

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: P331353

Luminaire Tested: **SA2XXDIP-C675D725U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331353
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-C675D725U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 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: 5519.5 lumens
Efficiency: N/A
Efficacy: 120.3 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

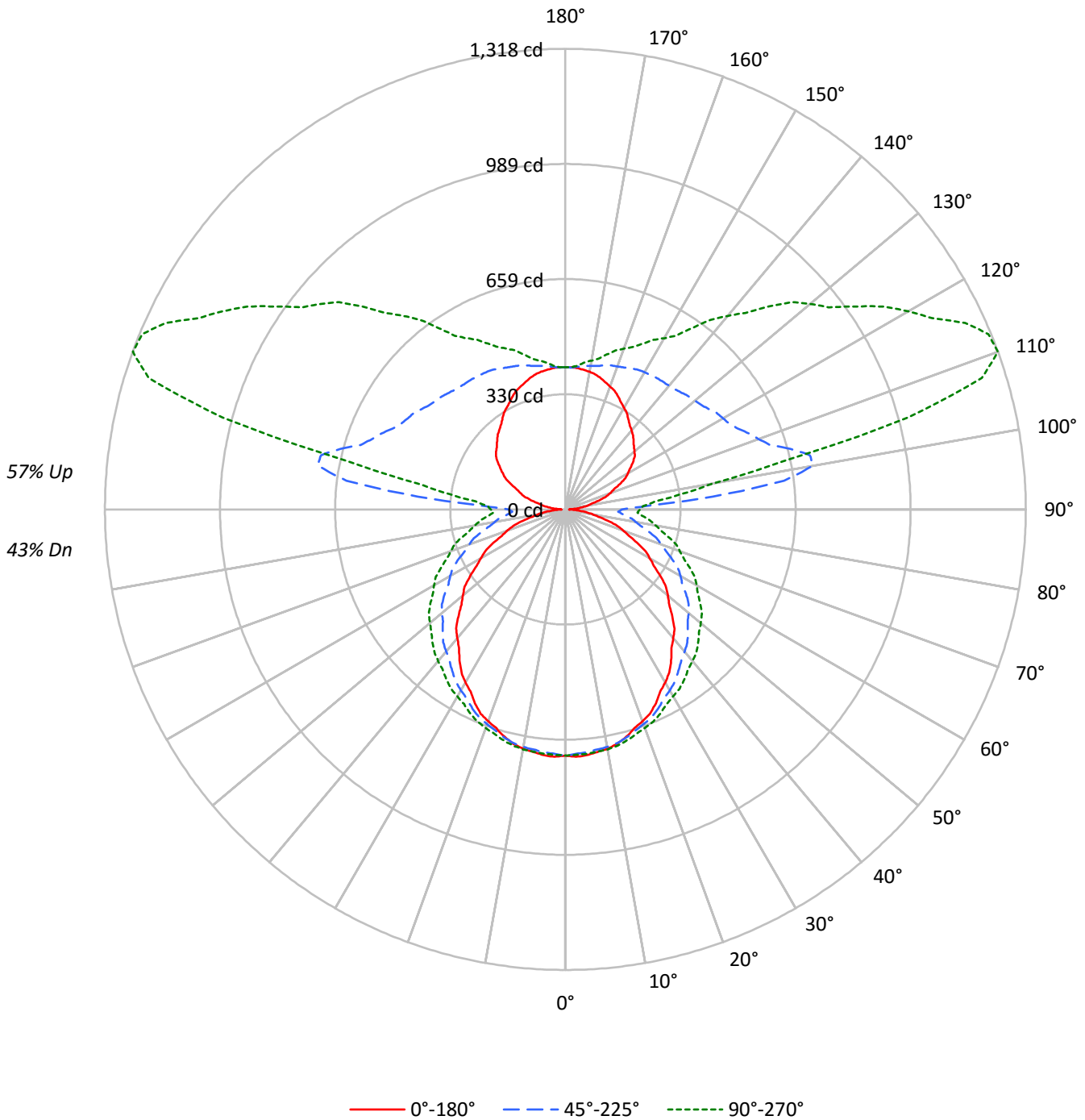
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43				
1	95	90	86	82	86	82	79	75	68	65	63	54	53	51	42	41	40	34				
2	86	78	71	66	78	71	66	61	59	54	51	47	44	41	36	34	32	27				
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22				
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19				
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16				
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14				
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	18	15	12				
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11				
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10				
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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CATALOG NUMBER: SA2XXDIP-C675D725U835-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.2
10°-20°	191.4	3.5
20°-30°	290.0	5.3
30°-40°	353.3	6.4
40°-50°	380.0	6.9
50°-60°	369.1	6.7
60°-70°	322.3	5.8
70°-80°	248.1	4.5
80°-90°	170.2	3.1
90°-100°	277.2	5.0
100°-110°	635.3	11.5
110°-120°	641.2	11.6
120°-130°	513.2	9.3
130°-140°	400.3	7.3
140°-150°	295.0	5.3
150°-160°	205.7	3.7
160°-170°	121.1	2.2
170°-180°	39.4	0.7
0°-30°	548.2	9.9
0°-40°	901.4	16.3
0°-60°	1650.6	29.9
0°-90°	2391.1	43.3
90°-120°	1553.8	28.2
90°-150°	2762.2	50.0
90°-180°	3128.0	56.7
0°-180°	5519.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	80	161	199	214	8
95°	36	124	424	270	258	35
105°	100	180	667	1158	1016	107
115°	172	229	546	1091	1262	170
125°	237	281	501	871	1012	210
135°	276	330	472	713	820	214
145°	314	361	458	575	634	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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.2	34.2	48.3	62.1	76.0	90.5	105.8	121.4	136.8	151.5	160.6
90°	11.0	26.5	42.8	57.5	72.2	88.4	106.8	126.8	146.0	161.3	169.6
92.5°	18.9	35.4	53.3	69.0	86.5	107.0	138.6	177.5	213.6	229.0	222.1
95°	35.5	49.3	67.8	85.5	108.7	139.6	189.1	270.7	375.0	423.8	394.1
97.5°	51.7	65.4	83.2	103.3	127.2	159.7	217.9	325.8	489.5	631.7	665.8
100°	67.3	78.1	93.5	114.4	138.4	170.9	225.0	333.1	514.6	719.6	840.6
102.5°	80.9	90.3	105.0	125.2	149.1	181.0	231.6	328.7	497.4	717.0	902.2
105°	100.5	110.2	122.2	140.5	164.3	195.4	243.9	325.3	466.1	667.0	882.9
107.5°	122.8	130.5	141.1	157.2	179.5	209.8	256.7	328.7	446.6	614.3	805.6
110°	137.0	144.6	153.9	168.6	189.5	220.0	265.5	332.9	439.4	588.1	757.2



