

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: P331497-930

Luminaire Tested: **S122DIW-S485D435U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331497-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D435U930-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3015.4 lumens
Efficiency: N/A
Efficacy: 99.8 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

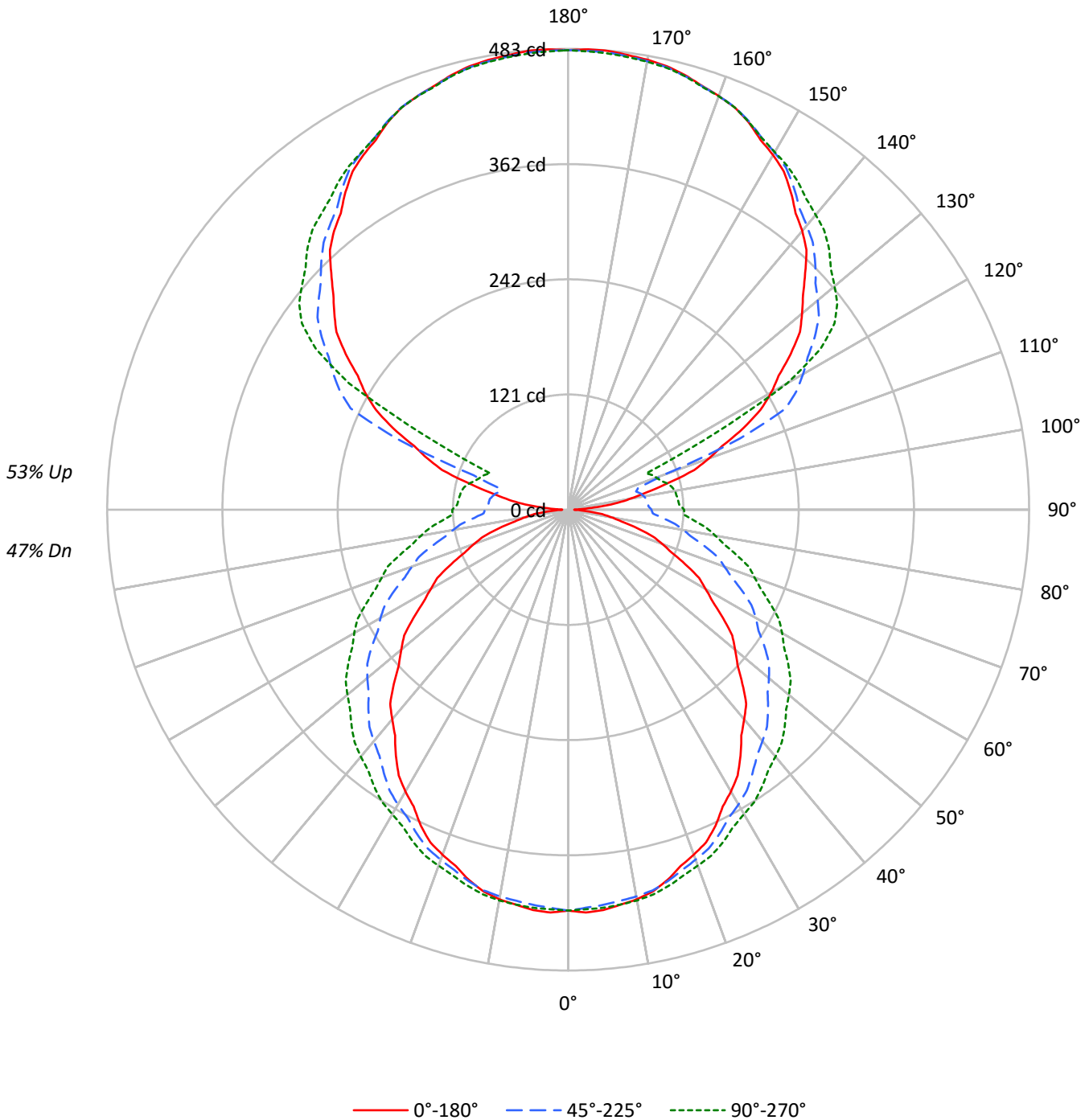
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47				47
1	96	91	86	82	88	83	80	76	70	67	64	57	55	53	45	44	42	37				37
2	87	78	72	66	79	72	66	61	60	56	52	49	46	43	39	37	35	30				30
3	79	69	61	54	72	63	56	51	53	47	43	43	39	36	34	31	29	25				25
4	72	60	52	46	65	56	48	42	46	41	36	38	34	30	30	27	24	21				21
5	66	54	45	39	60	49	42	36	41	35	31	34	29	26	27	24	21	18				18
6	60	48	39	33	55	44	37	31	37	31	27	31	26	23	24	21	18	15				15
7	56	43	35	29	51	40	32	27	34	28	23	28	23	20	22	19	16	13				13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12				12
9	48	36	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11				11
10	45	33	25	20	41	30	23	19	26	20	17	21	17	14	17	14	12	10				10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	1.3
10°-20°	114.2	3.8
20°-30°	173.0	5.7
30°-40°	210.7	7.0
40°-50°	226.7	7.5
50°-60°	220.1	7.3
60°-70°	192.2	6.4
70°-80°	148.0	4.9
80°-90°	100.5	3.3
90°-100°	84.5	2.8
100°-110°	108.9	3.6
110°-120°	190.5	6.3
120°-130°	278.4	9.2
130°-140°	284.2	9.4
140°-150°	258.3	8.6
150°-160°	206.6	6.9
160°-170°	133.1	4.4
170°-180°	45.8	1.5
0°-30°	327.0	10.8
0°-40°	537.7	17.8
0°-60°	984.5	32.6
0°-90°	1425.2	47.3
90°-120°	383.8	12.7
90°-150°	1204.6	40.0
90°-180°	1590.0	52.7
0°-180°	3015.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	6	46	87	112	122	5
95°	28	46	84	108	115	32
105°	109	132	74	98	107	117
115°	203	217	252	115	90	199
125°	284	290	315	333	341	254
135°	351	357	366	382	386	271
145°	407	407	412	418	420	254
155°	448	445	449	451	448	206
165°	472	470	471	473	471	133
175°	483	480	481	483	480	46
180°	482	482	482	482	482	



TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.0	20.2	28.5	36.7	44.9	53.5	62.2	71.0	79.8	88.6	94.2
90°	6.4	15.2	23.8	32.5	41.3	50.2	59.5	68.8	78.0	87.3	93.1
92.5°	12.6	19.9	27.1	34.3	41.6	49.5	58.1	66.8	75.4	84.1	89.6
95°	27.6	31.3	35.1	39.0	42.7	49.0	57.6	66.3	74.9	83.6	89.1
97.5°	49.2	47.7	46.1	44.6	43.0	46.8	55.8	64.9	73.9	83.0	88.3
100°	66.0	60.3	54.7	49.2	43.5	45.2	54.1	62.9	71.8	80.7	86.3
102.5°	83.9	86.2	88.5	90.8	93.2	92.5	88.9	85.2	81.5	77.9	83.6
105°	109.0	115.2	121.5	127.8	134.0	130.0	115.9	101.8	87.7	73.6	79.2
107.5°	138.4	143.3	148.4	153.4	158.4	151.6	133.0	114.4	95.7	77.1	80.8
110°	156.8	161.1	165.5	169.8	174.1	168.4	152.7	137.0	121.2	105.4	102.0



TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.6	178.4	182.1	185.8	189.5	191.8	192.5	193.3	194.0	194.9	171.0
115°	202.8	205.6	208.4	211.2	214.0	219.5	227.5	235.5	243.5	251.5	219.7
117.5°	227.4	229.8	232.3	234.7	237.2	241.8	248.8	255.8	262.7	269.7	265.1
120°	245.7	247.4	249.2	250.9	252.6	256.8	263.7	270.4	277.2	284.1	288.8
122.5°	261.4	262.8	264.2	265.7	267.1	271.2	277.8	284.4	291.0	297.6	301.8
125°	284.5	285.5	286.6	287.6	288.5	292.0	297.7	303.5	309.3	315.2	319.4
127.5°	306.1	307.0	308.0	309.0	310.0	312.7	317.4	322.0	326.5	331.1	335.3
130°	319.8	320.8	322.0	323.0	324.2	326.5	330.2	333.9	337.6	341.3	345.4
132.5°	333.6	334.6	335.5	336.4	337.4	339.3	342.3	345.4	348.5	351.5	355.4
135°	351.1	352.4	353.7	354.9	356.1	357.8	359.8	361.9	363.9	366.0	369.6
137.5°	369.5	370.3	371.2	372.0	372.8	374.0	375.4	376.7	378.1	379.5	382.8
140°	381.5	382.0	382.5	382.9	383.4	384.3	385.4	386.5	387.6	388.7	391.6
142.5°	391.5	391.9	392.4	392.8	393.2	394.0	394.9	396.0	397.1	398.0	400.4
145°	406.7	406.6	406.5	406.4	406.3	407.0	408.3	409.6	410.9	412.2	413.6
147.5°	420.4	420.1	419.8	419.6	419.2	419.7	421.0	422.3	423.6	424.9	425.4
150°	429.3	428.8	428.2	427.7	427.1	427.5	428.8	430.0	431.2	432.4	432.9
152.5°	436.8	436.3	435.6	435.0	434.4	434.7	435.9	437.1	438.2	439.4	439.9
155°	447.8	447.1	446.4	445.7	445.0	445.2	446.1	446.9	447.9	448.8	449.3
157.5°	456.3	455.8	455.2	454.6	454.0	454.0	454.7	455.3	456.0	456.6	457.1
160°	461.4	460.9	460.5	460.0	459.5	459.5	460.0	460.5	460.9	461.4	461.9
162.5°	465.9	465.4	464.9	464.5	464.0	464.0	464.3	464.7	465.1	465.5	466.1
165°	471.8	471.4	470.9	470.4	469.9	469.9	470.1	470.3	470.6	470.8	471.3
167.5°	476.3	475.8	475.4	474.9	474.4	474.3	474.5	474.7	475.0	475.2	475.7
170°	478.8	478.3	477.8	477.4	477.0	476.8	477.0	477.1	477.3	477.4	477.9
172.5°	480.5	480.0	479.6	479.1	478.6	478.5	478.6	478.7	478.9	479.1	479.6
175°	482.7	482.1	481.5	481.0	480.5	480.3	480.5	480.6	480.7	480.9	481.4
177.5°	483.0	482.6	482.1	481.7	481.3	481.0	481.1	481.2	481.3	481.3	481.8
180°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6



TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	99.8	105.4	111.0	114.6	116.4	118.2	119.9	121.7
90°	99.0	104.8	110.6	114.3	116.1	117.9	119.7	121.5
92.5°	95.1	100.6	106.1	109.7	111.5	113.2	114.9	116.6
95°	94.7	100.2	105.7	109.3	110.8	112.3	113.9	115.4
97.5°	93.6	98.9	104.3	107.8	109.4	111.1	112.8	114.5
100°	92.0	97.6	103.2	106.9	108.5	110.1	111.9	113.5
102.5°	89.3	95.0	100.7	104.4	106.2	107.9	109.5	111.2
105°	84.8	90.4	96.0	99.6	101.4	103.3	105.1	106.9
107.5°	84.5	88.1	91.9	94.6	96.4	98.2	100.0	101.7
110°	98.6	95.2	91.8	91.0	92.8	94.6	96.4	98.2



TEST NUMBER: P331497-930

CATALOG NUMBER: S122DIW-S485D435U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	147.0	123.1	99.1	88.1	89.8	91.6	93.3	95.1
115°	187.9	156.1	124.3	106.4	102.3	98.2	94.2	90.1
117.5°	260.3	255.7	251.0	240.2	223.2	206.4	189.4	172.4
120°	293.5	298.2	302.9	300.8	291.8	282.8	273.9	265.0
122.5°	306.1	310.3	314.5	316.3	315.5	314.8	314.0	313.2
125°	323.6	327.8	331.9	334.8	336.2	337.7	339.1	340.6
127.5°	339.4	343.6	347.7	350.4	351.6	352.9	354.1	355.4
130°	349.5	353.6	357.7	360.3	361.3	362.2	363.3	364.3
132.5°	359.2	363.1	367.0	369.4	370.4	371.4	372.4	373.4
135°	373.2	376.8	380.4	382.7	383.6	384.6	385.5	386.5
137.5°	386.0	389.2	392.5	394.4	395.1	395.7	396.4	397.1
140°	394.4	397.3	400.1	401.8	402.3	402.7	403.1	403.5
142.5°	402.8	405.1	407.5	408.9	409.2	409.5	409.9	410.1
145°	415.0	416.3	417.7	418.5	418.7	419.1	419.3	419.6
147.5°	425.9	426.5	427.0	427.2	427.2	427.2	427.2	427.2
150°	433.4	433.8	434.3	434.4	434.0	433.6	433.2	432.8
152.5°	440.3	440.8	441.3	441.2	440.8	440.3	439.7	439.2
155°	449.8	450.2	450.7	450.6	450.0	449.4	448.7	448.2
157.5°	457.7	458.2	458.8	458.7	458.1	457.5	456.9	456.3
160°	462.3	462.8	463.3	463.2	462.7	462.1	461.5	461.1
162.5°	466.6	467.2	467.7	467.6	466.9	466.3	465.6	465.0
165°	471.9	472.4	473.0	473.0	472.4	471.9	471.3	470.8
167.5°	476.3	476.8	477.4	477.3	476.5	475.9	475.2	474.5
170°	478.5	479.1	479.6	479.5	478.8	478.1	477.4	476.7
172.5°	480.1	480.7	481.3	481.2	480.5	479.8	479.1	478.4
175°	482.0	482.5	483.1	483.0	482.2	481.4	480.6	479.9
177.5°	482.2	482.6	483.1	483.0	482.4	481.8	481.3	480.8
180°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6

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