

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: P331374-830

Luminaire Tested: **SA2XXDIP-C675D1080U830-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331374-830
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-C675D1080U830-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

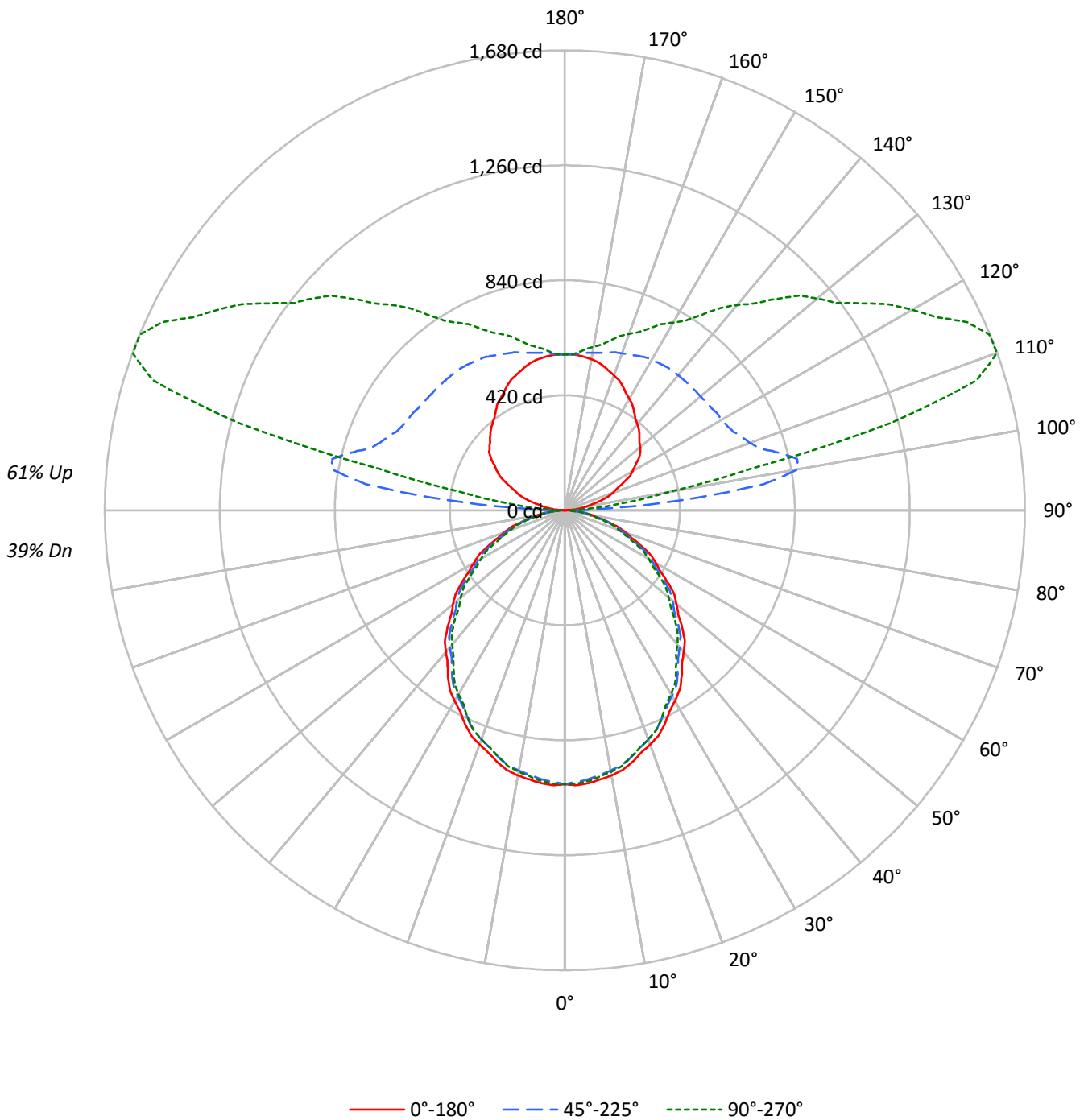
Lumens per Lamp: N/A
Luminaire Lumens: 6513.0 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 56.9
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	0
RCR																		
0	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	84	87	83	80	77	68	65	63	54	52	51	41	40	39	33
2	87	80	73	68	79	72	67	63	59	56	52	47	45	42	36	34	33	28
3	79	70	63	57	72	64	58	53	52	48	44	42	38	36	32	30	28	23
4	72	62	54	48	66	56	50	44	46	41	37	37	34	31	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	27	26	23	21	17
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	21	18	15
7	56	44	37	31	51	41	34	29	34	29	25	27	23	20	21	18	16	14
8	52	40	33	27	47	37	30	26	31	26	22	25	21	18	19	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	18	21	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16157	16157	16157
5°	16219	15985	16078
10°	16123	15823	15901
15°	15921	15616	15600
20°	15639	15309	15292
25°	15358	14931	14931
30°	14997	14585	14458
35°	14661	14168	13957
40°	14235	13748	13487
45°	13819	13337	13006
50°	13366	12906	12446
55°	12892	12405	11944
60°	12368	11806	11370
65°	11801	11213	10697
70°	11084	10494	9994
75°	10081	9669	9426
80°	8945	8675	8229
85°	7317	6947	6224



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	1.4
10°-20°	264.8	4.1
20°-30°	389.2	6.0
30°-40°	452.1	6.9
40°-50°	451.6	6.9
50°-60°	393.8	6.0
60°-70°	291.2	4.5
70°-80°	164.9	2.5
80°-90°	49.5	0.8
90°-100°	227.7	3.5
100°-110°	772.5	11.9
110°-120°	820.7	12.6
120°-130°	675.6	10.4
130°-140°	542.5	8.3
140°-150°	410.0	6.3
150°-160°	288.1	4.4
160°-170°	169.6	2.6
170°-180°	55.2	0.8
0°-30°	748.0	11.5
0°-40°	1200.1	18.4
0°-60°	2045.4	31.4
0°-90°	2551.0	39.2
90°-120°	1820.9	28.0
90°-150°	3449.0	53.0
90°-180°	3962.0	60.8
0°-180°	6513.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	1001	996	986	993	992	95
15°	952	946	934	938	933	268
25°	862	854	838	840	838	396
35°	744	734	719	713	708	464
45°	605	598	584	574	570	467
55°	458	452	441	430	424	409
65°	309	303	294	285	280	305
75°	162	160	155	150	151	173
85°	40	38	38	35	34	45
90°	1	15	37	36	36	4
