

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: P332497-940

Luminaire Tested: **S124DIP-S350D365U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332497-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D365U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH 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: 2483.3 lumens
Efficiency: N/A
Efficacy: 122.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

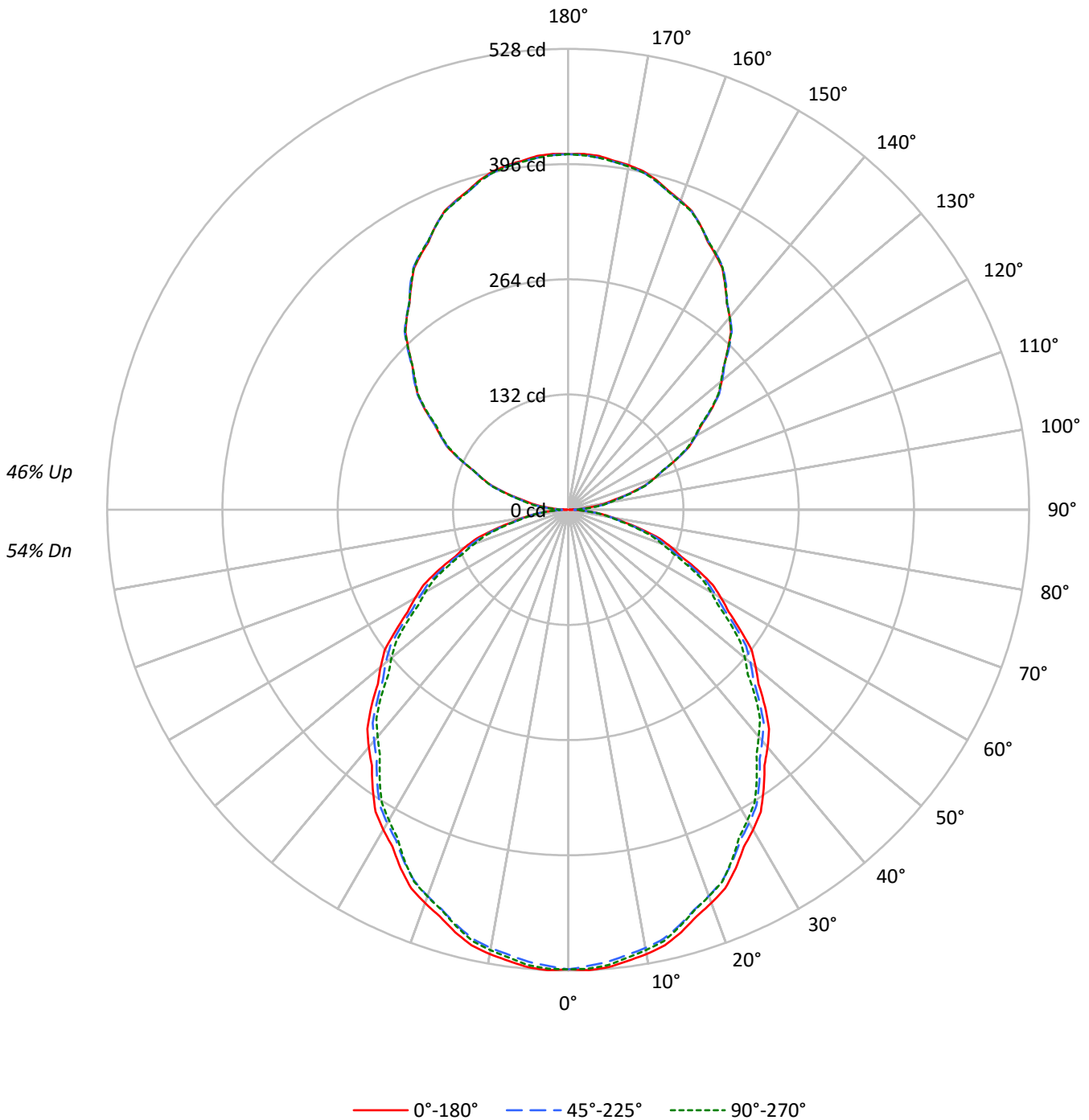
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332497-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-F1

