

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: P331967

Luminaire Tested: **S123DIP-S775D585U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331967  
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: S123DIP-S775D585U835-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5573.4 lumens  
Efficiency: N/A  
Efficacy: 138.3 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

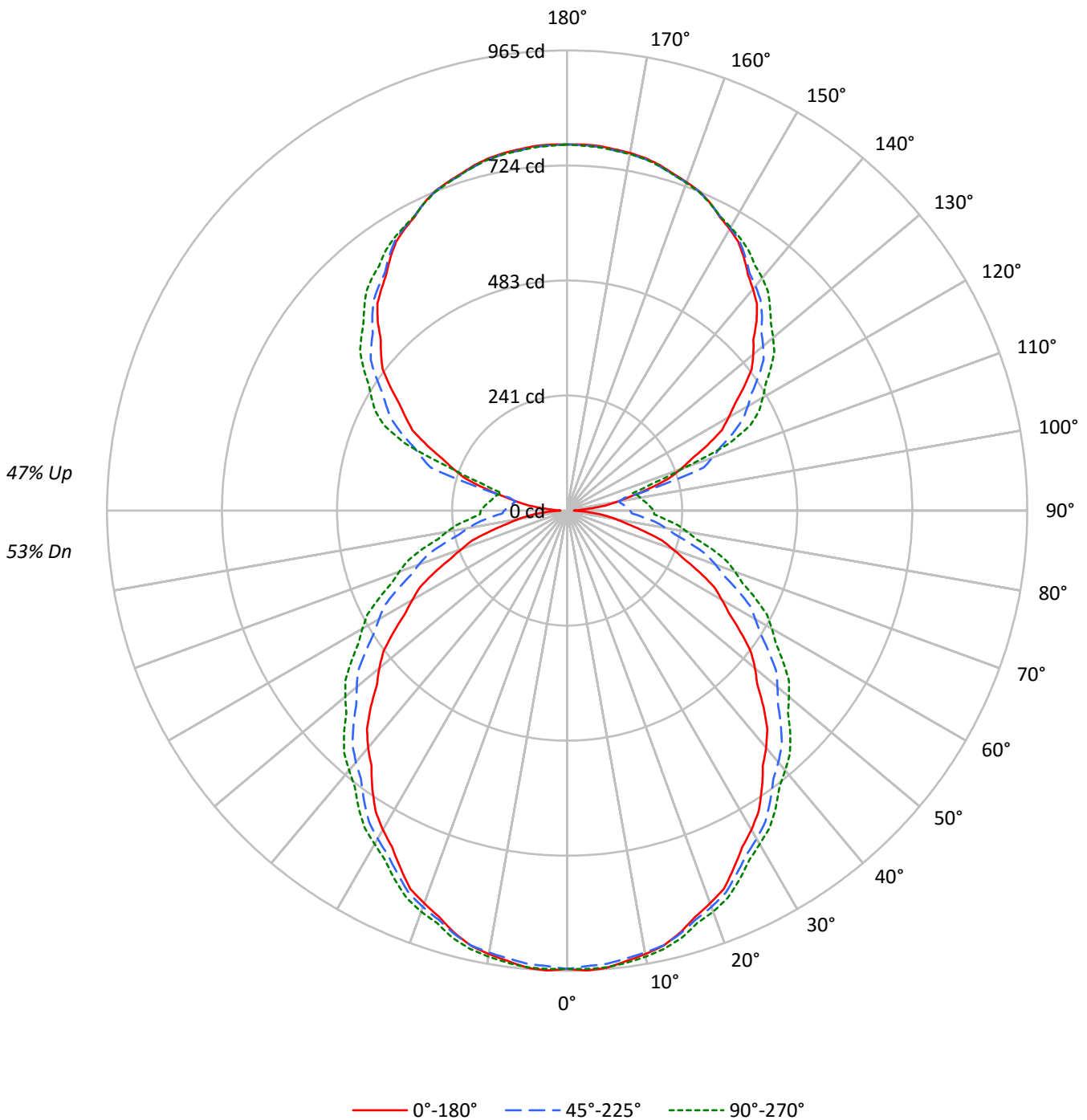
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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	85	85	85	71	71	71	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	50	49	48	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	55	50	46	47	43	39	38	35	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	20	17	14
9	49	37	29	24	45	34	27	23	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	31	25	20	27	22	18	23	19	16	20	16	14	12

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

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.1	1.6
10°-20°	259.8	4.7
20°-30°	388.5	7.0
30°-40°	464.0	8.3
40°-50°	485.4	8.7
50°-60°	455.5	8.2
60°-70°	380.5	6.8
70°-80°	272.2	4.9
80°-90°	164.5	3.0
90°-100°	129.8	2.3
100°-110°	207.9	3.7
110°-120°	369.5	6.6
120°-130°	435.4	7.8
130°-140°	447.6	8.0
140°-150°	409.3	7.3
150°-160°	327.9	5.9
160°-170°	211.6	3.8
170°-180°	72.9	1.3
0°-30°	739.4	13.3
0°-40°	1203.3	21.6
0°-60°	2144.3	38.5
0°-90°	2961.4	53.1
90°-120°	707.1	12.7
90°-150°	1999.4	35.9
90°-180°	2612.0	46.9
0°-180°	5573.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	14	71	132	168	182	11
95°	46	66	121	156	168	52
105°	178	208	203	136	142	189
115°	324	342	383	413	424	320
125°	453	459	490	512	521	404
135°	562	565	578	597	602	432
145°	647	650	651	660	664	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: P331967

