

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: P332329-930

Luminaire Tested: **S123RDIP-S775D1195U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332329-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D1195U930-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5902.1 lumens
Efficiency: N/A
Efficacy: 103.7 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

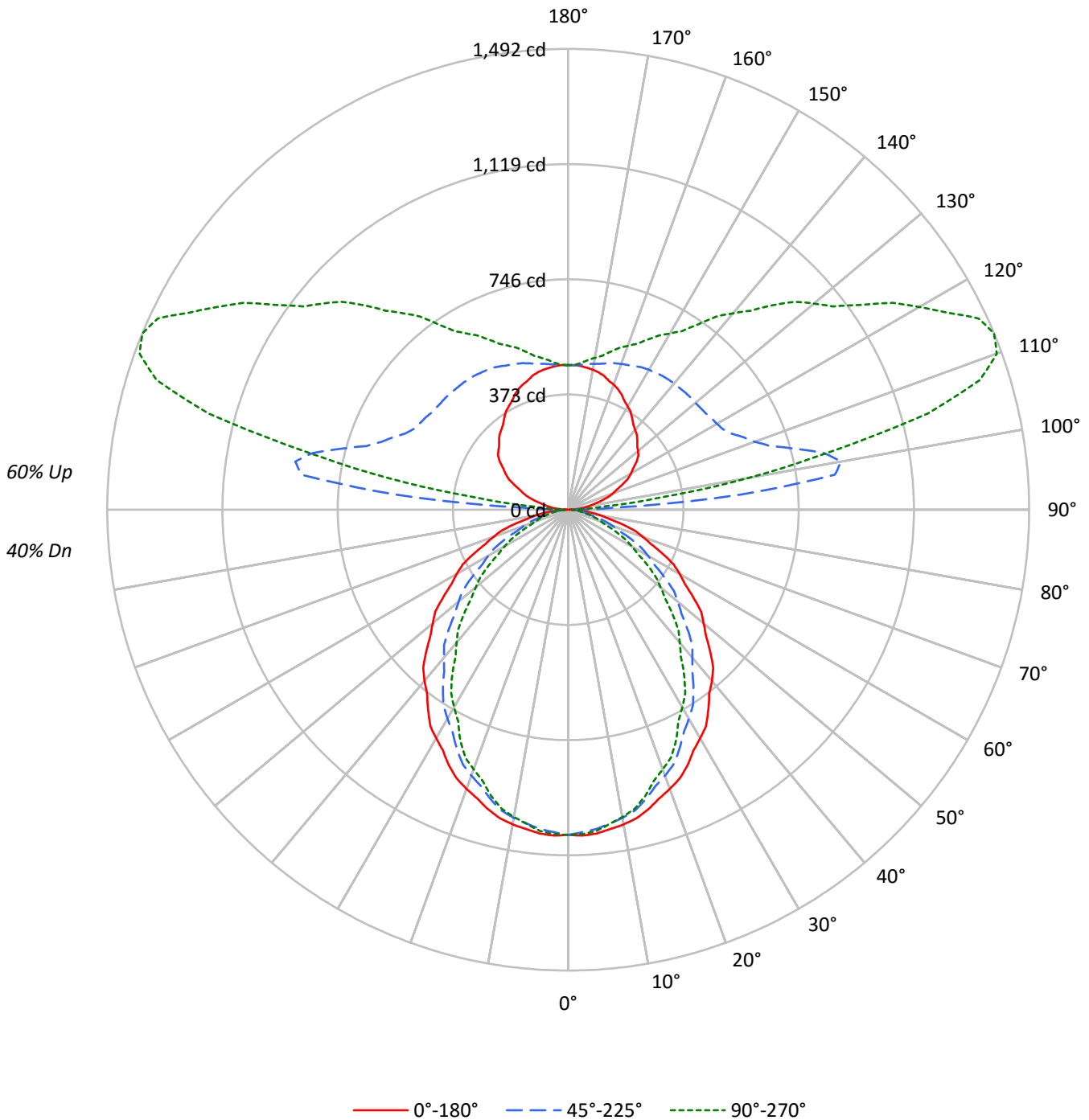
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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									70									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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40																				
1	96	92	88	85	87	84	81	78	69	66	64	55	53	52	42	41	40	34																				
2	87	80	74	69	79	73	68	64	60	57	54	48	46	44	37	36	34	29																				
3	80	71	64	58	73	65	59	54	54	49	45	43	40	37	33	31	30	25																				
4	73	63	55	49	66	58	51	46	48	43	39	38	35	32	30	28	26	22																				
5	67	56	48	42	61	51	45	39	43	38	34	35	31	28	27	25	22	19																				
6	62	50	42	37	56	46	39	34	39	33	29	31	27	25	25	22	20	17																				
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15																				
8	53	41	34	28	48	38	31	27	32	27	23	26	22	19	21	18	16	13																				
9	49	38	30	25	45	35	28	24	29	24	21	24	20	17	19	16	14	12																				
10	46	34	27	23	42	32	26	21	27	22	19	22	18	16	18	15	13	11																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11330	11330	11330
5°	11373	11217	11282
10°	11309	11075	11038
15°	11188	10816	10702
20°	11021	10493	10247
25°	10849	10128	9804
30°	10621	9708	9178
35°	10387	9289	8604
40°	10172	8792	7893
45°	9889	8304	7252
50°	9577	7748	6532
55°	9259	7112	5863
60°	8968	6433	5126
65°	8588	5695	4391
70°	8113	4784	3547
75°	7419	3764	3335
80°	6614	3335	3068
85°	5582	2952	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	1.7
10°-20°	275.0	4.7
20°-30°	396.0	6.7
30°-40°	446.1	7.6
40°-50°	426.7	7.2
50°-60°	349.5	5.9
60°-70°	235.8	4.0
70°-80°	118.6	2.0
80°-90°	35.0	0.6
90°-100°	260.4	4.4
100°-110°	737.4	12.5
110°-120°	725.4	12.3
120°-130°	578.6	9.8
130°-140°	456.2	7.7
140°-150°	340.5	5.8
150°-160°	237.3	4.0
160°-170°	139.4	2.4
170°-180°	45.4	0.8
0°-30°	769.9	13.0
0°-40°	1215.9	20.6
0°-60°	1992.1	33.8
0°-90°	2381.5	40.4
90°-120°	1723.2	29.2
90°-150°	3098.5	52.5
90°-180°	3521.0	59.7
0°-180°	5902.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1053	1048	1038	1045	1044	100
