

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: P331914-930

Luminaire Tested: **S123DIP-S560D365U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331914-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D365U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2943.9 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

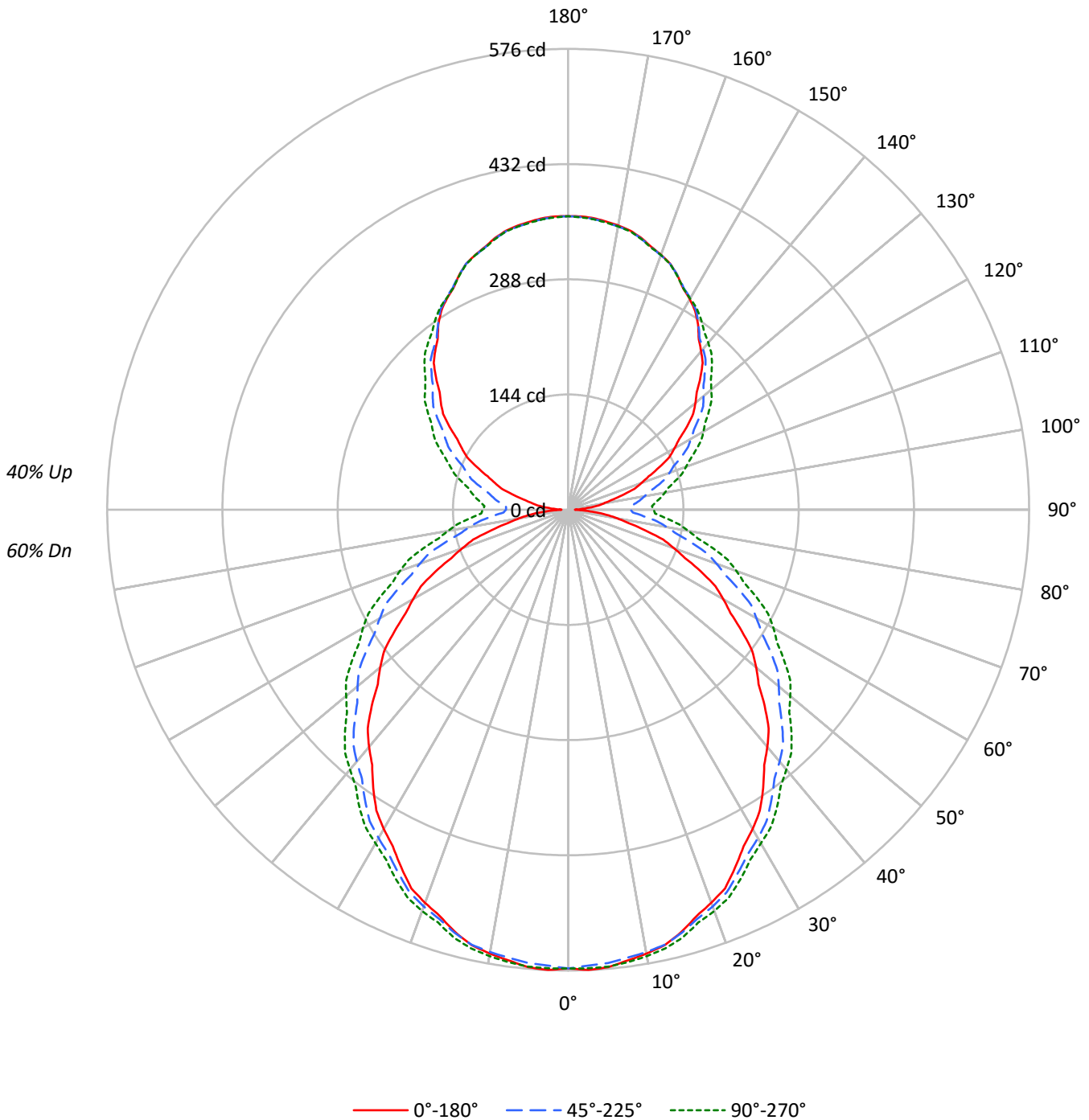
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331914-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	0														
RCR																																						
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60																				
1	99	94	89	85	92	88	84	80	76	73	70	65	63	61	56	54	53	48																				
2	89	81	74	69	83	76	70	65	66	61	57	57	53	50	48	46	43	39																				
3	81	71	63	57	75	66	59	54	58	52	48	50	46	42	42	39	36	33																				
4	74	63	54	48	69	59	51	45	51	45	40	44	39	36	38	34	31	28																				
5	68	56	47	41	63	52	44	39	46	39	35	40	35	31	34	30	27	24																				
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	24	21																				
7	58	45	37	31	54	42	35	29	37	31	26	32	27	24	28	24	21	18																				
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	22	19	16																				
9	50	37	30	24	47	35	28	23	31	25	21	27	22	19	24	20	17	15																				
10	47	34	27	22	44	32	25	21	29	23	19	25	20	17	22	18	15	13																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



