

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: P332014-830

Luminaire Tested: **S123DIP-S1000D585U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332014-830
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: S123DIP-S1000D585U830-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5957.5 lumens
Efficiency: N/A
Efficacy: 122.1 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: Semi-Direct

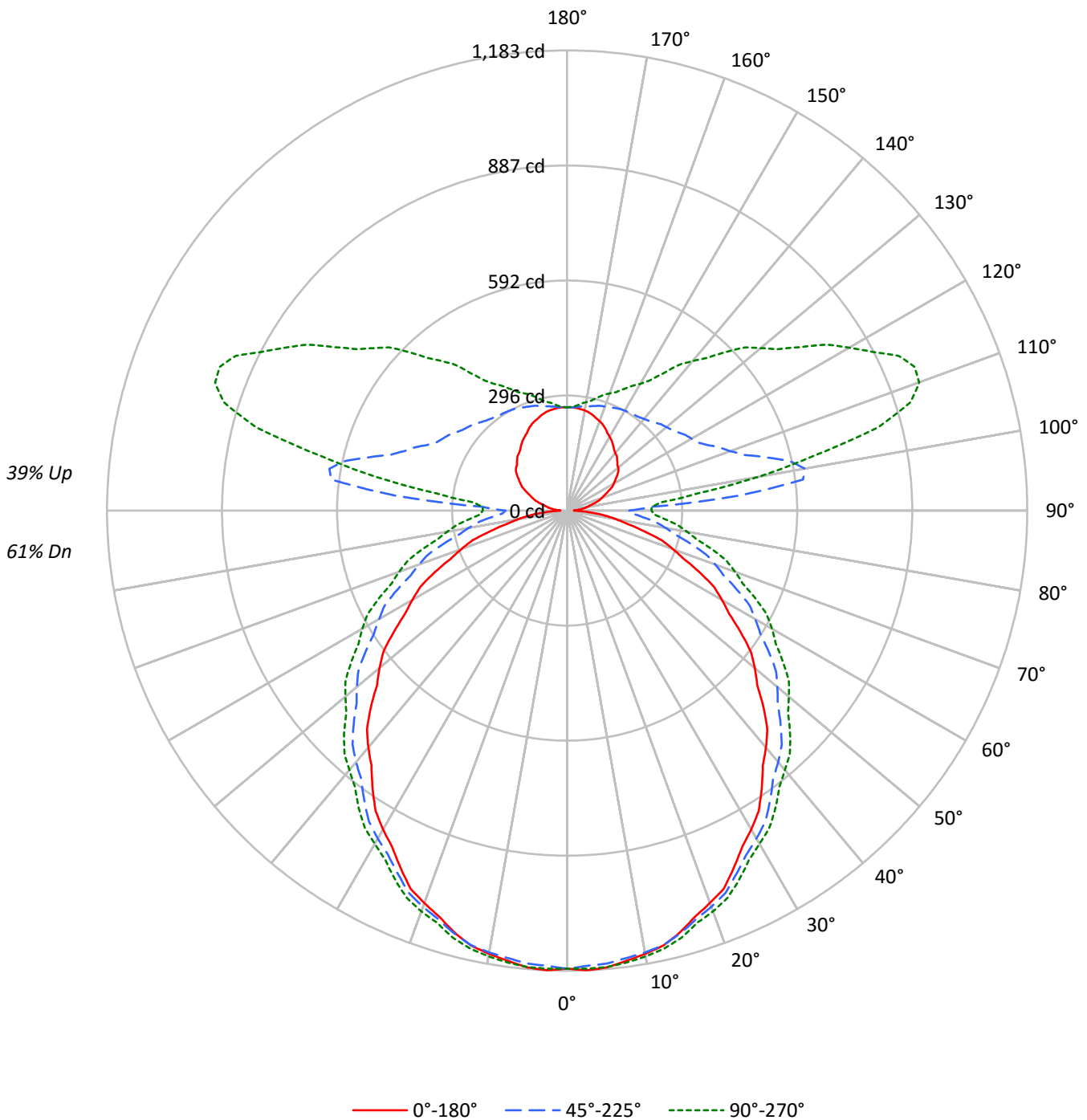
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	99	94	90	86	92	88	84	80	77	74	71	66	64	62	56	55	53	49
2	90	81	75	69	83	76	70	65	66	62	58	57	54	51	49	46	44	40
3	81	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37	33
4	74	63	54	48	69	59	51	45	51	45	41	45	40	36	38	34	31	28
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	37	31	27	33	28	24	28	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	32	26	21	29	23	19	25	21	17	22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12676	12676	12676
5°	12715	12357	12363
10°	12602	12072	12012
15°	12439	11748	11627
20°	12206	11380	11204
25°	11920	10955	10760
30°	11627	10572	10310
35°	11297	10169	9950
40°	10983	9801	9564
45°	10635	9448	9257
50°	10293	9100	8917
55°	9912	8741	8611
60°	9543	8380	8298
65°	9165	7994	7927
70°	8591	7558	7545
75°	7872	7060	7157
80°	7040	6572	6712
85°	6274	6235	6458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	1.9
10°-20°	318.2	5.3
20°-30°	476.0	8.0
30°-40°	568.4	9.5
40°-50°	594.7	10.0
50°-60°	558.1	9.4
60°-70°	466.1	7.8
70°-80°	333.5	5.6
80°-90°	200.9	3.4
90°-100°	272.6	4.6
100°-110°	510.2	8.6
110°-120°	472.9	7.9
120°-130°	363.4	6.1
130°-140°	274.6	4.6
140°-150°	196.6	3.3
150°-160°	134.7	2.3
160°-170°	79.1	1.3
170°-180°	25.7	0.4
0°-30°	905.9	15.2
0°-40°	1474.3	24.7
0°-60°	2627.1	44.1
0°-90°	3627.7	60.9
90°-120°	1255.7	21.1
90°-150°	2090.3	35.1
90°-180°	2330.0	39.1
0°-180°	5957.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1179	1176	1169	1178	1178	112
15°	1122	1126	1125	1137	1137	316
25°	1013	1026	1030	1046	1047	467
35°	872	893	910	928	934	545
45°	713	744	776	800	811	550
55°	544	586	632	666	677	487
65°	376	426	482	519	534	371
75°	204	264	328	369	386	218
85°	63	127	195	237	252	66
90°	18	86	158	202	217	13
95°	32	124	446	258	242	31
105°	73	135	528	887	828	77
115°	117	161	399	823	941	116
125°	157	187	350	626	733	140
135°	182	216	320	498	577	141
145°	206	235	300	388	431	129