15°	1004	994	971	966	960	283
25°	914	891	853	835	826	420
35°	790	759	707	671	655	495
45°	650	610	546	498	476	501
55°	493	450	379	331	312	442
65°	337	289	224	184	172	334
75°	178	137	90	82	80	190
85°	45	27	24	22	22	51
90°	2	11	24	27	28	4
95°	32	105	562	164	110	35
105°	110	162	762	1332	1205	117
115°	194	242	582	1277	1465	192
125°	270	319	544	985	1156	239
135°	316	378	536	811	937	244
145°	361	414	530	665	732	226
155°	410	442	512	583	607	189
165°	448	461	491	520	530	126
175°	467	468	471	477	476	44
180°	468	468	468	468	468	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1056.0	1055.4	1054.8	1054.2	1053.6	1052.4	1050.5	1048.7	1046.9	1045.1	1046.8
5°	1052.6	1051.7	1050.7	1049.8	1048.8	1047.2	1044.9	1042.6	1040.3	1038.1	1039.8
7.5°	1042.8	1041.9	1040.8	1039.8	1038.8	1036.7	1033.8	1030.9	1027.9	1024.9	1025.9
10°	1034.7	1033.3	1032.0	1030.7	1029.3	1027.0	1023.5	1020.2	1016.8	1013.3	1013.5
12.5°	1023.0	1021.6	1020.1	1018.6	1017.2	1014.3	1010.2	1006.0	1001.8	997.6	997.5
15°	1004.0	1001.8	999.7	997.7	995.6	991.9	986.6	981.3	975.9	970.6	969.7
17.5°	979.8	977.5	975.0	972.6	970.1	965.6	958.8	952.0	945.3	938.6	936.5
20°	962.1	959.0	956.0	953.0	950.0	944.9	937.6	930.4	923.2	916.0	913.5
22.5°	942.3	938.8	935.3	931.8	928.3	922.8	915.1	907.4	899.8	892.1	889.0
25°	913.5	908.7	903.9	899.2	894.5	887.7	879.0	870.3	861.5	852.8	848.8
27.5°	878.4	873.2	868.0	862.7	857.5	850.0	840.3	830.6	820.8	811.1	805.6
30°	854.5	848.8	843.2	837.5	831.8	823.6	813.0	802.3	791.7	781.1	774.7
32.5°	830.6	824.2	817.7	811.3	804.9	796.0	784.7	773.6	762.3	751.1	744.0
35°	790.5	783.7	776.8	770.1	763.2	753.9	742.2	730.3	718.6	706.9	698.7
37.5°	749.9	742.2	734.7	727.1	719.5	709.5	696.9	684.4	671.8	659.3	650.0
40°	723.9	715.6	707.2	698.9	690.6	679.6	666.2	652.7	639.2	625.7	615.9
42.5°	694.6	686.2	677.8	669.5	661.2	650.0	636.1	622.2	608.3	594.4	583.6
45°	649.6	641.2	632.6	624.0	615.5	604.0	589.3	574.7	560.1	545.5	534.7
47.5°	604.8	595.4	586.0	576.7	567.3	555.3	540.7	526.0	511.4	496.8	485.1
50°	571.9	563.0	554.2	545.2	536.3	524.2	508.8	493.4	478.1	462.7	450.9
52.5°	542.6	533.0	523.3	513.6	503.9	491.5	476.2	461.1	445.8	430.6	418.4
55°	493.4	484.1	474.8	465.5	456.2	443.5	427.4	411.3	395.2	379.0	368.0
57.5°	448.0	437.9	427.8	417.6	407.5	394.4	378.1	361.9	345.7	329.5	319.1
60°	416.6	406.2	395.7	385.3	374.9	361.7	346.0	330.3	314.5	298.8	288.5
62.5°	385.1	374.7	364.3	353.8	343.5	330.4	314.6	298.9	283.2	267.3	257.7
