

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: P331397-840

Luminaire Tested: **SA2XXDIP-C865D725U840-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331397-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
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-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6146.8 lumens
Efficiency: N/A
Efficacy: 113.0 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

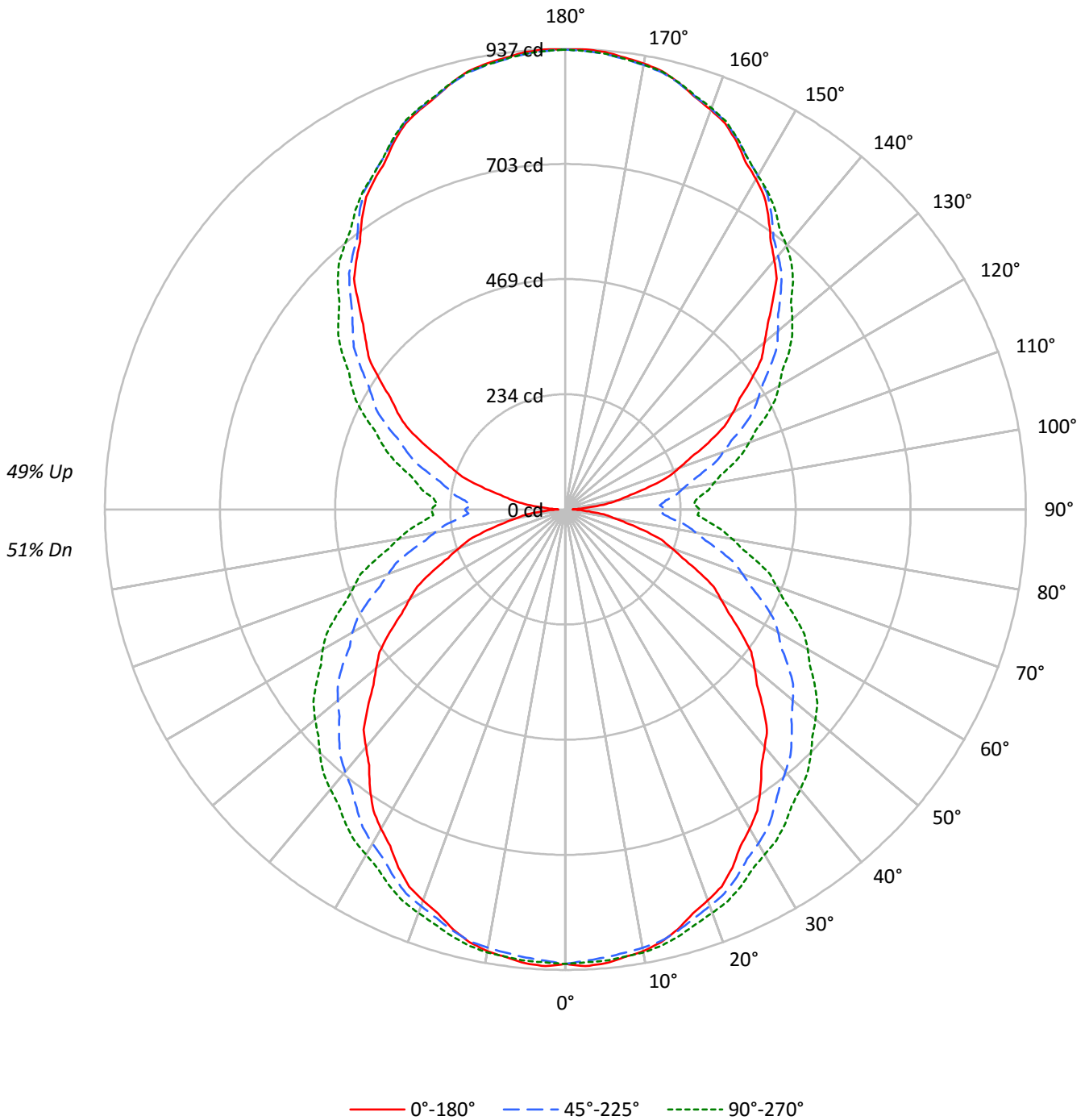
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331397-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D1

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	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	96	91	87	83	89	84	81	77	71	68	66	59	57	55	48	47	45	40
2	87	79	72	67	80	73	67	62	62	57	53	51	48	45	41	39	37	32
3	79	69	61	55	73	64	57	51	54	48	44	45	41	37	36	33	31	27
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	29	26	22
5	66	54	45	39	61	50	42	36	42	36	32	35	31	27	29	25	22	19
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	20	17
7	56	43	35	29	52	40	33	27	34	28	24	29	24	21	24	20	17	15
8	52	39	31	26	48	37	29	24	31	25	21	26	22	18	22	18	15	13
9	48	36	28	23	45	33	26	22	29	23	19	24	20	16	20	16	14	12
10	45	33	25	20	42	31	24	19	26	21	17	22	18	15	18	15	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