155°	233	251	291	331	345	107
165°	254	262	278	295	300	72
175°	265	265	267	271	270	25
180°	266	266	266	266	266	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1182.8	1182.1	1181.4	1180.7	1180.1	1178.7	1177.0	1175.2	1173.3	1171.5	1173.3
5°	1178.9	1178.4	1177.8	1177.2	1176.7	1175.5	1173.8	1172.1	1170.4	1168.7	1170.9
7.5°	1167.3	1167.5	1167.6	1167.7	1167.8	1167.1	1165.5	1163.8	1162.1	1160.5	1163.3
10°	1157.2	1157.7	1158.3	1158.9	1159.4	1159.0	1157.5	1156.1	1154.7	1153.3	1156.1
12.5°	1144.8	1145.6	1146.4	1147.2	1148.0	1147.9	1147.0	1145.9	1145.0	1144.1	1146.7
15°	1122.5	1123.3	1124.2	1125.0	1125.9	1126.1	1125.9	1125.6	1125.3	1125.0	1127.9
17.5°	1094.3	1096.0	1097.7	1099.4	1101.1	1101.9	1101.8	1101.6	1101.5	1101.5	1104.0
20°	1073.7	1075.4	1077.1	1078.8	1080.5	1081.8	1082.3	1082.9	1083.5	1084.0	1086.6
22.5°	1052.2	1053.9	1055.6	1057.3	1059.0	1060.3	1061.1	1061.9	1062.7	1063.5	1066.7
25°	1013.4	1016.2	1019.2	1022.0	1024.8	1026.7	1027.6	1028.4	1029.3	1030.1	1033.8
27.5°	974.4	977.7	980.9	984.2	987.4	990.0	991.8	993.6	995.4	997.3	1000.5
30°	946.7	950.5	954.1	957.8	961.6	964.5	966.9	969.1	971.4	973.6	977.1
32.5°	916.0	920.1	924.3	928.4	932.6	936.1	939.1	942.1	945.1	948.0	951.7
35°	872.3	876.8	881.5	886.0	890.6	894.7	898.4	902.1	905.8	909.6	913.8
37.5°	826.1	831.3	836.4	841.5	846.7	851.5	856.1	860.6	865.2	869.8	874.6
40°	795.3	800.5	805.6	810.8	815.9	821.3	827.0	832.7	838.4	844.1	848.9
42.5°	761.5	767.8	774.0	780.3	786.6	792.7	798.6	804.6	810.5	816.4	821.7
45°	713.2	720.1	727.0	733.8	740.6	747.6	754.7	761.9	769.0	776.1	781.6
47.5°	662.7	670.4	678.3	686.0	693.7	701.7	709.8	718.0	726.1	734.3	740.4
50°	629.9	637.8	645.8	653.8	661.8	670.2	679.0	687.9	696.7	705.6	712.1
52.5°	594.9	603.4	611.9	620.3	628.8	637.8	647.6	657.3	667.0	676.8	683.6
55°	543.9	553.4	562.7	572.1	581.5	591.4	601.6	611.9	622.2	632.4	640.2
57.5°	494.2	504.0	513.8	523.6	533.4	543.9	555.2	566.4	577.6	588.8	596.5
60°	459.3	469.5	479.8	490.0	500.3	511.2	522.9	534.7	546.4	558.1	566.0
62.5°	426.4	436.9	447.4	457.9	468.3	479.8	492.2	504.5	516.9	529.3	537.2
65°	375.9	387.0	398.1	409.3	420.4	432.2	444.7	457.2	469.8	482.4	490.9
67.5°	324.5	336.4	348.2	360.0	371.7	384.1	396.8	409.6	422.4	435.2	444.5
70°	288.6	300.9	313.1	325.5	337.7	350.6	364.3	378.1	391.7	405.4	414.5
72.5°	255.8	268.1	280.3	292.6	304.8	318.0	332.2	346.3	360.4	374.6	383.9
75°	204.0	217.4	230.7	244.2	257.6	271.4	285.7	299.9	314.1	328.4	337.8
