

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: P331354-940

Luminaire Tested: **SA2XXDIP-C675D725U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331354-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

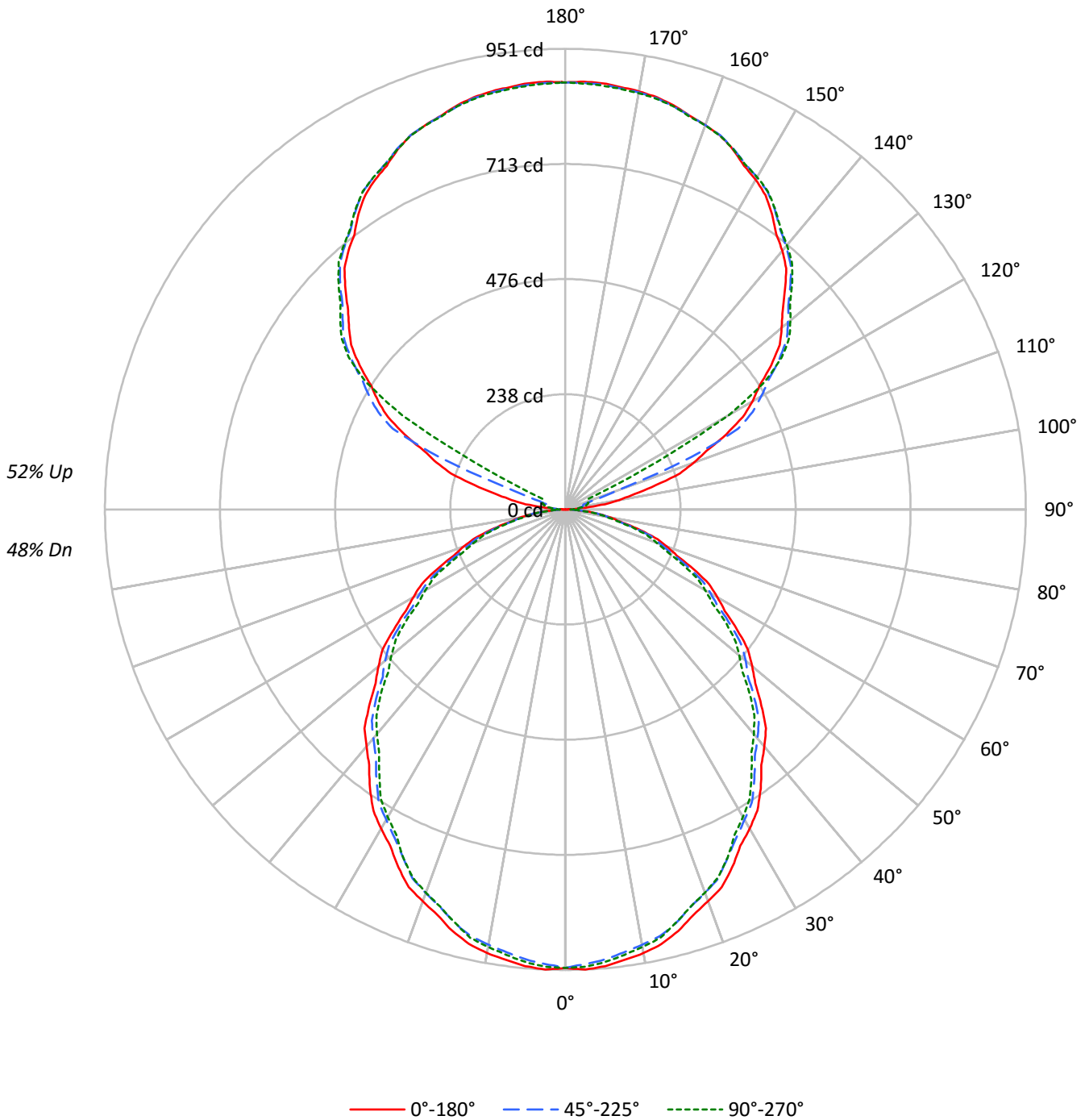
Lumens per Lamp: N/A
Luminaire Lumens: 4994.1 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46	41
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39	34
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	34	31	28	25
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	22
6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22	19
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17
8	54	41	34	28	49	38	32	27	33	28	24	28	24	20	23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

