

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: P332249

Luminaire Tested: **S123RDIP-S340D585U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332249
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D585U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3641.1 lumens
Efficiency: N/A
Efficacy: 142.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

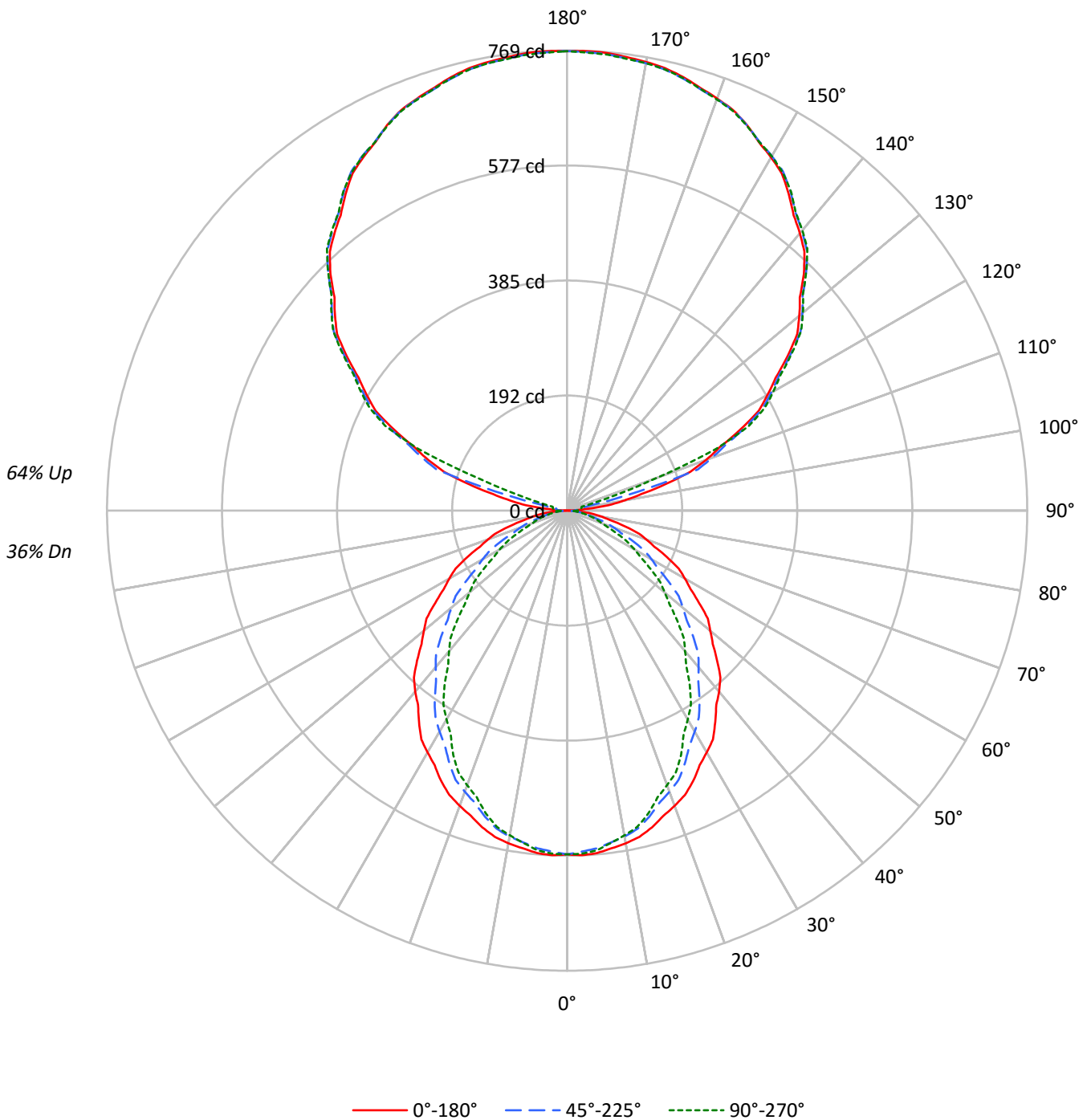
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332249