TEST NUMBER: P331914-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.8
10°-20°	154.9	5.3
20°-30°	231.7	7.9
30°-40°	276.7	9.4
40°-50°	289.5	9.8
50°-60°	271.7	9.2
60°-70°	226.9	7.7
70°-80°	162.4	5.5
80°-90°	97.9	3.3
90°-100°	84.6	2.9
100°-110°	116.2	3.9
110°-120°	151.4	5.1
120°-130°	177.0	6.0
130°-140°	187.5	6.4
140°-150°	178.4	6.1
150°-160°	148.8	5.1
160°-170°	99.1	3.4
170°-180°	34.7	1.2
0°-30°	441.0	15.0
0°-40°	717.7	24.4
0°-60°	1279.0	43.4
0°-90°	1766.1	60.0
90°-120°	352.2	12.0
90°-150°	895.2	30.4
90°-180°	1178.0	40.0
0°-180°	2943.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	8	42	78	99	107	7
95°	24	51	83	103	110	24
105°	70	86	115	132	138	74
115°	126	135	156	170	176	124
125°	181	183	200	211	215	162
135°	234	235	241	251	254	180
145°	283	283	284	288	290	176
155°	323	323	323	324	322	149
165°	352	351	351	352	351	99
175°	366	365	365	366	364	35
180°	367	367	367	367	367	



TEST NUMBER: P331914-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.6	23.7	30.7	37.7	44.8	51.9	59.2	66.4	73.7	81.0	85.7
90°	8.4	15.8	23.3	30.7	38.2	45.8	53.7	61.6	69.5	77.5	82.4
92.5°	14.6	21.2	27.7	34.3	40.8	47.9	55.3	62.8	70.2	77.6	82.4
95°	23.9	29.8	35.6	41.4	47.3	53.9	61.2	68.5	75.8	83.2	87.7
97.5°	36.3	41.5	46.7	51.9	57.2	63.3	70.1	77.0	83.8	90.7	95.1
100°	44.8	49.7	54.5	59.3	64.1	69.9	76.6	83.2	90.0	96.7	100.9
102.5°	54.7	58.9	63.1	67.3	71.6	77.0	83.7	90.4	97.1	103.9	107.9
105°	69.8	73.3	76.7	80.2	83.6	88.6	95.2	101.7	108.3	114.9	118.7
107.5°	86.8	89.8	92.6	95.6	98.5	102.9	108.8	114.6	120.5	126.5	130.4
110°	97.3	100.0	102.6	105.3	107.9	112.0	117.7	123.4	129.1	134.8	138.6



TEST NUMBER: P331914-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	108.9	111.0	113.2	115.3	117.4	121.2	126.5	131.9	137.2	142.6	146.4
115°	125.6	127.4	129.3	131.2	133.0	136.4	141.2	146.1	151.0	155.8	159.2
117.5°	142.8	144.0	145.1	146.3	147.5	150.3	154.8	159.4	163.9	168.4	171.7
120°	153.2	154.3	155.3	156.5	157.5	160.2	164.4	168.7	172.9	177.2	180.3
122.5°	164.4	165.1	165.8	166.4	167.1	169.5	173.7	177.8	182.1	186.2	189.1
125°	181.1	181.2	181.5	181.6	181.8	183.9	187.8	191.7	195.6	199.5	202.1
127.5°	197.0	197.2	197.5	197.8	198.0	199.8	203.0	206.2	209.4	212.5	214.9
130°	207.6	208.0	208.3	208.7	209.1	210.6	213.1	215.7	218.3	220.9	223.3
132.5°	217.7	218.2	218.7	219.2	219.6	220.9	223.0	225.1	227.1	229.3	231.5
135°	233.7	234.0	234.2	234.5	234.7	235.6	237.1	238.6	240.0	241.4	243.7
137.5°	248.6	248.8	249.1	249.2	249.5	250.1	251.1	252.1	253.2	254.2	256.1
140°	258.5	258.8	259.1	259.4	259.8	260.2	260.7	261.1	261.6	262.1	264.1
142.5°	267.9	268.2	268.4	268.6	268.8	269.0	269.2	269.4	269.5	269.8	271.6
145°	282.7	282.7	282.7	282.7	282.7	282.7	282.9	283.2	283.3	283.5	284.5
147.5°	295.0	295.2	295.5	295.7	295.9	296.1	296.3	296.4	296.6	296.9	297.2
150°	303.9	304.1	304.2	304.4	304.5	304.6	304.8	304.8	305.0	305.1	305.1
152.5°	311.4	311.5	311.7	311.9	312.1	312.2	312.3	312.3	312.4	312.5	312.6
155°	323.0	323.0	323.0	323.0	323.0	323.0	323.1	323.1	323.2	323.3	323.5
157.5°	332.9	332.8	332.7	332.6	332.6	332.6	332.6	332.6	332.7	332.8	333.0
160°	339.1	339.0	338.8	338.8	338.6	338.5	338.5	338.5	338.5	338.5	338.8
162.5°	344.6	344.5	344.3	344.1	343.9	343.9	343.9	344.0	344.1	344.1	344.4
165°	351.8	351.6	351.4	351.2	351.0	350.9	350.9	350.9	350.9	350.9	351.3
167.5°	357.5	357.3	357.0	356.7	356.4	356.4	356.4	356.4	356.5	356.6	356.9
170°	360.7	360.4	360.2	360.0	359.7	359.5	359.5	359.5	359.5	359.5	360.0
172.5°	363.3	363.0	362.7	362.5	362.2	362.1	362.1	362.1	362.1	362.1	362.5
175°	365.9	365.7	365.4	365.2	364.9	364.8	364.8	364.8	364.8	364.8	365.2
177.5°	367.0	366.8	366.6	366.4	366.2	366.1	366.1	366.1	366.1	366.1	366.4
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



