

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: P331396

Luminaire Tested: **SA2XXDIP-C865D725U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331396  
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-C865D725U835-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

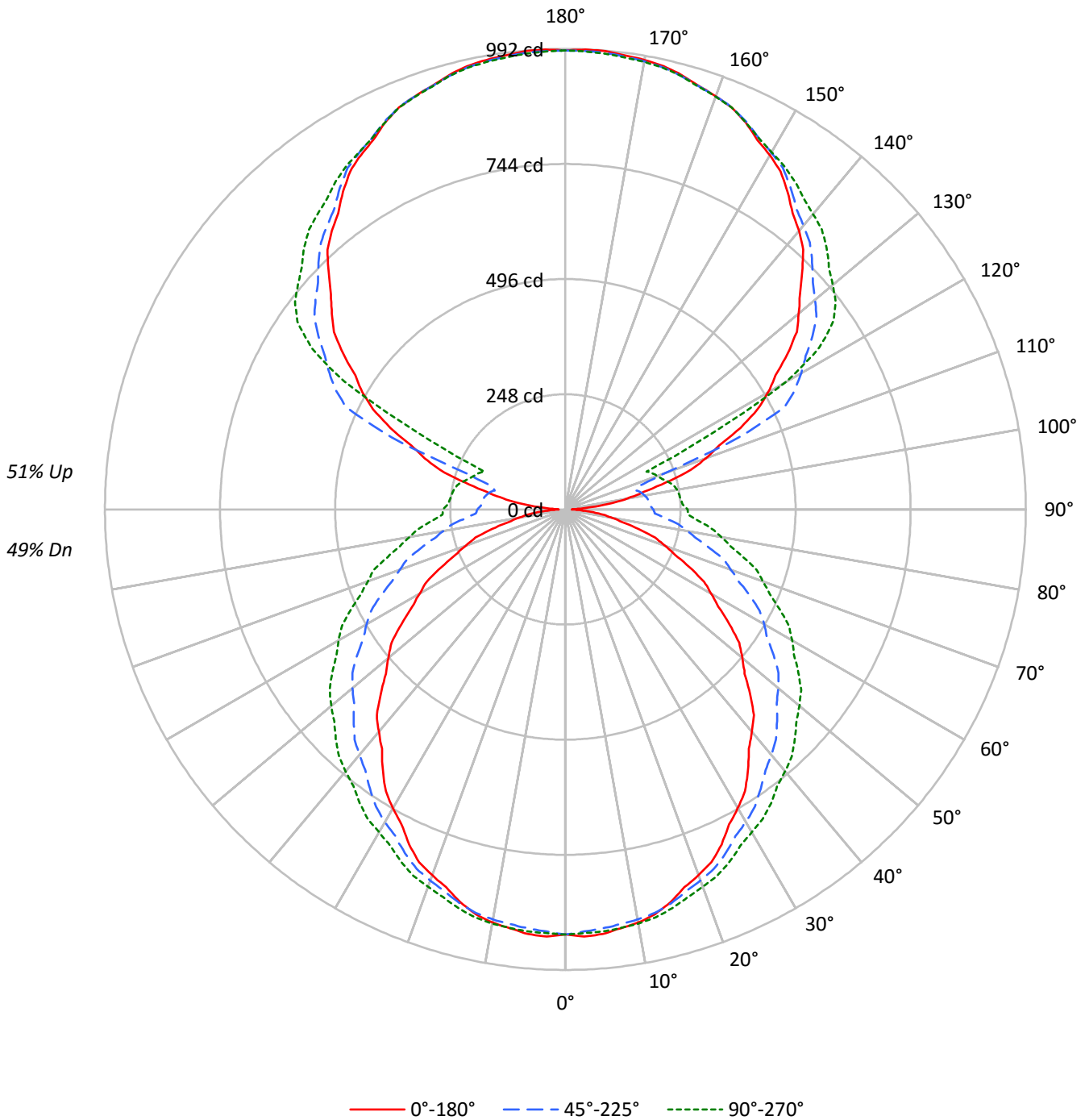
Lumens per Lamp: N/A  
Luminaire Lumens: 6392.6 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 54.4  
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	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	76	70	67	65	58	56	54	46	45	43	38
2	87	79	72	66	79	72	67	62	61	56	52	50	47	44	40	37	35	31
3	79	69	61	55	72	63	56	51	53	48	43	44	40	36	35	32	29	25
4	72	60	52	46	66	56	48	43	47	41	37	38	34	31	31	28	25	21
5	66	54	45	39	60	49	42	36	42	36	31	34	30	26	28	24	22	18
6	61	48	40	33	55	44	37	31	37	31	27	31	26	23	25	21	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	23	20	23	19	17	14
8	52	39	31	26	47	36	29	24	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	14	12	10

