

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: P331970-830

Luminaire Tested: **S123DIP-S775D585U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331970-830
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-S775D585U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5195.3 lumens
Efficiency: N/A
Efficacy: 128.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

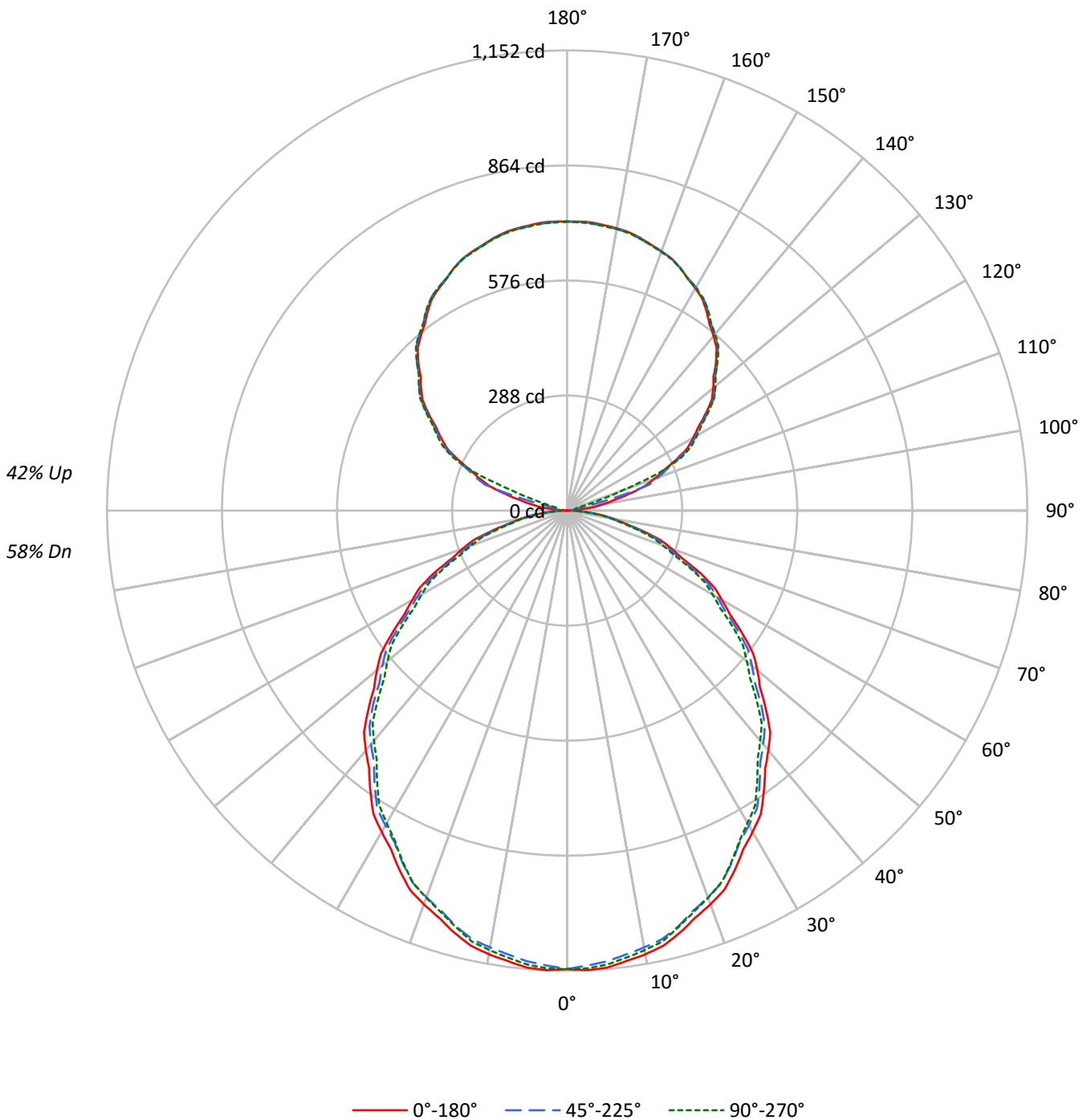
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	109	109	109	109	101	101	101	101	88	88	88	75	75	75	63	63	63	58																			
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	54	53	48																			
2	90	83	77	71	84	77	72	67	67	63	59	58	55	52	49	47	45	40																			
3	83	73	65	59	77	68	62	56	59	54	50	51	47	44	43	40	38	34																			
4	76	65	56	50	70	60	53	48	53	47	43	45	41	38	39	35	33	29																			
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	28	25																			
6	64	52	43	37	59	48	41	36	42	37	32	37	32	29	32	28	25	22																			
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20																			
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18																			
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16																			
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	14																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12355	12355	12355
5°	12413	12241	12327
10°	12329	12136	12211
15°	12186	11999	12021
20°	12016	11802	11813
25°	11792	11569	11545
30°	11543	11309	11225
35°	11284	11037	10893
40°	11011	10732	10568
45°	10712	10456	10201
50°	10412	10114	9833
55°	10021	9760	9466
60°	9623	9347	9052
65°	9276	8899	8621
70°	8759	8387	8013
75°	8006	7719	7390
80°	7221	6912	6856
85°	6336	6101	5854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.1
10°-20°	305.3	5.9
20°-30°	451.0	8.7
30°-40°	526.8	10.1
40°-50°	529.6	10.2
50°-60°	465.2	9.0
60°-70°	346.6	6.7
70°-80°	197.5	3.8
80°-90°	58.7	1.1
90°-100°	26.3	0.5
100°-110°	125.4	2.4
110°-120°	301.2	5.8
120°-130°	383.5	7.4
130°-140°	409.8	7.9
140°-150°	383.2	7.4
150°-160°	309.1	5.9
160°-170°	199.5	3.8
170°-180°	68.7	1.3
0°-30°	864.4	16.6
0°-40°	1391.1	26.8
0°-60°	2385.9	45.9
0°-90°	2988.7	57.5
90°-120°	452.8	8.7
90°-150°	1629.3	31.4
90°-180°	2207.0	42.5
0°-180°	5195.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1149	1143	1133	1142	1141	109
15°	1094	1089	1077	1084	1079	308
25°	993	987	974	975	972	457
