

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: P331297-840

Luminaire Tested: **SA2XXDIP-C485D530U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331297-840
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-C485D530U840-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

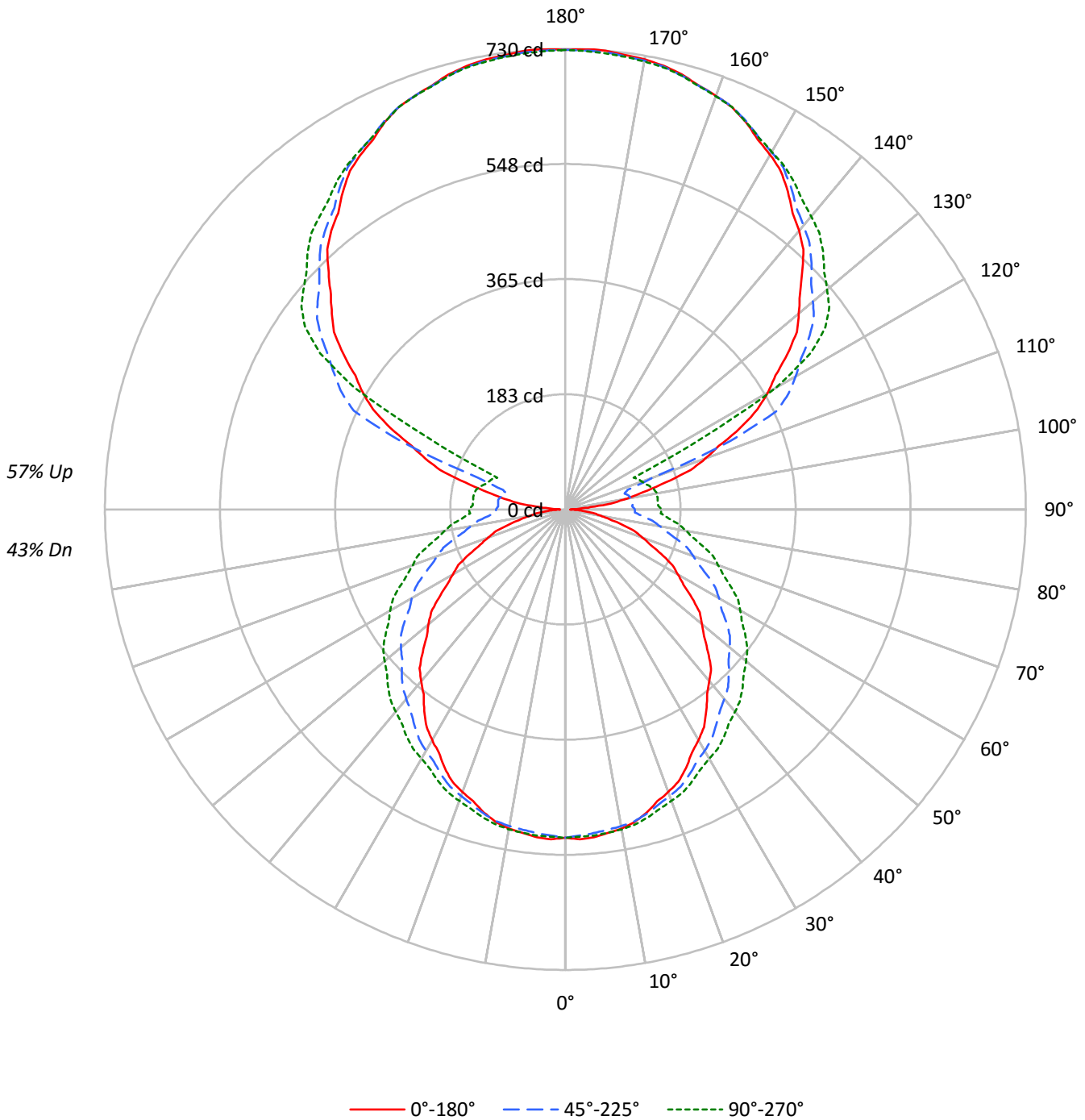
Lumens per Lamp: N/A
Luminaire Lumens: 4121.6 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 32.8
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	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	50	50	50	43																												
1	95	90	86	82	86	82	79	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	20	16																												
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	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°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	1.2
10°-20°	141.4	3.4
20°-30°	214.3	5.2
30°-40°	261.0	6.3
40°-50°	280.8	6.8
50°-60°	272.7	6.6
60°-70°	238.1	5.8
70°-80°	183.3	4.4
80°-90°	124.8	3.0
90°-100°	109.0	2.6
100°-110°	151.0	3.7
110°-120°	279.0	6.8
120°-130°	415.9	10.1
130°-140°	427.7	10.4
140°-150°	390.3	9.5
150°-160°	312.4	7.6
160°-170°	201.3	4.9
170°-180°	69.3	1.7
0°-30°	405.0	9.8
0°-40°	666.0	16.2
0°-60°	1219.4	29.6
0°-90°	1765.6	42.8
90°-120°	539.0	13.1
90°-150°	1772.9	43.0
90°-180°	2356.0	57.2
0°-180°	4121.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	8	58	110	142	153	7
95°	40	60	107	137	147	47
105°	164	194	97	128	140	175
115°	306	325	370	160	119	301
125°	430	438	471	494	503	383
135°	531	540	552	572	578	410
145°	615	615	624	631	633	385
155°	677	673	679	682	678	312
165°	714	711	712	715	712	202
175°	730	726	727	730	726	69
180°	728	728	728	728	728	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.8	25.1	35.3	45.6	55.8	66.4	77.4	88.3	99.2	110.1	117.0
90°	8.1	19.1	30.1	41.1	52.1	63.4	75.1	86.7	98.5	110.1	117.3
92.5°	17.6	26.6	35.4	44.4	53.3	63.2	74.0	84.7	95.5	106.3	113.2
95°	40.3	44.3	48.3	52.3	56.4	63.8	74.6	85.5	96.4	107.2	114.2
97.5°	73.2	69.4	65.5	61.6	57.8	61.6	73.1	84.6	96.2	107.8	114.4
100°	98.6	88.8	78.9	69.1	59.2	60.0	71.3	82.7	94.1	105.4	112.6
102.5°	125.8	128.1	130.3	132.6	134.8	132.2	124.7	117.1	109.6	102.1	109.4
105°	164.0	172.4	180.8	189.1	197.5	190.1	166.8	143.5	120.3	97.0	104.1
107.5°	208.4	215.1	221.9	228.6	235.3	223.7	193.7	163.7	133.7	103.7	108.0
110°	236.5	242.3	248.1	253.9	259.7	249.8	224.2	198.5	172.9	147.2	141.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	263.5	268.4	273.5	278.4	283.5	285.7	285.1	284.6	284.0	283.5	246.1