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

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.8	1.4
10°-20°	248.8	3.9
20°-30°	377.0	5.9
30°-40°	459.2	7.2
40°-50°	494.0	7.7
50°-60°	479.7	7.5
60°-70°	418.9	6.6
70°-80°	322.5	5.0
80°-90°	218.9	3.4
90°-100°	182.1	2.8
100°-110°	229.8	3.6
110°-120°	395.2	6.2
120°-130°	573.7	9.0
130°-140°	584.3	9.1
140°-150°	530.4	8.3
150°-160°	424.1	6.6
160°-170°	273.3	4.3
170°-180°	94.1	1.5
0°-30°	712.5	11.1
0°-40°	1171.7	18.3
0°-60°	2145.5	33.6
0°-90°	3105.7	48.6
90°-120°	807.0	12.6
90°-150°	2495.5	39.0
90°-180°	3287.0	51.4
0°-180°	6392.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	99	190	244	264	11
95°	57	98	180	232	250	65
105°	224	274	158	210	230	240
115°	417	446	521	244	193	410
125°	584	596	650	689	704	521
135°	721	733	752	786	796	557
145°	835	835	846	859	862	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°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.2	44.1	62.0	79.9	97.8	116.4	135.5	154.6	173.8	192.9	205.1
90°	14.0	32.8	51.7	70.5	89.4	108.9	129.0	149.2	169.3	189.5	202.1
92.5°	26.7	42.4	58.2	74.0	89.7	107.0	125.8	144.6	163.4	182.2	194.2
95°	57.1	65.7	74.3	83.0	91.6	105.3	124.1	142.9	161.7	180.5	192.5
97.5°	101.6	99.1	96.7	94.2	91.7	100.3	119.8	139.4	159.0	178.5	190.1
100°	135.9	125.0	114.2	103.3	92.4	96.6	115.8	135.0	154.3	173.5	185.7
102.5°	172.6	178.0	183.3	188.7	194.0	193.4	186.9	180.3	173.7	167.2	179.5
105°	224.1	237.4	250.7	264.1	277.4	270.0	241.9	213.9	185.8	157.8	169.8
107.5°	284.3	295.0	305.7	316.4	327.1	313.8	276.4	239.0	201.7	164.3	172.5
110°	322.2	331.4	340.7	349.9	359.1	348.0	316.5	285.0	253.5	222.1	215.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	358.8	366.7	374.6	382.6	390.5	395.6	398.0	400.4	402.8	405.2	356.6
115°	416.6	422.6	428.5	434.5	440.4	452.0	469.2	486.5	503.7	521.0	456.2
117.5°	466.9	472.1	477.2	482.4	487.5	497.6	512.6	527.6	542.6	557.6	548.5
120°	504.7	508.3	511.8	515.4	519.0	528.1	542.7	557.4	572.0	586.7	596.9
122.5°	536.8	539.7	542.7	545.7	548.7	557.3	571.5	585.7	599.9	614.1	623.3
125°	584.2	586.3	588.4	590.4	592.5	599.7	612.2	624.7	637.1	649.6	658.6
127.5°	628.4	630.4	632.4	634.4	636.4	642.3	652.2	662.1	671.9	681.8	690.7
130°	656.5	658.7	661.0	663.2	665.5	670.6	678.5	686.4	694.4	702.3	711.1
132.5°	685.1	686.9	688.8	690.7	692.6	696.7	703.3	709.8	716.3	722.8	731.2
135°	721.0	723.5	726.0	728.6	731.1	734.6	739.0	743.3	747.7	752.1	759.9
137.5°	758.6	760.3	762.0	763.7	765.5	767.8	770.7	773.6	776.5	779.5	786.4
140°	783.2	784.2	785.1	786.1	787.1	788.8	791.1	793.4	795.8	798.1	804.3
142.5°	803.8	804.6	805.5	806.3	807.2	808.7	810.8	812.9	815.0	817.2	822.2
145°	834.8	834.6	834.5	834.3	834.2	835.4	838.1	840.8	843.5	846.2	849.1
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°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	217.3	229.4	241.6	249.7	253.5	257.3	261.2	265.0
90°	214.6	227.2	239.8	248.0	251.9	255.8	259.6	263.5
92.5°	206.1	218.1	230.1	237.9	241.7	245.4	249.1	252.9
95°	204.5	216.5	228.5	236.2	239.6	242.9	246.3	249.7
97.5°	201.6	213.2	224.7	232.3	236.0	239.7	243.3	247.0
100°	197.8	210.0	222.2	230.1	233.6	237.2	240.8	244.3
102.5°	191.8	204.2	216.5	224.5	228.2	231.9	235.6	239.3
105°	181.9	194.0	206.0	214.0	217.9	221.8	225.6	229.5
107.5°	180.6	188.7	196.8	202.8	206.7	210.6	214.5	218.4
110°	209.1	202.7	196.2	194.9	198.8	202.7	206.6	210.4





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CATALOG NUMBER: SA2XXDIP-C865D725U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	308.1	259.5	211.0	188.6	192.3	196.1	199.8	203.6
115°	391.5	326.7	262.0	225.5	217.3	209.1	200.9	192.7
117.5°	539.4	530.4	521.3	499.5	464.9	430.2	395.6	361.0
120°	607.0	617.2	627.4	623.3	605.1	586.9	568.7	550.5
122.5°	632.4	641.6	650.8	654.6	653.3	651.9	650.5	649.1
125°	667.7	676.8	685.9	692.0	695.1	698.2	701.4	704.5
127.5°	699.7	708.6	717.5	723.3	726.0	728.7	731.4	734.1
130°	720.0	728.8	737.6	743.1	745.3	747.5	749.7	751.9
132.5°	739.5	747.9	756.2	761.5	763.7	765.9	768.1	770.3
135°	767.7	775.5	783.2	788.1	790.2	792.2	794.3	796.3
137.5°	793.4	800.4	807.4	811.6	813.1	814.5	816.0	817.5
140°	810.4	816.6	822.7	826.3	827.2	828.2	829.2	830.2
142.5°	827.3	832.4	837.5	840.4	841.1	841.9	842.6	843.3
145°	852.0	854.9	857.8	859.5	860.2	860.9	861.6	862.3
147.5°	874.4	875.5	876.5	877.1	877.1	877.2	877.2	877.2
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

(END OF REPORT)