708.0	713.1	718.4	724.1	729.7	735.4	741.0	747.6
37.5°	655.8	661.7	667.5	673.3	679.1	685.7	693.1	700.4	707.7	715.1	722.4
40°	631.2	637.7	644.3	650.9	657.3	664.7	672.7	680.8	688.8	696.8	704.6
42.5°	607.5	614.1	620.7	627.2	633.8	641.7	650.9	660.1	669.3	678.6	687.0
45°	568.2	576.2	584.2	592.3	600.4	609.6	620.0	630.5	640.9	651.3	660.5
47.5°	529.3	538.1	546.8	555.6	564.3	574.8	587.0	599.3	611.5	623.7	633.3
50°	502.5	511.7	521.0	530.2	539.5	550.8	564.1	577.5	591.0	604.4	614.5
52.5°	476.8	486.5	496.2	505.9	515.6	527.6	541.7	555.7	569.9	584.0	594.3
55°	435.6	446.3	457.0	467.7	478.4	491.5	507.0	522.5	538.0	553.4	564.1
57.5°	394.8	406.9	419.0	431.0	443.1	457.1	472.8	488.7	504.4	520.2	531.8
60°	365.9	378.6	391.4	404.2	417.1	431.9	448.9	465.9	482.8	499.9	511.2
62.5°	340.1	353.4	366.7	379.9	393.2	408.4	425.4	442.3	459.3	476.3	488.3
65°	297.5	312.0	326.7	341.2	355.9	371.9	389.5	407.1	424.6	442.2	454.4
67.5°	258.3	273.6	288.8	304.1	319.3	336.0	354.0	371.9	389.9	407.9	420.2
70°	230.5	246.0	261.5	276.9	292.5	309.4	327.9	346.3	364.8	383.2	396.1
72.5°	204.8	220.8	236.7	252.7	268.6	285.9	304.7	323.4	342.0	360.7	373.3
75°	164.8	181.5	198.1	214.9	231.6	249.4	268.4	287.5	306.6	325.6	338.4
77.5°	126.2	143.7	161.2	178.5	196.0	214.4	233.8	253.2	272.5	291.9	304.6
80°	100.5	118.7	136.8	155.0	173.2	191.9	211.3	230.7	249.9	269.3	281.9
82.5°	79.1	96.9	114.9	132.8	150.8	169.6	189.1	208.7	228.3	247.9	260.4
85°	48.3	66.8	85.1	103.6	122.1	140.9	159.9	178.9	198.0	217.1	229.6
87.5°	26.5	44.5	62.6	80.7	98.8	117.5	136.8	156.1	175.5	194.8	207.1
90°	14.1	33.1	52.2	71.2	90.3	110.0	130.3	150.7	171.0	191.4	204.1
92.5°	27.0	42.8	58.8	74.7	90.6	108.1	127.0	146.0	165.0	184.0	196.1
95°	57.7	66.3	75.0	83.8	92.5	106.3	125.3	144.3	163.3	182.3	194.4
97.5°	102.6	100.1	97.7	95.1	92.6	101.3	121.0	140.8	160.6	180.3	192.0
100°	137.2	126.2	115.3	104.3	93.3	97.6	116.9	136.3	155.8	175.2	187.5
102.5°	174.3	179.8	185.1	190.6	195.9	195.3	188.7	182.1	175.4	168.8	181.3
105°	226.3	239.7	253.2	266.7	280.1	272.7	244.3	216.0	187.6	159.4	171.5
107.5°	287.1	297.9	308.7	319.5	330.3	316.9	279.1	241.4	203.7	165.9	174.2
110°	325.4	334.7	344.1	353.4	362.6	351.4	319.6	287.8	256.0	224.3	217.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	362.3	370.3	378.3	386.4	394.4	399.5	401.9	404.3	406.8	409.2	360.1
115°	420.7	426.8	432.7	438.8	444.7	456.5	473.8	491.3	508.7	526.1	460.7
117.5°	471.5	476.8	481.9	487.2	492.3	502.5	517.7	532.8	548.0	563.1	553.9
120°	509.7	513.3	516.8	520.5	524.1	533.3	548.1	562.9	577.6	592.5	602.8
122.5°	542.1	545.0	548.1	551.1	554.1	562.8	577.1	591.5	605.8	620.2	629.4
125°	590.0	592.1	594.2	596.2	598.3	605.6	618.2	630.9	643.4	656.0	665.1
127.5°	634.6	636.6	638.6	640.7	642.7	648.6	658.6	668.6	678.5	688.5	697.5
