

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: P333172-830

Luminaire Tested: **S125DIP-S610D590U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333172-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S610D590U830-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4491.6 lumens  
Efficiency: N/A  
Efficacy: 136.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

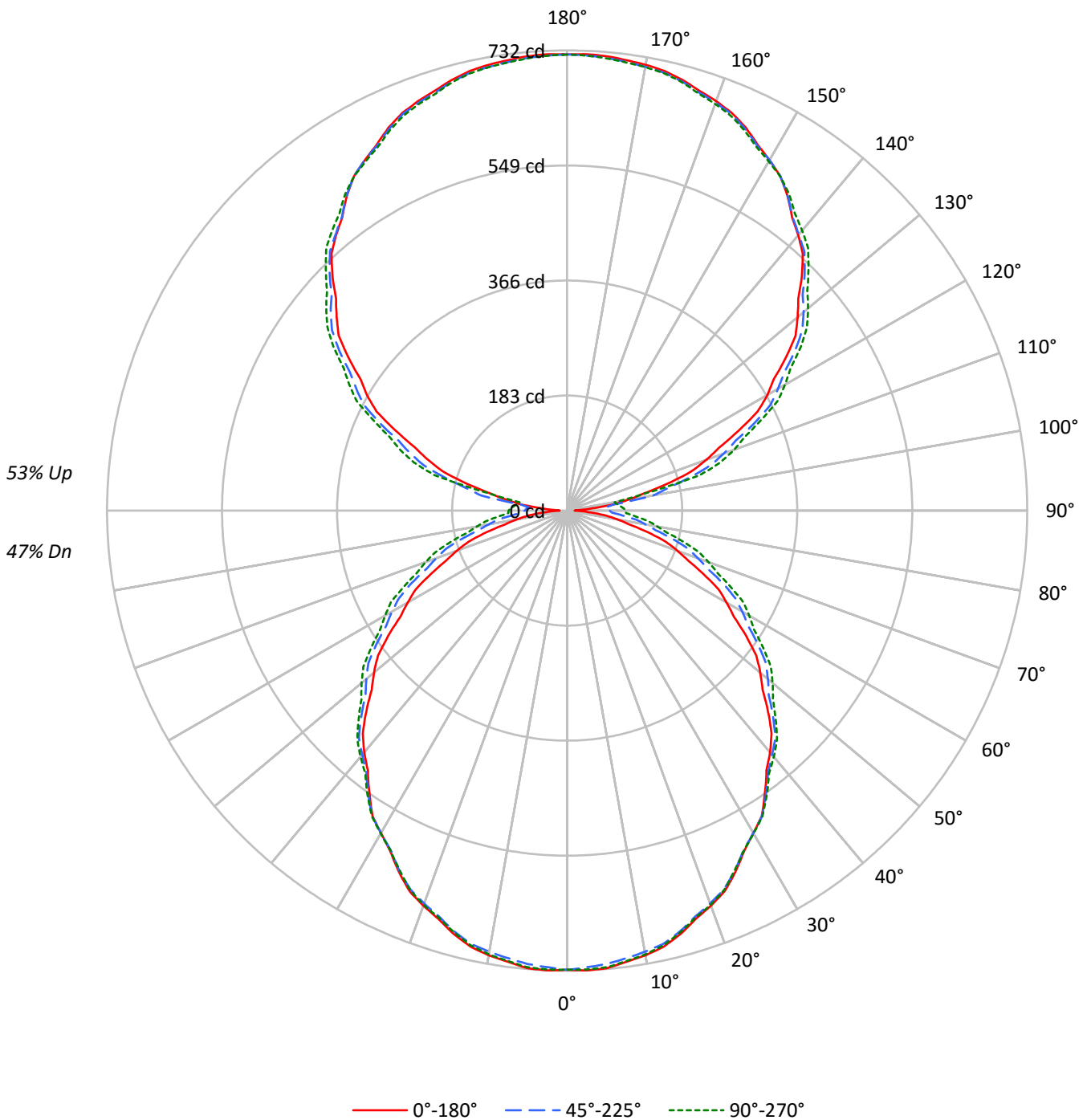
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-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	0
RCR																				
0	107	107	107	107	98	98	98	98	82	82	82		67	67	67		54	54	54	47
1	96	92	88	84	88	84	81	78	71	68	66		58	56	54		46	45	44	38
2	88	80	73	68	80	73	68	63	62	57	54		51	48	45		40	38	36	32
3	80	70	62	56	73	64	58	52	54	49	45		44	41	38		36	33	31	26
4	73	62	54	47	67	57	50	44	48	42	38		39	35	32		32	29	26	23
5	67	55	47	40	61	51	43	38	43	37	33		35	31	28		28	25	23	19
6	61	49	41	35	56	45	38	33	38	33	28		32	27	24		26	22	20	17
7	57	44	36	31	52	41	34	29	35	29	25		29	25	21		23	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22		26	22	19		22	18	16	13
9	49	37	29	24	45	34	27	23	29	24	20		24	20	17		20	17	14	12
10	46	34	26	21	42	31	25	20	27	21	18		22	18	15		18	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4718	4718	4718
5°	4727	4630	4645
10°	4693	4548	4541
15°	4638	4449	4409
20°	4562	4326	4276
25°	4473	4195	4112
30°	4364	4051	3964
35°	4263	3919	3829
40°	4160	3779	3691
45°	4043	3661	3570
50°	3932	3531	3463
55°	3798	3408	3337
60°	3652	3269	3208
65°	3499	3124	3063
70°	3326	2924	2915
75°	3052	2732	2732
80°	2694	2501	2532
85°	2358	2344	2469



TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.1	1.5
10°-20°	196.1	4.4
20°-30°	291.6	6.5
30°-40°	345.4	7.7
40°-50°	357.1	8.0
50°-60°	329.0	7.3
60°-70°	265.9	5.9
70°-80°	178.1	4.0
80°-90°	93.9	2.1
90°-100°	78.2	1.7
100°-110°	200.7	4.5
110°-120°	320.3	7.1
120°-130°	392.7	8.7
130°-140°	413.1	9.2
140°-150°	383.1	8.5
150°-160°	308.9	6.9
160°-170°	199.7	4.4
170°-180°	68.9	1.5
0°-30°	556.7	12.4
0°-40°	902.2	20.1
0°-60°	1588.2	35.4
0°-90°	2126.1	47.3
90°-120°	599.1	13.3
90°-150°	1788.0	39.8
90°-180°	2365.0	52.7
0°-180°	4491.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	730	730	730	730	730	
5°	730	729	724	729	729	69
15°	698	698	693	697	695	196
25°	634	636	632	634	631	292
35°	549	553	551	554	554	343
45°	452	460	463	468	469	349
55°	347	359	370	378	381	310
65°	239	256	273	283	286	237
75°	132	151	173	187	191	140
85°	39	63	88	103	110	42
90°	12	39	67	86	93	9
95°	40	56	61	79	84	46
105°	165	179	200	213	218	174
115°	301	309	328	338	340	298
125°	425	429	442	451	454	379
135°	528	530	534	542	543	407
145°	611	611	611	615	615	382
155°	672	669	670	671	667	310
165°	709	706	707	709	706	200
175°	726	722	723	727	722	69
180°	726	726	726	726	726	



TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	730.5	730.5	730.5	730.5	730.5	730.5	730.5	730.5	730.5	730.5	730.5
2.5°	732.2	731.9	731.7	731.4	731.1	730.6	729.7	728.8	727.9	727.0	727.9
5°	730.5	730.1	729.8	729.5	729.2	728.5	727.4	726.2	725.1	724.0	725.3
7.5°	724.0	723.9	723.8	723.6	723.5	722.8	721.7	720.6	719.4	718.3	719.3
10°	718.3	718.3	718.3	718.3	718.3	717.7	716.3	715.1	713.8	712.6	713.7
12.5°	710.3	710.4	710.5	710.7	710.8	710.3	709.3	708.3	707.3	706.2	707.1
15°	697.5	697.7	697.9	698.0	698.1	697.7	696.5	695.4	694.4	693.2	694.2
17.5°	680.9	681.2	681.6	681.8	682.2	681.7	680.7	679.6	678.4	677.3	678.1
20°	668.8	669.2	669.5	669.9	670.1	669.8	668.6	667.5	666.4	665.2	665.7
22.5°	655.2	655.7	656.3	656.9	657.4	657.0	655.8	654.6	653.4	652.1	652.7
25°	633.8	634.2	634.7	635.2	635.7	635.5	634.5	633.6	632.5	631.6	632.3
27.5°	610.0	610.7	611.4	612.1	612.8	612.7	611.5	610.5	609.4	608.3	608.7
30°	592.2	593.2	594.2	595.1	596.1	596.1	595.1	594.2	593.2	592.2	592.6
32.5°	576.2	577.0	577.9	578.7	579.5	579.6	578.9	578.2	577.5	576.7	577.1
35°	548.6	549.7	550.8	551.9	553.0	553.4	552.9	552.3	551.9	551.4	551.9
37.5°	520.9	522.0	522.9	524.0	525.0	525.4	525.3	525.1	524.9	524.8	525.4
40°	502.0	503.3	504.5	505.9	507.1	507.7	507.5	507.4	507.2	507.0	507.7
42.5°	481.4	483.1	484.7	486.4	488.0	489.0	489.4	489.7	490.0	490.4	491.2
45°	451.9	453.6	455.3	457.1	458.9	460.1	461.0	461.8	462.5	463.4	464.5
47.5°	421.7	423.3	424.9	426.5	428.2	429.6	431.0	432.3	433.8	435.1	436.8
50°	401.1	402.7	404.5	406.3	408.0	409.8	411.5	413.3	415.0	416.8	418.6
52.5°	379.3	381.4	383.5	385.7	387.8	389.9	392.1	394.2	396.3	398.4	400.3
55°	347.3	349.9	352.4	355.0	357.5	360.1	362.6	365.1	367.7	370.2	372.0
57.5°	314.7	317.7	320.7	323.9	326.9	329.9	332.8	335.7	338.7	341.6	343.6
60°	292.9	296.1	299.3	302.5	305.7	308.8	312.0	315.2	318.4	321.5	324.0
62.5°	271.7	274.8	278.1	281.3	284.5	287.8	291.2	294.6	298.0	301.5	304.2
65°	239.2	242.9	246.5	250.2	253.8	257.6	261.4	265.2	269.0	272.9	275.2
67.5°	208.6	212.1	215.6	219.1	222.6	226.4	230.3	234.1	238.0	242.0	244.8
70°	186.2	189.8	193.5	197.2	200.9	204.7	208.9	213.0	217.2	221.3	224.3
72.5°	164.4	168.2	172.0	175.8	179.6	183.7	188.2	192.7	197.3	201.8	205.1
75°	131.8	135.9	140.1	144.2	148.4	153.0	158.1	163.2	168.2	173.3	176.4
77.5°	100.4	105.2	110.0	114.7	119.5	124.3	129.2	134.1	139.0	143.9	147.4
80°	81.0	85.7	90.5	95.3	100.0	105.1	110.6	115.9	121.3	126.8	130.3
82.5°	63.2	68.1	73.2	78.2	83.3	88.6	94.1	99.6	105.2	110.7	114.0
85°	39.4	44.7	49.9	55.1	60.4	65.8	71.4	76.9	82.5	88.1	91.6
87.5°	22.4	27.7	33.0	38.3	43.5	49.0	54.6	60.1	65.8	71.4	75.1
90°	12.0	18.0	24.1	30.2	36.2	42.3	48.5	54.9	61.1	67.3	71.5
92.5°	18.6	22.6	26.7	30.7	34.8	40.0	46.2	52.5	58.7	65.0	69.2
95°	40.0	43.7	47.5	51.3	55.0	57.4	58.2	59.1	60.0	60.9	64.9
97.5°	72.5	76.8	81.2	85.6	89.9	90.2	86.4	82.7	78.9	75.1	75.1
100°	97.6	101.4	105.1	108.8	112.4	117.2	122.7	128.3	133.8	139.4	125.0
102.5°	123.4	126.9	130.4	133.9	137.5	141.9	147.1	152.4	157.7	163.0	162.8
105°	164.6	167.6	170.6	173.6	176.6	180.5	185.3	190.1	194.8	199.6	202.8
107.5°	207.4	209.5	211.7	213.9	216.0	219.5	224.3	229.1	233.9	238.7	242.0
110°	235.2	237.0	239.0	240.9	242.8	246.1	250.8	255.5	260.2	264.9	267.6



TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	261.8	263.6	265.5	267.3	269.1	272.2	276.7	281.2	285.7	290.1	292.6
115°	301.1	302.8	304.5	306.2	308.0	310.9	315.2	319.5	323.8	328.0	330.4
117.5°	341.9	342.5	343.3	343.9	344.7	347.2	351.6	355.9	360.3	364.7	366.7
120°	367.7	368.0	368.3	368.7	369.1	371.3	375.3	379.3	383.3	387.3	389.8
122.5°	389.8	390.6	391.2	391.9	392.6	394.7	398.5	402.2	405.9	409.5	411.9
125°	425.0	425.7	426.3	427.1	427.7	429.6	432.8	436.0	439.2	442.3	444.4
127.5°	458.0	458.4	458.8	459.3	459.7	461.2	463.7	466.3	468.8	471.4	473.4
130°	478.6	479.0	479.5	479.9	480.3	481.7	484.1	486.4	488.8	491.2	493.0
132.5°	498.7	499.4	500.0	500.7	501.3	502.4	503.9	505.3	506.7	508.2	510.4
135°	527.9	528.5	529.0	529.6	530.1	530.8	531.7	532.6	533.5	534.3	536.2
137.5°	554.8	555.3	555.7	556.2	556.8	557.1	557.4	557.8	558.1	558.5	560.3
140°	571.8	572.0	572.3	572.5	572.8	572.9	573.0	573.0	573.1	573.1	575.0
142.5°	587.8	587.8	587.8	587.8	587.8	587.9	588.1	588.3	588.5	588.7	590.2
145°	611.1	611.1	611.2	611.3	611.4	611.4	611.4	611.4	611.4	611.4	612.4
147.5°	630.7	630.7	630.7	630.7	630.6	630.7	630.7	630.9	631.0	631.2	631.6
150°	643.7	643.5	643.2	643.0	642.7	642.7	643.0	643.2	643.5	643.7	643.9
152.5°	656.2	655.6	655.2	654.6	654.0	653.9	654.1	654.4	654.6	654.9	655.2
155°	672.2	671.5	670.8	670.1	669.3	669.1	669.3	669.6	669.8	670.1	670.4
157.5°	684.6	684.1	683.7	683.2	682.9	682.7	682.7	682.7	682.7	682.8	683.2
160°	693.1	692.5	691.7	691.0	690.3	690.0	690.1	690.2	690.3	690.5	691.0
162.5°	700.0	699.4	698.6	697.9	697.2	696.9	697.0	697.1	697.2	697.4	698.0
165°	709.3	708.6	707.8	707.2	706.4	706.2	706.2	706.3	706.5	706.6	707.3
167.5°	716.1	715.5	714.7	714.0	713.2	712.9	713.0	713.1	713.2	713.4	714.3
170°	720.1	719.3	718.4	717.6	716.7	716.3	716.4	716.6	716.7	716.8	717.7
172.5°	722.6	721.8	721.0	720.1	719.3	719.0	719.2	719.4	719.6	719.8	720.7
175°	725.5	724.7	724.0	723.3	722.6	722.3	722.4	722.6	722.6	722.7	723.7
177.5°	726.7	726.1	725.6	725.0	724.4	724.2	724.2	724.3	724.4	724.5	725.3
180°	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5



TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	730.5	730.5	730.5	730.5	730.5	730.5	730.5	730.5
2.5°	728.8	729.7	730.6	730.9	730.8	730.8	730.6	730.5
5°	726.5	727.8	729.1	729.6	729.5	729.3	729.2	729.1
7.5°	720.5	721.6	722.7	723.2	723.0	722.9	722.7	722.6
10°	714.8	715.9	717.0	717.5	717.4	717.2	717.0	716.8
12.5°	707.9	708.8	709.7	709.9	709.5	709.1	708.7	708.2
15°	695.1	696.1	697.0	697.2	696.5	695.9	695.3	694.7
17.5°	678.8	679.5	680.2	680.4	680.0	679.7	679.3	678.9
20°	666.3	666.8	667.2	667.4	667.4	667.4	667.4	667.4
22.5°	653.3	653.9	654.5	654.6	654.2	653.8	653.5	653.1
25°	632.9	633.6	634.1	634.1	633.3	632.5	631.7	630.9
27.5°	609.2	609.6	610.1	610.1	609.8	609.5	609.3	609.0
30°	592.9	593.2	593.5	593.6	593.4	593.2	593.1	593.0
32.5°	577.4	577.7	578.1	578.2	578.0	577.8	577.7	577.5
35°	552.3	552.9	553.4	553.6	553.6	553.6	553.6	553.6
37.5°	526.0	526.7	527.4	527.6	527.5	527.4	527.4	527.4
40°	508.3	509.0	509.5	510.0	510.4	510.7	511.0	511.3
42.5°	491.9	492.7	493.4	493.9	494.0	494.0	494.1	494.2
45°	465.5	466.7	467.8	468.4	468.6	468.7	468.9	469.1
47.5°	438.4	440.0	441.6	442.6	443.0	443.3	443.7	444.0
50°	420.3	422.1	423.8	424.9	425.4	425.8	426.3	426.8
52.5°	402.2	404.1	406.0	407.1	407.5	407.7	408.1	408.5
55°	373.7	375.5	377.2	378.4	379.1	379.8	380.3	381.0
57.5°	345.6	347.6	349.6	350.8	351.4	351.9	352.3	352.8
60°	326.3	328.7	331.1	332.5	333.0	333.5	333.9	334.4
62.5°	306.8	309.4	312.1	313.7	314.2	314.9	315.5	316.1
65°	277.6	280.0	282.4	283.9	284.6	285.2	285.8	286.4
67.5°	247.7	250.6	253.4	255.3	256.2	257.0	257.9	258.6
70°	227.3	230.4	233.4	235.4	236.3	237.2	238.3	239.2
72.5°	208.4	211.6	214.9	216.9	217.6	218.3	219.0	219.7
75°	179.6	182.9	186.1	188.0	188.8	189.6	190.4	191.2
77.5°	150.9	154.5	158.0	160.0	160.6	161.3	161.9	162.6
80°	133.7	137.2	140.7	142.8	143.5	144.1	144.8	145.3
82.5°	117.4	120.8	124.2	126.5	127.6	128.8	129.9	131.0
85°	95.1	98.6	102.1	104.4	105.8	107.0	108.3	109.5
87.5°	78.9	82.7	86.4	89.0	90.1	91.3	92.5	93.7
90°	75.9	80.1	84.4	87.2	88.7	90.2	91.6	93.1
92.5°	73.3	77.4	81.5	84.3	85.6	86.8	88.1	89.4
95°	69.1	73.1	77.3	79.9	81.0	82.1	83.2	84.4
97.5°	75.1	75.0	75.0	75.6	76.6	77.8	78.8	79.9
100°	110.5	96.0	81.5	74.6	75.0	75.5	76.0	76.4
102.5°	162.6	162.5	162.3	158.6	151.5	144.3	137.1	130.0
105°	206.0	209.2	212.4	214.4	215.5	216.4	217.4	218.5
107.5°	245.2	248.4	251.5	253.4	254.0	254.7	255.2	255.9
110°	270.2	272.9	275.6	277.5	278.7	279.9	281.2	282.5