35°	859	852	840	834	829	537
45°	704	699	687	675	670	543
55°	534	532	520	510	504	478
65°	364	359	349	342	338	359
75°	192	189	186	181	178	206
85°	51	50	49	48	47	56
90°	1	6	13	15	16	4
95°	33	12	17	20	20	41
105°	160	163	118	28	24	170
115°	300	304	309	314	316	297
125°	424	428	430	431	432	378
135°	527	531	533	534	533	406
145°	608	612	613	614	614	381
155°	670	669	670	672	669	309
165°	707	705	705	709	705	200
175°	724	721	721	725	721	69
180°	724	724	724	724	724	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1151.7	1151.0	1150.4	1149.6	1149.0	1147.6	1145.7	1143.8	1141.8	1139.9	1141.6
5°	1148.8	1147.6	1146.6	1145.5	1144.3	1142.6	1140.2	1137.8	1135.4	1132.9	1135.2
7.5°	1137.6	1136.4	1135.3	1134.3	1133.1	1131.3	1128.8	1126.3	1123.8	1121.3	1123.3
10°	1128.0	1126.9	1125.9	1124.7	1123.7	1121.7	1118.8	1116.0	1113.1	1110.3	1112.3
12.5°	1115.4	1114.5	1113.6	1112.7	1111.7	1109.9	1107.3	1104.6	1101.9	1099.2	1100.7
15°	1093.5	1092.6	1091.7	1090.9	1090.0	1088.2	1085.2	1082.4	1079.6	1076.8	1078.5
17.5°	1068.0	1066.9	1065.7	1064.6	1063.5	1061.5	1058.7	1055.7	1052.9	1050.1	1051.3
20°	1049.0	1047.7	1046.5	1045.2	1043.9	1041.7	1038.9	1036.0	1033.2	1030.3	1031.2
22.5°	1027.7	1026.4	1025.1	1023.8	1022.5	1020.4	1017.6	1014.7	1011.9	1009.0	1009.7
25°	992.9	991.6	990.2	988.9	987.6	985.5	982.6	979.8	976.9	974.1	974.3
27.5°	955.5	954.2	953.0	951.7	950.5	948.3	945.2	942.2	939.1	935.9	936.1
30°	928.7	927.6	926.5	925.4	924.3	922.2	919.2	916.1	913.0	909.9	909.9
32.5°	901.8	900.4	898.9	897.5	896.1	894.2	891.7	889.4	887.0	884.7	883.4
35°	858.7	857.3	856.0	854.7	853.4	851.3	848.4	845.6	842.7	839.9	838.6
37.5°	814.4	812.8	811.1	809.4	807.8	805.5	802.6	799.7	796.7	793.9	792.3
40°	783.6	782.3	781.0	779.7	778.4	776.2	773.1	770.1	766.9	763.8	762.1
42.5°	752.8	751.3	749.8	748.4	746.9	744.6	741.5	738.4	735.4	732.3	730.6
45°	703.7	702.8	701.9	701.1	700.1	698.3	695.4	692.6	689.8	686.9	684.3
47.5°	654.9	653.7	652.3	651.1	649.8	647.8	645.2	642.5	639.8	637.2	634.5
50°	621.8	620.7	619.5	618.5	617.4	615.4	612.6	609.7	606.8	604.0	601.6
52.5°	587.0	586.3	585.5	584.8	584.0	582.1	579.1	576.1	573.1	570.0	568.0
55°	534.0	533.7	533.5	533.3	533.0	531.5	528.7	525.8	522.9	520.1	517.7
57.5°	483.4	482.7	481.9	481.2	480.4	478.9	476.6	474.3	472.0	469.8	467.6
60°	447.0	446.9	446.7	446.4	446.2	444.8	442.1	439.5	436.9	434.2	432.3
62.5°	414.7	414.2	413.6	413.0	412.5	410.9	408.2	405.6	402.9	400.3	398.3
