

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: P331297-940

Luminaire Tested: **SA2XXDIP-C485D530U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331297-940
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-C485D530U940-4F0-1E-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

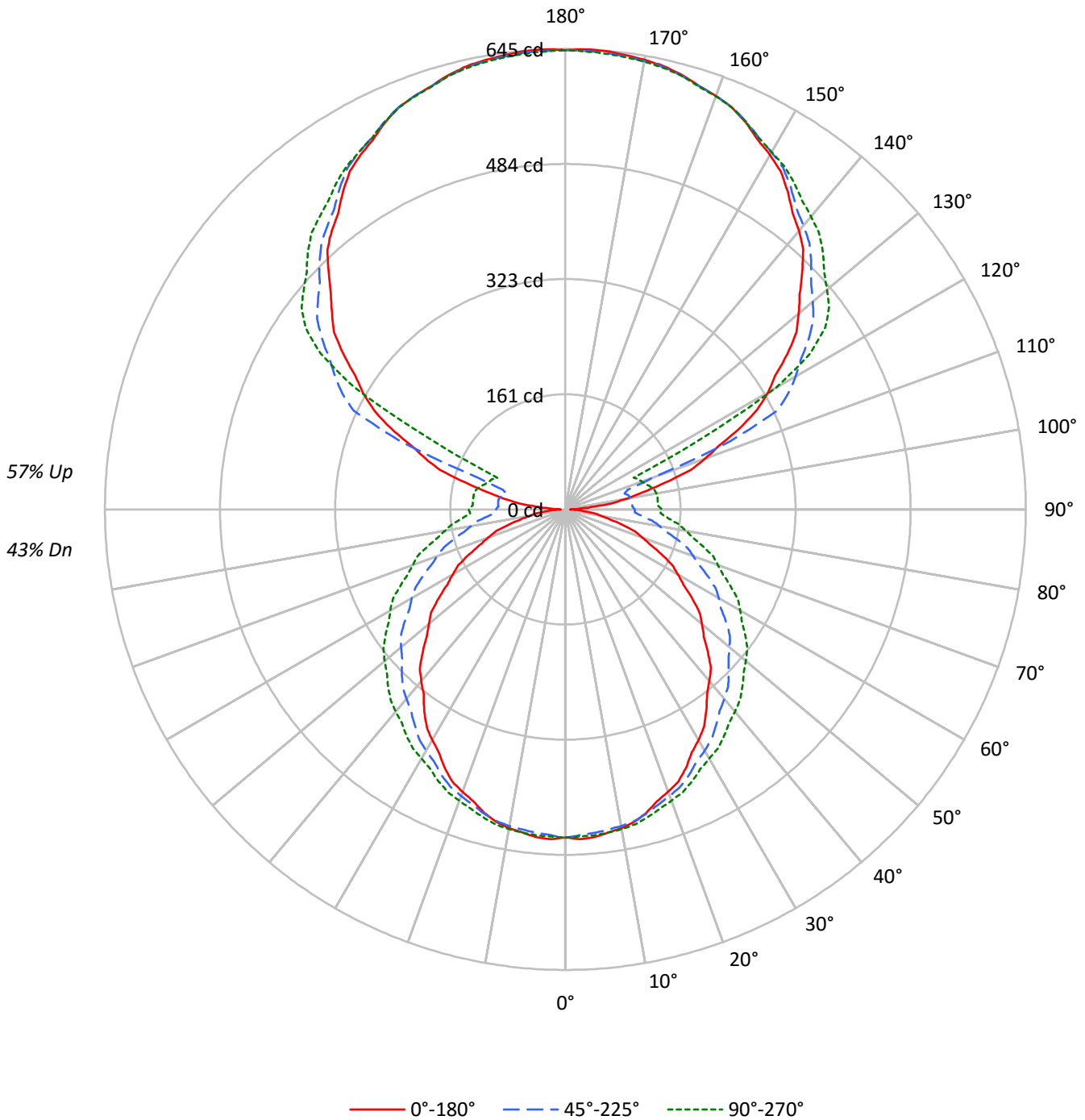
Lumens per Lamp: N/A
Luminaire Lumens: 3639.4 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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	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°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	1.2
10°-20°	124.9	3.4
20°-30°	189.2	5.2
30°-40°	230.5	6.3
40°-50°	247.9	6.8
50°-60°	240.8	6.6
60°-70°	210.2	5.8
70°-80°	161.8	4.4
80°-90°	110.2	3.0
90°-100°	96.3	2.6
100°-110°	133.3	3.7
110°-120°	246.4	6.8
120°-130°	367.3	10.1
130°-140°	377.6	10.4
140°-150°	344.6	9.5
150°-160°	275.9	7.6
160°-170°	177.8	4.9
170°-180°	61.2	1.7
0°-30°	357.6	9.8
0°-40°	588.1	16.2
0°-60°	1076.8	29.6
0°-90°	1559.0	42.8
90°-120°	476.0	13.1
90°-150°	1565.5	43.0
90°-180°	2080.0	57.2
0°-180°	3639.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	7	51	97	125	135	6
95°	36	53	95	121	130	41
105°	145	171	86	113	123	155
115°	270	287	327	141	105	266
125°	380	387	416	436	444	339
135°	469	476	487	505	510	362
145°	543	543	550	557	559	340
155°	598	594	599	602	598	275
165°	630	628	629	632	629	178
175°	644	642	642	645	641	61
180°	643	643	643	643	643	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.1	22.2	31.2	40.3	49.3	58.7	68.3	77.9	87.6	97.2	103.3
90°	7.1	16.9	26.6	36.3	46.0	56.0	66.3	76.6	86.9	97.2	103.6
92.5°	15.5	23.5	31.3	39.2	47.1	55.8	65.4	74.8	84.4	93.9	100.0
95°	35.6	39.1	42.6	46.2	49.8	56.4	65.9	75.5	85.2	94.7	100.9
97.5°	64.6	61.3	57.9	54.4	51.0	54.4	64.6	74.7	85.0	95.1	101.0
100°	87.0	78.4	69.6	61.0	52.3	53.0	63.0	73.0	83.1	93.1	99.4
102.5°	111.1	113.1	115.0	117.1	119.0	116.7	110.1	103.4	96.8	90.2	96.6
105°	144.8	152.2	159.6	167.0	174.4	167.8	147.3	126.7	106.2	85.7	91.9
107.5°	184.0	189.9	195.9	201.9	207.8	197.5	171.0	144.5	118.1	91.6	95.3
