

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: P331351

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

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331351
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-C675D725U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

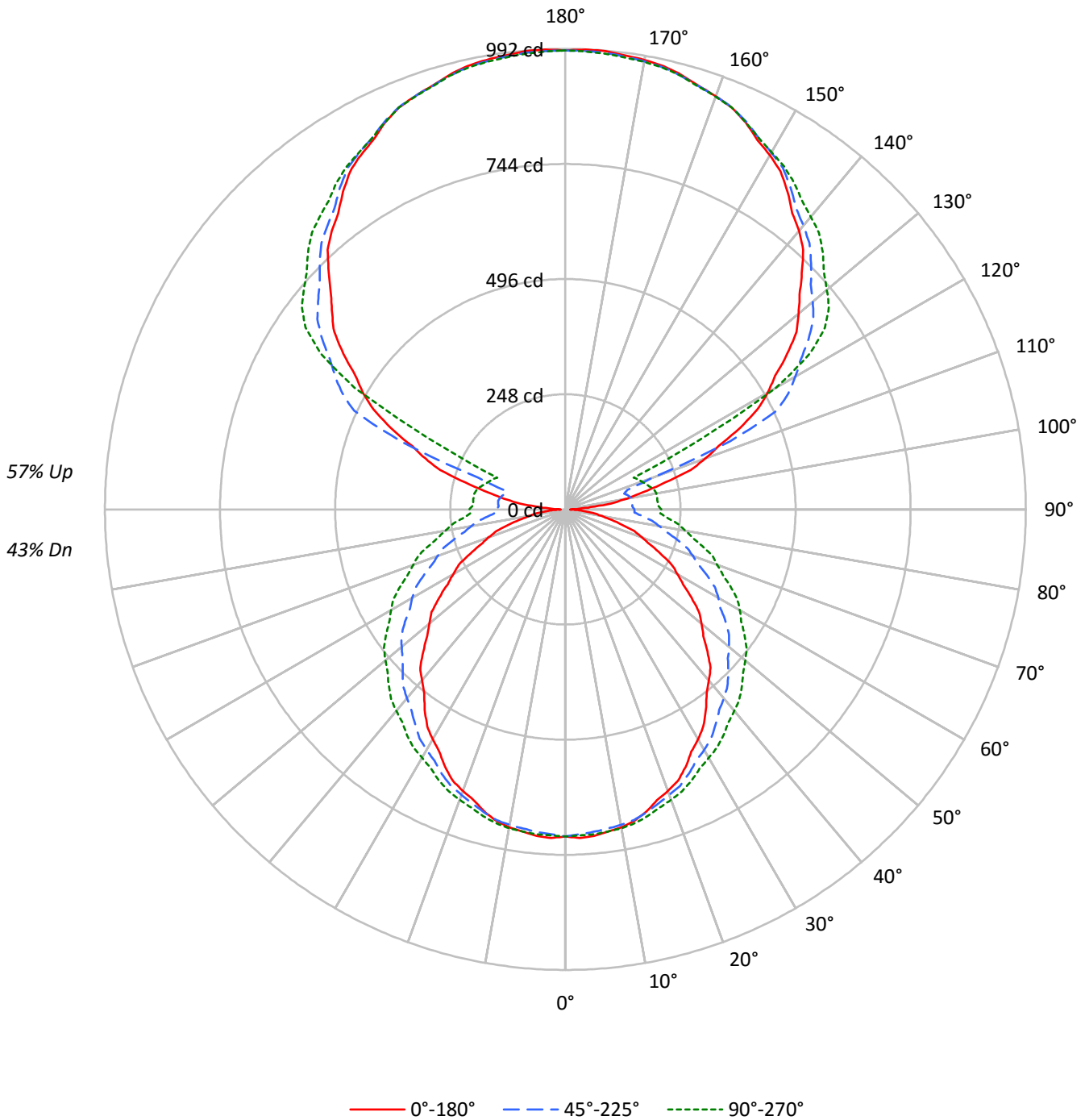
Lumens per Lamp: N/A
Luminaire Lumens: 5586.8 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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	0
RCR																		
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	95	90	86	82	86	82	78	75	68	65	62	54	52	50	42	40	39	33
2	86	78	71	66	78	71	65	61	58	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	31	29	27	22
4	71	60	52	45	64	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	19	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	25	46	36	28	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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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.2
10°-20°	191.4	3.4
20°-30°	290.0	5.2
30°-40°	353.3	6.3
40°-50°	380.0	6.8
50°-60°	369.1	6.6
60°-70°	322.3	5.8
70°-80°	248.1	4.4
80°-90°	168.9	3.0
90°-100°	147.7	2.6
100°-110°	204.7	3.7
110°-120°	378.6	6.8
120°-130°	564.5	10.1
130°-140°	580.4	10.4
140°-150°	529.7	9.5
150°-160°	424.1	7.6
160°-170°	273.3	4.9
170°-180°	94.1	1.7
0°-30°	548.2	9.8
0°-40°	901.4	16.1
0°-60°	1650.6	29.5
0°-90°	2389.9	42.8
90°-120°	731.0	13.1
90°-150°	2405.6	43.1
90°-180°	3197.0	57.2
0°-180°	5586.8	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	78	149	192	207	9
95°	55	81	145	186	199	63
105°	223	263	131	173	189	238
115°	415	441	503	216	162	409
125°	584	595	639	671	683	521
135°	721	732	749	776	784	557
145°	835	835	846	857	859	522
155°	919	914	921	925	920	423
165°	969	965	966	971	966	274
175°	991	986	987	992	985	94
180°	989	989	989	989	989	