CATALOG NUMBER: S123RDIP-S340D585U835-4F0-1E-UDD-F

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	104	104	104	104	94	94	94	94	75	75	75	59	59	59	43	43	43	36
1	95	91	87	84	86	82	79	76	66	64	62	52	50	49	38	37	37	31
2	86	79	74	69	78	72	67	63	58	55	52	46	43	41	34	33	31	26
3	79	70	63	57	71	64	58	53	52	47	44	41	38	35	30	28	27	22
4	72	62	54	49	65	56	50	45	46	41	37	36	33	30	27	25	23	19
5	66	55	47	42	60	50	44	38	41	36	32	33	29	26	25	22	20	17
6	61	49	42	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15
7	56	45	37	32	51	41	34	29	34	29	25	27	23	20	20	18	16	13
8	52	40	33	28	47	37	30	26	31	26	22	25	21	18	19	16	14	12
9	49	37	30	25	44	34	27	23	28	23	20	23	19	16	17	15	13	11
10	45	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6184	6184	6184
5°	6207	6122	6158
10°	6172	6045	6025
15°	6107	5904	5841
20°	6015	5727	5593
25°	5922	5529	5352
30°	5797	5299	5009
35°	5670	5070	4696
40°	5552	4799	4308
45°	5398	4532	3958
50°	5228	4228	3565
55°	5054	3883	3200
60°	4895	3511	2799
65°	4689	3110	2397
70°	4428	2609	1936
75°	4051	2054	1822
80°	3608	1822	1674
85°	3051	1606	1494



TEST NUMBER: P332249

CATALOG NUMBER: S123RDIP-S340D585U835-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	1.5
10°-20°	150.1	4.1
20°-30°	216.1	5.9
30°-40°	243.5	6.7
40°-50°	232.9	6.4
50°-60°	190.7	5.2
60°-70°	128.7	3.5
70°-80°	64.7	1.8
80°-90°	19.3	0.5
90°-100°	27.9	0.8
100°-110°	133.0	3.7
110°-120°	319.5	8.8
120°-130°	406.9	11.2
130°-140°	434.7	11.9
140°-150°	406.5	11.2
150°-160°	327.9	9.0
160°-170°	211.6	5.8
170°-180°	72.9	2.0
0°-30°	420.2	11.5
0°-40°	663.7	18.2
0°-60°	1087.3	29.9
0°-90°	1300.0	35.7
90°-120°	480.5	13.2
90°-150°	1728.6	47.5
90°-180°	2341.0	64.3
0°-180°	3641.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	574	572	567	570	570	54
15°	548	542	530	527	524	154
25°	499	486	466	456	451	229
35°	432	414	386	366	357	270
45°	355	333	298	272	260	273
55°	269	246	207	181	170	241
65°	184	158	122	100	94	182
75°	97	75	49	45	44	104
85°	25	15	13	12	12	28
90°	1	6	14	16	17	3
95°	35	13	18	21	22	43
105°	170	173	125	30	25	180
115°	319	322	327	333	335	315
125°	449	454	456	457	459	401
135°	560	563	565	567	565	431
145°	646	650	651	652	652	404
155°	711	710	711	713	710	328
165°	750	748	748	752	748	212
175°	768	765	765	769	765	73
180°	768	768	768	768	768	