TEST NUMBER: P333172-830

CATALOG NUMBER: S125DIP-S610D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	295.0	297.5	299.9	301.6	302.6	303.5	304.4	305.4
115°	332.8	335.2	337.5	338.8	339.1	339.3	339.6	339.8
117.5°	368.8	370.9	373.1	374.5	375.2	376.0	376.7	377.5
120°	392.3	394.7	397.2	398.6	399.0	399.4	399.7	400.0
122.5°	414.2	416.6	419.0	420.2	420.5	420.8	421.0	421.3
125°	446.5	448.6	450.6	451.9	452.3	452.8	453.2	453.6
127.5°	475.5	477.6	479.8	480.8	480.8	480.9	480.9	481.0
130°	494.8	496.7	498.6	499.6	499.8	500.0	500.2	500.4
132.5°	512.6	514.6	516.8	517.9	518.0	518.1	518.1	518.2
135°	538.0	539.8	541.7	542.6	542.7	542.8	542.8	542.9
137.5°	562.3	564.2	566.2	567.1	567.1	567.1	567.1	567.1
140°	577.0	579.0	581.0	582.0	581.9	581.8	581.7	581.6
142.5°	591.8	593.3	594.8	595.6	595.5	595.4	595.4	595.3
145°	613.2	614.2	615.1	615.5	615.4	615.4	615.3	615.2
147.5°	632.0	632.4	632.8	632.7	632.2	631.6	631.0	630.5
150°	644.1	644.4	644.6	644.4	643.6	642.8	642.0	641.2
152.5°	655.3	655.6	655.8	655.5	654.7	653.8	653.1	652.2
155°	670.8	671.1	671.5	671.2	670.2	669.3	668.4	667.3
157.5°	683.5	683.9	684.3	684.0	683.1	682.0	681.1	680.1
160°	691.4	691.9	692.4	692.1	691.2	690.2	689.3	688.3
162.5°	698.7	699.4	700.0	699.8	698.8	697.8	696.7	695.6
165°	708.0	708.8	709.5	709.4	708.4	707.5	706.5	705.5
167.5°	715.1	716.0	716.8	716.7	715.7	714.5	713.5	712.4
170°	718.8	719.7	720.7	720.6	719.5	718.4	717.4	716.3
172.5°	721.5	722.5	723.3	723.2	722.1	721.0	719.9	718.9
175°	724.6	725.6	726.6	726.5	725.5	724.3	723.3	722.2
177.5°	725.9	726.6	727.3	727.2	726.4	725.7	724.9	724.2
180°	725.5	725.5	725.5	725.5	725.5	725.5	725.5	725.5

(END OF REPORT)