

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: P332014-935

Luminaire Tested: **S123DIP-S1000D585U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332014-935
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-S1000D585U935-4F0-1E-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: 5442.1 lumens
Efficiency: N/A
Efficacy: 111.5 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

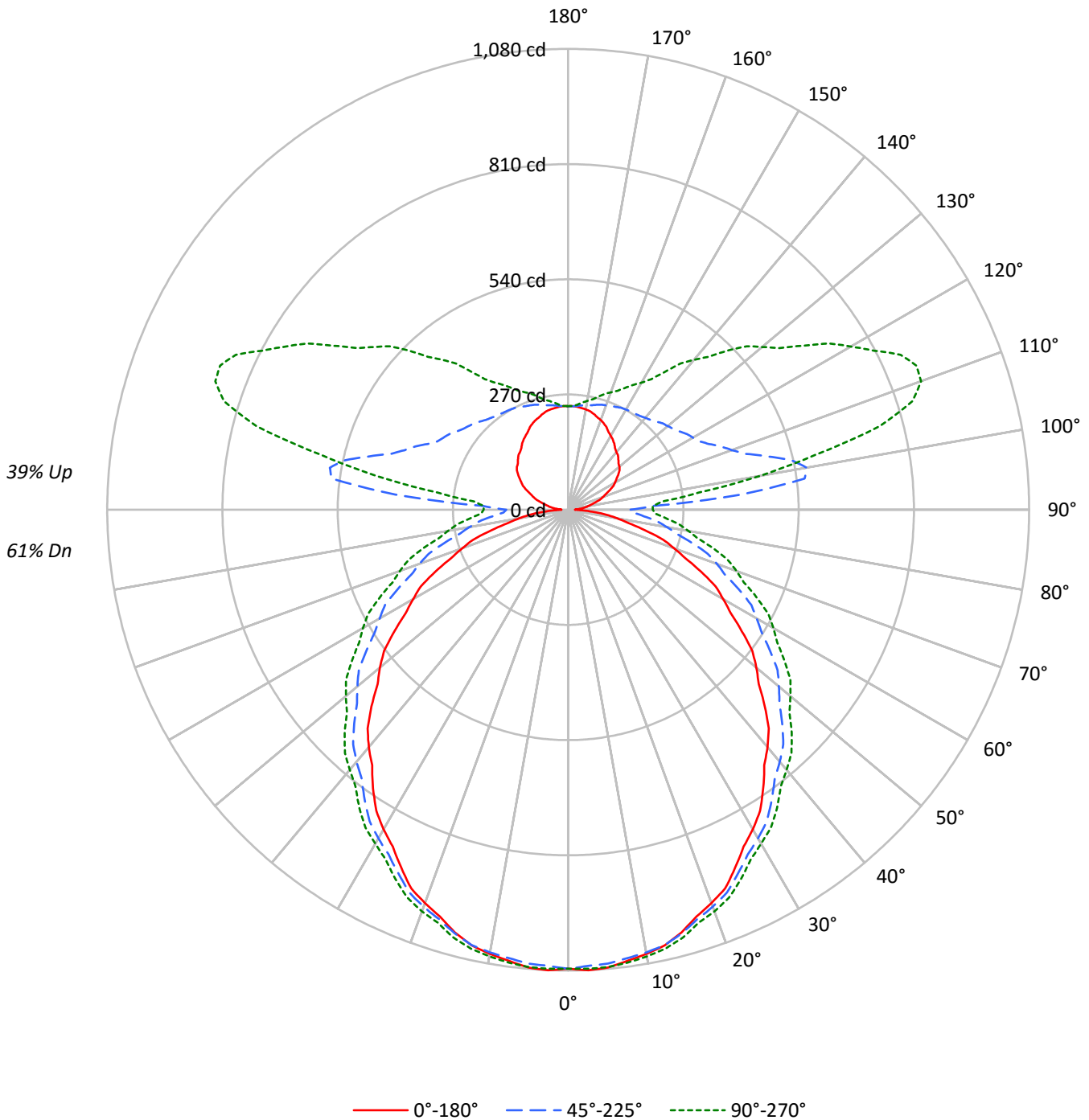
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66
1	99	94	90	86	92	88	84	80	77	74	71	66	64	62	56	55	53
2	90	81	75	69	83	76	70	65	66	62	58	57	54	51	49	46	44
3	81	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37
4	74	63	54	48	69	59	51	45	51	45	41	45	40	36	38	34	31
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	30	27
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24
7	58	45	37	31	54	42	35	29	37	31	27	33	28	24	28	24	21
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17
10	47	34	27	22	44	32	26	21	29	23	19	25	21	17	22	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.9
10°-20°	290.7	5.3
20°-30°	434.8	8.0
30°-40°	519.2	9.5
40°-50°	543.3	10.0
50°-60°	509.8	9.4
60°-70°	425.8	7.8
70°-80°	304.6	5.6
80°-90°	183.5	3.4
90°-100°	249.0	4.6
100°-110°	466.1	8.6
110°-120°	432.0	7.9
120°-130°	331.9	6.1
130°-140°	250.8	4.6
140°-150°	179.6	3.3
150°-160°	123.1	2.3
160°-170°	72.3	1.3
170°-180°	23.5	0.4
0°-30°	827.5	15.2
0°-40°	1346.7	24.7
0°-60°	2399.8	44.1
0°-90°	3313.8	60.9
90°-120°	1147.1	21.1
90°-150°	1909.4	35.1
90°-180°	2128.0	39.1
0°-180°	5442.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	79	145	184	198	12
95°	30	114	407	236	221	28
105°	66	123	483	810	756	70
115°	106	147	364	751	859	106
125°	143	171	319	572	669	128
135°	166	198	292	455	527	129
145°	188	214	274	354	394	118
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.3	44.5	57.7	70.9	84.1	97.5	111.0	124.6	138.2	151.7	160.5
90°	16.2	30.0	43.7	57.9	71.6	85.7	100.4	115.2	129.9	144.7	153.1
92.5°	20.4	34.9	50.5	65.8	81.5	101.0	126.9	161.2	194.9	200.4	190.5
95°	29.6	41.2	56.7	75.3	98.2	128.8	183.3	269.2	362.6	407.3	360.3
97.5°	40.0	49.6	63.0	79.5	101.2	132.6	184.7	279.3	425.8	558.9	598.1
100°	46.9	55.7	67.5	82.7	102.8	132.1	178.5	263.1	404.2	567.1	671.3
102.5°	54.2	62.6	73.1	87.1	105.2	132.4	175.0	248.5	375.3	535.9	669.4
105°	66.4	74.0	83.3	95.4	111.0	134.9	172.6	234.5	338.5	482.8	630.9
107.5°	78.1	84.9	93.1	104.2	118.2	140.3	174.2	226.9	312.4	435.1	570.0
110°	86.6	92.7	99.9	109.9	123.0	144.3	176.8	224.5	300.8	407.9	532.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	95.2	100.6	106.9	116.1	128.3	148.6	179.2	223.7	291.6	387.4	497.6