TEST NUMBER: P331397-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	1.4
10°-20°	251.2	4.1
20°-30°	380.7	6.2
30°-40°	463.7	7.5
40°-50°	498.9	8.1
50°-60°	484.5	7.9
60°-70°	423.0	6.9
70°-80°	325.7	5.3
80°-90°	222.3	3.6
90°-100°	209.8	3.4
100°-110°	294.0	4.8
110°-120°	387.3	6.3
120°-130°	454.3	7.4
130°-140°	481.4	7.8
140°-150°	458.4	7.5
150°-160°	382.0	6.2
160°-170°	253.3	4.1
170°-180°	88.5	1.4
0°-30°	719.6	11.7
0°-40°	1183.3	19.3
0°-60°	2166.6	35.2
0°-90°	3137.6	51.0
90°-120°	891.2	14.5
90°-150°	2285.3	37.2
90°-180°	3009.0	49.0
0°-180°	6146.8	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	102	204	255	273	11
95°	52	123	205	253	270	56
105°	176	219	289	336	352	187
115°	321	343	399	437	451	317
125°	462	471	510	542	555	413
135°	596	605	619	646	655	460
145°	721	727	732	740	744	451
155°	825	827	830	833	831	380
165°	898	897	897	902	898	253
175°	934	932	930	935	931	89
180°	935	935	935	935	935	



TEST NUMBER: P331397-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D1

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	44.6	62.7	80.9	99.1	118.1	137.9	157.7	177.6	197.4	209.5
90°	14.2	33.5	52.9	72.3	91.7	112.8	135.7	158.6	181.6	204.5	216.1
92.5°	26.4	44.0	61.6	79.3	96.8	115.3	134.6	153.8	173.1	192.4	204.1
95°	51.8	67.6	83.3	99.0	114.7	131.8	150.0	168.1	186.4	204.6	215.9
97.5°	84.3	98.4	112.4	126.3	140.4	156.2	174.1	191.9	209.6	227.5	238.5
100°	109.7	122.1	134.5	146.9	159.4	174.1	191.4	208.5	225.7	243.0	254.0
102.5°	135.1	146.2	157.4	168.6	179.9	193.9	210.8	227.6	244.5	261.4	272.3
105°	176.4	185.6	194.7	203.9	213.1	225.6	241.4	257.2	273.1	288.9	299.6
107.5°	219.4	227.1	234.8	242.5	250.1	261.4	276.2	291.0	305.9	320.7	330.8
110°	246.1	253.1	260.1	267.1	274.2	285.0	299.5	314.2	328.7	343.4	352.8



TEST NUMBER: P331397-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	276.4	282.5	288.5	294.6	300.6	310.5	324.3	338.0	351.7	365.5	374.6
115°	321.1	325.5	329.7	334.1	338.4	347.1	360.1	373.2	386.3	399.3	408.1
117.5°	364.3	367.8	371.3	375.0	378.5	386.0	397.4	408.8	420.2	431.6	440.0
120°	393.9	396.6	399.2	401.7	404.3	410.9	421.4	431.9	442.4	452.9	461.3
122.5°	421.1	423.2	425.5	427.6	429.8	436.0	446.2	456.4	466.6	476.8	484.4
125°	462.1	463.6	465.2	466.9	468.4	473.7	482.7	491.7	500.7	509.7	517.3
127.5°	503.3	505.0	506.6	508.4	510.1	514.4	521.5	528.6	535.6	542.7	549.5
130°	529.2	531.2	533.1	535.1	537.1	541.1	546.9	552.9	558.8	564.6	571.5
132.5°	558.3	559.8	561.4	562.9	564.5	567.7	572.6	577.4	582.4	587.2	593.4
135°	595.7	597.6	599.6	601.5	603.4	606.0	609.4	612.7	616.0	619.4	625.5
137.5°	636.6	638.1	639.6	641.2	642.7	644.3	646.1	647.8	649.6	651.4	656.7
140°	661.3	662.5	663.8	665.1	666.4	667.7	669.2	670.7	672.2	673.6	678.4
142.5°	686.5	687.8	689.0	690.3	691.7	692.7	693.4	694.1	694.8	695.5	699.4
145°	721.4	722.7	724.0	725.2	726.4	727.5	728.6	729.6	730.6	731.7	733.7
147.5°	753.9	755.3	756.8	758.2	759.7	760.8	761.5	762.2	763.0	763.7	764.3
150°	776.0	777.0	778.0	779.1	780.1	781.0	781.7	782.4	783.2	783.9	784.4
152.5°	795.5	796.6	797.6	798.7	799.7	800.6	801.5	802.3	803.1	804.1	804.7
155°	824.9	825.4	826.0	826.5	827.0	827.5	828.0	828.6	829.1	829.6	830.5
157.5°	850.0	850.3	850.7	851.0	851.4	851.7	852.0	852.3	852.6	852.9	854.1
160°	865.2	865.5	865.9	866.2	866.6	866.8	867.0	867.2	867.4	867.5	868.6
162.5°	879.0	879.1	879.2	879.2	879.3	879.4	879.6	879.8	880.0	880.1	881.3
165°	897.5	897.4	897.2	897.0	896.8	896.7	896.7	896.7	896.7	896.7	898.0
167.5°	912.9	912.4	911.9	911.4	910.9	910.6	910.6	910.5	910.5	910.4	911.7
170°	921.2	920.7	920.1	919.6	919.1	918.7	918.6	918.4	918.2	918.0	919.3
172.5°	926.9	926.3	925.8	925.2	924.7	924.4	924.2	924.0	923.9	923.7	924.9
175°	933.8	933.3	932.7	932.2	931.7	931.3	930.9	930.6	930.2	929.9	931.1
177.5°	936.6	936.2	935.8	935.3	934.9	934.6	934.3	934.0	933.7	933.5	934.3
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3