CATALOG NUMBER: S123DIP-S775D585U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	28.0	39.8	51.6	63.5	75.3	87.3	99.5	111.7	123.9	136.1	144.1
90°	14.2	26.9	39.5	52.2	64.9	78.0	91.5	105.0	118.5	132.0	140.4
92.5°	23.4	33.3	43.2	53.2	63.1	74.5	87.5	100.4	113.3	126.2	134.8
95°	46.3	50.2	54.1	57.9	61.8	70.2	83.0	95.8	108.5	121.3	129.4
97.5°	80.2	86.0	91.9	97.8	103.6	107.4	109.2	111.0	112.7	114.5	122.4
100°	105.8	115.8	125.8	135.8	145.7	146.2	137.1	128.1	119.0	109.9	117.7
102.5°	135.1	143.6	152.1	160.7	169.2	167.9	156.8	145.8	134.7	123.6	127.0
105°	178.3	185.3	192.3	199.3	206.3	209.0	207.6	206.2	204.8	203.4	187.5
107.5°	222.9	228.8	234.7	240.5	246.4	255.0	266.3	277.6	288.8	300.1	289.9
110°	252.7	257.9	263.1	268.3	273.5	281.4	292.1	302.8	313.5	324.2	326.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.9	286.2	290.6	294.9	299.3	306.6	317.0	327.3	337.6	348.0	353.9
115°	324.1	327.6	331.2	334.7	338.3	344.8	354.3	363.8	373.4	382.9	389.7
117.5°	365.7	368.4	371.0	373.7	376.4	381.9	390.4	398.8	407.3	415.7	422.3
120°	390.9	393.2	395.5	397.8	400.1	405.3	413.3	421.4	429.5	437.5	443.9
122.5°	417.4	418.9	420.4	422.0	423.5	428.2	436.0	443.8	451.6	459.3	465.2
125°	452.6	453.6	454.6	455.6	456.6	460.8	468.0	475.3	482.5	489.8	494.9
127.5°	487.7	488.5	489.3	490.1	490.8	494.3	500.5	506.7	512.9	519.1	524.1
130°	509.6	510.4	511.2	512.0	512.7	515.7	520.9	526.0	531.2	536.4	541.3
132.5°	529.8	530.7	531.7	532.7	533.6	536.2	540.3	544.4	548.6	552.7	557.4
135°	561.6	562.1	562.7	563.2	563.7	565.5	568.6	571.7	574.7	577.8	582.4
137.5°	588.8	589.6	590.3	591.1	591.9	593.1	594.9	596.6	598.3	600.0	604.3
140°	606.2	607.0	607.7	608.5	609.2	610.2	611.2	612.3	613.4	614.5	618.5
142.5°	623.1	623.7	624.2	624.8	625.4	625.9	626.4	627.0	627.5	628.0	631.5
145°	646.7	647.3	648.0	648.7	649.3	649.8	650.0	650.3	650.5	650.8	652.9
147.5°	667.9	668.5	669.1	669.6	670.2	670.6	670.9	671.1	671.4	671.7	672.5
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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	152.2	160.2	168.2	173.4	175.8	178.1	180.5	182.9
90°	148.8	157.3	165.7	171.2	173.8	176.3	178.9	181.5
92.5°	143.3	151.8	160.4	165.8	168.1	170.4	172.7	175.0
95°	137.5	145.6	153.7	159.0	161.3	163.6	165.9	168.3
97.5°	130.4	138.3	146.3	151.5	153.9	156.4	158.8	161.3
100°	125.4	133.2	141.0	146.1	148.5	151.0	153.4	155.9
102.5°	130.4	133.9	137.3	140.3	142.8	145.4	147.9	150.5
105°	171.6	155.7	139.8	133.0	135.3	137.7	140.0	142.4
107.5°	279.7	269.5	259.3	246.7	231.9	217.0	202.2	187.3
110°	328.0	329.8	331.7	324.5	308.3	292.0	275.7	259.5





TEST NUMBER: P331967

CATALOG NUMBER: S123DIP-S775D585U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	359.8	365.8	371.7	373.8	372.0	370.2	368.5	366.7
115°	396.6	403.4	410.3	414.9	417.3	419.6	422.0	424.4
117.5°	428.8	435.4	441.9	446.1	448.1	450.0	451.9	453.8
120°	450.3	456.6	463.0	467.0	468.6	470.2	471.9	473.5
122.5°	471.1	477.0	482.8	486.6	488.4	490.1	491.8	493.6
125°	500.1	505.2	510.4	513.9	515.7	517.6	519.5	521.4
127.5°	529.1	534.1	539.1	542.3	543.6	545.0	546.3	547.6
130°	546.2	551.1	556.1	559.1	560.2	561.4	562.5	563.7
132.5°	562.2	566.9	571.7	574.7	575.9	577.1	578.3	579.6
135°	586.9	591.5	596.1	598.7	599.5	600.3	601.1	601.9
137.5°	608.6	612.9	617.2	619.8	620.7	621.6	622.5	623.4
140°	622.5	626.5	630.5	632.9	633.8	634.7	635.6	636.6
142.5°	635.0	638.6	642.1	644.3	645.1	645.9	646.7	647.5
145°	655.0	657.1	659.2	660.8	661.7	662.6	663.6	664.5
147.5°	673.3	674.1	674.9	675.4	675.7	675.9	676.2	676.5
150°	684.9	685.2	685.4	685.6	685.7	685.8	685.9	686.0
152.5°	696.3	696.7	697.2	697.2	696.7	696.2	695.7	695.2
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

(END OF REPORT)