115°	106.5	111.6	117.7	125.7	137.2	156.7	184.8	224.1	283.5	364.1	455.3
117.5°	118.7	123.0	127.3	133.8	145.1	162.6	189.9	225.5	276.8	346.5	426.2
120°	126.5	129.2	133.0	139.2	149.8	167.1	193.4	227.5	273.9	337.5	410.3
122.5°	134.0	136.1	139.2	145.2	154.8	172.3	197.8	229.5	272.3	330.0	396.3
125°	143.4	144.5	147.4	152.8	162.1	179.2	203.9	233.1	270.1	319.3	377.4
127.5°	151.6	152.8	156.2	161.4	171.5	187.8	210.6	236.3	269.1	310.6	359.8
130°	156.7	157.9	162.1	167.7	177.8	193.6	214.9	238.8	268.5	304.7	349.5
132.5°	159.7	161.5	166.3	173.3	183.6	198.5	218.5	240.9	267.3	299.6	339.4
135°	166.3	168.1	173.2	180.3	190.4	204.9	223.0	242.5	265.1	292.1	325.7
137.5°	172.6	174.4	179.6	187.2	197.3	210.2	226.4	244.0	263.0	285.3	313.7
140°	176.0	178.5	183.4	191.2	201.0	213.7	228.8	244.3	261.7	281.2	306.2
142.5°	180.7	182.5	187.7	194.5	204.1	215.6	229.6	244.1	259.8	276.6	298.9
145°	188.3	189.5	193.6	200.8	208.9	220.0	232.8	246.1	259.8	274.5	292.3
147.5°	194.8	195.6	200.0	206.4	214.4	224.0	235.7	247.6	259.8	272.7	286.7
150°	199.8	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.0	283.4
152.5°	205.0	205.1	209.1	214.6	220.7	229.1	238.8	248.8	258.6	269.1	280.3
155°	212.7	212.7	215.6	220.5	225.9	232.8	241.2	249.0	257.4	265.7	275.5
157.5°	218.7	219.1	221.4	225.8	230.4	235.7	242.4	249.5	255.6	262.6	270.2
160°	223.4	223.4	225.4	229.4	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.0	227.0	228.6	231.7	234.7	238.8	244.0	249.1	253.3	258.0	263.1
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.5	248.0	251.0	254.4	258.3
167.5°	236.3	235.7	236.2	238.1	239.4	241.6	244.4	247.2	248.6	250.8	253.7
170°	238.7	237.7	238.2	239.6	240.6	241.6	244.1	246.1	247.0	248.5	251.0
172.5°	240.2	239.6	239.8	240.8	241.4	242.0	244.1	245.6	245.8	246.5	248.2
175°	242.1	241.6	241.2	242.1	242.1	242.6	243.6	244.5	244.1	244.1	245.0
177.5°	243.0	242.6	242.2	242.6	242.6	242.6	243.0	243.7	243.0	242.6	243.0
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	169.4	178.4	187.4	193.3	195.8	198.5	201.2	203.7
90°	162.4	171.8	181.1	187.8	189.9	193.0	196.1	198.2
92.5°	183.6	183.7	188.5	191.5	193.0	193.9	196.7	198.3
95°	308.9	260.0	242.1	229.8	223.0	221.2	220.4	221.0
97.5°	563.8	483.9	428.3	374.7	341.0	321.6	310.9	309.3
100°	696.0	663.8	613.9	549.2	502.3	469.0	452.5	455.6
102.5°	736.0	742.0	715.9	676.7	640.7	614.9	601.5	592.8
105°	740.9	797.3	813.9	806.0	785.7	769.4	756.0	756.0
107.5°	693.4	780.1	830.1	852.2	854.9	850.9	847.9	845.7
110°	651.3	748.5	817.1	855.9	871.8	877.8	878.8	879.9



