

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: P331337-940

Luminaire Tested: **SA2XXDIP-C675D330U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331337-940  
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-C675D330U940-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

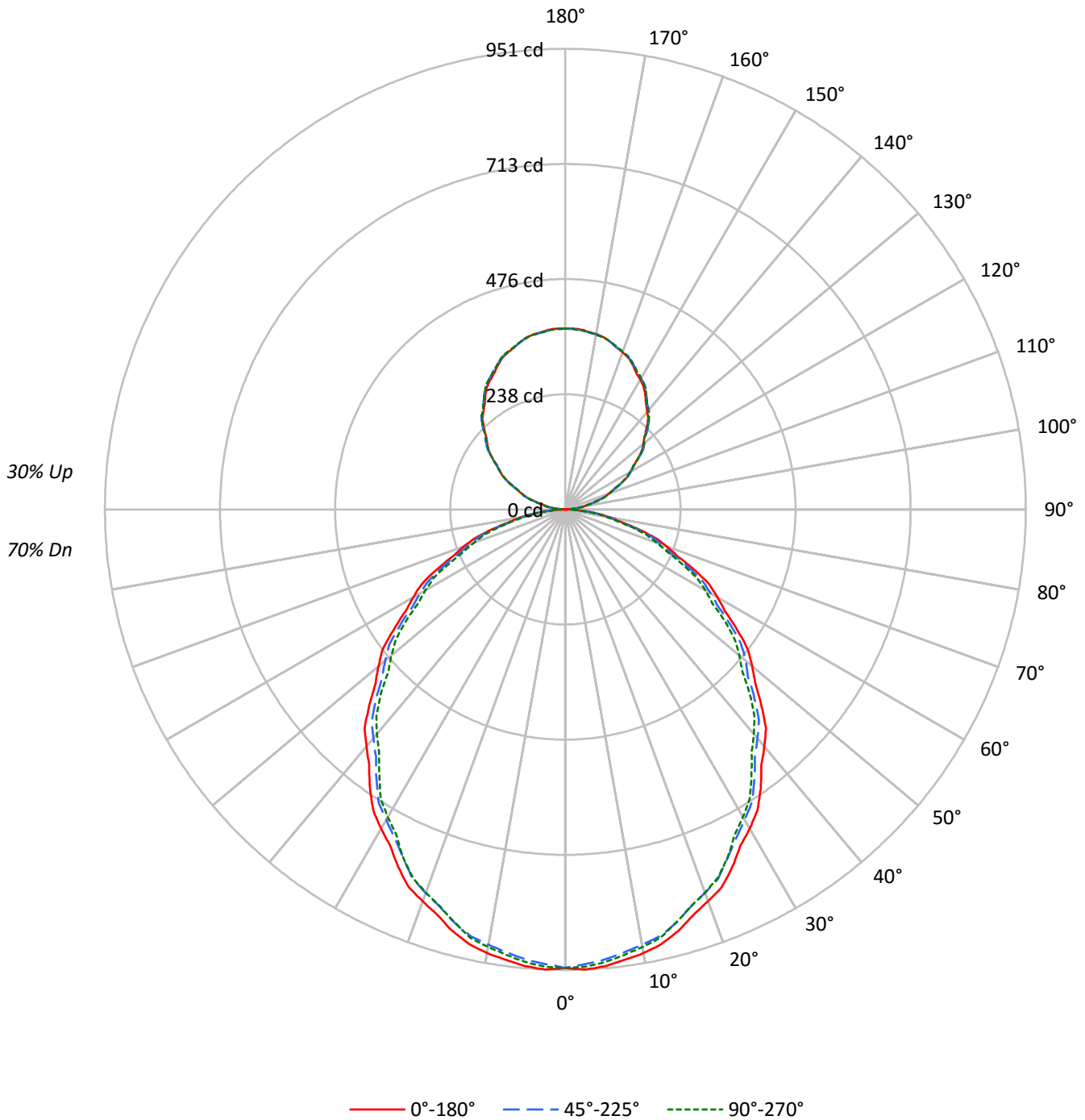
Lumens per Lamp: N/A  
Luminaire Lumens: 3454.0 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 35  
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	102	98	94	90	96	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	61	58	58	55	53	49
3	85	75	68	61	80	71	64	59	64	59	54	57	53	50	51	48	45	42
4	78	67	58	52	73	63	56	50	57	51	46	51	46	43	46	42	39	36
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	41	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	36	32	38	33	30	27
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	31	54	42	35	30	38	32	28	35	30	26	32	27	24	22
9	53	40	33	27	50	39	31	27	35	29	25	32	27	23	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	15285	15285	15285
5°	15344	15123	15211
10°	15252	14969	15044
15°	15064	14775	14760
20°	14795	14483	14467
25°	14530	14125	14125
30°	14188	13798	13679
35°	13868	13403	13204
40°	13468	13009	12760
45°	13075	12618	12305
50°	12645	12210	11776
55°	12197	11738	11299
60°	11699	11170	10756
65°	11163	10609	10120
70°	10485	9928	9456
75°	9538	9145	8914
80°	8461	8210	7782
85°	6928	6576	5891



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	2.6
10°-20°	250.5	7.3
20°-30°	368.2	10.7
30°-40°	427.7	12.4
40°-50°	427.2	12.4
50°-60°	372.6	10.8
60°-70°	275.5	8.0
70°-80°	156.0	4.5
80°-90°	43.5	1.3
90°-100°	23.7	0.7
100°-110°	73.5	2.1
110°-120°	125.6	3.6
120°-130°	165.1	4.8
130°-140°	185.4	5.4
140°-150°	181.8	5.3
150°-160°	152.4	4.4
160°-170°	101.1	2.9
170°-180°	35.3	1.0
0°-30°	707.7	20.5
0°-40°	1135.4	32.9
0°-60°	1935.1	56.0
0°-90°	2410.1	69.8
90°-120°	222.7	6.4
90°-150°	755.0	21.9
90°-180°	1044.0	30.2
0°-180°	3454.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	947	943	933	940	938	90
15°	901	895	884	887	883	254
25°	816	808	793	794	793	375
35°	704	694	680	675	670	439
45°	573	566	553	543	539	442
55°	433	428	417	406	401	387
65°	292	286	278	270	265	289
75°	153	151	147	142	143	163
85°	37	36	36	33	32	43
90°	0	4	11	10	11	3
95°	16	19	20	20	20	19
105°	68	69	69	70	70	72