TEST NUMBER: P332249

CATALOG NUMBER: S123RDIP-S340D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	576.4	576.0	575.7	575.4	575.1	574.4	573.4	572.4	571.4	570.4	571.3
5°	574.5	574.0	573.5	573.0	572.4	571.6	570.3	569.1	567.8	566.6	567.5
7.5°	569.2	568.6	568.1	567.5	567.0	565.9	564.3	562.7	561.0	559.4	559.9
10°	564.7	564.0	563.3	562.6	561.8	560.5	558.7	556.8	554.9	553.1	553.2
12.5°	558.4	557.6	556.8	556.0	555.2	553.6	551.3	549.1	546.8	544.5	544.4
15°	548.0	546.8	545.7	544.5	543.4	541.4	538.5	535.6	532.7	529.8	529.3
17.5°	534.8	533.5	532.2	530.8	529.5	527.0	523.3	519.6	516.0	512.3	511.2
20°	525.1	523.5	521.8	520.2	518.5	515.7	511.8	507.8	503.9	500.0	498.6
22.5°	514.3	512.4	510.5	508.6	506.7	503.7	499.5	495.3	491.1	486.9	485.2
25°	498.6	496.0	493.4	490.8	488.2	484.5	479.8	475.0	470.2	465.5	463.3
27.5°	479.5	476.6	473.7	470.9	468.0	464.0	458.7	453.3	448.0	442.7	439.7
30°	466.4	463.3	460.2	457.1	454.0	449.5	443.7	437.9	432.1	426.3	422.8
32.5°	453.4	449.8	446.3	442.8	439.3	434.5	428.3	422.2	416.1	409.9	406.1
35°	431.5	427.7	424.0	420.3	416.6	411.5	405.1	398.6	392.2	385.8	381.4
37.5°	409.3	405.1	401.0	396.9	392.7	387.2	380.4	373.5	366.7	359.8	354.8
40°	395.1	390.6	386.0	381.5	376.9	370.9	363.6	356.2	348.9	341.5	336.2
42.5°	379.1	374.5	370.0	365.4	360.9	354.8	347.2	339.6	332.0	324.4	318.5
45°	354.6	349.9	345.3	340.6	335.9	329.6	321.7	313.7	305.7	297.7	291.8
47.5°	330.1	325.0	319.8	314.7	309.6	303.1	295.1	287.1	279.2	271.2	264.8
50°	312.2	307.3	302.5	297.6	292.7	286.1	277.7	269.3	260.9	252.5	246.1
52.5°	296.2	290.9	285.6	280.3	275.0	268.2	259.9	251.6	243.3	235.0	228.4
55°	269.3	264.2	259.2	254.1	249.0	242.1	233.3	224.5	215.7	206.9	200.9
57.5°	244.5	239.0	233.5	227.9	222.4	215.2	206.4	197.5	188.7	179.9	174.2
60°	227.4	221.7	216.0	210.3	204.6	197.5	188.9	180.3	171.7	163.1	157.5
62.5°	210.2	204.5	198.8	193.2	187.5	180.3	171.7	163.1	154.5	145.9	140.7
65°	184.1	178.4	172.7	167.0	161.3	154.4	146.3	138.2	130.2	122.1	117.0
67.5°	157.9	152.1	146.3	140.6	134.8	128.1	120.3	112.6	104.8	97.1	93.3
70°	140.7	135.1	129.5	123.9	118.4	111.9	104.7	97.4	90.2	82.9	79.3
72.5°	123.6	118.1	112.6	107.0	101.5	95.5	88.9	82.3	75.7	69.1	66.2
75°	97.4	92.4	87.4	82.5	77.5	72.2	66.5	60.8	55.1	49.4	48.4
77.5°	73.5	69.0	64.5	60.0	55.6	51.5	47.8	44.1	40.5	36.8	36.3
80°	58.2	54.0	49.8	45.5	41.3	38.1	35.9	33.7	31.5	29.4	29.0
82.5°	43.7	40.0	36.4	32.7	29.0	26.7	25.7	24.7	23.7	22.6	22.3
85°	24.7	22.4	20.1	17.9	15.6	14.3	14.0	13.7	13.4	13.0	12.8
87.5°	9.1	8.4	7.7	7.1	6.4	6.3	6.6	6.9	7.3	7.6	7.6
90°	0.6	1.8	3.1	4.4	5.6	7.1	8.7	10.4	12.0	13.7	14.2
92.5°	10.6	10.3	9.9	9.5	9.2	9.6	10.9	12.1	13.4	14.6	15.4
95°	34.8	29.6	24.4	19.2	14.0	12.1	13.5	14.9	16.3	17.7	18.6
97.5°	69.9	67.6	65.3	62.9	60.6	54.9	45.7	36.6	27.5	18.4	19.4
100°	96.4	98.9	101.5	104.0	106.5	97.9	78.1	58.4	38.6	18.8	19.8
102.5°	126.5	128.3	130.2	132.0	133.8	123.9	102.3	80.7	59.1	37.5	34.4
105°	170.0	171.4	172.8	174.1	175.5	170.5	159.1	147.7	136.3	124.9	102.5
107.5°	215.8	216.9	218.1	219.2	220.3	221.7	223.5	225.3	227.1	228.9	212.5
110°	246.4	247.4	248.4	249.4	250.4	251.7	253.0	254.4	255.8	257.2	253.0