77.5°	158.8	172.3	185.9	199.3	212.8	226.8	241.2	255.5	269.9	284.3	294.2
80°	127.0	141.0	155.0	168.9	182.9	197.3	212.1	227.0	241.8	256.6	266.3
82.5°	99.2	113.5	127.7	141.9	156.1	170.7	185.8	200.8	215.8	230.9	240.6
85°	62.9	77.1	91.3	105.7	119.9	134.6	149.7	164.8	179.8	195.0	204.7
87.5°	34.3	48.7	63.2	77.7	92.1	106.7	121.5	136.4	151.3	166.1	175.7
90°	17.7	32.8	47.9	63.4	78.4	93.8	109.9	126.1	142.2	158.4	167.6
92.5°	22.3	38.2	55.2	72.0	89.2	110.6	138.9	176.4	213.4	219.4	208.6
95°	32.4	45.1	62.1	82.4	107.5	141.0	200.7	294.7	396.9	445.8	394.5
97.5°	43.7	54.3	69.0	87.0	110.7	145.2	202.2	305.8	466.1	611.8	654.8
100°	51.4	61.0	73.9	90.5	112.5	144.6	195.4	288.0	442.5	620.8	734.9
102.5°	59.4	68.5	80.0	95.4	115.2	145.0	191.6	272.0	410.9	586.6	732.8
105°	72.7	81.1	91.1	104.4	121.5	147.7	189.0	256.7	370.5	528.5	690.7
107.5°	85.5	92.9	101.9	114.0	129.4	153.6	190.7	248.4	342.0	476.3	624.0
110°	94.8	101.5	109.3	120.4	134.7	158.0	193.6	245.8	329.3	446.6	582.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	104.2	110.1	117.0	127.1	140.4	162.7	196.1	244.9	319.2	424.0	544.7
115°	116.6	122.2	128.8	137.6	150.2	171.5	202.3	245.3	310.4	398.6	498.4
117.5°	130.0	134.6	139.4	146.5	158.8	178.0	207.9	246.9	303.0	379.3	466.6
120°	138.5	141.5	145.6	152.4	164.0	182.9	211.7	249.0	299.8	369.5	449.1
122.5°	146.7	149.0	152.4	158.9	169.5	188.6	216.5	251.3	298.1	361.3	433.9
125°	157.0	158.2	161.4	167.3	177.5	196.1	223.2	255.1	295.7	349.6	413.1
127.5°	166.0	167.3	171.0	176.7	187.8	205.6	230.5	258.7	294.5	340.0	393.9
130°	171.5	172.9	177.5	183.6	194.6	211.9	235.3	261.5	294.0	333.6	382.6
132.5°	174.8	176.8	182.1	189.7	201.0	217.4	239.2	263.7	292.6	328.0	371.6
135°	182.1	184.0	189.6	197.4	208.4	224.3	244.1	265.5	290.2	319.7	356.6
137.5°	189.0	191.0	196.6	204.9	215.9	230.1	247.9	267.1	287.9	312.4	343.4
140°	192.7	195.4	200.8	209.3	220.1	233.9	250.4	267.4	286.5	307.8	335.2
142.5°	197.8	199.8	205.5	212.9	223.5	236.0	251.4	267.2	284.4	302.8	327.2
145°	206.1	207.5	212.0	219.8	228.7	240.8	254.9	269.4	284.4	300.5	320.0
147.5°	213.2	214.1	219.0	225.9	234.7	245.2	258.1	271.1	284.4	298.5	313.9
150°	218.8	219.3	223.7	230.6	238.2	247.8	260.2	271.5	284.4	296.7	310.2
152.5°	224.4	224.5	228.8	235.0	241.6	250.8	261.5	272.4	283.1	294.6	306.8
155°	232.8	232.8	236.0	241.4	247.3	254.9	264.0	272.6	281.7	290.9	301.6
157.5°	239.4	239.9	242.4	247.2	252.2	258.1	265.3	273.1	279.8	287.5	295.8