95°	38	94	429	162	125	41
105°	134	202	811	1450	1234	142
115°	235	297	679	1401	1624	233
125°	328	389	653	1135	1317	292
135°	385	460	645	954	1092	298
145°	440	506	642	797	872	276
155°	500	540	623	705	732	230
165°	545	562	597	633	643	154
175°	568	569	574	581	579	54
180°	569	569	569	569	569	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1005.3	1004.5	1003.6	1002.8	1001.9	1000.5	998.6	996.7	994.9	993.0	994.7
5°	1000.7	999.8	999.0	998.2	997.3	995.7	993.3	991.0	988.6	986.3	988.0
7.5°	991.8	990.5	989.2	987.9	986.6	984.7	982.3	979.9	977.5	975.1	976.8
10°	983.4	981.8	980.3	978.8	977.4	975.3	972.8	970.3	967.6	965.1	966.8
12.5°	971.9	970.5	969.1	967.8	966.5	964.6	962.0	959.4	956.9	954.3	955.5
15°	952.5	951.3	950.0	948.8	947.4	945.4	942.6	939.8	937.1	934.2	935.2
17.5°	927.9	926.6	925.4	924.1	922.8	920.8	917.9	915.1	912.3	909.5	910.5
20°	910.2	909.0	907.7	906.3	905.1	903.0	899.9	897.0	894.0	891.0	891.6
22.5°	892.5	890.7	888.9	887.1	885.3	883.1	880.2	877.4	874.6	871.8	871.9
25°	862.1	860.4	858.8	857.0	855.3	852.6	848.9	845.4	841.7	838.1	838.5
27.5°	827.5	826.0	824.4	822.8	821.3	819.2	816.2	813.4	810.5	807.7	807.0
30°	804.4	802.7	801.0	799.3	797.6	795.1	791.9	788.7	785.5	782.3	781.7
32.5°	779.8	778.4	777.0	775.6	774.3	771.9	768.5	765.2	761.8	758.4	757.2
35°	743.8	741.7	739.5	737.4	735.2	732.4	729.1	725.6	722.2	718.8	717.5
37.5°	703.1	701.3	699.4	697.5	695.7	693.0	689.6	686.2	682.8	679.3	677.7
40°	675.4	673.7	672.0	670.3	668.6	666.1	662.6	659.2	655.8	652.3	650.4
42.5°	648.6	646.8	645.1	643.4	641.7	639.1	635.7	632.3	628.9	625.5	623.3
45°	605.2	603.7	602.2	600.8	599.3	596.9	593.7	590.5	587.3	584.1	581.7
47.5°	562.1	560.7	559.3	557.9	556.5	554.1	550.7	547.4	544.1	540.7	538.3
50°	532.1	531.0	530.0	528.9	527.8	525.8	522.8	519.8	516.8	513.8	510.9
52.5°	502.8	501.4	500.0	498.6	497.2	495.1	492.3	489.5	486.6	483.8	481.4
55°	458.0	456.8	455.4	454.1	452.9	450.9	448.4	445.8	443.3	440.7	438.1
57.5°	412.9	412.0	410.9	409.9	408.9	407.0	404.2	401.3	398.5	395.7	393.1
60°	383.0	382.1	381.3	380.4	379.6	377.6	374.7	371.6	368.6	365.6	363.3
62.5°	353.7	352.3	351.0	349.6	348.3	346.4	344.1	341.8	339.5	337.1	335.0
65°	308.9	307.6	306.3	305.0	303.7	302.0	299.9	297.7	295.6	293.5	291.5
67.5°	263.3	262.2	261.2	260.1	259.1	257.7	255.7	253.8	251.9	250.0	248.5
70°	234.8	233.9	233.1	232.2	231.4	230.0	228.0	226.1	224.2	222.3	220.7
72.5°	205.6	204.6	203.8	202.9	202.1	201.0	199.8	198.6	197.4	196.0	194.6
