

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: P331398

Luminaire Tested: **SA2XXDIP-C865D725U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331398
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

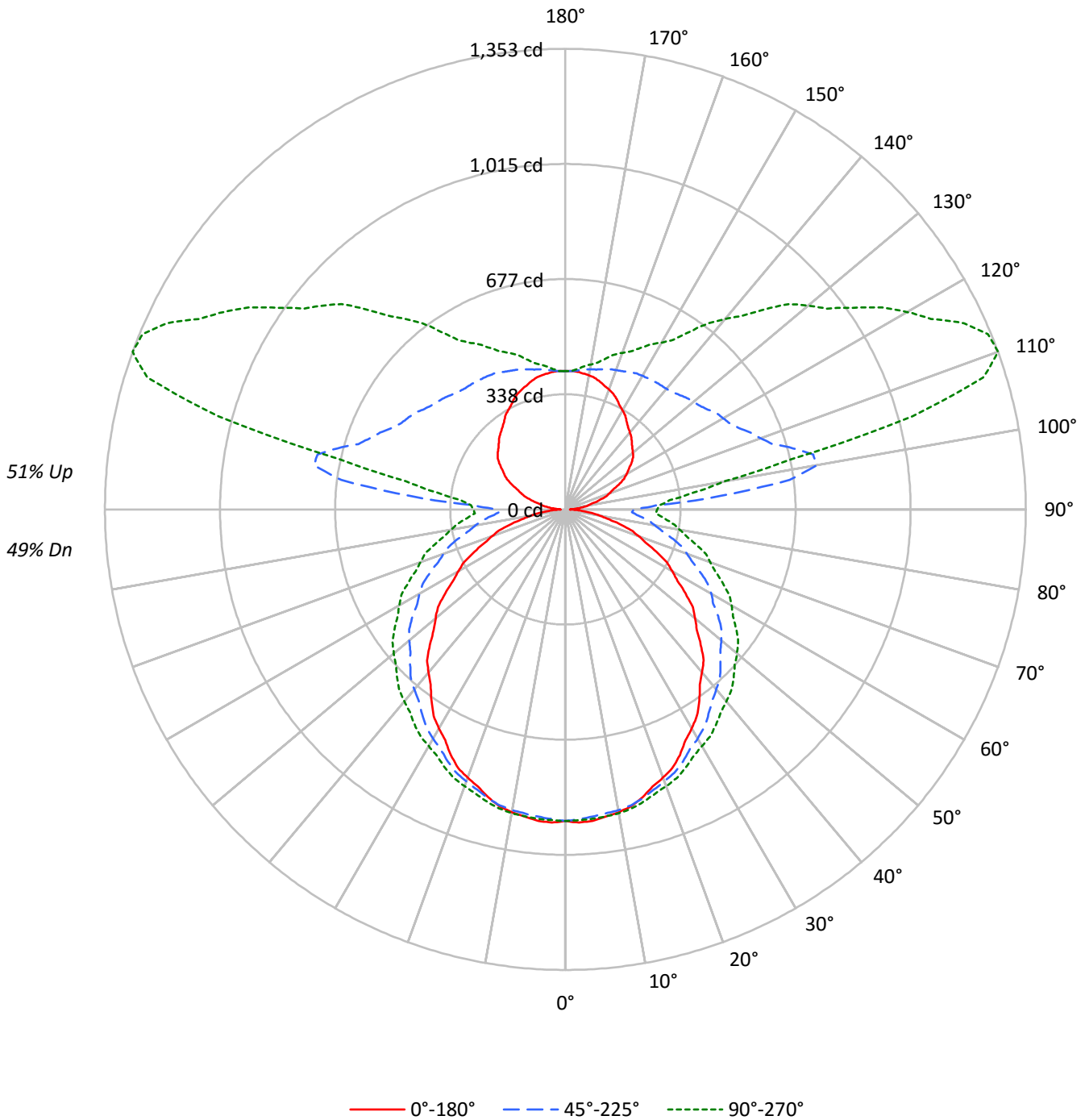
Lumens per Lamp: N/A
Luminaire Lumens: 6325.3 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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: P331398
CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331398

CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

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	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	47	45	44	38
2	87	79	72	66	80	73	67	62	61	56	53	50	47	44	40	38	36	31
3	79	69	61	55	72	63	56	51	53	48	44	44	40	37	35	32	30	26
4	72	60	52	46	66	56	48	43	47	41	37	39	34	31	31	28	25	21
5	66	54	45	39	60	50	42	36	42	36	31	35	30	26	28	24	22	18
6	61	48	40	33	55	44	37	31	38	32	27	31	27	23	25	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	19	17	14
8	52	39	31	26	48	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	21	17	22	17	14	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