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	1.8
10°-20°	250.5	5.0
20°-30°	368.2	7.4
30°-40°	427.7	8.6
40°-50°	427.2	8.6
50°-60°	372.6	7.5
60°-70°	275.5	5.5
70°-80°	156.0	3.1
80°-90°	44.1	0.9
90°-100°	29.4	0.6
100°-110°	107.8	2.2
110°-120°	288.3	5.8
120°-130°	475.8	9.5
130°-140°	506.0	10.1
140°-150°	470.3	9.4
150°-160°	378.1	7.6
160°-170°	243.7	4.9
170°-180°	83.9	1.7
0°-30°	707.7	14.2
0°-40°	1135.4	22.7
0°-60°	1935.1	38.7
0°-90°	2410.8	48.3
90°-120°	425.5	8.5
90°-150°	1877.7	37.6
90°-180°	2583.0	51.7
0°-180°	4994.1	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°	1	8	13	16	17	4
95°	42	22	25	28	28	51
105°	194	202	39	46	48	207
115°	367	378	394	112	52	361
125°	519	527	539	543	545	462
135°	642	652	658	664	663	495
145°	744	744	755	759	756	465
155°	820	815	822	825	820	378
165°	864	860	862	866	862	244
175°	883	879	880	884	878	84
180°	882	882	882	882	882	



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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	13.2	13.2	13.2	13.2	13.1	13.0	12.9	12.8	12.8	12.4
90°	0.6	2.2	3.7	5.4	6.9	8.2	9.4	10.5	11.6	12.8	13.5
92.5°	12.8	12.8	12.6	12.5	12.3	12.6	13.1	13.6	14.3	14.8	15.2
95°	41.5	36.8	32.1	27.5	22.7	20.9	21.9	22.9	23.9	24.9	25.6
97.5°	82.3	69.1	55.9	42.7	29.5	24.1	26.4	28.7	31.0	33.3	33.9
100°	112.9	93.5	74.1	54.7	35.2	26.8	29.2	31.6	34.0	36.4	37.5
102.5°	146.6	142.5	138.4	134.3	130.1	118.0	97.8	77.7	57.5	37.4	38.9
105°	193.9	198.1	202.4	206.7	210.9	193.7	155.0	116.3	77.6	38.9	40.5
107.5°	247.9	251.3	254.8	258.2	261.6	240.1	193.7	147.3	100.9	54.5	52.9
110°	282.6	285.5	288.6	291.5	294.4	275.4	234.5	193.6	152.6	111.6	97.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	315.2	317.9	320.5	323.2	325.7	322.0	311.9	301.8	291.7	281.5	229.9
115°	366.8	369.2	371.6	374.0	376.4	379.4	382.9	386.5	390.0	393.6	328.0
117.5°	412.9	415.5	418.2	420.9	423.6	426.1	428.6	431.1	433.5	436.0	420.1
120°	446.5	448.6	450.8	452.9	455.0	457.4	459.9	462.4	465.0	467.5	469.2
122.5°	475.1	477.3	479.6	481.8	484.0	486.5	489.4	492.1	494.9	497.7	498.6
125°	518.6	520.4	522.3	524.1	525.9	528.2	530.9	533.6	536.3	539.0	540.0
127.5°	558.0	560.1	562.1	564.1	566.1	568.2	570.2	572.2	574.3	576.2	577.7
130°	583.0	585.3	587.5	589.8	592.1	594.0	595.6	597.1	598.7	600.2	601.8
132.5°	608.5	610.5	612.4	614.3	616.3	618.0	619.6	621.1	622.7	624.2	625.5
135°	641.7	644.0	646.2	648.5	650.8	652.6	653.8	655.1	656.4	657.6	659.1
137.5°	675.3	676.8	678.4	680.0	681.6	683.1	684.6	686.0	687.4	688.9	690.3
140°	697.2	698.3	699.5	700.6	701.7	703.1	704.6	706.2	707.8	709.4	710.6
142.5°	715.6	716.6	717.6	718.6	719.6	721.0	722.8	724.6	726.4	728.2	729.3
145°	744.4	744.2	744.1	744.0	743.9	744.9	747.3	749.8	752.2	754.6	755.6
147.5°	769.5	769.0	768.5	767.9	767.4	768.3	770.7	773.0	775.4	777.8	778.6
150°	785.9	784.9	783.9	782.9	781.9	782.6	784.8	787.0	789.3	791.6	792.5
152.5°	799.6	798.5	797.5	796.3	795.2	795.8	797.9	800.0	802.2	804.3	805.2
155°	819.7	818.4	817.1	815.8	814.6	814.8	816.5	818.1	819.8	821.5	822.4
157.5°	835.4	834.3	833.2	832.1	831.1	831.1	832.3	833.5	834.6	835.9	836.9
160°	844.5	843.6	842.8	842.0	841.2	841.2	842.0	842.8	843.6	844.5	845.4
162.5°	852.7	851.9	851.0	850.2	849.3	849.3	850.0	850.7	851.5	852.2	853.2
165°	863.7	862.8	862.0	861.1	860.2	860.1	860.5	860.9	861.3	861.7	862.7
167.5°	871.8	871.0	870.1	869.3	868.4	868.2	868.6	869.0	869.4	869.8	870.8
170°	876.5	875.6	874.8	873.9	873.1	872.7	873.1	873.3	873.6	873.9	874.9
172.5°	879.5	878.6	877.8	876.9	876.1	875.8	876.1	876.4	876.6	876.9	878.0
175°	883.4	882.4	881.5	880.5	879.5	879.1	879.4	879.7	879.9	880.3	881.3
177.5°	884.1	883.3	882.5	881.7	880.9	880.6	880.7	880.8	880.9	881.0	881.8
180°	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5