110°	208.8	213.9	219.1	224.2	229.3	220.6	198.0	175.3	152.7	130.0	124.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	232.6	237.0	241.5	245.8	250.3	252.3	251.7	251.3	250.7	250.3	217.3
115°	270.3	273.7	277.1	280.4	283.8	290.1	299.3	308.6	317.8	327.1	283.7
117.5°	303.2	306.2	309.2	312.3	315.3	320.7	328.7	336.6	344.6	352.5	345.4
120°	327.7	329.9	332.1	334.2	336.4	341.3	349.1	356.9	364.6	372.4	377.8
122.5°	348.6	350.4	352.3	354.2	356.1	360.8	368.4	376.0	383.6	391.2	395.9
125°	379.7	381.0	382.4	383.7	385.0	389.1	395.7	402.4	409.2	415.9	420.6
127.5°	408.4	409.7	411.1	412.4	413.8	417.1	422.4	427.7	432.9	438.3	443.0
130°	426.7	428.2	429.7	431.2	432.7	435.6	439.8	444.1	448.3	452.5	457.3
132.5°	445.3	446.6	447.8	449.1	450.3	452.7	456.3	459.8	463.3	466.8	471.3
135°	468.8	470.5	472.2	473.8	475.5	477.4	479.9	482.3	484.7	487.1	491.2
137.5°	493.3	494.5	495.5	496.7	497.8	499.2	501.0	502.7	504.4	506.0	509.8
140°	509.3	510.0	510.7	511.3	512.0	513.1	514.5	515.9	517.4	518.8	522.1
142.5°	522.7	523.3	523.9	524.5	525.1	526.1	527.4	528.8	530.1	531.5	534.2
145°	543.1	543.0	542.9	542.8	542.7	543.5	545.3	547.0	548.8	550.5	552.1
147.5°	561.4	561.0	560.6	560.3	559.8	560.5	562.2	564.0	565.7	567.5	568.1
150°	573.3	572.6	571.9	571.1	570.4	570.9	572.6	574.2	575.9	577.5	578.1
152.5°	583.4	582.6	581.8	580.9	580.1	580.5	582.1	583.7	585.2	586.8	587.5
155°	598.0	597.1	596.1	595.2	594.2	594.4	595.7	596.9	598.2	599.4	600.0
157.5°	609.4	608.7	607.9	607.1	606.3	606.4	607.2	608.1	608.9	609.8	610.5
160°	616.2	615.5	614.9	614.3	613.7	613.7	614.3	614.9	615.5	616.2	616.8
162.5°	622.1	621.4	620.8	620.2	619.6	619.6	620.1	620.6	621.2	621.7	622.4
165°	630.1	629.5	628.8	628.2	627.6	627.5	627.8	628.0	628.4	628.7	629.5
167.5°	636.1	635.4	634.8	634.2	633.6	633.4	633.6	634.0	634.3	634.5	635.3
170°	639.4	638.8	638.2	637.6	636.9	636.7	636.9	637.1	637.3	637.6	638.3
172.5°	641.7	641.1	640.4	639.8	639.2	638.9	639.2	639.4	639.5	639.8	640.5
175°	644.5	643.8	643.1	642.4	641.6	641.4	641.6	641.8	641.9	642.2	642.9
177.5°	645.0	644.4	643.8	643.3	642.7	642.4	642.5	642.6	642.7	642.7	643.4
180°	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1