TEST NUMBER: P331914-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	90.5	95.2	100.0	103.1	104.5	105.9	107.4	108.8
90°	87.4	92.4	97.3	100.6	102.2	103.6	105.2	106.7
92.5°	87.2	92.0	96.9	99.9	101.1	102.3	103.5	104.7
95°	92.3	96.9	101.4	104.4	105.7	107.1	108.5	109.9
97.5°	99.5	104.0	108.4	111.3	112.7	114.1	115.4	116.8
100°	105.1	109.3	113.6	116.4	118.0	119.4	121.0	122.5
102.5°	112.0	116.2	120.3	123.0	124.3	125.7	127.1	128.4
105°	122.6	126.5	130.4	133.0	134.4	135.7	137.1	138.5
107.5°	134.3	138.2	142.1	144.6	145.8	146.9	148.1	149.2
110°	142.5	146.3	150.3	152.6	153.6	154.6	155.6	156.5



TEST NUMBER: P331914-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	150.2	154.0	157.8	160.3	161.5	162.7	163.9	165.1
115°	162.7	166.0	169.4	171.6	172.7	173.7	174.8	175.9
117.5°	175.0	178.3	181.6	183.7	184.6	185.5	186.4	187.3
120°	183.4	186.6	189.7	191.7	192.6	193.4	194.2	195.1
122.5°	192.1	194.9	197.9	199.7	200.6	201.3	202.1	202.9
125°	204.8	207.5	210.1	211.8	212.5	213.2	213.9	214.7
127.5°	217.4	219.7	222.1	223.6	224.3	224.9	225.6	226.2
130°	225.7	228.0	230.4	231.8	232.2	232.6	232.9	233.3
132.5°	233.7	235.9	238.1	239.5	240.1	240.7	241.3	241.9
135°	245.9	248.2	250.4	251.8	252.4	253.0	253.5	254.0
137.5°	258.0	259.9	261.9	263.1	263.5	264.0	264.4	264.9
140°	266.1	268.2	270.2	271.3	271.6	271.8	272.1	272.3
142.5°	273.4	275.2	277.0	278.0	278.3	278.8	279.1	279.4
145°	285.6	286.7	287.7	288.4	288.7	288.9	289.3	289.6
147.5°	297.5	297.8	298.2	298.4	298.5	298.6	298.7	298.8
150°	305.1	305.1	305.1	305.1	304.9	304.8	304.8	304.7
152.5°	312.7	312.8	312.9	312.8	312.5	312.3	312.0	311.7
155°	323.8	324.0	324.3	324.2	323.8	323.3	322.9	322.4
157.5°	333.3	333.6	333.9	333.8	333.5	333.1	332.7	332.4
160°	339.2	339.5	339.8	339.8	339.6	339.3	339.1	338.8
162.5°	344.7	345.0	345.4	345.3	344.9	344.5	344.1	343.6
165°	351.7	352.0	352.5	352.5	352.0	351.6	351.1	350.7
167.5°	357.3	357.8	358.2	358.2	357.8	357.3	356.9	356.6
170°	360.4	360.9	361.3	361.3	360.9	360.4	360.0	359.5
172.5°	362.9	363.3	363.7	363.7	363.2	362.8	362.3	361.9
175°	365.5	365.9	366.3	366.2	365.8	365.3	364.9	364.4
177.5°	366.7	367.0	367.3	367.3	367.0	366.6	366.2	365.8
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8

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