115°	306.1	309.9	313.8	317.6	321.4	328.5	339.0	349.5	359.9	370.4	321.2
117.5°	343.4	346.8	350.2	353.7	357.1	363.2	372.2	381.2	390.2	399.2	391.1
120°	371.1	373.7	376.1	378.5	380.9	386.5	395.4	404.1	412.9	421.7	427.9
122.5°	394.8	396.9	399.0	401.1	403.2	408.6	417.2	425.9	434.4	443.0	448.4
125°	430.0	431.5	433.0	434.5	436.1	440.6	448.2	455.8	463.4	471.0	476.4
127.5°	462.5	464.0	465.5	467.1	468.6	472.4	478.4	484.3	490.3	496.3	501.7
130°	483.2	484.9	486.7	488.4	490.0	493.3	498.1	502.9	507.7	512.5	517.9
132.5°	504.3	505.7	507.2	508.6	510.0	512.7	516.7	520.7	524.7	528.7	533.7
135°	530.9	532.8	534.7	536.5	538.5	540.7	543.5	546.2	549.0	551.7	556.3
137.5°	558.7	560.0	561.2	562.5	563.8	565.3	567.3	569.3	571.2	573.1	577.3
140°	576.8	577.5	578.3	579.1	579.9	581.1	582.7	584.3	585.9	587.5	591.3
142.5°	592.0	592.6	593.3	594.0	594.7	595.8	597.3	598.8	600.4	602.0	605.0
145°	615.0	614.9	614.8	614.7	614.6	615.5	617.5	619.5	621.5	623.5	625.3
147.5°	635.8	635.3	634.9	634.5	634.0	634.8	636.7	638.7	640.7	642.7	643.4
150°	649.2	648.4	647.6	646.8	646.0	646.5	648.4	650.3	652.2	654.0	654.7
152.5°	660.7	659.7	658.8	657.9	657.0	657.4	659.2	661.1	662.8	664.6	665.3
155°	677.2	676.2	675.1	674.1	673.0	673.2	674.6	676.0	677.4	678.8	679.5
157.5°	690.1	689.3	688.4	687.5	686.6	686.7	687.6	688.6	689.6	690.6	691.4
160°	697.8	697.1	696.4	695.7	695.0	695.0	695.7	696.4	697.1	697.8	698.5
162.5°	704.5	703.8	703.1	702.4	701.8	701.7	702.3	702.9	703.5	704.1	704.9
165°	713.6	712.9	712.2	711.4	710.7	710.6	710.9	711.2	711.7	712.0	712.9
167.5°	720.3	719.6	718.9	718.2	717.5	717.3	717.6	718.0	718.3	718.6	719.4
170°	724.1	723.5	722.8	722.1	721.3	721.0	721.3	721.5	721.8	722.1	722.9
172.5°	726.7	726.0	725.3	724.6	723.9	723.6	723.9	724.1	724.3	724.6	725.4
175°	729.9	729.1	728.3	727.5	726.6	726.4	726.6	726.8	727.0	727.3	728.1
177.5°	730.4	729.8	729.1	728.5	727.8	727.5	727.6	727.7	727.8	727.9	728.6
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	124.0	131.0	137.9	142.5	144.7	146.9	149.1	151.3
90°	124.7	132.0	139.3	144.0	146.2	148.6	150.8	153.0
92.5°	120.1	126.9	133.8	138.4	140.5	142.7	144.8	146.9
95°	121.2	128.2	135.1	139.6	141.4	143.3	145.2	147.1
97.5°	121.1	127.7	134.4	138.9	141.0	143.1	145.2	147.3
100°	119.8	126.8	134.0	138.7	140.7	142.8	144.8	146.9
102.5°	116.6	123.9	131.2	135.9	138.1	140.3	142.5	144.6
105°	111.3	118.5	125.6	130.4	132.7	135.0	137.3	139.6
107.5°	112.3	116.6	121.0	124.3	126.6	128.9	131.2	133.5
110°	134.6	128.3	121.9	119.9	122.2	124.5	126.8	129.2



