

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: P332310-830

Luminaire Tested: **S123RDIP-S775D585U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332310-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S775D585U830-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4647.2 lumens  
Efficiency: N/A  
Efficacy: 115.3 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: General Diffuse

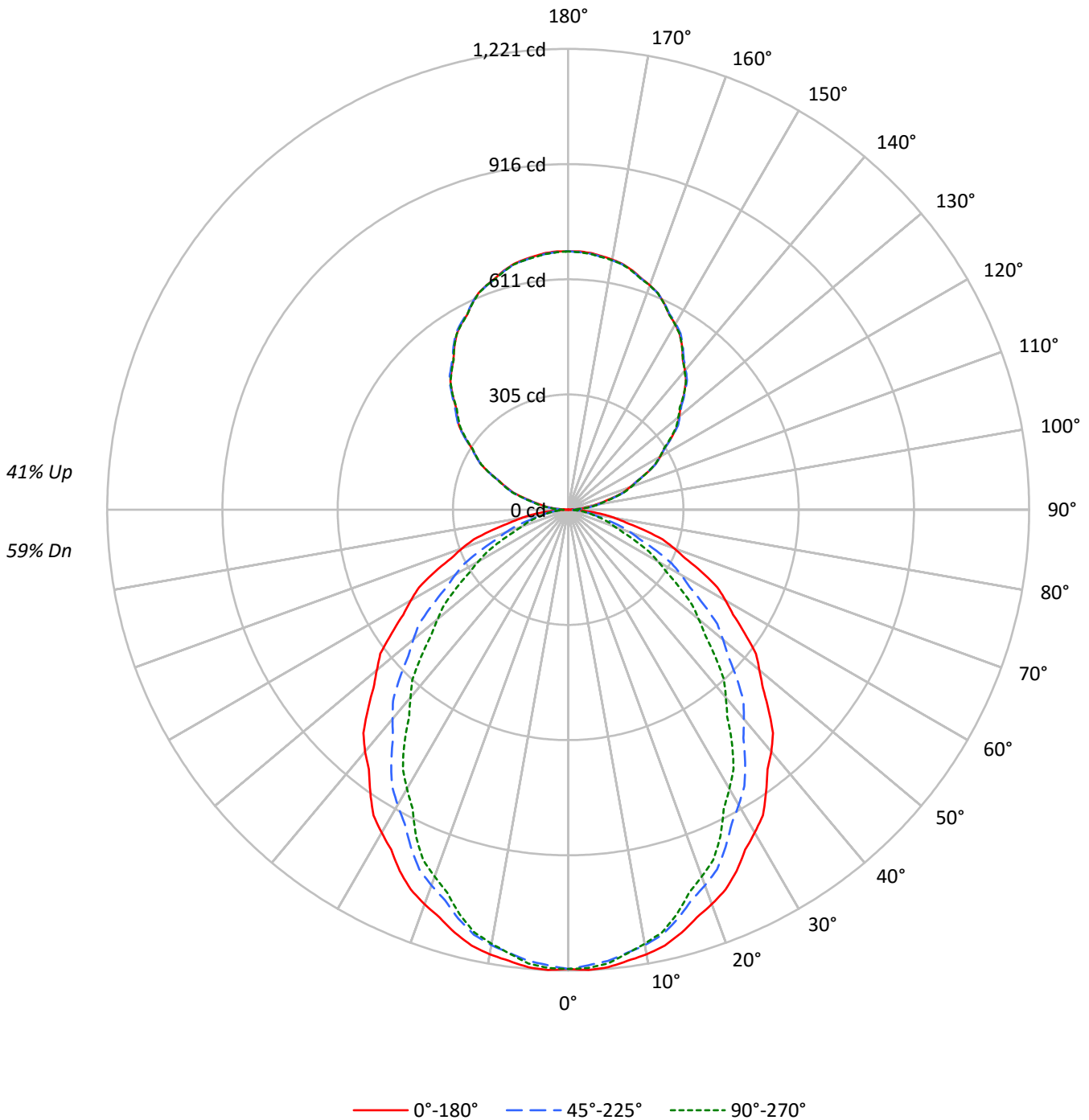
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	93	90	87	84	78	76	74	68	66	64	58	56	55	51
2	92	84	78	73	85	79	74	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	43	40	41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39	43	38	35	37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	27	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	27	24	22
8	56	44	36	31	52	42	34	30	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	27	34	28	24	30	25	22	26	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