75°	161.6	161.2	160.8	160.3	159.9	159.2	158.2	157.0	156.0	155.0	153.6
77.5°	122.4	121.7	120.9	120.2	119.5	118.9	118.5	118.0	117.6	117.2	116.6
80°	96.2	96.0	95.8	95.6	95.4	95.0	94.6	94.2	93.8	93.3	92.7
82.5°	71.6	71.5	71.5	71.4	71.4	71.3	71.0	70.8	70.5	70.2	69.5
85°	39.5	39.2	39.0	38.8	38.5	38.4	38.2	38.0	37.7	37.5	36.9
87.5°	14.0	14.4	14.9	15.0	15.1	15.5	16.2	17.3	18.4	18.2	17.5
90°	1.1	4.3	8.8	10.9	13.1	16.4	21.9	29.6	36.1	37.2	36.1
92.5°	13.4	19.2	27.1	32.0	39.4	49.7	74.5	109.2	140.3	142.3	120.3
95°	38.4	42.7	53.6	63.5	81.1	107.3	157.7	252.9	379.9	429.2	375.6
97.5°	62.4	68.3	79.9	94.8	115.0	144.8	208.0	340.7	551.9	732.7	768.6
100°	84.3	87.6	97.5	115.0	136.9	167.5	225.6	359.1	595.6	865.0	1022.7
102.5°	104.4	106.9	116.7	134.2	157.0	187.7	241.3	360.1	579.0	869.4	1117.3
105°	133.6	138.0	145.6	162.0	186.2	216.8	268.2	365.7	546.4	811.3	1102.6
107.5°	165.1	168.6	176.1	191.1	215.1	245.9	295.9	380.8	530.2	749.1	1006.4
110°	186.2	190.5	197.1	211.3	234.3	266.1	314.2	393.0	526.7	719.3	946.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	205.4	209.8	217.3	230.5	252.7	285.3	331.8	406.2	527.5	700.1	904.0
115°	235.4	240.9	247.4	260.6	282.5	312.1	359.1	425.9	532.2	678.8	851.9
117.5°	266.6	270.9	277.5	289.1	310.1	340.7	384.3	447.0	540.0	668.5	819.0
120°	285.8	290.1	296.7	306.6	328.5	359.1	401.8	461.0	545.3	662.4	801.4
122.5°	304.2	307.6	314.2	325.0	346.9	378.4	418.5	473.3	551.4	658.9	786.6
125°	328.5	331.8	338.4	351.5	373.3	404.1	443.5	492.8	560.6	652.6	765.3
127.5°	347.7	352.1	361.4	375.8	396.8	428.3	466.7	510.9	570.0	648.8	745.6
130°	359.1	363.5	374.5	389.8	411.7	442.3	480.7	522.3	577.0	647.1	732.5
132.5°	369.7	374.9	386.7	402.9	425.7	456.4	492.9	533.7	584.0	646.2	722.0
135°	385.4	389.8	402.9	419.3	444.5	475.2	510.2	548.6	592.4	644.9	707.3
137.5°	400.3	405.6	418.7	436.2	461.2	489.7	524.2	560.0	599.8	644.7	697.0
140°	411.7	416.0	429.2	446.8	470.8	499.3	532.2	566.1	603.3	643.9	690.9
142.5°	423.1	426.6	438.8	456.4	479.6	506.3	538.3	571.4	606.0	643.9	684.8
145°	440.2	444.5	455.5	471.9	493.8	517.9	547.4	578.2	608.8	641.6	676.7
147.5°	458.5	461.8	472.3	487.5	505.7	527.1	554.9	581.8	609.6	637.7	668.4
150°	470.8	474.1	482.9	497.1	513.5	533.2	558.5	583.6	608.8	635.1	661.3
152.5°	483.1	484.7	493.3	505.9	521.4	539.3	561.9	584.5	607.0	630.7	655.2
155°	500.4	501.4	508.0	520.1	532.2	548.6	567.1	585.8	604.4	623.0	643.9