65°	337.2	326.8	316.3	305.9	295.5	282.8	268.1	253.2	238.5	223.6	214.3
67.5°	289.3	278.7	268.2	257.6	247.0	234.6	220.5	206.3	192.1	177.9	171.0
70°	257.8	247.6	237.3	227.1	216.9	205.0	191.8	178.6	165.3	152.0	145.3
72.5°	226.4	216.3	206.2	196.1	186.1	175.0	162.9	150.8	138.8	126.7	121.2
75°	178.4	169.3	160.2	151.1	142.0	132.2	121.8	111.4	100.9	90.5	88.6
77.5°	134.7	126.5	118.2	110.0	101.7	94.3	87.6	80.9	74.2	67.4	66.4
80°	106.7	98.9	91.2	83.4	75.6	69.7	65.7	61.7	57.8	53.8	53.2
82.5°	80.1	73.4	66.6	59.9	53.2	48.9	47.0	45.2	43.4	41.5	40.9
85°	45.2	41.1	36.9	32.7	28.5	26.2	25.6	25.0	24.5	23.9	23.6
87.5°	16.8	15.5	14.2	13.1	11.8	11.3	11.9	12.5	13.0	13.6	13.3
90°	1.9	3.8	5.7	8.6	10.4	12.3	15.2	18.0	20.9	23.6	22.7
92.5°	11.7	17.4	25.4	32.8	40.8	54.8	79.6	120.3	160.3	145.7	109.9
95°	32.2	35.1	45.5	61.6	86.2	123.1	203.7	344.8	500.2	561.7	455.6
97.5°	55.0	55.8	64.0	78.0	102.3	142.3	219.2	378.3	637.3	870.5	931.3
100°	70.1	71.0	77.7	90.9	113.7	150.6	217.0	357.1	606.3	897.1	1083.7
102.5°	86.0	87.7	93.6	106.1	126.5	160.5	220.0	338.9	560.8	847.8	1091.2
105°	109.9	112.8	118.4	129.8	147.7	177.2	228.3	325.9	504.9	761.6	1033.5
107.5°	135.3	138.1	143.6	154.7	171.6	198.9	243.9	324.9	469.3	685.4	932.3
110°	153.4	156.3	161.0	171.5	187.5	214.1	256.7	328.7	455.6	642.2	868.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	170.2	173.0	177.7	188.1	204.2	230.0	269.6	336.3	448.1	613.4	813.3
115°	194.2	198.0	203.7	213.1	229.3	254.8	290.8	348.6	445.2	582.5	746.4
117.5°	218.3	222.6	227.3	236.0	254.0	277.8	313.3	364.8	446.9	564.4	706.0
120°	234.9	237.7	242.5	252.0	269.9	293.7	327.8	377.0	450.0	556.0	684.9
122.5°	249.3	252.2	256.9	267.1	284.4	309.6	342.9	388.4	455.3	550.7	667.4
125°	269.9	271.9	277.5	288.0	306.0	331.5	364.7	406.3	463.2	543.7	645.1
127.5°	285.7	288.5	295.5	306.1	326.0	351.6	383.6	421.2	472.3	540.3	625.4
130°	295.5	298.4	306.9	318.3	338.2	363.7	395.0	431.0	478.3	538.0	614.7
132.5°	303.1	306.7	316.0	329.6	349.5	374.4	404.9	440.1	482.9	537.3	605.0
135°	316.4	320.2	330.6	344.8	364.7	390.3	419.6	451.8	489.8	536.1	592.1
137.5°	328.9	332.9	343.1	358.2	378.0	401.6	429.8	460.6	494.3	534.0	580.8
140°	337.2	341.9	351.4	366.6	385.6	409.2	436.7	465.1	497.3	533.3	574.1
142.5°	346.3	350.3	360.5	374.1	393.1	415.3	442.0	469.6	499.6	531.8	567.9
145°	360.9	363.7	372.3	386.5	402.6	424.4	449.0	474.6	501.1	529.5	559.9
147.5°	375.7	377.4	385.7	398.0	413.6	432.1	454.7	477.6	501.1	525.9	551.9
150°	385.6	386.5	394.0	406.3	419.6	436.7	458.4	478.3	501.1	522.9	546.6