65°	364.2	363.1	361.9	360.9	359.8	358.2	355.9	353.7	351.6	349.4	347.6
67.5°	310.7	309.7	308.8	307.7	306.8	305.5	303.9	302.2	300.5	298.9	297.3
70°	278.3	277.0	275.7	274.4	273.1	271.7	270.4	269.1	267.8	266.5	264.9
72.5°	244.4	243.4	242.4	241.5	240.5	239.3	237.8	236.3	234.8	233.3	232.0
75°	192.5	191.5	190.7	189.8	189.0	188.1	187.5	186.8	186.2	185.6	184.5
77.5°	146.5	146.0	145.5	145.1	144.5	143.9	143.1	142.3	141.6	140.7	140.0
80°	116.5	115.8	115.2	114.5	113.9	113.3	112.8	112.4	112.0	111.5	111.3
82.5°	87.3	87.1	87.0	86.8	86.7	86.6	86.5	86.4	86.3	86.2	85.9
85°	51.3	50.9	50.4	50.0	49.6	49.4	49.4	49.4	49.4	49.4	48.9
87.5°	20.6	20.4	20.1	19.8	19.5	19.4	19.5	19.7	19.8	20.0	19.9
90°	0.6	1.7	2.9	4.1	5.3	6.7	8.2	9.8	11.3	12.9	13.4
92.5°	10.0	9.7	9.3	9.0	8.7	9.0	10.3	11.4	12.6	13.8	14.5
95°	32.8	27.9	23.0	18.1	13.2	11.4	12.7	14.0	15.4	16.7	17.5
97.5°	65.9	63.7	61.5	59.3	57.1	51.7	43.1	34.5	25.9	17.3	18.3
100°	90.9	93.2	95.7	98.0	100.4	92.3	73.6	55.0	36.4	17.7	18.7
102.5°	119.2	120.9	122.7	124.4	126.1	116.8	96.4	76.1	55.7	35.3	32.4
105°	160.2	161.6	162.9	164.1	165.4	160.7	150.0	139.2	128.5	117.7	96.6
107.5°	203.4	204.4	205.6	206.6	207.6	209.0	210.7	212.4	214.1	215.7	200.3
110°	232.2	233.2	234.1	235.1	236.0	237.2	238.5	239.8	241.1	242.4	238.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	259.8	260.6	261.5	262.3	263.2	264.3	265.6	266.9	268.2	269.6	269.7
115°	300.5	301.2	301.9	302.7	303.4	304.3	305.4	306.4	307.5	308.6	309.8
117.5°	340.0	340.8	341.8	342.6	343.5	344.2	344.8	345.3	345.9	346.4	347.4
120°	364.5	365.5	366.6	367.7	368.8	369.5	369.9	370.2	370.6	370.9	371.9
122.5°	389.5	390.3	391.2	392.1	392.9	393.6	394.1	394.5	395.0	395.5	396.2
125°	423.6	424.6	425.6	426.5	427.4	428.2	428.7	429.1	429.6	430.1	430.3
127.5°	456.8	457.7	458.6	459.6	460.5	461.3	461.8	462.5	463.1	463.6	464.0
130°	477.4	478.3	479.3	480.2	481.2	481.9	482.4	482.9	483.3	483.8	484.3
132.5°	497.2	498.1	499.1	500.0	501.0	501.6	502.0	502.4	502.8	503.2	503.7
135°	527.4	528.1	528.8	529.5	530.3	530.8	531.3	531.8	532.3	532.7	533.1
137.5°	553.2	554.1	555.0	555.9	556.8	557.4	557.6	557.9	558.2	558.5	559.0
140°	570.3	571.1	571.8	572.5	573.3	573.8	574.1	574.5	574.9	575.2	575.7
142.5°	586.3	587.0	587.8	588.4	589.2	589.7	590.0	590.4	590.8	591.2	591.5
145°	608.5	609.4	610.2	611.1	611.9	612.5	612.7	612.9	613.1	613.4	613.6
147.5°	629.5	630.1	630.7	631.1	631.7	632.1	632.4	632.5	632.8	633.1	633.3
150°	642.4	642.8	643.1	643.5	643.9	644.1	644.4	644.6	644.9	645.1	645.4