TEST NUMBER: P331297-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	109.5	115.7	121.8	125.8	127.8	129.7	131.6	133.6
90°	110.1	116.5	123.0	127.2	129.1	131.2	133.1	135.1
92.5°	106.0	112.1	118.2	122.2	124.0	126.0	127.9	129.7
95°	107.0	113.2	119.3	123.2	124.8	126.5	128.2	129.9
97.5°	106.9	112.8	118.7	122.6	124.5	126.4	128.2	130.1
100°	105.8	112.0	118.3	122.4	124.2	126.1	127.9	129.7
102.5°	103.0	109.4	115.8	120.0	122.0	123.9	125.8	127.7
105°	98.3	104.6	110.9	115.1	117.2	119.2	121.3	123.2
107.5°	99.2	103.0	106.8	109.8	111.8	113.8	115.8	117.9
110°	118.9	113.2	107.6	105.8	107.9	109.9	112.0	114.0



TEST NUMBER: P331297-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	184.3	151.3	118.3	102.8	104.8	106.7	108.7	110.7
115°	240.2	196.8	153.3	128.7	122.9	117.1	111.2	105.4
117.5°	338.1	330.9	323.7	308.6	285.7	262.7	239.8	216.8
120°	383.2	388.5	394.0	390.5	378.2	365.8	353.5	341.2
122.5°	400.7	405.5	410.3	412.0	410.6	409.4	408.0	406.7
125°	425.3	430.1	434.7	437.9	439.6	441.2	442.8	444.5
127.5°	447.7	452.5	457.2	460.2	461.5	462.9	464.3	465.7
130°	461.9	466.6	471.3	474.2	475.3	476.4	477.4	478.5
132.5°	475.6	480.1	484.5	487.2	488.3	489.4	490.4	491.5
135°	495.4	499.5	503.6	506.2	507.2	508.2	509.2	510.1
137.5°	513.5	517.3	521.0	523.2	523.9	524.5	525.1	525.8
140°	525.4	528.7	532.0	533.9	534.2	534.6	534.9	535.3
142.5°	537.0	539.8	542.5	543.9	544.2	544.5	544.7	545.0
145°	553.8	555.4	557.0	557.9	558.1	558.3	558.6	558.7
147.5°	568.7	569.4	570.1	570.3	570.2	570.2	570.2	570.1
150°	578.7	579.3	580.0	580.1	579.5	579.0	578.5	578.0
152.5°	588.1	588.7	589.3	589.2	588.6	587.9	587.2	586.6
155°	600.7	601.3	601.9	601.7	600.9	600.1	599.3	598.4
157.5°	611.2	611.9	612.6	612.6	611.7	610.9	610.1	609.3
160°	617.3	618.0	618.6	618.6	617.9	617.2	616.4	615.6
162.5°	623.1	623.8	624.6	624.5	623.6	622.7	621.8	620.9
165°	630.2	630.9	631.6	631.6	630.9	630.2	629.5	628.7
167.5°	636.0	636.8	637.5	637.4	636.4	635.5	634.5	633.6
170°	639.0	639.7	640.4	640.3	639.4	638.5	637.6	636.6
172.5°	641.2	641.9	642.7	642.6	641.7	640.7	639.8	638.8
175°	643.6	644.4	645.1	645.0	643.9	642.8	641.9	640.8
177.5°	643.9	644.5	645.1	645.0	644.3	643.5	642.7	642.0
180°	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1

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