115°	126	128	127	127	126	125
125°	183	186	185	184	184	164
135°	237	241	241	241	240	183
145°	288	290	292	292	291	180
155°	329	330	331	333	332	151
165°	358	358	358	360	359	101
175°	373	372	371	373	371	35
180°	373	373	373	373	373	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	951.1	950.3	949.5	948.7	947.9	946.6	944.8	943.0	941.2	939.4	941.0
5°	946.7	945.9	945.1	944.3	943.5	942.0	939.8	937.5	935.3	933.1	934.7
7.5°	938.3	937.1	935.9	934.6	933.4	931.6	929.3	927.0	924.8	922.5	924.1
10°	930.3	928.9	927.5	926.0	924.7	922.7	920.3	917.9	915.4	913.0	914.6
12.5°	919.4	918.2	916.9	915.6	914.4	912.6	910.1	907.7	905.3	902.9	904.0
15°	901.2	900.0	898.8	897.6	896.3	894.4	891.8	889.1	886.5	883.9	884.8
17.5°	877.9	876.6	875.5	874.2	873.1	871.1	868.4	865.8	863.1	860.4	861.4
20°	861.1	860.0	858.7	857.5	856.3	854.3	851.4	848.6	845.8	842.9	843.6
22.5°	844.4	842.7	841.0	839.3	837.6	835.4	832.8	830.1	827.4	824.7	824.8
25°	815.6	814.0	812.4	810.7	809.1	806.6	803.2	799.8	796.3	792.9	793.3
27.5°	782.8	781.4	780.0	778.5	777.0	775.0	772.2	769.5	766.8	764.1	763.5
30°	761.0	759.4	757.8	756.2	754.6	752.2	749.2	746.2	743.2	740.1	739.5
32.5°	737.7	736.4	735.1	733.8	732.5	730.3	727.1	723.9	720.7	717.5	716.4
35°	703.6	701.7	699.6	697.6	695.5	692.9	689.7	686.4	683.2	680.0	678.8
37.5°	665.2	663.4	661.6	659.9	658.2	655.6	652.4	649.2	646.0	642.7	641.1
40°	639.0	637.4	635.8	634.2	632.6	630.2	626.9	623.7	620.5	617.2	615.4
42.5°	613.6	611.9	610.3	608.7	607.1	604.7	601.4	598.2	594.9	591.7	589.7
45°	572.6	571.1	569.7	568.4	566.9	564.7	561.7	558.7	555.6	552.6	550.4
47.5°	531.8	530.5	529.1	527.8	526.5	524.2	521.0	517.9	514.8	511.6	509.3
50°	503.4	502.4	501.4	500.3	499.4	497.4	494.6	491.8	488.9	486.1	483.3
52.5°	475.7	474.4	473.1	471.7	470.4	468.4	465.7	463.1	460.4	457.7	455.4
55°	433.3	432.1	430.9	429.6	428.5	426.6	424.2	421.8	419.4	417.0	414.5
57.5°	390.7	389.8	388.8	387.8	386.8	385.0	382.4	379.7	377.0	374.3	371.9
60°	362.3	361.5	360.7	359.9	359.1	357.2	354.5	351.6	348.7	345.9	343.7
62.5°	334.7	333.3	332.1	330.7	329.5	327.7	325.6	323.3	321.2	319.0	316.9
65°	292.2	291.0	289.8	288.6	287.3	285.7	283.7	281.7	279.6	277.7	275.8
67.5°	249.1	248.1	247.1	246.1	245.1	243.8	241.9	240.1	238.4	236.5	235.1
70°	222.1	221.3	220.5	219.7	218.9	217.6	215.7	213.9	212.1	210.3	208.8
72.5°	194.5	193.6	192.8	192.0	191.2	190.2	189.0	187.9	186.7	185.5	184.1