TEST NUMBER: P332249

CATALOG NUMBER: S123RDIP-S340D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.6	276.5	277.4	278.3	279.2	280.4	281.8	283.2	284.6	286.0	286.1
115°	318.8	319.6	320.3	321.1	321.9	322.8	324.0	325.1	326.2	327.4	328.7
117.5°	360.7	361.6	362.6	363.5	364.4	365.2	365.8	366.4	367.0	367.5	368.6
120°	386.7	387.8	389.0	390.1	391.3	392.0	392.4	392.8	393.2	393.5	394.6
122.5°	413.2	414.1	415.0	416.0	416.9	417.6	418.1	418.6	419.1	419.6	420.3
125°	449.4	450.5	451.5	452.5	453.5	454.3	454.8	455.3	455.8	456.3	456.5
127.5°	484.6	485.6	486.6	487.6	488.6	489.4	490.0	490.7	491.3	491.9	492.3
130°	506.5	507.5	508.5	509.5	510.5	511.3	511.8	512.3	512.8	513.3	513.8
132.5°	527.5	528.5	529.5	530.5	531.5	532.2	532.6	533.0	533.4	533.9	534.4
135°	559.5	560.3	561.0	561.8	562.6	563.2	563.7	564.2	564.7	565.2	565.6
137.5°	586.9	587.9	588.8	589.8	590.7	591.4	591.6	591.9	592.2	592.5	593.1
140°	605.1	605.9	606.7	607.4	608.2	608.8	609.1	609.5	609.9	610.3	610.8
142.5°	622.0	622.8	623.6	624.3	625.1	625.6	626.0	626.4	626.8	627.2	627.6
145°	645.6	646.5	647.4	648.3	649.2	649.8	650.0	650.3	650.5	650.8	651.0
147.5°	667.9	668.5	669.1	669.6	670.2	670.6	670.9	671.1	671.4	671.7	671.9
150°	681.6	682.0	682.3	682.7	683.1	683.4	683.7	683.9	684.2	684.4	684.7
152.5°	693.9	694.1	694.2	694.4	694.6	694.8	694.9	695.1	695.2	695.4	695.8
155°	711.2	711.0	710.7	710.5	710.2	710.2	710.3	710.4	710.5	710.7	711.3
157.5°	724.7	724.7	724.6	724.6	724.6	724.5	724.4	724.3	724.1	724.0	724.8
160°	732.9	732.8	732.7	732.5	732.4	732.3	732.1	732.0	731.9	731.8	732.5
162.5°	740.7	740.3	740.0	739.7	739.3	739.1	739.0	738.9	738.7	738.6	739.5
165°	750.0	749.6	749.3	748.9	748.5	748.2	748.1	748.0	747.9	747.7	748.8
167.5°	757.3	756.8	756.3	755.8	755.3	755.0	755.0	755.0	755.0	755.0	756.1
170°	761.4	760.9	760.4	759.9	759.4	759.1	759.1	759.1	759.1	759.1	760.2
172.5°	764.2	763.6	762.9	762.3	761.7	761.5	761.6	761.7	761.8	761.9	762.9
175°	767.7	767.1	766.4	765.8	765.2	764.9	765.0	765.2	765.3	765.4	766.3
177.5°	768.6	768.1	767.6	767.1	766.6	766.4	766.5	766.6	766.7	766.8	767.6
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7