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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°	12.0	11.7	11.4	11.1	11.1	11.0	10.8	10.7
90°	14.2	14.9	15.6	16.1	16.4	16.7	16.9	17.2
92.5°	15.5	15.9	16.2	16.6	16.7	16.9	17.0	17.2
95°	26.3	27.0	27.7	28.0	27.8	27.7	27.6	27.5
97.5°	34.4	35.0	35.6	35.9	36.1	36.3	36.5	36.6
100°	38.6	39.8	40.9	41.6	41.9	42.2	42.4	42.7
102.5°	40.3	41.8	43.2	44.2	44.6	45.0	45.4	45.8
105°	42.0	43.6	45.1	46.2	46.8	47.3	47.9	48.5
107.5°	51.3	49.7	48.2	47.6	48.2	48.8	49.3	49.8
110°	83.3	69.1	54.9	48.2	48.7	49.2	49.8	50.4



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CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	178.2	126.4	74.7	49.0	49.6	50.0	50.5	50.9
115°	262.3	196.7	131.1	93.1	82.9	72.7	62.5	52.3
117.5°	404.2	388.3	372.4	347.7	314.1	280.6	247.1	213.6
120°	471.0	472.7	474.4	465.7	446.5	427.4	408.2	389.1
122.5°	499.7	500.7	501.8	500.4	496.7	492.9	489.3	485.5
125°	541.0	542.0	543.0	543.7	544.1	544.6	544.9	545.4
127.5°	579.2	580.6	582.0	582.8	582.9	583.0	583.1	583.2
130°	603.3	604.9	606.5	607.2	607.1	606.9	606.7	606.6
132.5°	626.9	628.2	629.5	630.2	630.0	629.9	629.7	629.5
135°	660.5	661.9	663.3	663.9	663.6	663.3	663.0	662.7
137.5°	691.7	693.0	694.5	694.9	694.5	693.9	693.5	692.9
140°	711.9	713.1	714.4	714.7	714.0	713.3	712.6	711.9
142.5°	730.5	731.6	732.8	733.1	732.4	731.6	730.9	730.2
145°	756.6	757.6	758.6	758.7	758.0	757.3	756.6	755.9
147.5°	779.3	780.1	780.8	780.9	780.2	779.6	779.1	778.5
150°	793.3	794.2	795.0	795.0	794.3	793.6	792.9	792.2
152.5°	806.0	806.9	807.8	807.7	806.8	805.8	804.9	804.0
155°	823.3	824.1	825.0	824.8	823.7	822.6	821.4	820.3
157.5°	837.8	838.7	839.7	839.6	838.6	837.4	836.3	835.3
160°	846.2	847.1	847.9	847.8	846.9	845.9	844.9	843.9
162.5°	854.1	855.1	856.0	856.0	854.7	853.5	852.3	851.0
165°	863.7	864.8	865.8	865.8	864.8	863.7	862.7	861.7
167.5°	871.8	872.8	873.8	873.6	872.4	871.1	869.8	868.5
170°	875.8	876.8	877.9	877.7	876.5	875.1	873.9	872.6
172.5°	879.0	879.9	880.9	880.7	879.5	878.2	876.9	875.7
175°	882.3	883.2	884.2	884.0	882.6	881.2	879.8	878.3
177.5°	882.6	883.4	884.2	884.1	883.1	882.1	881.0	880.0
180°	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5

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