TEST NUMBER: P331397-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D1

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°	221.6	233.7	245.7	253.7	257.5	261.4	265.2	269.1
90°	227.6	239.2	250.7	258.4	262.2	265.9	269.6	273.4
92.5°	215.8	227.5	239.3	247.0	250.5	254.2	257.8	261.5
95°	227.2	238.5	249.8	257.1	260.3	263.6	266.8	270.0
97.5°	249.5	260.5	271.6	278.8	282.4	285.8	289.2	292.8
100°	265.0	276.0	287.0	294.1	297.2	300.2	303.4	306.5
102.5°	283.2	294.1	305.0	312.0	315.1	318.2	321.3	324.4
105°	310.4	321.2	332.0	339.0	342.3	345.6	348.8	352.1
107.5°	341.0	351.1	361.3	367.6	370.0	372.5	375.0	377.5
110°	362.3	371.9	381.4	387.6	390.3	393.0	395.8	398.6



TEST NUMBER: P331397-840

CATALOG NUMBER: SA2XXDIP-C865D725U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	383.7	392.8	401.9	407.9	410.8	413.7	416.6	419.5
115°	416.8	425.6	434.3	440.1	442.8	445.6	448.4	451.1
117.5°	448.4	456.8	465.1	470.6	473.1	475.6	478.2	480.6
120°	469.6	478.0	486.3	491.8	494.5	497.4	500.1	502.8
122.5°	492.2	499.9	507.6	512.6	514.9	517.4	519.8	522.2
125°	524.7	532.2	539.8	544.7	547.2	549.8	552.3	554.8
127.5°	556.2	562.9	569.7	574.1	576.1	578.2	580.3	582.3
130°	578.2	585.0	591.9	596.1	597.7	599.5	601.2	602.8
132.5°	599.6	605.7	611.8	615.8	617.6	619.5	621.3	623.1
135°	631.6	637.6	643.7	647.6	649.5	651.4	653.3	655.1
137.5°	662.1	667.4	672.8	676.1	677.4	678.7	680.0	681.4
140°	683.2	687.9	692.7	695.6	696.7	697.8	698.8	699.9
142.5°	703.4	707.3	711.2	713.7	714.6	715.4	716.2	717.1
145°	735.7	737.6	739.6	740.9	741.7	742.6	743.4	744.1
147.5°	764.9	765.5	766.1	766.5	766.5	766.6	766.6	766.7
150°	784.9	785.4	786.0	786.0	785.4	784.9	784.4	783.9
152.5°	805.4	806.1	806.7	806.7	806.1	805.4	804.7	804.1
155°	831.3	832.2	833.1	833.3	832.7	832.2	831.7	831.2
157.5°	855.4	856.6	857.8	857.9	857.1	856.3	855.4	854.5
160°	869.6	870.7	871.7	871.9	871.2	870.5	869.8	869.1
162.5°	882.5	883.7	884.9	885.0	884.2	883.4	882.5	881.7
165°	899.2	900.4	901.6	901.8	900.9	900.0	899.2	898.3
167.5°	912.9	914.1	915.3	915.5	914.6	913.7	912.8	911.9
170°	920.5	921.7	922.9	923.0	922.0	920.9	919.9	918.8
172.5°	926.1	927.4	928.6	928.7	927.7	926.6	925.5	924.5
175°	932.3	933.5	934.7	934.8	933.8	932.7	931.7	930.7
177.5°	935.1	936.0	936.9	936.9	936.0	935.1	934.3	933.5
180°	935.3	935.3	935.3	935.3	935.3	935.3	935.3	935.3

(END OF REPORT)