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

	0°	45°	90°
0°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.3	2.5
10°-20°	317.9	6.8
20°-30°	457.8	9.9
30°-40°	515.7	11.1
40°-50°	493.3	10.6
50°-60°	404.0	8.7
60°-70°	272.6	5.9
70°-80°	137.1	3.0
80°-90°	38.3	0.8
90°-100°	44.6	1.0
100°-110°	133.4	2.9
110°-120°	227.0	4.9
120°-130°	298.5	6.4
130°-140°	335.6	7.2
140°-150°	329.8	7.1
150°-160°	277.7	6.0
160°-170°	184.8	4.0
170°-180°	64.7	1.4
0°-30°	890.0	19.2
0°-40°	1405.7	30.2
0°-60°	2303.0	49.6
0°-90°	2751.0	59.2
90°-120°	405.0	8.7
90°-150°	1368.9	29.5
90°-180°	1896.0	40.8
0°-180°	4647.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	1	6	13	15	16	5
95°	32	36	40	42	42	36
105°	121	122	127	127	128	130
115°	228	230	229	230	229	226
125°	334	336	335	333	331	298
135°	434	437	437	434	433	334
145°	526	527	529	528	526	329
155°	603	603	603	605	602	277
165°	656	655	655	658	654	185
175°	683	681	681	683	680	65
180°	684	684	684	684	684	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.0	17.3	15.6	13.9	12.3	11.6	11.9	12.3	12.5	12.8	12.7
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°	13.0	13.9	14.6	15.5	16.3	17.2	18.0	18.9	19.8	20.6	21.0
95°	31.8	32.5	33.4	34.2	35.1	36.0	36.9	37.9	38.8	39.8	40.2
97.5°	56.4	56.9	57.6	58.2	58.8	59.5	60.1	60.9	61.5	62.3	62.8
100°	73.1	73.8	74.6	75.3	76.0	76.6	77.2	77.9	78.4	79.0	79.4
102.5°	92.5	92.9	93.3	93.8	94.2	94.8	95.6	96.4	97.2	97.9	98.3
105°	120.9	121.2	121.4	121.7	122.0	122.5	123.7	124.7	125.8	126.9	126.9
107.5°	154.1	154.2	154.4	154.5	154.7	155.0	155.3	155.8	156.3	156.7	157.0
110°	174.7	174.9	175.2	175.4	175.7	175.9	176.2	176.4	176.6	176.9	177.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	196.2	196.3	196.5	196.6	196.8	196.9	197.0	197.0	197.1	197.1	197.7
115°	228.5	228.8	229.2	229.6	229.9	230.0	229.7	229.5	229.2	229.0	229.1
117.5°	261.0	261.2	261.5	261.6	261.9	261.8	261.6	261.3	261.0	260.6	260.6
120°	281.2	281.9	282.6	283.3	284.1	284.1	283.5	283.0	282.3	281.7	281.6
122.5°	302.3	302.7	303.3	303.8	304.3	304.4	304.2	303.9	303.5	303.2	302.9
125°	334.4	334.8	335.1	335.5	335.8	335.9	335.6	335.5	335.2	335.0	334.4
127.5°	364.1	364.9	365.6	366.4	367.1	367.4	367.1	366.8	366.6	366.4	365.7
130°	383.9	384.8	385.8	386.7	387.7	388.0	387.7	387.3	386.9	386.5	386.1
132.5°	403.6	404.6	405.6	406.5	407.5	407.8	407.6	407.3	407.0	406.8	406.1
135°	433.9	434.6	435.3	436.0	436.7	437.1	436.9	436.8	436.7	436.6	436.1
137.5°	461.8	462.4	463.0	463.6	464.2	464.7	465.0	465.2	465.6	465.9	465.4
140°	481.2	481.7	482.4	483.0	483.5	483.9	484.0	484.2	484.3	484.4	484.3
142.5°	498.8	499.4	500.0	500.6	501.1	501.6	501.8	502.0	502.3	502.5	502.4
145°	526.3	526.6	526.8	527.1	527.3	527.5	527.9	528.3	528.7	529.0	528.9
147.5°	550.4	550.8	551.3	551.7	552.1	552.5	552.9	553.2	553.6	553.8	553.8
150°	567.2	567.4	567.7	567.9	568.2	568.4	568.6	568.8	569.1	569.3	569.3
152.5°	581.0	581.3	581.6	581.9	582.3	582.5	582.7	582.8	583.0	583.1	583.2
155°	602.7	602.7	602.7	602.7	602.7	602.8	602.9	602.9	603.1	603.2	603.7
157.5°	621.1	621.0	620.9	620.8	620.6	620.6	620.7	620.8	620.9	620.9	621.4
160°	632.7	632.5	632.3	632.1	631.8	631.7	631.7	631.7	631.7	631.7	632.3
162.5°	643.1	642.7	642.4	642.1	641.8	641.7	641.8	641.9	642.0	642.1	642.6
165°	656.4	656.1	655.7	655.3	655.0	654.8	654.8	654.8	654.8	654.8	655.5
167.5°	667.0	666.6	666.1	665.6	665.2	665.0	665.1	665.2	665.2	665.3	666.1
170°	673.1	672.6	672.1	671.7	671.2	670.9	670.9	670.9	670.9	670.9	671.8
172.5°	677.8	677.3	676.8	676.4	675.9	675.7	675.7	675.7	675.7	675.7	676.5
175°	682.8	682.3	681.8	681.4	680.9	680.6	680.6	680.6	680.6	680.6	681.4
177.5°	684.9	684.5	684.1	683.6	683.2	683.1	683.1	683.1	683.1	683.1	683.6
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	12.7	12.6	12.5	12.4	12.3	12.2	12.1	11.9
90°	13.9	14.3	14.8	15.2	15.5	15.6	15.9	16.1
92.5°	21.4	21.8	22.1	22.3	22.1	22.0	21.9	21.7
95°	40.7	41.2	41.7	41.9	41.9	41.9	41.9	41.9
97.5°	63.3	63.9	64.5	64.7	64.7	64.6	64.6	64.5
100°	79.7	80.1	80.5	80.8	81.0	81.2	81.4	81.7
102.5°	98.7	99.1	99.3	99.5	99.5	99.4	99.4	99.3
105°	126.9	126.9	126.9	127.0	127.2	127.4	127.7	128.0
107.5°	157.4	157.8	158.2	158.3	158.2	158.1	157.9	157.8
110°	177.9	178.3	178.8	178.9	178.7	178.4	178.2	178.0