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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	94	90	87	91	88	84	81	75	73	70	64	62	60	53	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	47	45	43	38
3	82	72	65	59	76	67	61	56	58	53	49	49	46	43	41	39	36	32
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28
5	69	57	49	43	64	53	46	41	46	40	36	40	35	32	33	30	27	24
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	21	19
8	55	42	34	29	51	39	32	27	35	29	25	30	25	22	25	22	19	17
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17	15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4252	4252	4252
5°	4265	4214	4245
10°	4238	4180	4200
15°	4187	4120	4131
20°	4119	4046	4050
25°	4041	3963	3951
30°	3947	3864	3828
35°	3847	3761	3710
40°	3744	3643	3577
45°	3639	3528	3460
50°	3520	3425	3318
55°	3392	3291	3184
60°	3265	3142	3047
65°	3121	2999	2879
70°	2960	2809	2700
75°	2711	2583	2514
80°	2413	2315	2255
85°	2112	2029	1991



TEST NUMBER: P332497-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	2.0
10°-20°	139.8	5.6
20°-30°	205.7	8.3
30°-40°	239.2	9.6
40°-50°	239.2	9.6
50°-60°	209.2	8.4
60°-70°	155.4	6.3
70°-80°	88.3	3.6
80°-90°	26.7	1.1
90°-100°	26.9	1.1
100°-110°	79.6	3.2
110°-120°	135.1	5.4
120°-130°	178.2	7.2
130°-140°	200.1	8.1
140°-150°	196.6	7.9
150°-160°	165.4	6.7
160°-170°	110.0	4.4
170°-180°	38.5	1.6
0°-30°	395.1	15.9
0°-40°	634.2	25.5
0°-60°	1082.6	43.6
0°-90°	1352.9	54.5
90°-120°	241.6	9.7
90°-150°	816.5	32.9
90°-180°	1130.0	45.5
0°-180°	2483.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	527	527	527	527	527	
5°	526	524	520	524	524	50
15°	501	499	493	495	494	141
25°	454	451	445	445	444	209
35°	390	387	382	379	376	244
45°	319	316	309	305	303	246
55°	241	240	234	229	226	216
65°	163	161	157	153	151	162
75°	87	85	83	81	81	92
85°	23	23	22	22	22	25
90°	1	4	7	9	10	2
95°	19	22	24	25	25	21
105°	73	74	75	76	77	78
115°	137	137	137	136	136	135
125°	200	200	200	199	198	178
135°	258	260	260	259	258	200
145°	314	315	315	315	314	196
155°	359	359	359	360	359	165
165°	391	390	390	391	390	110
175°	407	405	405	407	405	39
180°	407	407	407	407	407	