75°	152.9	152.5	152.1	151.7	151.3	150.6	149.6	148.6	147.6	146.6	145.3
77.5°	115.8	115.1	114.4	113.7	113.1	112.5	112.1	111.6	111.3	110.8	110.3
80°	91.0	90.9	90.6	90.4	90.2	89.9	89.5	89.1	88.7	88.3	87.7
82.5°	67.8	67.7	67.7	67.6	67.6	67.4	67.1	67.0	66.7	66.4	65.7
85°	37.4	37.1	36.9	36.7	36.5	36.3	36.1	35.9	35.7	35.5	34.9
87.5°	13.2	13.0	12.8	12.7	12.6	12.5	12.5	12.4	12.4	12.4	11.9
90°	0.4	1.2	2.0	2.9	3.7	4.9	6.4	7.9	9.5	11.1	10.9
92.5°	5.6	6.2	6.9	7.5	8.1	8.6	8.9	9.3	9.6	10.0	10.1
95°	16.4	17.1	17.7	18.5	19.2	19.6	19.7	19.9	20.1	20.2	20.2
97.5°	30.0	30.6	31.1	31.7	32.4	32.8	33.1	33.3	33.6	33.9	33.9
100°	40.0	40.6	41.1	41.7	42.3	42.6	42.8	43.1	43.2	43.5	43.5
102.5°	50.6	51.0	51.5	51.9	52.3	52.8	53.0	53.2	53.5	53.8	53.9
105°	67.8	67.9	68.1	68.4	68.6	68.8	68.9	69.0	69.2	69.3	69.5
107.5°	85.0	85.3	85.6	86.0	86.2	86.4	86.4	86.4	86.4	86.4	86.4
110°	96.1	96.5	96.9	97.4	97.7	98.0	98.0	98.0	98.0	98.0	98.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	108.2	108.6	109.1	109.4	109.9	110.0	109.9	109.9	109.9	109.9	109.7
115°	126.0	126.4	126.9	127.2	127.7	127.9	127.7	127.5	127.4	127.2	127.2
117.5°	143.7	144.4	144.9	145.4	146.1	146.2	145.7	145.3	144.9	144.5	144.4
120°	155.6	156.2	156.8	157.3	157.8	157.8	157.3	156.8	156.2	155.6	155.6
122.5°	166.5	167.1	167.8	168.4	169.2	169.3	168.9	168.5	168.1	167.7	167.6
125°	183.3	184.0	184.6	185.2	185.8	186.1	185.8	185.7	185.5	185.2	185.0
127.5°	199.8	200.6	201.4	202.2	203.0	203.2	203.0	202.8	202.5	202.2	202.0
130°	210.2	211.1	212.0	212.9	213.7	214.2	214.0	213.9	213.7	213.6	213.5
132.5°	221.8	222.5	223.2	223.9	224.7	225.1	225.1	225.2	225.2	225.2	224.9
135°	237.2	238.0	238.8	239.5	240.3	240.8	240.9	241.0	241.2	241.3	241.2
137.5°	253.5	254.1	254.8	255.5	256.1	256.5	256.6	256.8	257.0	257.2	257.2
140°	263.4	264.0	264.7	265.3	265.9	266.4	266.7	267.1	267.4	267.8	267.8
142.5°	273.5	274.1	274.7	275.4	276.0	276.4	276.6	276.9	277.1	277.3	277.4
145°	287.9	288.5	288.9	289.4	289.9	290.3	290.8	291.2	291.6	292.0	292.1
147.5°	300.9	301.5	302.0	302.6	303.2	303.6	303.9	304.3	304.5	304.8	305.0
150°	309.7	310.1	310.5	310.9	311.4	311.7	312.0	312.3	312.5	312.8	313.1
152.5°	317.5	317.9	318.3	318.8	319.1	319.6	319.9	320.2	320.6	320.9	321.2
155°	329.2	329.4	329.7	329.8	330.0	330.3	330.5	330.6	330.9	331.1	331.4
157.5°	339.2	339.4	339.5	339.7	339.8	339.9	340.1	340.2	340.3	340.5	340.9