TEST NUMBER: P331398

CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	1.4
10°-20°	248.8	3.9
20°-30°	377.0	6.0
30°-40°	459.2	7.3
40°-50°	494.0	7.8
50°-60°	479.7	7.6
60°-70°	418.9	6.6
70°-80°	322.5	5.1
80°-90°	220.1	3.5
90°-100°	311.6	4.9
100°-110°	660.4	10.4
110°-120°	657.8	10.4
120°-130°	522.5	8.3
130°-140°	404.2	6.4
140°-150°	295.6	4.7
150°-160°	205.7	3.3
160°-170°	121.1	1.9
170°-180°	39.4	0.6
0°-30°	712.5	11.3
0°-40°	1171.7	18.5
0°-60°	2145.5	33.9
0°-90°	3106.9	49.1
90°-120°	1629.9	25.8
90°-150°	2852.2	45.1
90°-180°	3218.0	50.9
0°-180°	6325.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	101	202	252	270	10
95°	38	141	459	317	308	37
105°	102	191	693	1194	1056	109
115°	173	235	564	1118	1293	171
125°	237	282	511	890	1033	211
135°	276	330	475	722	832	214
145°	314	361	458	577	637	197
155°	357	386	445	503	523	164
165°	389	401	426	452	459	110
175°	406	406	410	415	414	39
180°	406	406	406	406	406	



TEST NUMBER: P331398

CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.2	44.2	62.4	80.3	98.2	116.9	136.5	156.5	176.3	195.3	207.2
90°	14.1	33.5	53.7	72.4	91.1	111.4	134.2	158.5	182.1	201.7	212.7
92.5°	21.7	41.9	63.4	82.8	104.0	128.4	164.3	207.3	247.7	267.2	263.0
95°	38.0	55.0	76.6	97.5	123.9	158.4	212.1	297.8	406.2	459.0	431.9
97.5°	53.8	70.4	91.0	114.0	140.7	176.6	238.8	350.5	518.2	664.3	700.9
100°	69.5	82.7	100.7	124.1	150.6	186.2	244.2	356.1	541.4	750.2	873.7
102.5°	82.8	94.5	111.5	134.0	160.2	195.1	249.4	350.2	522.6	745.9	933.6
105°	102.0	113.7	127.7	148.0	173.7	207.6	259.6	344.5	488.9	693.4	911.6
107.5°	124.2	133.6	145.7	163.4	187.3	220.1	270.4	345.7	467.1	638.1	831.7
110°	138.2	147.2	157.8	173.9	196.2	229.0	277.9	348.6	458.4	610.4	781.7



TEST NUMBER: P331398

CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.0	160.0	170.3	184.8	205.5	238.2	285.1	352.0	452.3	589.3	744.2
115°	173.4	180.5	188.5	201.1	220.0	249.3	296.2	357.2	446.3	564.3	696.6
117.5°	194.2	199.5	206.3	216.7	233.9	262.9	306.3	363.3	442.0	546.0	662.2
120°	208.0	212.3	218.2	226.4	243.2	271.6	313.9	367.9	439.9	535.3	642.8
122.5°	221.1	224.1	229.3	237.4	253.5	281.8	321.5	371.7	438.6	526.4	625.6
125°	237.2	239.5	244.2	253.6	269.2	295.8	333.4	378.0	435.9	511.0	599.5
127.5°	250.9	253.8	260.0	270.0	284.8	310.9	345.9	385.1	434.9	498.8	575.2
130°	259.1	261.9	269.4	280.1	295.4	320.2	353.8	389.7	435.0	491.2	559.2
132.5°	266.6	270.0	278.2	289.4	305.4	329.5	360.4	394.3	435.0	484.2	545.1
135°	276.5	279.6	289.0	300.7	318.7	342.1	370.0	400.3	434.5	475.0	525.8
137.5°	287.1	290.8	300.1	312.6	330.3	351.3	377.3	404.1	433.8	467.2	510.0
140°	295.2	298.1	307.2	319.4	336.3	356.8	380.8	405.6	432.8	462.3	500.6
142.5°	303.4	305.6	314.0	326.3	342.5	361.5	384.5	408.2	433.0	460.2	493.2
145°	314.2	317.4	325.2	336.9	352.5	369.7	390.9	412.7	434.6	458.1	484.9
147.5°	327.4	329.7	337.2	348.0	361.0	376.3	396.2	415.4	435.3	455.3	477.4
150°	336.1	338.5	344.7	354.9	366.6	380.7	398.7	416.6	434.6	453.4	472.1
152.5°	344.9	346.0	352.2	361.1	372.2	385.1	401.2	417.3	433.4	450.3	467.8
155°	357.2	358.0	362.7	371.3	379.9	391.6	404.9	418.2	431.5	444.8	459.6
157.5°	367.6	368.3	372.1	379.6	386.5	396.3	407.6	418.2	427.9	439.2	452.0
160°	374.4	375.2	378.3	384.6	390.9	399.4	408.8	418.2	426.0	435.4	446.4
162.5°	381.3	380.8	384.0	389.0	394.6	401.3	409.5	417.6	424.2	432.3	441.3
165°	389.3	388.5	390.1	394.8	398.7	403.4	410.4	415.9	420.6	426.0	433.1
167.5°	395.9	394.9	396.3	399.3	402.1	405.1	410.2	414.8	417.0	420.6	424.9
170°	400.2	398.7	399.4	401.8	403.4	405.7	409.6	413.5	415.1	417.4	420.6
172.5°	402.7	401.8	401.3	403.7	404.6	406.3	409.0	411.6	412.6	413.7	416.2
175°	405.7	404.9	404.1	405.7	405.7	406.5	408.0	409.6	408.8	409.6	410.4
177.5°	407.1	405.9	405.2	406.5	406.5	406.5	407.1	408.4	407.1	406.5	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5