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CATALOG NUMBER: SA2XXDIP-C485D530U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	208.7	171.4	134.0	116.4	118.7	120.9	123.1	125.3
115°	272.1	222.9	173.6	145.7	139.2	132.6	125.9	119.4
117.5°	382.9	374.8	366.6	349.5	323.6	297.5	271.6	245.5
120°	433.9	440.0	446.2	442.2	428.3	414.2	400.3	386.4
122.5°	453.8	459.2	464.6	466.6	465.0	463.6	462.1	460.6
125°	481.7	487.1	492.3	495.9	497.9	499.7	501.5	503.4
127.5°	507.1	512.4	517.8	521.2	522.7	524.2	525.8	527.4
130°	523.1	528.5	533.7	537.0	538.3	539.5	540.7	541.9
132.5°	538.7	543.7	548.7	551.8	553.0	554.2	555.4	556.6
135°	561.1	565.7	570.4	573.3	574.4	575.5	576.6	577.7
137.5°	581.6	585.8	590.1	592.5	593.3	594.0	594.7	595.5
140°	595.0	598.7	602.5	604.6	605.0	605.4	605.8	606.2
142.5°	608.1	611.3	614.4	616.0	616.3	616.6	616.9	617.2
145°	627.1	628.9	630.8	631.8	632.1	632.3	632.6	632.8
147.5°	644.1	644.9	645.6	645.9	645.8	645.8	645.7	645.6
150°	655.4	656.1	656.8	656.9	656.3	655.7	655.1	654.6
152.5°	666.0	666.7	667.4	667.3	666.6	665.8	665.0	664.3
155°	680.2	681.0	681.7	681.5	680.5	679.6	678.7	677.7
157.5°	692.2	693.0	693.8	693.8	692.8	691.9	690.9	690.0
160°	699.1	699.8	700.5	700.5	699.7	698.9	698.0	697.2
162.5°	705.7	706.5	707.3	707.2	706.2	705.2	704.2	703.2
165°	713.7	714.5	715.3	715.3	714.5	713.7	712.9	712.0
167.5°	720.2	721.1	722.0	721.9	720.7	719.7	718.6	717.6
170°	723.7	724.5	725.3	725.2	724.1	723.1	722.1	720.9
172.5°	726.2	727.0	727.8	727.7	726.7	725.6	724.6	723.5
175°	728.9	729.7	730.5	730.4	729.2	728.0	726.9	725.7
177.5°	729.2	729.9	730.5	730.4	729.6	728.7	727.9	727.1
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3

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