160°	244.6	244.6	246.8	251.1	254.9	260.2	266.6	273.1	279.0	284.9	291.9
162.5°	248.5	248.5	250.2	253.6	256.9	261.5	267.1	272.7	277.3	282.4	288.0
165°	254.3	253.7	254.9	257.5	259.7	263.4	267.7	271.5	274.8	278.5	282.8
167.5°	258.7	258.1	258.5	260.6	262.1	264.5	267.6	270.6	272.1	274.6	277.8
170°	261.3	260.2	260.7	262.3	263.4	264.5	267.2	269.4	270.4	272.0	274.8
172.5°	263.0	262.3	262.5	263.6	264.3	264.9	267.2	268.9	269.1	269.8	271.7
175°	265.0	264.5	264.0	265.0	265.0	265.6	266.6	267.7	267.2	267.2	268.2
177.5°	266.0	265.6	265.1	265.6	265.6	265.6	266.0	266.8	266.0	265.6	266.0
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1175.2	1177.0	1178.7	1179.6	1179.3	1179.1	1178.9	1178.6
5°	1173.2	1175.5	1177.8	1178.7	1178.5	1178.2	1177.9	1177.6
7.5°	1166.1	1169.0	1171.9	1173.1	1172.8	1172.4	1172.1	1171.8
10°	1159.0	1161.8	1164.7	1165.8	1165.3	1164.7	1164.1	1163.6
12.5°	1149.2	1151.9	1154.5	1155.6	1155.0	1154.4	1153.9	1153.3
15°	1130.8	1133.6	1136.4	1137.7	1137.5	1137.2	1136.9	1136.6
17.5°	1106.5	1109.2	1111.7	1112.8	1112.4	1112.0	1111.6	1111.2
20°	1089.1	1091.7	1094.3	1095.7	1096.0	1096.3	1096.6	1096.8
22.5°	1070.0	1073.2	1076.5	1078.0	1077.8	1077.7	1077.5	1077.3
25°	1037.6	1041.2	1044.9	1046.8	1046.8	1046.8	1046.8	1046.8
27.5°	1003.6	1006.8	1010.0	1011.7	1012.0	1012.2	1012.5	1012.7
30°	980.5	983.9	987.3	989.1	989.1	989.1	989.1	989.1
32.5°	955.4	958.9	962.6	964.8	965.4	966.1	966.9	967.5
35°	918.0	922.4	926.6	929.3	930.5	931.6	932.7	933.9
37.5°	879.5	884.3	889.2	892.0	893.0	893.8	894.8	895.7
40°	853.8	858.7	863.5	866.5	867.6	868.7	869.9	871.0
42.5°	827.0	832.3	837.6	841.0	842.6	844.2	845.8	847.4
45°	786.9	792.4	797.8	801.6	803.9	806.2	808.5	810.8
47.5°	746.5	752.6	758.7	762.6	764.4	766.2	767.9	769.7
50°	718.7	725.2	731.8	736.0	738.1	740.1	742.1	744.0
52.5°	690.4	697.2	704.0	708.6	711.1	713.5	716.0	718.4
55°	647.8	655.5	663.3	668.2	670.5	672.8	675.0	677.3
57.5°	604.4	612.1	619.8	625.1	627.7	630.4	633.1	635.7
60°	574.0	582.0	589.9	595.5	598.7	601.8	604.9	608.0
62.5°	545.3	553.3	561.2	566.7	569.6	572.5	575.4	578.3
65°	499.5	508.0	516.5	522.3	525.1	527.9	530.8	533.7
67.5°	453.8	463.2	472.5	478.4	480.8	483.2	485.6	488.0
70°	423.6	432.7	441.9	447.9	450.7	453.6	456.4	459.3
72.5°	393.3	402.7	412.0	418.1	420.9	423.8	426.7	429.5
75°	347.2	356.7	366.0	372.5	375.9	379.3	382.7	386.2
