

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: P331298-940

Luminaire Tested: **S122DIP-S485D530U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331298-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S485D530U940-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3440.4 lumens  
Efficiency: N/A  
Efficacy: 104.9 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

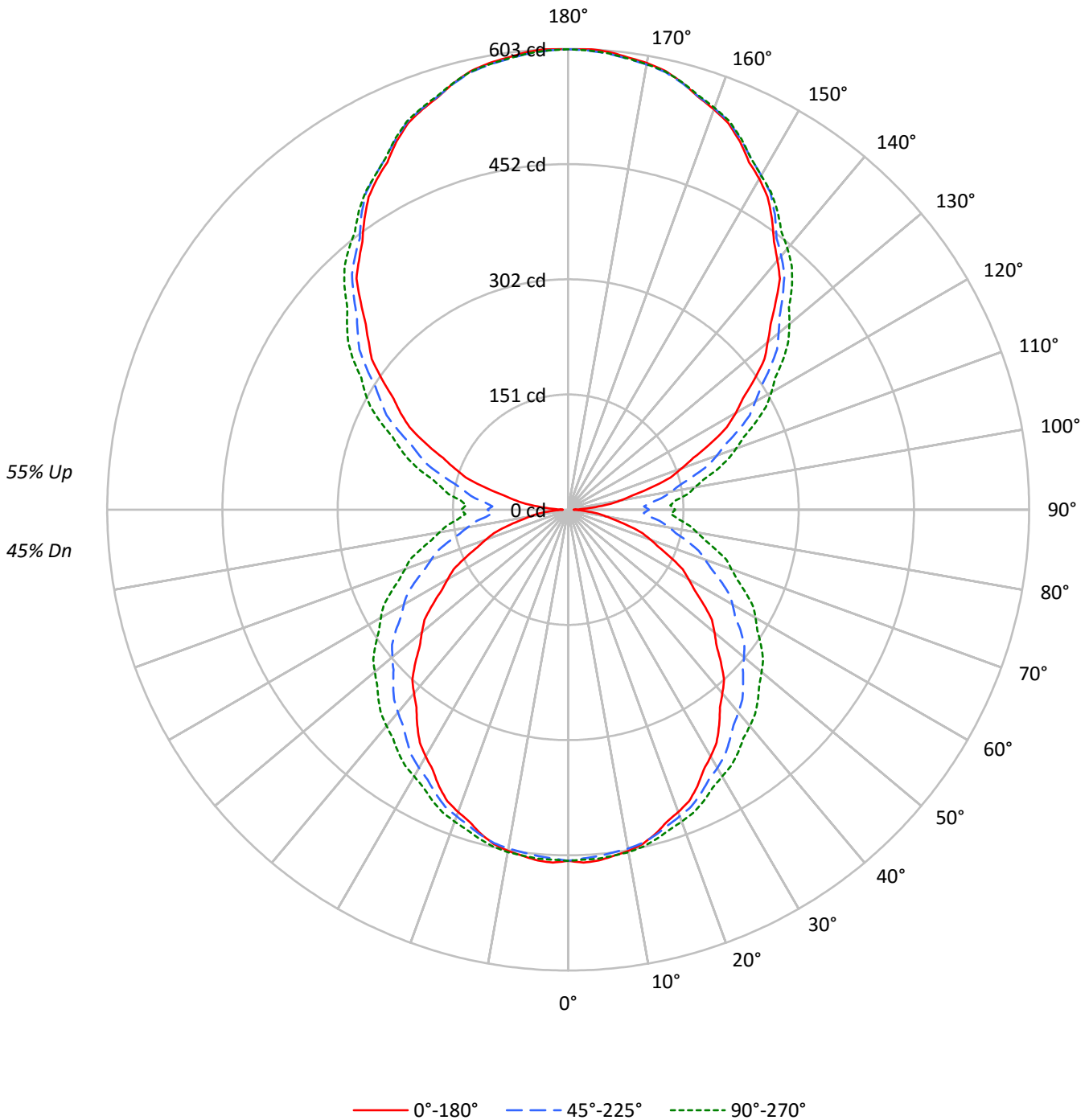
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331298-940