160°	345.3	345.4	345.5	345.7	345.8	346.0	346.0	346.1	346.2	346.3	346.6
162.5°	350.8	350.9	350.9	350.9	351.0	351.0	351.1	351.2	351.2	351.2	351.8
165°	358.2	358.1	358.0	358.0	357.9	357.8	357.8	357.8	357.8	357.8	358.4
167.5°	364.4	364.2	364.0	363.7	363.6	363.5	363.4	363.4	363.4	363.4	363.8
170°	367.7	367.5	367.2	367.0	366.8	366.7	366.6	366.5	366.5	366.4	366.8
172.5°	369.9	369.7	369.5	369.3	369.1	368.9	368.9	368.8	368.7	368.6	369.2
175°	372.7	372.5	372.3	372.0	371.8	371.7	371.6	371.4	371.2	371.1	371.6
177.5°	373.8	373.6	373.4	373.4	373.2	373.0	372.9	372.8	372.6	372.6	372.9
180°	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	942.6	944.3	945.9	946.6	946.2	945.9	945.6	945.3
5°	936.3	937.9	939.5	940.1	939.8	939.3	939.0	938.5
7.5°	925.8	927.4	929.0	929.5	929.1	928.7	928.3	927.8
10°	916.2	917.9	919.5	920.0	919.4	918.8	918.2	917.6
12.5°	905.1	906.2	907.4	907.7	907.2	906.9	906.4	906.0
15°	885.6	886.4	887.2	887.1	886.0	885.0	884.0	883.0
17.5°	862.3	863.2	864.2	864.2	863.2	862.2	861.2	860.2
20°	844.2	844.8	845.3	845.3	844.5	843.6	842.8	842.0
22.5°	825.0	825.1	825.2	825.0	824.6	824.0	823.6	823.1
25°	793.7	794.1	794.5	794.5	794.1	793.7	793.3	792.9
27.5°	762.9	762.3	761.7	760.9	759.9	758.9	758.0	757.0
30°	738.9	738.2	737.6	736.9	736.1	735.3	734.5	733.7
32.5°	715.3	714.3	713.1	712.2	711.4	710.6	709.7	708.9
35°	677.6	676.4	675.1	674.0	673.1	672.0	671.0	669.9
37.5°	639.7	638.2	636.7	635.4	634.5	633.5	632.6	631.6
40°	613.6	611.7	609.9	608.6	607.8	607.0	606.2	605.4
42.5°	587.7	585.8	583.8	582.2	581.0	580.0	578.8	577.7
45°	548.1	545.9	543.7	542.2	541.4	540.6	539.8	538.9
47.5°	506.9	504.5	502.2	500.4	499.3	498.1	497.0	495.8
50°	480.5	477.6	474.7	472.9	471.8	470.8	469.8	468.8
52.5°	453.0	450.7	448.4	446.5	445.1	443.8	442.5	441.1
55°	412.1	409.7	407.2	405.5	404.5	403.5	402.4	401.4
57.5°	369.5	367.1	364.8	363.2	362.4	361.7	360.9	360.1
60°	341.4	339.2	337.0	335.6	335.0	334.4	333.8	333.1
62.5°	314.9	312.8	310.8	309.3	308.5	307.7	307.0	306.2
65°	274.0	272.2	270.4	268.9	268.0	266.9	265.9	264.9
67.5°	233.6	232.3	230.9	229.7	228.9	228.1	227.3	226.5
70°	207.4	206.1	204.6	203.5	202.7	201.9	201.1	200.3
72.5°	182.7	181.3	179.9	178.8	178.2	177.5	176.9	176.2
75°	144.1	142.9	141.7	141.3	141.7	142.1	142.5	142.9
77.5°	109.7	109.1	108.4	107.9	107.3	106.7	106.2	105.6