TEST NUMBER: P332497-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7
2.5°	528.1	527.9	527.6	527.4	527.2	526.6	525.8	525.0	524.2	523.3	524.1
5°	526.3	525.9	525.6	525.2	524.9	524.1	523.1	522.1	521.0	520.0	521.0
7.5°	521.5	521.0	520.7	520.3	520.0	519.2	518.0	516.9	515.8	514.6	515.4
10°	517.0	516.7	516.3	515.9	515.6	514.8	513.5	512.3	511.1	509.9	510.6
12.5°	511.3	511.0	510.6	510.1	509.8	509.0	507.7	506.4	505.1	503.8	504.6
15°	501.0	500.6	500.2	499.9	499.5	498.6	497.2	495.8	494.4	493.0	493.6
17.5°	488.6	488.1	487.7	487.2	486.7	485.8	484.5	483.1	481.8	480.5	480.8
20°	479.5	479.0	478.6	478.0	477.6	476.7	475.3	473.9	472.4	471.0	471.4
22.5°	469.7	469.0	468.4	467.8	467.2	466.2	464.8	463.4	462.0	460.6	461.1
25°	453.7	453.1	452.5	451.7	451.1	450.1	448.8	447.5	446.2	444.9	445.0
27.5°	435.5	434.8	434.2	433.5	432.8	431.9	430.6	429.4	428.2	427.0	426.8
30°	423.4	422.6	421.9	421.1	420.4	419.4	418.1	416.9	415.7	414.5	414.1
32.5°	410.5	409.8	409.1	408.5	407.8	406.8	405.6	404.2	403.0	401.6	401.2
35°	390.4	389.8	389.1	388.4	387.8	386.8	385.5	384.1	382.9	381.6	380.9
37.5°	369.3	368.6	368.0	367.5	366.8	365.9	364.4	363.0	361.6	360.2	359.4
40°	355.3	354.6	353.9	353.1	352.4	351.3	349.9	348.5	347.1	345.7	344.7
42.5°	340.5	340.1	339.7	339.2	338.8	337.7	336.2	334.6	333.1	331.5	330.4
45°	318.7	318.0	317.4	316.7	316.0	315.0	313.4	311.9	310.5	309.0	307.9
47.5°	295.8	295.3	294.9	294.4	294.0	293.1	291.7	290.3	288.9	287.5	286.3
50°	280.3	279.9	279.6	279.1	278.7	277.9	276.6	275.3	273.9	272.7	271.3
52.5°	265.1	264.6	264.1	263.7	263.2	262.3	260.9	259.6	258.2	256.8	255.7
55°	241.0	240.8	240.4	240.1	239.9	239.1	237.7	236.5	235.1	233.8	232.7
57.5°	218.0	217.8	217.4	217.1	216.8	216.0	214.6	213.4	212.0	210.8	209.7
60°	202.2	201.7	201.3	200.7	200.3	199.5	198.2	197.0	195.8	194.6	193.8
62.5°	186.6	186.3	185.8	185.5	185.0	184.2	182.9	181.6	180.3	179.1	178.3
65°	163.4	162.9	162.4	161.9	161.5	160.8	159.8	158.9	157.9	157.0	156.0
67.5°	139.9	139.5	139.0	138.6	138.1	137.5	136.6	135.7	134.8	133.8	133.0
70°	125.4	124.7	124.0	123.4	122.7	122.0	121.3	120.6	119.8	119.0	118.2
72.5°	109.9	109.1	108.5	107.9	107.2	106.6	105.9	105.4	104.8	104.2	103.5
75°	86.9	86.5	86.1	85.5	85.1	84.6	84.2	83.6	83.2	82.8	82.4
77.5°	65.1	64.9	64.6	64.5	64.3	63.9	63.6	63.1	62.7	62.3	62.2
80°	51.9	51.6	51.4	51.1	50.8	50.6	50.4	50.2	50.0	49.8	49.6
82.5°	39.1	39.0	38.8	38.7	38.5	38.4	38.4	38.4	38.3	38.3	38.3
85°	22.8	22.8	22.8	22.8	22.8	22.7	22.5	22.3	22.1	21.9	21.9
87.5°	9.0	9.0	9.1	9.2	9.3	9.4	9.4	9.5	9.5	9.5	9.5
90°	1.0	1.7	2.5	3.3	4.0	4.7	5.3	5.8	6.3	7.0	7.3
92.5°	6.8	7.7	8.5	9.4	10.3	10.9	11.3	11.7	12.1	12.5	12.8
95°	18.9	19.5	20.2	20.8	21.4	22.0	22.5	23.0	23.5	24.0	24.2
97.5°	33.0	33.5	34.1	34.5	35.0	35.6	36.1	36.7	37.3	37.9	38.2
100°	44.1	44.4	44.7	44.9	45.2	45.7	46.3	47.0	47.6	48.2	48.3
102.5°	55.7	55.8	55.9	56.1	56.2	56.5	57.1	57.7	58.2	58.8	59.0
105°	73.4	73.5	73.6	73.7	73.7	73.8	74.2	74.5	74.7	75.0	75.2
107.5°	92.0	92.1	92.2	92.3	92.4	92.4	92.5	92.5	92.6	92.6	92.7
110°	104.6	104.8	104.9	105.0	105.1	105.2	105.1	105.0	105.0	105.0	104.8