TEST NUMBER: P331398

CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	219.1	230.8	243.1	251.2	255.0	258.8	262.5	266.3
90°	223.8	234.0	247.4	255.8	259.3	262.9	266.4	270.0
92.5°	256.9	258.8	263.7	266.4	269.4	270.4	274.6	276.8
95°	379.8	343.3	321.7	311.9	305.3	302.5	303.7	308.1
97.5°	640.9	564.9	491.3	442.0	408.1	392.4	384.4	381.4
100°	868.2	782.2	686.0	598.5	536.9	506.5	487.1	476.2
102.5°	1014.8	1003.6	935.9	842.7	775.4	721.3	696.2	680.4
105°	1084.5	1183.2	1203.7	1184.6	1139.4	1094.2	1063.8	1056.1
107.5°	1014.0	1157.0	1248.2	1292.6	1301.9	1302.5	1299.1	1287.8
110°	956.1	1105.4	1214.9	1285.4	1322.2	1340.3	1350.6	1353.1



TEST NUMBER: P331398

CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	902.4	1046.1	1162.5	1242.3	1292.3	1320.4	1336.9	1344.4
115°	834.5	963.7	1074.9	1161.5	1220.2	1259.4	1283.0	1293.3
117.5°	780.5	894.9	996.5	1077.9	1137.5	1178.5	1202.9	1211.9
120°	751.9	857.1	948.2	1025.1	1083.1	1123.1	1149.0	1160.0
122.5°	728.2	825.0	911.5	981.2	1033.0	1071.9	1094.9	1104.2
125°	692.7	781.1	857.9	921.8	969.8	1002.2	1024.4	1033.3
127.5°	657.6	737.7	809.9	869.0	911.1	941.6	961.0	968.6
130°	635.1	709.4	778.2	834.5	875.2	904.1	922.1	930.7
132.5°	613.2	682.3	745.9	799.0	839.0	867.9	884.7	892.7
135°	582.8	640.6	698.3	746.4	782.4	810.5	826.9	832.4
137.5°	556.8	605.4	651.8	693.6	726.3	750.5	764.8	771.5
140°	540.5	582.8	623.4	661.1	687.9	710.0	723.4	729.9
142.5°	527.8	563.4	598.2	629.6	654.9	674.9	686.9	689.3
145°	510.9	538.4	564.4	588.7	609.0	623.7	633.0	636.8
147.5°	498.3	518.8	538.0	555.0	571.2	582.5	588.6	590.7
150°	490.9	508.1	524.5	538.6	550.3	559.7	564.4	565.2
152.5°	484.0	500.0	513.9	526.1	535.3	543.4	546.9	547.0
155°	474.5	487.0	498.7	507.3	515.9	521.4	524.5	523.0
157.5°	463.4	473.9	483.7	490.4	496.5	501.1	502.5	502.5
160°	456.5	465.1	473.7	479.2	484.7	488.6	489.3	489.3
162.5°	449.6	457.0	464.3	468.6	474.0	476.7	477.5	476.8
165°	439.3	444.8	450.3	453.4	456.5	459.6	459.6	458.9
167.5°	429.5	433.7	437.4	440.3	441.7	443.4	443.2	442.3
170°	424.5	426.8	429.9	431.5	432.3	434.6	433.8	432.3
172.5°	418.8	420.6	423.1	424.0	424.8	425.9	425.1	424.2
175°	412.7	413.5	414.3	415.1	415.1	415.9	415.1	413.5
177.5°	408.4	408.4	409.0	409.0	409.0	409.0	408.4	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5

(END OF REPORT)