80°	87.1	86.5	85.9	85.3	85.0	84.5	84.2	83.7
82.5°	64.9	64.1	63.4	63.0	62.9	62.8	62.7	62.6
85°	34.3	33.7	33.1	32.6	32.5	32.3	32.1	31.8
87.5°	11.4	10.9	10.3	10.0	9.9	9.7	9.5	9.5
90°	10.8	10.6	10.4	10.4	10.5	10.6	10.6	10.7
92.5°	10.1	10.1	10.2	10.2	10.2	10.2	10.2	10.2
95°	20.2	20.2	20.2	20.1	20.0	19.8	19.7	19.5
97.5°	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.8
100°	43.5	43.5	43.5	43.4	43.3	43.3	43.2	43.2
102.5°	53.9	53.9	54.0	54.0	53.9	53.9	53.9	53.8
105°	69.6	69.7	69.9	69.9	69.9	69.9	69.9	69.9
107.5°	86.5	86.6	86.6	86.5	86.1	85.9	85.5	85.2
110°	98.0	98.0	98.0	97.9	97.6	97.5	97.3	97.0





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CATALOG NUMBER: SA2XXDIP-C675D330U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	109.5	109.3	109.1	109.0	108.9	108.7	108.5	108.3
115°	127.2	127.1	127.0	126.9	126.6	126.4	126.3	126.0
117.5°	144.2	144.0	143.8	143.7	143.5	143.3	143.0	142.9
120°	155.6	155.6	155.6	155.5	155.3	155.1	154.9	154.7
122.5°	167.4	167.2	167.0	166.9	166.7	166.6	166.4	166.3
125°	184.9	184.6	184.4	184.2	184.2	184.1	184.0	184.0
127.5°	201.8	201.5	201.3	201.0	200.8	200.5	200.4	200.1
130°	213.3	213.2	213.0	212.9	212.6	212.2	212.0	211.7
132.5°	224.5	224.3	224.0	223.7	223.5	223.3	223.0	222.8
135°	241.2	241.1	241.0	240.9	240.7	240.5	240.3	240.0
137.5°	257.1	257.0	257.0	256.8	256.5	256.3	256.0	255.7
140°	267.8	267.8	267.8	267.6	267.3	267.1	266.8	266.5
142.5°	277.5	277.5	277.6	277.5	277.2	276.9	276.6	276.3
145°	292.2	292.2	292.3	292.2	291.9	291.7	291.4	291.1
147.5°	305.1	305.2	305.4	305.3	305.1	304.8	304.5	304.3
150°	313.3	313.4	313.7	313.7	313.4	313.3	313.1	312.8
152.5°	321.5	321.7	322.0	322.0	321.7	321.5	321.2	320.9
155°	331.8	332.2	332.5	332.6	332.3	332.2	332.0	331.7
157.5°	341.3	341.9	342.3	342.4	342.1	341.7	341.4	341.1
160°	347.1	347.5	347.9	347.9	347.7	347.4	347.1	346.9
162.5°	352.2	352.7	353.2	353.2	352.9	352.6	352.2	351.9
165°	358.8	359.4	359.8	359.9	359.5	359.2	358.8	358.6
167.5°	364.4	364.8	365.3	365.4	365.1	364.6	364.3	363.9
170°	367.4	367.8	368.4	368.4	368.0	367.6	367.1	366.7
172.5°	369.6	370.1	370.6	370.7	370.2	369.8	369.4	369.0
175°	372.1	372.6	373.1	373.1	372.7	372.3	371.8	371.4
177.5°	373.3	373.5	373.9	373.9	373.5	373.3	372.9	372.6
180°	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4

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