TEST NUMBER: P332497-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	117.7	117.7	117.8	117.8	117.8	117.8	117.6	117.5	117.4	117.3	117.3
115°	137.4	137.4	137.4	137.4	137.4	137.3	137.1	137.1	136.9	136.8	136.7
117.5°	155.9	156.0	156.0	156.0	156.1	156.1	156.0	156.0	155.8	155.7	155.5
120°	168.3	168.5	168.8	169.1	169.4	169.4	169.2	169.0	168.8	168.6	168.3
122.5°	181.1	181.2	181.4	181.5	181.6	181.6	181.5	181.4	181.3	181.2	180.9
125°	200.1	200.1	200.1	200.1	200.1	200.0	200.0	199.9	199.8	199.7	199.7
127.5°	217.3	217.5	217.8	217.9	218.1	218.2	218.1	217.9	217.8	217.8	217.6
130°	229.4	229.6	229.8	230.1	230.2	230.3	230.3	230.3	230.3	230.3	230.2
132.5°	241.7	241.9	242.0	242.2	242.4	242.4	242.4	242.3	242.3	242.2	242.0
135°	258.1	258.5	258.9	259.3	259.8	259.9	259.9	259.9	259.9	259.9	259.8
137.5°	275.8	276.1	276.3	276.4	276.6	276.8	276.9	277.0	277.1	277.2	277.1
140°	287.7	287.8	287.9	288.1	288.3	288.3	288.3	288.3	288.3	288.3	288.3
142.5°	298.5	298.6	298.8	298.9	299.1	299.2	299.1	299.0	299.0	298.9	298.9
145°	313.5	313.8	314.1	314.3	314.7	314.9	314.9	315.0	315.0	315.1	315.0
147.5°	328.4	328.8	329.0	329.4	329.8	329.8	329.8	329.8	329.8	329.7	329.6
150°	337.5	337.8	338.0	338.3	338.6	338.8	338.8	338.8	338.8	338.8	338.8
152.5°	346.1	346.3	346.3	346.5	346.7	346.8	346.9	347.0	347.0	347.1	347.2
155°	359.2	359.2	359.2	359.2	359.2	359.2	359.1	359.0	359.0	358.9	359.2
157.5°	370.3	370.1	370.1	370.0	369.8	369.7	369.7	369.7	369.7	369.7	369.9
160°	376.8	376.7	376.7	376.7	376.6	376.5	376.5	376.4	376.3	376.2	376.5
162.5°	382.9	382.7	382.5	382.4	382.2	382.1	382.0	381.9	381.8	381.7	382.2
165°	391.0	390.8	390.7	390.4	390.2	390.0	389.9	389.8	389.6	389.5	389.9
167.5°	397.3	397.0	396.7	396.4	396.1	395.9	396.0	396.0	396.0	396.0	396.5
170°	400.8	400.5	400.1	399.8	399.4	399.3	399.3	399.4	399.5	399.6	399.9
172.5°	403.3	403.1	402.7	402.4	402.2	402.0	402.0	402.1	402.1	402.1	402.5
175°	406.8	406.4	406.1	405.7	405.4	405.2	405.1	405.0	405.0	404.9	405.4
177.5°	408.0	407.7	407.3	407.1	406.8	406.7	406.7	406.7	406.7	406.7	407.1
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4



TEST NUMBER: P332497-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7
2.5°	524.9	525.7	526.4	526.7	526.6	526.6	526.5	526.4
5°	522.1	523.1	524.1	524.5	524.3	524.1	524.0	523.8
7.5°	516.2	517.1	517.9	518.3	518.2	518.0	517.9	517.8
10°	511.4	512.1	512.9	513.2	513.0	512.7	512.6	512.4
12.5°	505.4	506.2	507.1	507.4	507.1	506.8	506.6	506.3
15°	494.1	494.6	495.3	495.3	495.1	494.8	494.5	494.3
17.5°	481.2	481.5	481.9	482.0	481.8	481.6	481.4	481.3
20°	471.6	471.9	472.2	472.3	472.0	471.8	471.6	471.4
22.5°	461.5	462.1	462.6	462.7	462.4	462.0	461.6	461.4
25°	445.1	445.1	445.2	445.1	444.7	444.3	444.0	443.6
27.5°	426.5	426.3	426.1	425.7	425.3	424.8	424.3	423.8
30°	413.8	413.4	413.0	412.6	412.1	411.6	411.2	410.7
32.5°	400.7	400.3	399.8	399.4	399.0	398.4	398.0	397.5
35°	380.2	379.6	378.9	378.4	377.9	377.5	376.9	376.5
37.5°	358.7	358.0	357.3	356.7	356.1	355.4	354.8	354.2
40°	343.8	342.9	342.0	341.3	340.7	340.3	339.8	339.4
42.5°	329.3	328.2	327.2	326.5	326.1	325.8	325.5	325.2
45°	306.9	305.9	304.9	304.2	303.9	303.6	303.4	303.1
47.5°	285.2	284.0	282.9	282.0	281.2	280.5	279.8	279.1
50°	270.0	268.8	267.4	266.4	265.9	265.4	264.7	264.2
52.5°	254.5	253.3	252.2	251.2	250.5	249.8	249.1	248.3
55°	231.6	230.4	229.3	228.5	227.9	227.4	226.8	226.2
57.5°	208.7	207.6	206.5	205.7	205.2	204.6	204.1	203.5
60°	192.9	192.1	191.2	190.6	190.1	189.6	189.1	188.7
62.5°	177.5	176.7	175.9	175.3	174.9	174.4	174.0	173.4
65°	155.2	154.2	153.3	152.6	152.1	151.6	151.1	150.7
67.5°	132.1	131.2	130.3	129.7	129.7	129.5	129.4	129.2
70°	117.5	116.8	116.0	115.5	115.2	114.9	114.7	114.4
72.5°	103.0	102.4	101.7	101.3	101.0	100.8	100.5	100.2
75°	81.9	81.6	81.2	81.0	80.9	80.8	80.7	80.6
77.5°	62.1	62.0	61.9	61.7	61.4	61.2	60.9	60.7
80°	49.4	49.2	49.0	49.0	48.8	48.7	48.6	48.5
82.5°	38.1	38.0	37.9	37.8	37.7	37.5	37.5	37.4
85°	21.9	21.9	21.9	21.9	21.8	21.8	21.6	21.5
87.5°	9.6	9.7	9.8	9.9	9.9	9.9	10.0	10.0
90°	7.8	8.2	8.6	8.9	9.0	9.2	9.3	9.5
92.5°	13.0	13.2	13.5	13.6	13.7	13.8	13.9	14.0
95°	24.3	24.6	24.8	24.9	24.9	24.9	24.9	24.9
97.5°	38.3	38.6	38.9	39.0	39.0	39.0	39.0	39.0
100°	48.5	48.6	48.8	48.9	48.9	48.9	48.9	48.9
102.5°	59.2	59.4	59.6	59.7	59.7	59.8	59.8	59.9
105°	75.4	75.6	75.8	76.1	76.2	76.5	76.7	76.9
107.5°	93.0	93.2	93.4	93.5	93.5	93.5	93.5	93.4
110°	104.7	104.5	104.3	104.4	104.6	104.9	105.0	105.2