152.5°	395.4	395.6	403.2	413.9	425.7	442.0	460.7	479.9	498.8	519.1	540.5
155°	410.2	410.2	415.9	425.3	435.7	449.0	465.1	480.3	496.4	512.5	531.4
157.5°	421.9	422.7	427.2	435.5	444.4	454.7	467.6	481.2	493.2	506.6	521.1
160°	431.0	431.0	434.8	442.4	449.0	458.4	469.9	481.2	491.6	502.1	514.4
162.5°	437.8	437.8	440.8	446.9	452.8	460.7	470.6	480.5	488.6	497.5	507.5
165°	448.1	447.1	449.0	453.7	457.5	464.1	471.7	478.3	484.0	490.6	498.2
167.5°	455.8	454.7	455.6	459.3	461.9	466.0	471.6	476.9	479.5	483.9	489.3
170°	460.4	458.4	459.4	462.3	464.1	466.0	470.8	474.6	476.5	479.3	484.0
172.5°	463.4	462.3	462.4	464.6	465.7	466.8	470.8	473.9	474.2	475.5	478.7
175°	467.0	466.0	465.1	467.0	467.0	468.0	469.9	471.7	470.8	470.8	472.7
177.5°	468.7	468.0	467.2	468.0	468.0	468.0	468.7	470.2	468.7	468.0	468.7
180°	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1048.4	1050.1	1051.7	1052.5	1052.1	1051.8	1051.5	1051.2
5°	1041.5	1043.2	1044.9	1045.5	1045.2	1044.8	1044.4	1044.1
7.5°	1026.9	1027.8	1028.7	1028.9	1028.3	1027.6	1027.0	1026.3
10°	1013.7	1013.9	1014.1	1013.7	1012.8	1011.8	1010.9	1009.9
12.5°	997.4	997.3	997.2	996.5	995.5	994.3	993.3	992.1
15°	968.7	967.8	966.9	965.7	964.4	963.0	961.7	960.4
17.5°	934.5	932.5	930.5	928.5	926.5	924.5	922.6	920.6
20°	911.1	908.6	906.1	903.8	901.5	899.2	896.9	894.6
22.5°	886.0	882.9	879.8	877.2	875.1	872.9	870.8	868.7
25°	844.9	840.9	836.9	833.9	831.8	829.6	827.6	825.5
27.5°	800.1	794.6	789.0	784.6	781.5	778.3	775.1	771.9
30°	768.3	761.7	755.3	750.6	747.5	744.5	741.4	738.4
32.5°	736.9	729.9	722.8	717.7	714.5	711.3	708.2	705.0
35°	690.6	682.4	674.3	668.5	665.0	661.6	658.2	654.8
37.5°	640.7	631.4	622.2	615.5	611.2	607.0	602.8	598.6
40°	606.0	596.1	586.3	579.2	574.8	570.5	566.1	561.7
42.5°	572.7	562.0	551.2	543.9	540.0	536.1	532.1	528.2
45°	523.9	513.1	502.2	494.6	490.0	485.4	480.9	476.4
47.5°	473.3	461.5	449.8	441.9	437.8	433.7	429.7	425.7
50°	439.2	427.4	415.6	407.6	403.2	398.8	394.5	390.1
52.5°	406.2	394.0	381.7	373.7	369.7	365.8	361.9	358.0
55°	357.0	346.0	335.0	327.6	323.8	320.0	316.3	312.4
57.5°	308.8	298.3	288.0	281.1	277.9	274.7	271.4	268.2
60°	278.3	268.1	257.8	251.1	247.9	244.6	241.4	238.1
62.5°	248.1	238.5	228.9	222.3	218.9	215.6	212.2	208.8
65°	205.0	195.8	186.5	180.8	178.7	176.6	174.6	172.4
67.5°	164.0	157.1	150.1	145.5	143.3	141.0	138.8	136.6
70°	138.7	132.0	125.4	121.1	119.0	116.8	114.8	112.7
72.5°	115.9	110.4	105.0	101.8	100.9	100.1	99.2	98.3