77.5°	304.2	314.1	324.0	330.3	332.8	335.5	338.1	340.7
80°	276.0	285.7	295.3	301.6	304.4	307.3	310.2	313.0
82.5°	250.3	260.0	269.7	276.0	278.8	281.6	284.5	287.4
85°	214.3	224.0	233.8	240.1	242.9	245.7	248.5	251.5
87.5°	185.5	195.3	205.1	211.6	214.3	217.3	220.3	223.0
90°	177.8	188.0	198.2	205.6	207.9	211.3	214.7	217.0
92.5°	201.0	201.0	206.3	209.6	211.2	212.3	215.4	217.1
95°	338.2	284.6	265.0	251.6	244.1	242.1	241.3	242.0
97.5°	617.2	529.7	468.8	410.2	373.3	352.0	340.4	338.6
100°	762.0	726.7	672.0	601.2	549.9	513.4	495.3	498.7
102.5°	805.7	812.3	783.7	740.7	701.3	673.2	658.5	648.9
105°	811.1	872.8	891.0	882.3	860.2	842.3	827.6	827.6
107.5°	759.0	853.9	908.7	932.9	935.9	931.5	928.2	925.8
110°	713.0	819.4	894.5	937.0	954.3	960.9	962.1	963.3



TEST NUMBER: P332014-830

CATALOG NUMBER: S123DIP-S1000D585U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	666.4	774.7	857.7	911.0	941.0	956.9	963.5	966.2
115°	604.7	705.1	791.0	854.1	896.7	922.7	935.8	940.8
117.5°	557.3	644.8	722.6	786.6	830.8	860.1	877.8	883.7
120°	531.5	610.6	681.6	740.3	784.8	816.8	831.7	837.0
122.5°	510.0	582.0	648.1	702.7	742.4	771.6	787.7	793.8
125°	480.4	545.0	602.6	649.6	686.0	711.6	727.1	732.8
127.5°	453.6	511.4	563.6	606.5	639.1	661.3	675.4	680.8
130°	436.3	490.1	539.1	579.2	609.4	630.5	643.5	649.5
132.5°	420.0	469.7	515.4	553.8	582.6	603.8	615.8	620.8
135°	397.7	441.0	481.1	515.0	542.7	560.3	571.4	576.6
137.5°	377.0	412.8	447.4	476.9	500.6	518.3	527.9	531.8
140°	364.8	396.4	426.5	452.5	474.3	490.8	500.9	501.7
142.5°	352.4	379.8	406.0	428.7	447.5	462.3	471.5	472.3
145°	339.5	359.5	379.0	396.3	410.9	423.3	428.8	430.9
147.5°	329.1	343.8	358.4	370.3	381.5	390.2	395.4	396.8
150°	322.5	334.9	346.2	356.8	365.3	371.8	375.6	376.2
152.5°	317.8	328.5	338.5	347.0	353.5	359.1	361.1	361.3
155°	310.8	319.3	327.4	333.8	338.7	343.0	344.0	344.6
157.5°	303.2	310.4	316.7	321.7	325.9	329.1	330.0	329.9
160°	298.9	304.8	310.2	314.0	317.7	320.9	320.9	320.4
162.5°	293.8	298.8	303.8	307.1	309.5	312.4	312.4	311.8
165°	287.1	290.3	294.1	296.7	298.9	301.0	300.5	300.5
167.5°	281.3	283.7	285.9	287.9	288.8	290.3	289.7	289.7
170°	277.4	279.0	281.2	282.2	282.8	283.9	283.3	283.3
172.5°	274.0	275.1	276.8	277.5	277.6	278.7	277.8	277.3
175°	269.4	269.8	271.0	271.0	271.0	271.5	271.0	270.4
177.5°	266.5	266.8	267.3	267.3	266.8	267.3	266.5	266.5
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6

(END OF REPORT)