TEST NUMBER: P332497-940

CATALOG NUMBER: S124DIP-S350D365U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	117.3	117.2	117.2	117.2	117.3	117.3	117.3	117.3
115°	136.6	136.5	136.4	136.4	136.3	136.3	136.2	136.2
117.5°	155.2	155.0	154.8	154.6	154.4	154.3	154.2	154.0
120°	167.9	167.6	167.2	167.1	167.2	167.4	167.5	167.6
122.5°	180.7	180.5	180.2	179.9	179.8	179.5	179.2	179.0
125°	199.5	199.4	199.2	199.0	198.9	198.8	198.7	198.5
127.5°	217.5	217.3	217.1	217.0	217.0	216.9	216.7	216.6
130°	230.1	229.9	229.8	229.5	229.3	229.0	228.7	228.5
132.5°	241.9	241.7	241.7	241.5	241.4	241.3	241.2	241.0
135°	259.7	259.6	259.4	259.2	259.0	258.8	258.6	258.4
137.5°	276.9	276.7	276.5	276.4	276.4	276.5	276.5	276.6
140°	288.2	288.1	288.0	287.9	287.9	287.8	287.8	287.7
142.5°	298.9	298.9	298.8	298.8	298.8	298.8	298.8	298.8
145°	315.0	314.9	314.9	314.7	314.5	314.2	314.1	313.9
147.5°	329.6	329.5	329.4	329.4	329.3	329.2	329.1	329.1
150°	338.8	338.8	338.8	338.7	338.7	338.6	338.5	338.4
152.5°	347.4	347.6	347.8	347.7	347.5	347.3	347.1	347.0
155°	359.4	359.7	360.0	360.0	359.7	359.4	359.2	358.9
157.5°	370.1	370.3	370.5	370.5	370.2	370.1	369.8	369.5
160°	376.7	376.8	377.1	377.0	376.7	376.3	375.9	375.6
162.5°	382.5	382.9	383.3	383.3	383.0	382.6	382.3	381.9
165°	390.3	390.7	391.1	391.2	390.9	390.7	390.4	390.1
167.5°	396.9	397.3	397.7	397.7	397.3	396.8	396.4	395.9
170°	400.4	400.8	401.3	401.2	400.7	400.2	399.8	399.2
172.5°	403.1	403.5	403.9	403.9	403.5	403.0	402.5	402.0
175°	405.9	406.4	406.9	406.9	406.4	405.9	405.4	404.9
177.5°	407.4	407.9	408.2	408.2	407.8	407.3	406.9	406.4
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4

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