TEST NUMBER: P331353

CATALOG NUMBER: SA2XXDIP-C675D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150.7	157.7	166.8	180.1	199.7	230.2	273.9	337.7	434.9	568.6	721.4
115°	172.1	178.6	185.7	197.6	215.7	243.2	287.0	344.9	430.9	545.9	676.2
117.5°	193.3	198.1	204.4	214.3	231.0	258.4	298.9	353.1	429.0	530.2	644.3
120°	207.1	211.1	216.7	224.7	241.2	268.1	307.6	358.9	428.2	520.9	626.5
122.5°	220.2	223.1	228.1	236.2	252.2	279.1	316.3	363.9	428.2	513.5	610.8
125°	236.6	238.9	243.6	253.0	268.6	294.1	329.5	372.0	427.7	500.6	587.2
127.5°	250.3	253.2	259.5	269.6	284.4	309.7	343.0	380.4	428.5	490.6	565.3
130°	258.4	261.3	268.9	279.6	295.1	319.2	351.3	385.8	429.7	484.4	550.9
132.5°	265.9	269.5	277.7	289.0	305.1	328.7	358.5	391.2	430.8	478.9	538.3
135°	276.2	279.3	288.7	300.4	318.4	341.4	368.7	398.3	431.9	471.7	521.0
137.5°	286.8	290.5	299.9	312.3	330.1	350.9	376.6	403.1	432.5	465.6	507.1
140°	294.9	297.8	307.0	319.3	336.2	356.7	380.6	405.3	432.3	461.7	498.9
142.5°	303.1	305.3	313.9	326.2	342.5	361.5	384.4	408.1	432.9	460.0	492.2
145°	314.2	317.4	325.2	336.9	352.5	369.7	390.9	412.7	434.6	458.1	484.5
147.5°	327.4	329.7	337.2	348.0	361.0	376.3	396.2	415.4	435.3	455.3	477.3
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: P331353

CATALOG NUMBER: SA2XXDIP-C675D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	169.7	178.6	188.2	194.4	197.4	200.3	203.2	206.1
90°	177.9	185.4	196.1	202.7	205.5	208.2	210.9	213.6
92.5°	213.4	212.6	214.9	215.8	217.9	218.2	221.5	223.0
95°	339.4	300.4	276.2	264.6	257.2	253.7	254.1	257.6
97.5°	603.3	524.8	448.6	397.7	363.0	346.5	337.7	333.8
100°	832.6	744.0	645.3	556.2	493.8	462.7	442.5	430.9
102.5°	981.0	967.3	897.2	802.3	734.3	679.4	653.6	637.0
105°	1053.4	1149.7	1167.8	1147.2	1101.3	1055.3	1024.2	1015.7
107.5°	985.7	1126.3	1215.2	1258.1	1266.7	1266.6	1262.3	1250.3
110°	929.4	1076.6	1183.9	1252.8	1289.0	1306.3	1315.8	1317.5



TEST NUMBER: P331353

CATALOG NUMBER: SA2XXDIP-C675D725U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	877.4	1018.9	1133.1	1211.5	1260.7	1288.1	1303.9	1310.6
115°	812.0	939.2	1048.4	1133.6	1191.6	1230.0	1252.8	1262.4
117.5°	760.6	873.0	972.6	1052.6	1111.5	1151.8	1175.6	1183.8
120°	733.7	837.0	926.2	1001.8	1059.0	1098.2	1123.4	1133.7
122.5°	711.6	806.6	891.2	959.6	1010.8	1049.1	1071.4	1080.1
125°	678.6	765.2	840.1	902.8	950.2	982.0	1003.6	1011.8
127.5°	646.0	724.5	795.0	852.9	894.4	924.3	943.1	950.1
130°	625.1	697.8	765.0	820.2	860.3	888.7	906.1	914.2
132.5°	604.8	672.3	734.3	786.3	825.8	854.2	870.4	877.9
135°	576.5	632.9	689.3	736.3	771.8	799.4	815.2	820.2
137.5°	552.7	600.0	645.2	686.2	718.4	742.1	756.0	762.2
140°	537.7	578.9	618.5	655.4	681.7	703.4	716.5	722.6
142.5°	525.9	560.7	594.5	625.4	650.3	669.9	681.6	683.7
145°	510.0	537.2	562.8	586.7	606.6	621.0	630.0	633.5
147.5°	498.2	518.7	537.8	554.7	570.7	581.9	587.7	589.7
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

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