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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	34.0	47.9	61.8	75.6	90.0	104.7	119.5	134.3	149.0	158.5
90°	10.9	25.8	40.7	55.6	70.5	85.9	101.7	117.5	133.3	149.1	158.9
92.5°	23.8	35.9	48.0	60.1	72.2	85.6	100.2	114.8	129.4	144.0	153.3
95°	54.7	60.1	65.5	70.9	76.3	86.4	101.1	115.8	130.6	145.3	154.7
97.5°	99.4	94.1	88.8	83.5	78.2	83.4	99.0	114.7	130.3	146.0	155.0
100°	133.8	120.4	107.0	93.6	80.2	81.2	96.6	112.0	127.5	142.9	152.5
102.5°	170.7	173.8	176.8	179.9	182.9	179.3	169.1	158.8	148.6	138.3	148.2
105°	222.6	233.9	245.3	256.6	268.0	257.8	226.2	194.6	163.0	131.4	141.1
107.5°	282.9	292.0	301.1	310.2	319.3	303.5	262.8	222.0	181.3	140.5	146.4
110°	321.0	328.9	336.7	344.6	352.5	339.0	304.2	269.4	234.5	199.7	191.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	357.6	364.4	371.1	377.9	384.7	387.7	386.9	386.1	385.3	384.6	333.8
115°	415.4	420.6	425.8	431.0	436.2	445.9	460.1	474.2	488.4	502.6	435.8
117.5°	466.0	470.7	475.3	480.0	484.6	493.1	505.2	517.4	529.6	541.7	530.7
120°	503.8	507.1	510.4	513.7	517.0	524.6	536.5	548.4	560.4	572.3	580.6
122.5°	535.8	538.7	541.6	544.5	547.3	554.6	566.2	577.9	589.5	601.2	608.5
125°	583.6	585.7	587.7	589.8	591.9	598.0	608.3	618.6	628.9	639.2	646.4
127.5°	627.8	629.9	631.9	634.0	636.1	641.2	649.3	657.4	665.5	673.6	680.8
130°	655.9	658.2	660.5	662.8	665.1	669.5	676.1	682.6	689.1	695.6	702.8
132.5°	684.5	686.4	688.3	690.3	692.2	695.9	701.3	706.7	712.2	717.6	724.3
135°	720.6	723.2	725.7	728.3	730.8	733.9	737.6	741.3	745.0	748.7	755.1
137.5°	758.3	760.0	761.7	763.5	765.2	767.4	770.0	772.6	775.2	777.9	783.6
140°	782.9	783.9	785.0	786.0	787.1	788.7	790.9	793.1	795.3	797.5	802.6
142.5°	803.5	804.4	805.3	806.2	807.2	808.7	810.8	812.8	814.9	817.0	821.2
145°	834.8	834.6	834.5	834.3	834.2	835.4	838.1	840.8	843.5	846.2	848.7
147.5°	863.0	862.4	861.8	861.2	860.6	861.6	864.3	866.9	869.6	872.3	873.3
150°	881.3	880.2	879.1	878.0	876.8	877.6	880.1	882.6	885.2	887.7	888.7
152.5°	896.7	895.5	894.3	893.0	891.8	892.4	894.8	897.2	899.6	902.0	903.0
155°	919.2	917.8	916.3	914.9	913.5	913.7	915.6	917.5	919.4	921.3	922.3
157.5°	936.8	935.6	934.4	933.2	932.0	932.0	933.4	934.7	936.0	937.4	938.5
160°	947.1	946.1	945.2	944.2	943.3	943.3	944.2	945.2	946.1	947.1	948.1
162.5°	956.3	955.3	954.4	953.4	952.4	952.4	953.2	954.0	954.9	955.7	956.8
165°	968.6	967.6	966.7	965.7	964.7	964.5	965.0	965.5	965.9	966.4	967.5
167.5°	977.7	976.8	975.8	974.9	973.9	973.6	974.1	974.5	975.0	975.4	976.5
170°	982.9	981.9	981.0	980.0	979.1	978.7	979.1	979.4	979.7	980.0	981.1
172.5°	986.3	985.3	984.4	983.4	982.5	982.2	982.5	982.8	983.1	983.4	984.6
175°	990.7	989.6	988.5	987.4	986.3	985.9	986.2	986.5	986.8	987.2	988.3
177.5°	991.5	990.6	989.7	988.8	987.9	987.5	987.6	987.8	987.9	988.0	988.9
180°	988.6	988.6	988.6	988.6	988.6	988.6	988.6	988.6	988.6	988.6	988.6