152.5°	654.0	654.2	654.3	654.5	654.7	654.9	655.0	655.2	655.3	655.4	655.8
155°	670.3	670.1	669.9	669.7	669.4	669.4	669.5	669.6	669.7	669.9	670.4
157.5°	683.1	683.1	683.0	683.0	683.0	682.9	682.8	682.7	682.5	682.4	683.2
160°	690.8	690.7	690.6	690.4	690.3	690.2	690.0	689.9	689.8	689.8	690.4
162.5°	698.1	697.8	697.5	697.2	696.8	696.6	696.5	696.4	696.3	696.2	697.0
165°	706.9	706.5	706.2	705.9	705.5	705.2	705.1	705.0	704.9	704.7	705.8
167.5°	713.8	713.3	712.8	712.4	711.9	711.6	711.6	711.6	711.6	711.6	712.7
170°	717.7	717.2	716.7	716.2	715.8	715.5	715.5	715.5	715.5	715.5	716.5
172.5°	720.3	719.7	719.1	718.5	717.9	717.7	717.8	717.9	718.0	718.1	719.1
175°	723.6	723.0	722.4	721.8	721.2	721.0	721.0	721.2	721.3	721.4	722.3
177.5°	724.4	724.0	723.5	723.0	722.6	722.4	722.5	722.6	722.6	722.7	723.5
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1143.4	1145.2	1146.9	1147.7	1147.5	1147.4	1147.2	1147.0
5°	1137.4	1139.5	1141.8	1142.6	1142.2	1141.8	1141.3	1140.9
7.5°	1125.3	1127.3	1129.3	1130.1	1129.8	1129.5	1129.3	1129.1
10°	1114.3	1116.2	1118.1	1119.0	1118.5	1118.0	1117.7	1117.2
12.5°	1102.1	1103.5	1105.0	1105.6	1105.3	1105.0	1104.8	1104.6
15°	1080.2	1081.9	1083.7	1083.9	1082.6	1081.3	1080.1	1078.7
17.5°	1052.5	1053.8	1055.0	1055.4	1054.9	1054.4	1054.0	1053.5
20°	1032.1	1032.9	1033.9	1034.0	1033.3	1032.6	1032.0	1031.3
22.5°	1010.4	1011.2	1011.8	1011.7	1011.0	1010.1	1009.3	1008.4
25°	974.5	974.8	975.0	974.8	974.1	973.5	972.8	972.1
27.5°	936.3	936.5	936.7	936.3	935.6	934.7	933.9	933.0
30°	909.9	909.9	909.9	909.2	907.7	906.1	904.6	903.1
32.5°	882.2	881.0	879.8	878.7	877.9	877.0	876.2	875.4
35°	837.3	835.9	834.6	833.4	832.3	831.2	830.1	829.0
37.5°	790.7	789.1	787.6	786.5	785.7	785.0	784.3	783.6
40°	760.3	758.7	756.9	755.5	754.7	753.8	752.9	752.1
42.5°	728.8	727.0	725.3	724.0	723.1	722.2	721.3	720.5
45°	681.6	679.0	676.4	674.5	673.4	672.3	671.2	670.1
47.5°	632.0	629.4	626.8	625.0	624.1	623.1	622.2	621.1
50°	599.2	596.7	594.4	592.5	591.2	589.8	588.5	587.2
52.5°	565.9	563.8	561.8	560.2	558.8	557.5	556.2	554.9
55°	515.3	512.8	510.5	508.7	507.6	506.5	505.4	504.4
57.5°	465.4	463.4	461.2	459.5	458.2	456.9	455.6	454.4
60°	430.3	428.3	426.3	424.8	423.7	422.6	421.5	420.5
62.5°	396.3	394.4	392.4	391.1	390.3	389.6	388.8	388.0
65°	345.8	344.1	342.3	341.1	340.4	339.8	339.1	338.5
67.5°	295.8	294.3	292.7	291.4	290.6	289.6	288.7	287.8
70°	263.4	261.8	260.3	259.0	257.9	256.8	255.7	254.6