157.5°	514.8	515.9	521.2	531.7	541.3	555.2	570.9	585.8	599.4	615.1	633.1
160°	524.4	525.6	529.9	538.7	547.4	559.5	572.7	585.8	596.7	609.9	625.2
162.5°	534.1	533.5	537.8	544.8	552.7	562.1	573.5	584.9	594.1	605.5	618.2
165°	545.3	544.2	546.4	552.9	558.5	565.0	574.9	582.5	589.1	596.7	606.6
167.5°	554.5	553.2	555.2	559.3	563.3	567.4	574.6	581.0	584.0	589.1	595.2
170°	560.6	558.5	559.5	562.8	565.0	568.3	573.7	579.2	581.4	584.7	589.1
172.5°	564.1	562.8	562.1	565.4	566.8	569.1	572.9	576.6	577.9	579.5	583.0
175°	568.3	567.1	566.1	568.3	568.3	569.4	571.6	573.7	572.7	573.7	574.9
177.5°	570.2	568.4	567.6	569.4	569.4	569.4	570.2	572.0	570.2	569.4	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	996.4	998.2	999.8	1000.5	1000.1	999.8	999.5	999.2
5°	989.7	991.4	993.1	993.7	993.3	992.9	992.5	992.0
7.5°	978.5	980.2	981.9	982.5	982.0	981.7	981.2	980.7
10°	968.5	970.3	971.9	972.4	971.9	971.2	970.5	969.9
12.5°	956.7	957.9	959.1	959.4	958.9	958.6	958.1	957.6
15°	936.0	936.9	937.7	937.6	936.5	935.5	934.4	933.3
17.5°	911.4	912.4	913.4	913.4	912.4	911.3	910.3	909.3
20°	892.3	893.0	893.5	893.4	892.6	891.7	890.9	890.0
22.5°	872.0	872.1	872.2	872.0	871.6	871.0	870.5	870.1
25°	839.0	839.3	839.8	839.8	839.3	839.0	838.5	838.1
27.5°	806.3	805.8	805.1	804.3	803.2	802.2	801.2	800.1
30°	781.0	780.3	779.7	778.9	778.1	777.2	776.4	775.5
32.5°	756.1	755.0	753.8	752.8	752.0	751.1	750.2	749.3
35°	716.2	714.9	713.6	712.5	711.4	710.3	709.3	708.1
37.5°	676.2	674.6	673.0	671.7	670.6	669.6	668.6	667.6
40°	648.6	646.6	644.7	643.3	642.4	641.6	640.7	639.9
42.5°	621.2	619.2	617.1	615.4	614.2	613.0	611.8	610.6
45°	579.4	577.0	574.7	573.1	572.2	571.4	570.5	569.6
47.5°	535.8	533.3	530.8	529.0	527.7	526.5	525.3	524.1
50°	507.8	504.8	501.8	499.8	498.7	497.7	496.6	495.5
52.5°	478.8	476.4	473.9	471.9	470.5	469.1	467.7	466.3
55°	435.5	433.0	430.5	428.6	427.5	426.5	425.4	424.3
57.5°	390.6	388.0	385.6	383.9	383.0	382.3	381.4	380.6
60°	360.9	358.5	356.2	354.8	354.1	353.5	352.8	352.1
62.5°	332.8	330.6	328.5	327.0	326.1	325.3	324.5	323.7
65°	289.6	287.7	285.8	284.3	283.2	282.1	281.1	280.0
67.5°	246.9	245.5	244.0	242.8	242.0	241.1	240.3	239.4
70°	219.2	217.8	216.3	215.1	214.2	213.4	212.5	211.7
72.5°	193.1	191.6	190.1	189.0	188.3	187.7	187.0	186.2
75°	152.3	151.1	149.8	149.4	149.8	150.2	150.6	151.1
77.5°	115.9	115.3	114.6	114.0	113.4	112.8	112.3	111.6
80°	92.1	91.4	90.8	90.2	89.8	89.4	89.0	88.5