75°	86.7	84.8	82.9	81.8	81.4	81.0	80.6	80.2
77.5°	65.4	64.3	63.3	62.6	62.3	61.9	61.5	61.1
80°	52.7	52.1	51.5	51.0	50.6	50.3	49.9	49.5
82.5°	40.4	39.8	39.2	38.9	38.8	38.7	38.6	38.6
85°	23.2	22.7	22.4	22.2	22.2	22.2	22.2	22.2
87.5°	13.3	13.4	13.4	13.6	13.3	13.3	13.4	13.0
90°	23.6	24.6	25.6	27.5	26.5	27.5	28.5	27.5
92.5°	79.7	63.3	55.8	51.0	49.2	46.4	47.4	45.7
95°	341.0	231.1	180.9	146.8	128.8	120.3	113.7	109.9
97.5°	850.0	680.9	558.7	445.4	375.5	332.9	307.3	299.1
100°	1116.8	1040.1	929.3	794.8	699.0	629.9	593.0	593.9
102.5°	1205.5	1203.0	1138.4	1053.1	978.7	924.0	893.1	871.3
105°	1231.4	1326.2	1344.2	1319.6	1275.9	1240.0	1209.7	1204.9
107.5°	1156.7	1310.6	1393.6	1427.3	1428.1	1415.9	1405.7	1397.0
110°	1085.6	1259.9	1379.2	1445.5	1472.0	1479.6	1477.7	1475.9



TEST NUMBER: P332329-930

CATALOG NUMBER: S123RDIP-S775D1195U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1015.0	1193.2	1326.9	1412.2	1460.7	1484.2	1491.3	1491.8
115°	921.7	1086.5	1225.7	1329.0	1400.0	1441.7	1460.7	1465.4
117.5°	854.0	996.3	1121.4	1226.1	1300.2	1347.9	1375.2	1381.7
120°	818.4	946.3	1060.0	1155.7	1230.4	1283.5	1306.3	1312.0
122.5°	790.4	906.1	1011.5	1100.3	1166.9	1214.6	1239.6	1246.8
125°	753.1	856.3	947.2	1023.0	1083.7	1125.4	1149.0	1155.7
127.5°	720.5	812.5	894.5	963.5	1017.6	1053.1	1074.6	1080.6
130°	700.0	785.3	862.0	926.4	976.6	1010.7	1030.6	1038.2
132.5°	681.1	759.5	831.0	892.3	939.5	973.5	991.2	996.5
135°	655.5	722.8	784.3	838.3	884.8	913.1	930.2	936.9
137.5°	632.2	687.3	740.4	787.2	826.2	855.0	869.4	873.8
140°	618.6	666.8	712.3	753.1	789.0	815.6	830.7	829.8
142.5°	605.7	647.2	686.6	722.0	752.7	776.2	789.8	788.9
145°	590.1	621.4	651.8	679.1	702.9	722.8	730.3	732.2
147.5°	577.5	602.3	626.7	646.2	664.2	677.7	684.9	685.6
150°	568.3	590.1	610.0	628.0	642.2	652.6	658.4	658.4
152.5°	560.0	578.8	596.4	611.4	622.6	632.2	635.6	635.6
155°	547.5	562.6	576.9	588.2	596.8	604.4	606.3	607.2
157.5°	534.3	547.0	557.9	566.8	574.2	579.9	581.4	581.2
160°	526.7	537.1	546.6	553.2	559.9	565.5	565.5	564.6
162.5°	517.6	526.5	535.2	541.0	545.4	550.3	550.3	549.4
165°	505.8	511.5	518.1	522.9	526.7	530.4	529.5	529.5
167.5°	495.6	499.9	503.8	507.2	508.8	511.5	510.5	510.5
170°	488.8	491.6	495.4	497.3	498.2	500.2	499.2	499.2
172.5°	482.7	484.8	487.9	488.9	489.2	491.1	489.3	488.6
175°	474.6	475.5	477.4	477.4	477.4	478.3	477.4	476.5
177.5°	469.4	470.2	471.0	471.0	470.2	471.0	469.4	469.4
180°	468.0	468.0	468.0	468.0	468.0	468.0	468.0	468.0

(END OF REPORT)