CATALOG NUMBER: S122DIP-S485D530U940-4F0-1E-UDD-D1

### 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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45
1	95	90	86	82	87	83	79	76	69	66	63	56	54	52	44	42	41	35
2	86	78	72	66	79	72	66	61	59	55	51	48	45	42	38	35	33	29
3	78	68	60	54	71	63	56	50	52	47	43	42	38	35	33	30	28	24
4	71	60	52	45	65	55	48	42	46	40	36	37	33	30	29	26	24	20
5	65	53	45	39	60	49	42	36	41	35	31	33	29	25	26	23	20	17
6	60	48	39	33	55	44	36	31	37	31	27	30	25	22	24	20	18	15
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13
8	51	39	31	25	47	36	29	24	30	24	20	25	20	17	20	16	14	11
9	48	35	28	23	44	33	26	21	28	22	18	23	18	15	18	15	13	10
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	11	9

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

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



TEST NUMBER: P331298-940

CATALOG NUMBER: S122DIP-S485D530U940-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	1.3
10°-20°	124.9	3.6
20°-30°	189.2	5.5
30°-40°	230.5	6.7
40°-50°	247.9	7.2
50°-60°	240.8	7.0
60°-70°	210.2	6.1
70°-80°	161.8	4.7
80°-90°	111.0	3.2
90°-100°	113.0	3.3
100°-110°	173.2	5.0
110°-120°	238.8	6.9
120°-130°	286.7	8.3
130°-140°	307.6	8.9
140°-150°	294.8	8.6
150°-160°	246.1	7.2
160°-170°	163.2	4.7
170°-180°	57.0	1.7
0°-30°	357.6	10.4
0°-40°	588.1	17.1
0°-60°	1076.8	31.3
0°-90°	1559.9	45.3
90°-120°	525.0	15.3
90°-150°	1414.2	41.1
90°-180°	1881.0	54.7
0°-180°	3440.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	7	52	106	130	140	6
95°	32	68	109	133	141	35
105°	113	134	169	192	201	119
115°	206	217	245	264	271	204
125°	297	303	322	338	344	266
135°	384	389	397	410	414	296
145°	465	468	471	476	477	290
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



TEST NUMBER: P331298-940

CATALOG NUMBER: S122DIP-S485D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.2	22.2	31.3	40.4	49.5	59.0	69.0	79.0	89.0	98.9	105.0
90°	7.1	17.1	27.0	37.0	46.9	57.9	69.8	81.8	93.7	105.7	111.4
92.5°	15.2	24.2	33.2	42.2	51.1	60.5	70.2	79.9	89.6	99.2	105.1
95°	31.7	39.9	48.0	56.0	64.1	72.7	81.8	91.0	100.0	109.1	114.8
97.5°	53.0	60.2	67.3	74.5	81.7	89.8	98.7	107.6	116.6	125.6	131.1
100°	69.2	75.6	82.0	88.4	94.8	102.3	110.9	119.5	128.1	136.8	142.2
102.5°	85.8	91.5	97.3	103.0	108.7	115.8	124.3	132.8	141.2	149.7	155.2
105°	112.6	117.3	121.9	126.5	131.2	137.4	145.3	153.3	161.2	169.2	174.5
107.5°	140.4	144.3	148.3	152.2	156.1	161.8	169.2	176.5	183.9	191.3	196.3
110°	157.7	161.4	165.1	168.7	172.3	177.7	185.0	192.3	199.5	206.8	211.5