130°	663.0	665.2	667.5	669.7	672.1	677.2	685.2	693.2	701.3	709.2	718.1
132.5°	691.9	693.7	695.6	697.5	699.4	703.6	710.2	716.8	723.4	729.9	738.4
135°	728.1	730.6	733.2	735.8	738.3	741.8	746.3	750.6	755.1	759.5	767.4
137.5°	766.1	767.8	769.5	771.2	773.1	775.4	778.3	781.2	784.2	787.2	794.2
140°	790.9	791.9	792.8	793.9	794.9	796.6	798.9	801.2	803.7	806.0	812.2
142.5°	811.7	812.5	813.4	814.3	815.2	816.7	818.8	820.9	823.0	825.3	830.3
145°	843.0	842.8	842.7	842.5	842.4	843.6	846.4	849.1	851.8	854.5	857.5
147.5°	871.5	870.9	870.3	869.7	869.1	870.1	872.8	875.5	878.2	880.9	881.9
150°	890.0	888.9	887.8	886.7	885.4	886.3	888.8	891.3	893.9	896.5	897.5
152.5°	905.5	904.3	903.1	901.8	900.6	901.2	903.6	906.1	908.5	910.9	911.9
155°	928.3	926.9	925.3	923.9	922.5	922.7	924.6	926.6	928.5	930.4	931.4
157.5°	946.0	944.8	943.6	942.4	941.2	941.2	942.6	943.9	945.2	946.6	947.8
160°	956.4	955.4	954.5	953.5	952.6	952.6	953.5	954.5	955.4	956.4	957.5
162.5°	965.7	964.7	963.8	962.8	961.8	961.8	962.6	963.4	964.3	965.1	966.2
165°	978.2	977.1	976.2	975.2	974.2	974.0	974.5	975.0	975.4	975.9	977.0
167.5°	987.3	986.4	985.4	984.5	983.5	983.2	983.7	984.1	984.6	985.0	986.1
170°	992.6	991.6	990.7	989.7	988.8	988.4	988.8	989.1	989.4	989.7	990.8
172.5°	996.0	995.0	994.1	993.1	992.2	991.9	992.2	992.5	992.8	993.1	994.3
175°	1000.5	999.4	998.3	997.1	996.0	995.6	995.9	996.2	996.5	996.9	998.0
177.5°	1001.3	1000.4	999.5	998.6	997.6	997.2	997.3	997.5	997.6	997.7	998.7
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	921.6	922.8	924.0	924.4	923.9	923.4	922.9	922.5
5°	918.8	920.6	922.4	923.1	922.8	922.5	922.2	921.9
7.5°	914.4	916.6	918.8	919.7	919.4	919.1	918.8	918.5
10°	910.6	913.0	915.4	916.5	916.1	915.8	915.5	915.2
12.5°	904.2	906.6	909.0	910.0	909.7	909.4	909.1	908.8
15°	892.4	895.1	897.9	899.0	898.7	898.4	898.1	897.9
17.5°	877.5	880.2	883.0	884.4	884.4	884.4	884.4	884.4
20°	865.6	868.8	872.0	873.7	873.7	873.7	873.7	873.7
22.5°	852.6	856.0	859.2	861.1	861.5	862.0	862.5	863.0
25°	832.6	836.2	839.8	842.0	842.8	843.7	844.7	845.6
27.5°	810.4	815.0	819.4	822.0	822.7	823.3	824.0	824.7
30°	794.8	799.5	804.4	807.2	808.0	808.9	809.8	810.7
32.5°	778.0	783.5	788.9	792.5	794.1	795.7	797.3	798.9
35°	754.2	760.7	767.3	771.5	773.7	775.8	777.8	779.9
37.5°	729.5	736.8	744.1	748.8	751.0	753.3	755.5	757.7
40°	712.3	720.0	727.8	733.0	735.7	738.3	741.0	743.8
42.5°	695.5	704.0	712.5	718.0	720.6	723.4	726.0	728.7
45°	669.7	678.9	688.2	694.3	697.3	700.2	703.3	706.2
47.5°	643.0	652.6	662.3	668.7	672.0	675.3	678.5	681.9
50°	624.6	634.7	644.9	651.6	654.8	658.1	661.4	664.7
52.5°	604.7	615.1	625.4	632.4	635.9	639.4	642.9	646.4
55°	574.9	585.6	596.3	603.6	607.4	611.4	615.2	619.0
57.5°	543.3	554.8	566.4	574.2	578.0	582.0	585.9	589.9
60°	522.5	533.8	545.1	552.8	557.0	561.2	565.3	569.6