72.5°	230.5	229.2	227.9	226.9	226.3	225.7	225.2	224.6
75°	183.3	182.3	181.2	180.3	179.6	179.0	178.3	177.7
77.5°	139.2	138.5	137.7	137.4	137.4	137.4	137.4	137.4
80°	111.1	110.8	110.7	110.6	110.6	110.6	110.6	110.6
82.5°	85.5	85.1	84.6	84.4	84.3	84.1	83.9	83.7
85°	48.4	48.1	47.6	47.4	47.4	47.4	47.4	47.4
87.5°	19.8	19.7	19.6	19.6	19.7	19.7	19.8	19.8
90°	13.9	14.3	14.8	15.2	15.5	15.6	15.9	16.1
92.5°	15.3	16.0	16.8	17.2	17.4	17.5	17.7	17.8
95°	18.4	19.1	20.0	20.5	20.5	20.5	20.5	20.5
97.5°	19.2	20.2	21.1	21.7	21.8	21.9	22.1	22.1
100°	19.6	20.6	21.6	22.1	22.2	22.3	22.4	22.6
102.5°	29.4	26.5	23.6	22.1	22.3	22.6	22.8	23.0
105°	75.4	54.3	33.2	22.7	22.9	23.2	23.4	23.7
107.5°	184.7	169.3	153.7	138.1	122.1	106.1	90.2	74.3
110°	234.6	230.6	226.7	216.1	199.1	182.0	164.9	147.8



TEST NUMBER: P331970-830

CATALOG NUMBER: S123DIP-S775D585U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	269.7	269.8	269.8	268.1	264.5	260.8	257.2	253.6
115°	310.9	312.2	313.4	314.1	314.6	315.2	315.7	316.1
117.5°	348.4	349.3	350.2	350.8	350.9	351.0	351.1	351.2
120°	372.9	373.8	374.8	375.2	375.2	375.2	375.2	375.2
122.5°	396.8	397.5	398.1	398.5	398.6	398.7	398.8	398.9
125°	430.6	430.7	431.0	431.3	431.5	431.8	432.0	432.3
127.5°	464.4	464.8	465.1	465.2	465.0	464.8	464.5	464.3
130°	484.7	485.2	485.7	485.9	485.6	485.4	485.1	484.9
132.5°	504.2	504.6	505.1	505.2	504.8	504.4	504.2	503.8
135°	533.5	533.9	534.1	534.1	533.9	533.5	533.1	532.7
137.5°	559.6	560.2	560.7	560.9	560.6	560.4	560.2	560.0
140°	576.2	576.6	577.1	577.2	577.0	576.7	576.6	576.3
142.5°	591.9	592.3	592.7	592.7	592.4	592.0	591.6	591.4
145°	613.9	614.1	614.3	614.4	614.4	614.4	614.4	614.4
147.5°	633.6	633.8	634.0	633.9	633.3	632.7	632.3	631.7
150°	645.5	645.8	646.0	646.0	645.6	645.3	644.9	644.6
152.5°	656.3	656.7	657.1	657.0	656.6	656.0	655.4	654.9
155°	671.0	671.7	672.2	672.1	671.5	670.7	670.1	669.3
157.5°	683.8	684.6	685.3	685.1	684.2	683.3	682.4	681.5
160°	691.2	691.8	692.6	692.5	691.7	690.9	690.0	689.2
162.5°	697.8	698.6	699.5	699.5	698.7	698.0	697.2	696.5
165°	706.7	707.7	708.6	708.7	707.8	707.0	706.2	705.3
167.5°	713.6	714.5	715.5	715.5	714.5	713.6	712.7	711.6
170°	717.5	718.4	719.3	719.3	718.4	717.5	716.5	715.5
172.5°	720.0	721.0	721.9	721.9	720.9	719.8	718.7	717.7
175°	723.1	724.0	724.8	724.7	723.8	722.8	721.9	720.9
177.5°	724.2	725.0	725.8	725.7	724.7	723.8	722.8	721.9
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6

(END OF REPORT)