TEST NUMBER: P332310-830

CATALOG NUMBER: S123RDIP-S775D585U830-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.2	198.8	199.3	199.6	199.6	199.5	199.5	199.4
115°	229.2	229.4	229.5	229.5	229.4	229.2	229.1	229.0
117.5°	260.6	260.5	260.5	260.3	260.0	259.7	259.4	259.0
120°	281.4	281.3	281.3	281.1	280.8	280.6	280.3	280.1
122.5°	302.6	302.3	302.0	301.6	301.3	301.0	300.7	300.3
125°	333.9	333.5	333.0	332.5	332.1	331.6	331.1	330.6
127.5°	365.0	364.3	363.6	363.1	362.5	361.9	361.4	360.8
130°	385.6	385.1	384.7	384.0	383.1	382.3	381.4	380.6
132.5°	405.6	405.0	404.4	403.9	403.2	402.6	401.9	401.2
135°	435.5	435.1	434.6	434.2	434.0	433.8	433.6	433.3
137.5°	464.9	464.4	463.9	463.4	463.0	462.5	462.0	461.6
140°	484.2	484.0	483.9	483.4	482.6	481.7	480.9	480.1
142.5°	502.2	502.1	502.0	501.6	501.0	500.3	499.6	499.0
145°	528.8	528.7	528.6	528.2	527.7	527.3	526.8	526.3
147.5°	553.8	553.8	553.8	553.5	552.8	552.0	551.4	550.6
150°	569.3	569.3	569.3	569.0	568.3	567.5	566.8	566.1
152.5°	583.5	583.7	583.9	583.6	583.1	582.4	581.8	581.2
155°	604.2	604.6	605.1	604.9	604.1	603.2	602.5	601.6
157.5°	622.0	622.5	622.9	622.8	622.2	621.5	620.9	620.2
160°	632.9	633.5	634.0	634.1	633.7	633.2	632.7	632.3
162.5°	643.2	643.9	644.4	644.3	643.6	642.8	642.1	641.3
165°	656.3	657.0	657.7	657.6	656.8	655.9	655.2	654.3
167.5°	666.8	667.6	668.4	668.4	667.6	666.8	666.1	665.3
170°	672.6	673.4	674.3	674.3	673.4	672.6	671.8	670.9
172.5°	677.1	677.9	678.6	678.6	677.8	676.9	676.1	675.2
175°	682.0	682.8	683.5	683.4	682.6	681.7	680.9	680.0
177.5°	684.3	684.9	685.4	685.3	684.7	684.0	683.3	682.7
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4

(END OF REPORT)