62.5°	500.3	512.3	524.3	532.4	536.2	540.2	544.1	548.1
65°	466.7	478.9	491.1	499.1	502.9	506.9	510.7	514.5
67.5°	432.5	444.8	457.3	465.4	469.5	473.5	477.6	481.6
70°	408.9	421.6	434.4	442.6	446.3	449.8	453.4	457.0
72.5°	385.9	398.4	411.0	419.4	423.7	428.0	432.3	436.6
75°	351.2	364.1	376.9	385.2	389.1	392.9	396.8	400.7
77.5°	317.4	330.1	342.8	351.3	355.5	359.6	363.9	368.0
80°	294.4	306.9	319.4	327.7	331.8	336.1	340.2	344.4
82.5°	273.0	285.4	297.9	306.2	310.1	314.0	317.9	321.8
85°	242.1	254.6	267.1	275.5	279.6	283.8	287.9	292.2
87.5°	219.4	231.7	244.0	252.2	256.0	259.8	263.8	267.6
90°	216.7	229.4	242.2	250.4	254.4	258.3	262.2	266.1
92.5°	208.1	220.3	232.4	240.2	244.1	247.8	251.6	255.4
95°	206.5	218.6	230.8	238.5	242.0	245.3	248.7	252.2
97.5°	203.6	215.3	226.9	234.6	238.3	242.1	245.7	249.4
100°	199.8	212.1	224.4	232.4	235.9	239.5	243.2	246.7
102.5°	193.7	206.2	218.6	226.7	230.5	234.2	237.9	241.7
105°	183.7	195.9	208.0	216.1	220.0	224.0	227.8	231.8
107.5°	182.4	190.6	198.7	204.8	208.7	212.7	216.6	220.6
110°	211.2	204.7	198.1	196.8	200.8	204.7	208.6	212.5



TEST NUMBER: P331396-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	311.1	262.1	213.1	190.5	194.2	198.0	201.8	205.6
115°	395.4	329.9	264.6	227.7	219.4	211.2	202.9	194.6
117.5°	544.7	535.6	526.4	504.4	469.5	434.4	399.5	364.6
120°	613.0	623.3	633.6	629.4	611.1	592.7	574.3	555.9
122.5°	638.6	647.9	657.2	661.1	659.7	658.3	656.9	655.5
125°	674.3	683.5	692.7	698.8	702.0	705.1	708.3	711.4
127.5°	706.6	715.6	724.6	730.4	733.2	735.9	738.6	741.3
130°	727.1	736.0	744.9	750.4	752.7	754.9	757.1	759.3
132.5°	746.8	755.3	763.7	769.0	771.2	773.5	775.7	777.9
135°	775.3	783.2	790.9	795.9	798.0	800.0	802.1	804.2
137.5°	801.2	808.3	815.4	819.6	821.1	822.5	824.0	825.6
140°	818.4	824.7	830.8	834.5	835.4	836.4	837.4	838.4
142.5°	835.5	840.6	845.8	848.7	849.4	850.2	850.9	851.6
145°	860.4	863.3	866.3	868.0	868.7	869.4	870.1	870.8
147.5°	883.0	884.1	885.1	885.8	885.8	885.9	885.9	885.9
150°	898.4	899.4	900.3	900.4	899.6	898.8	898.0	897.2
152.5°	912.8	913.8	914.8	914.7	913.7	912.6	911.6	910.5
155°	932.4	933.3	934.3	934.1	932.8	931.6	930.3	929.0
157.5°	948.8	949.9	951.0	950.9	949.7	948.4	947.2	945.9
160°	958.4	959.4	960.3	960.2	959.1	958.0	956.8	955.7
162.5°	967.2	968.4	969.5	969.4	968.0	966.5	965.2	963.8
165°	978.2	979.4	980.5	980.5	979.4	978.2	977.0	975.9
167.5°	987.3	988.5	989.6	989.4	988.0	986.5	985.0	983.6
170°	991.9	993.0	994.2	994.0	992.6	991.1	989.7	988.3
172.5°	995.4	996.5	997.6	997.4	996.0	994.6	993.1	991.7
175°	999.2	1000.3	1001.4	1001.2	999.6	997.9	996.3	994.7
177.5°	999.6	1000.5	1001.4	1001.3	1000.1	999.0	997.7	996.6
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4

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