82.5°	68.6	67.8	67.0	66.5	66.4	66.4	66.3	66.2
85°	36.3	35.6	35.0	34.5	34.3	34.1	33.9	33.6
87.5°	16.8	15.8	15.7	15.6	15.5	15.3	15.1	14.9
90°	35.1	32.9	35.1	36.1	36.1	36.1	36.1	36.1
92.5°	95.5	81.9	72.7	65.9	65.0	61.5	62.4	60.7
95°	286.9	220.1	174.1	150.0	135.7	127.1	123.8	124.8
97.5°	669.4	547.7	429.2	350.2	297.8	270.9	254.9	245.7
100°	999.7	863.9	713.9	581.4	490.5	443.5	411.7	392.0
102.5°	1216.1	1185.3	1075.6	935.3	836.5	756.2	716.5	689.8
105°	1330.3	1454.1	1468.3	1432.2	1364.2	1296.4	1249.3	1234.0
107.5°	1248.0	1434.4	1548.2	1601.2	1609.8	1606.0	1596.6	1576.2
110°	1177.0	1373.0	1513.2	1603.0	1650.0	1670.8	1680.7	1679.6



TEST NUMBER: P331374-830

CATALOG NUMBER: SA2XXDIP-C675D1080U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1112.2	1300.3	1450.1	1553.0	1618.5	1653.3	1672.0	1677.8
115°	1032.6	1201.2	1344.5	1457.4	1535.1	1585.5	1613.9	1623.8
117.5°	972.5	1120.6	1250.7	1356.4	1435.7	1488.8	1518.9	1527.2
120°	942.7	1078.5	1194.6	1294.2	1370.8	1422.3	1454.1	1465.0
122.5°	919.1	1043.5	1153.4	1243.4	1312.1	1362.7	1391.0	1400.1
125°	884.7	997.5	1093.8	1175.9	1239.4	1281.1	1308.4	1317.2
127.5°	850.7	952.8	1043.7	1119.5	1174.9	1213.8	1237.5	1244.5
130°	828.9	923.0	1009.6	1081.8	1135.5	1172.7	1194.6	1203.3
132.5°	807.9	895.0	974.5	1042.4	1095.1	1132.4	1152.5	1160.4
135°	778.4	850.7	923.0	984.3	1031.4	1067.5	1087.2	1091.7
137.5°	755.1	815.5	872.9	926.3	969.2	1000.3	1017.7	1024.2
140°	740.2	792.8	843.1	891.3	926.3	954.8	971.2	977.8
142.5°	727.9	772.6	816.0	856.2	889.5	915.4	930.0	931.3
145°	710.6	746.8	780.7	812.5	838.7	857.3	868.3	871.6
147.5°	697.3	725.8	752.2	775.4	797.1	812.0	819.4	821.4
150°	687.6	711.7	734.7	754.4	770.8	784.0	790.5	791.6
152.5°	678.0	700.3	719.8	736.9	749.8	761.2	766.0	766.2
155°	664.6	682.1	698.5	710.6	722.6	730.3	734.7	732.5
157.5°	649.0	663.7	677.5	686.9	695.5	701.8	703.8	703.8
160°	639.4	651.5	663.5	671.2	678.8	684.3	685.4	685.4
162.5°	629.8	640.1	650.4	656.3	663.9	667.7	668.7	667.9
165°	615.4	623.0	630.7	635.1	639.4	643.9	643.9	642.7
167.5°	601.5	607.5	612.7	616.7	618.6	621.0	620.9	619.5
170°	594.6	597.9	602.2	604.4	605.5	608.8	607.7	605.5
172.5°	586.6	589.1	592.6	593.9	595.0	596.5	595.4	594.1
175°	578.2	579.2	580.3	581.4	581.4	582.5	581.4	579.2
177.5°	572.0	572.0	572.9	572.9	572.9	572.9	572.0	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4

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