TEST NUMBER: P332249

CATALOG NUMBER: S123RDIP-S340D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	572.2	573.1	574.1	574.4	574.3	574.1	573.9	573.8
5°	568.5	569.4	570.3	570.7	570.5	570.3	570.1	569.9
7.5°	560.5	561.0	561.5	561.6	561.2	560.9	560.5	560.2
10°	553.3	553.4	553.5	553.3	552.8	552.3	551.7	551.2
12.5°	544.4	544.3	544.3	543.9	543.3	542.7	542.1	541.5
15°	528.7	528.2	527.7	527.1	526.4	525.6	524.9	524.2
17.5°	510.1	509.0	507.9	506.8	505.7	504.6	503.6	502.5
20°	497.3	495.9	494.6	493.3	492.0	490.8	489.6	488.3
22.5°	483.6	481.9	480.2	478.8	477.6	476.5	475.3	474.2
25°	461.1	459.0	456.8	455.1	454.0	452.9	451.7	450.6
27.5°	436.7	433.7	430.7	428.3	426.5	424.8	423.1	421.3
30°	419.3	415.8	412.3	409.7	408.0	406.4	404.7	403.0
32.5°	402.2	398.4	394.5	391.7	390.0	388.3	386.5	384.8
35°	376.9	372.4	368.0	364.8	363.0	361.1	359.2	357.4
37.5°	349.7	344.6	339.6	335.9	333.6	331.3	329.0	326.7
40°	330.8	325.4	320.0	316.1	313.7	311.4	309.0	306.6
42.5°	312.6	306.8	300.9	296.9	294.7	292.6	290.5	288.3
45°	285.9	280.0	274.1	269.9	267.5	265.0	262.5	260.0
47.5°	258.3	251.9	245.5	241.2	239.0	236.8	234.5	232.3
50°	239.7	233.3	226.9	222.5	220.1	217.7	215.3	212.9
52.5°	221.7	215.0	208.4	204.0	201.8	199.7	197.6	195.4
55°	194.9	188.9	182.9	178.8	176.8	174.7	172.6	170.5
57.5°	168.5	162.8	157.2	153.4	151.7	149.9	148.2	146.4
60°	151.9	146.3	140.7	137.0	135.3	133.5	131.8	130.0
62.5°	135.4	130.2	124.9	121.3	119.5	117.7	115.8	114.0
65°	111.9	106.9	101.8	98.7	97.5	96.4	95.3	94.1
67.5°	89.5	85.7	81.9	79.4	78.2	77.0	75.8	74.6
70°	75.7	72.1	68.4	66.1	64.9	63.8	62.6	61.5
72.5°	63.2	60.3	57.3	55.6	55.1	54.6	54.2	53.7
75°	47.3	46.3	45.2	44.6	44.4	44.2	44.0	43.8
77.5°	35.7	35.1	34.6	34.2	34.0	33.8	33.6	33.4
80°	28.7	28.4	28.1	27.9	27.6	27.4	27.2	27.0
82.5°	22.0	21.7	21.4	21.2	21.2	21.1	21.1	21.1
85°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
87.5°	7.6	7.6	7.7	7.7	7.6	7.6	7.6	7.5
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	16.2	17.0	17.8	18.3	18.5	18.6	18.8	18.9
95°	19.5	20.3	21.2	21.7	21.7	21.7	21.7	21.7
97.5°	20.4	21.4	22.4	23.0	23.1	23.2	23.4	23.5
100°	20.8	21.9	22.9	23.4	23.6	23.7	23.8	24.0
102.5°	31.2	28.1	25.0	23.5	23.7	24.0	24.2	24.4
105°	80.0	57.6	35.2	24.1	24.3	24.6	24.8	25.1
107.5°	196.0	179.6	163.1	146.5	129.5	112.6	95.7	78.8
110°	248.9	244.7	240.5	229.3	211.2	193.1	175.0	156.8



TEST NUMBER: P332249

CATALOG NUMBER: S123RDIP-S340D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	286.1	286.2	286.3	284.4	280.6	276.7	272.9	269.1
115°	329.9	331.2	332.5	333.3	333.8	334.4	334.9	335.4
117.5°	369.6	370.6	371.6	372.2	372.3	372.4	372.5	372.6
120°	395.6	396.6	397.6	398.1	398.1	398.1	398.1	398.1
122.5°	421.0	421.7	422.4	422.8	422.9	423.0	423.1	423.2
125°	456.8	457.0	457.3	457.6	457.8	458.1	458.3	458.6
127.5°	492.7	493.1	493.5	493.6	493.3	493.1	492.8	492.6
130°	514.3	514.8	515.3	515.5	515.2	515.0	514.7	514.5
132.5°	534.9	535.4	535.9	536.0	535.6	535.2	534.9	534.5
135°	566.0	566.4	566.7	566.7	566.4	566.0	565.6	565.2
137.5°	593.7	594.3	594.9	595.1	594.8	594.6	594.3	594.1
140°	611.3	611.8	612.3	612.4	612.2	611.9	611.7	611.4
142.5°	628.0	628.4	628.8	628.8	628.5	628.1	627.7	627.4
145°	651.3	651.5	651.8	651.9	651.9	651.9	651.9	651.9
147.5°	672.2	672.4	672.7	672.5	671.9	671.3	670.8	670.2
150°	684.9	685.2	685.4	685.4	685.0	684.6	684.2	683.9
152.5°	696.3	696.7	697.2	697.1	696.6	696.0	695.4	694.8
155°	711.9	712.6	713.2	713.1	712.4	711.6	710.9	710.1
157.5°	725.5	726.3	727.1	726.9	725.9	725.0	724.0	723.0
160°	733.3	734.0	734.8	734.7	733.9	733.0	732.1	731.2
162.5°	740.3	741.2	742.1	742.1	741.3	740.5	739.7	739.0
165°	749.8	750.8	751.8	751.9	751.0	750.1	749.2	748.3
167.5°	757.1	758.1	759.1	759.1	758.1	757.1	756.1	755.0
170°	761.2	762.2	763.2	763.2	762.2	761.2	760.2	759.1
172.5°	763.9	764.9	765.9	765.9	764.8	763.7	762.5	761.4
175°	767.2	768.1	769.0	768.9	767.9	766.9	765.9	764.8
177.5°	768.4	769.2	770.0	769.9	768.9	767.9	766.9	765.9
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7

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