TEST NUMBER: P332014-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	608.7	707.7	783.5	832.2	859.6	874.1	880.1	882.6
115°	552.4	644.1	722.6	780.2	819.2	842.9	854.8	859.4
117.5°	509.1	589.0	660.0	718.5	758.9	785.7	801.8	807.3
120°	485.5	557.8	622.7	676.2	716.9	746.1	759.7	764.6
122.5°	465.9	531.7	592.0	641.9	678.2	704.8	719.5	725.1
125°	438.9	497.8	550.4	593.4	626.6	650.1	664.2	669.4
127.5°	414.3	467.2	514.9	554.1	583.8	604.1	617.0	621.9
130°	398.6	447.7	492.5	529.1	556.7	575.9	587.8	593.3
132.5°	383.7	429.0	470.8	505.9	532.2	551.6	562.5	567.1
135°	363.3	402.9	439.5	470.5	495.8	511.9	521.9	526.7
137.5°	344.4	377.1	408.7	435.7	457.3	473.5	482.2	485.8
140°	333.2	362.1	389.6	413.4	433.3	448.3	457.5	458.3
142.5°	321.9	346.9	370.8	391.6	408.8	422.3	430.7	431.4
145°	310.1	328.4	346.2	362.1	375.3	386.7	391.7	393.6
147.5°	300.7	314.1	327.4	338.3	348.5	356.5	361.2	362.5
150°	294.6	305.9	316.2	325.9	333.7	339.7	343.1	343.6
152.5°	290.3	300.1	309.2	317.0	322.9	328.0	329.8	330.0
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	277.0	283.5	289.3	293.9	297.7	300.7	301.4	301.4
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	268.4	272.9	277.5	280.5	282.8	285.3	285.3	284.8
165°	262.3	265.2	268.6	271.0	273.0	275.0	274.5	274.5
167.5°	256.9	259.2	261.1	262.9	263.8	265.2	264.7	264.7
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	250.3	251.3	252.9	253.5	253.6	254.6	253.7	253.3
175°	246.1	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.4	243.7	244.2	244.2	243.7	244.2	243.4	243.4
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

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