TEST NUMBER: P331298-940

CATALOG NUMBER: S122DIP-S485D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	177.3	180.5	183.6	186.8	189.9	194.9	201.7	208.6	215.3	222.1	226.6
115°	206.1	208.4	210.7	212.9	215.3	219.6	226.0	232.6	239.0	245.4	249.7
117.5°	234.1	236.0	238.0	240.0	241.9	245.7	251.2	256.7	262.3	267.8	271.9
120°	253.2	254.7	256.2	257.7	259.2	262.4	267.4	272.5	277.5	282.5	286.6
122.5°	270.7	272.0	273.3	274.6	276.0	279.1	284.0	289.0	293.9	298.8	302.6
125°	297.3	298.3	299.3	300.3	301.3	304.1	308.4	312.8	317.3	321.6	325.3
127.5°	323.8	324.9	326.1	327.3	328.4	330.6	334.0	337.5	340.9	344.3	347.6
130°	340.5	341.8	343.1	344.5	345.8	347.9	350.8	353.7	356.5	359.4	362.7
132.5°	359.2	360.3	361.3	362.4	363.4	365.2	367.6	370.1	372.5	375.0	377.8
135°	383.5	384.8	386.0	387.3	388.5	390.0	391.7	393.4	395.1	396.8	399.8
137.5°	409.9	410.9	411.9	412.9	413.8	414.8	415.8	416.7	417.7	418.6	421.2
140°	425.8	426.6	427.5	428.4	429.3	430.1	431.0	431.9	432.7	433.5	436.0
142.5°	442.0	442.9	443.8	444.6	445.5	446.2	446.7	447.0	447.5	447.9	450.0
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	472.3
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.3
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



TEST NUMBER: P331298-940

CATALOG NUMBER: S122DIP-S485D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	110.9	116.9	122.9	126.9	128.8	130.7	132.6	134.6
90°	117.1	122.8	128.5	132.2	134.2	136.1	137.9	139.8
92.5°	111.0	116.8	122.7	126.5	128.3	130.1	131.9	133.7
95°	120.4	126.0	131.6	135.2	136.8	138.3	139.8	141.4
97.5°	136.5	142.0	147.5	151.1	152.8	154.5	156.2	158.0
100°	147.8	153.2	158.6	162.2	163.7	165.2	166.7	168.3
102.5°	160.6	166.0	171.5	175.0	176.5	178.0	179.5	181.0
105°	179.9	185.4	190.7	194.3	195.9	197.5	199.2	200.8
107.5°	201.3	206.4	211.5	214.5	215.7	216.8	217.9	219.0
110°	216.2	221.0	225.7	228.7	230.0	231.3	232.6	233.9





TEST NUMBER: P331298-940

CATALOG NUMBER: S122DIP-S485D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	231.0	235.5	240.0	242.9	244.3	245.7	247.1	248.4
115°	254.0	258.3	262.7	265.5	266.8	268.0	269.4	270.6
117.5°	276.0	280.1	284.2	286.9	288.0	289.2	290.3	291.6
120°	290.8	294.9	299.1	301.8	303.1	304.3	305.7	306.9
122.5°	306.3	310.0	313.9	316.3	317.4	318.6	319.7	320.8
125°	329.0	332.6	336.3	338.7	339.9	341.2	342.3	343.6
127.5°	350.8	354.1	357.4	359.4	360.4	361.3	362.3	363.2
130°	366.0	369.3	372.7	374.8	375.5	376.2	376.9	377.6
132.5°	380.8	383.7	386.6	388.5	389.4	390.2	391.0	391.8
135°	402.8	405.8	408.8	410.7	411.6	412.4	413.3	414.1
137.5°	423.8	426.5	429.1	430.7	431.2	431.9	432.4	432.9
140°	438.3	440.7	443.0	444.4	444.9	445.3	445.8	446.2
142.5°	451.9	453.9	455.8	457.0	457.4	457.6	458.0	458.3
145°	473.4	474.4	475.4	476.0	476.4	476.6	476.9	477.2
147.5°	492.7	493.0	493.4	493.6	493.5	493.4	493.3	493.2
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)