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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°	167.9	177.3	186.7	192.9	195.9	198.8	201.8	204.8
90°	168.8	178.7	188.5	195.0	198.0	201.1	204.1	207.2
92.5°	162.6	171.9	181.2	187.3	190.2	193.2	196.1	199.0
95°	164.1	173.5	183.0	188.9	191.5	194.1	196.6	199.2
97.5°	164.0	173.0	182.1	188.0	190.9	193.8	196.6	199.5
100°	162.2	171.9	181.5	187.8	190.6	193.4	196.2	199.0
102.5°	158.0	167.9	177.7	184.2	187.1	190.0	193.0	195.9
105°	150.8	160.5	170.2	176.6	179.7	182.9	186.0	189.1
107.5°	152.2	158.0	163.9	168.4	171.5	174.6	177.8	180.9
110°	182.4	173.8	165.2	162.4	165.5	168.7	171.8	174.9



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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	283.1	232.4	181.6	157.8	160.8	163.8	166.8	169.8
115°	369.0	302.2	235.4	197.6	188.6	179.7	170.7	161.8
117.5°	519.6	508.5	497.4	474.2	438.9	403.6	368.3	333.0
120°	588.8	597.1	605.4	600.0	581.0	562.1	543.1	524.1
122.5°	615.8	623.1	630.4	633.1	631.1	629.0	627.0	625.0
125°	653.6	660.9	668.1	673.0	675.5	678.0	680.6	683.1
127.5°	688.1	695.3	702.6	707.3	709.3	711.4	713.5	715.6
130°	710.0	717.2	724.4	728.8	730.4	732.1	733.8	735.4
132.5°	731.1	737.9	744.6	748.8	750.5	752.1	753.8	755.4
135°	761.4	767.8	774.2	778.1	779.6	781.1	782.6	784.1
137.5°	789.3	795.1	800.8	804.2	805.2	806.2	807.2	808.2
140°	807.6	812.7	817.7	820.5	821.1	821.7	822.2	822.8
142.5°	825.4	829.7	833.9	836.2	836.5	836.9	837.3	837.7
145°	851.2	853.7	856.1	857.5	857.9	858.2	858.6	858.9
147.5°	874.3	875.3	876.3	876.8	876.6	876.5	876.4	876.3
150°	889.6	890.6	891.5	891.6	890.8	890.0	889.2	888.4
152.5°	903.9	904.9	905.9	905.8	904.8	903.7	902.7	901.6
155°	923.3	924.2	925.2	925.0	923.7	922.5	921.2	919.9
157.5°	939.5	940.6	941.7	941.6	940.4	939.1	937.9	936.7
160°	949.0	950.0	950.9	950.8	949.7	948.6	947.5	946.4
162.5°	957.8	958.9	960.0	959.9	958.5	957.1	955.8	954.4
165°	968.6	969.8	970.9	970.9	969.8	968.6	967.5	966.4
167.5°	977.7	978.8	979.9	979.7	978.3	976.9	975.4	974.0
170°	982.2	983.3	984.5	984.3	982.9	981.4	980.0	978.6
172.5°	985.7	986.8	987.9	987.7	986.3	984.9	983.4	982.0
175°	989.4	990.5	991.6	991.4	989.8	988.2	986.6	985.0
177.5°	989.8	990.7	991.6	991.5	990.3	989.2	988.0	986.9
180°	988.6	988.6	988.6	988.6	988.6	988.6	988.6	988.6

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