

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: P332004-935

Luminaire Tested: **S123DIP-S1000D365U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332004-935
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: S123DIP-S1000D365U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4689.3 lumens
Efficiency: N/A
Efficacy: 107.8 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

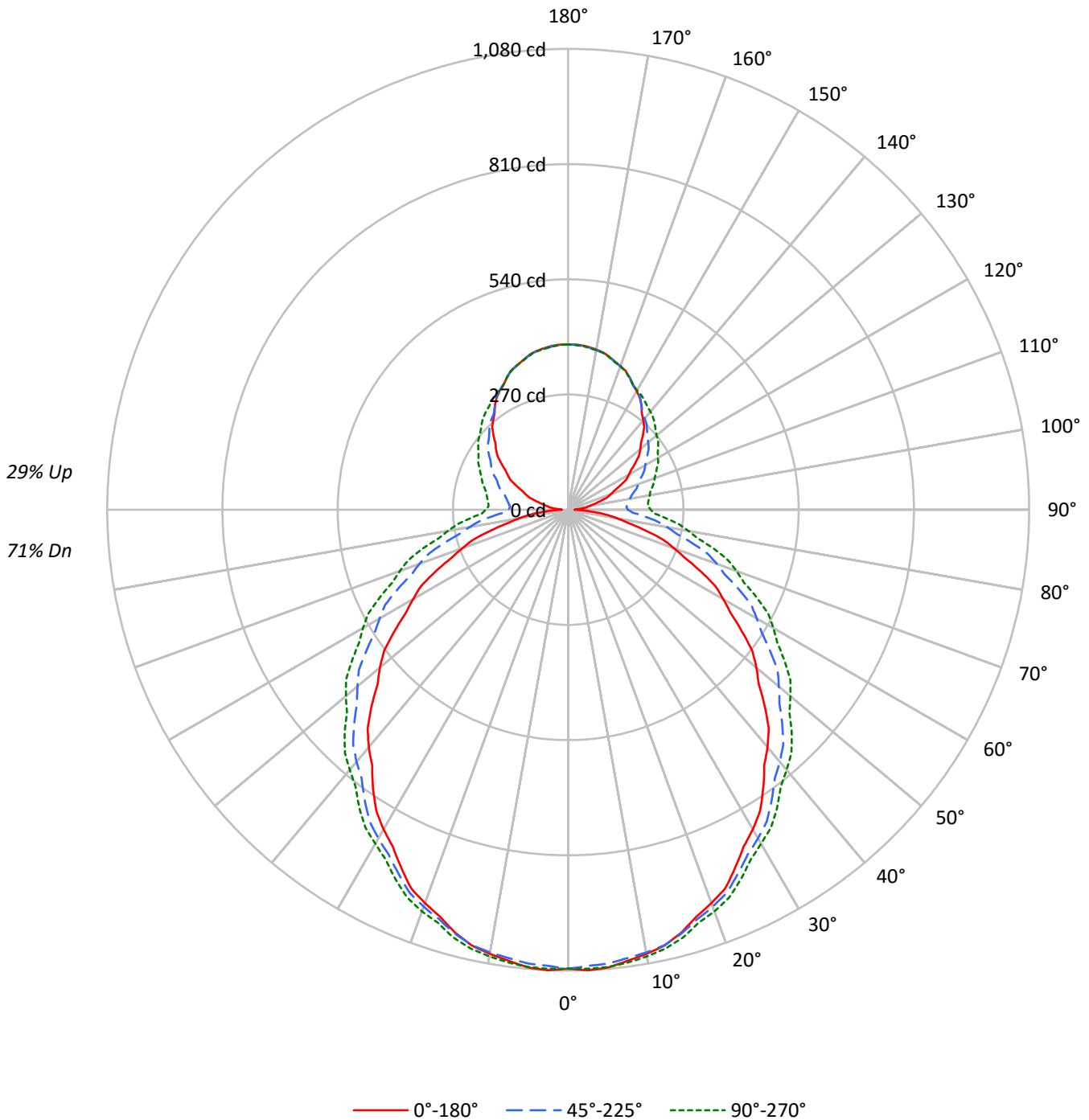
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	75	75	75	71	
1	101	96	91	87	95	91	87	83	81	78	75	72	70	67	64	62	60	60	60	60	56	
2	91	83	76	70	86	78	72	67	70	65	61	63	59	55	56	53	50	50	50	50	46	
3	83	72	64	58	78	69	61	55	61	56	51	55	50	46	49	45	42	42	42	42	38	
4	76	64	55	49	71	61	53	47	54	48	43	49	43	39	43	39	36	36	36	36	33	
5	70	57	48	41	65	54	46	40	49	42	37	44	38	34	39	34	31	31	31	31	28	
6	64	51	42	36	60	49	40	35	44	37	32	39	34	30	35	31	27	27	27	27	24	
7	59	46	38	32	56	44	36	30	40	33	28	36	30	26	32	27	24	24	24	24	22	
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	21	21	21	19	
9	51	38	30	25	48	37	29	24	33	27	22	30	25	21	27	23	19	19	19	19	17	
10	48	35	28	22	45	34	27	22	31	25	20	28	23	19	25	21	17	17	17	17	16	

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	2.2
10°-20°	290.7	6.2
20°-30°	434.8	9.3
30°-40°	519.2	11.1
40°-50°	543.3	11.6
50°-60°	509.8	10.9
60°-70°	425.8	9.1
70°-80°	304.6	6.5
80°-90°	182.8	3.9
90°-100°	139.2	3.0
100°-110°	159.3	3.4
110°-120°	184.4	3.9
120°-130°	200.9	4.3
130°-140°	204.2	4.4
140°-150°	189.7	4.0
150°-160°	157.2	3.4
160°-170°	104.6	2.2
170°-180°	36.6	0.8
0°-30°	827.5	17.6
0°-40°	1346.7	28.7
0°-60°	2399.8	51.2
0°-90°	3313.1	70.7
90°-120°	482.9	10.3
90°-150°	1077.8	23.0
90°-180°	1376.0	29.3
0°-180°	4689.3	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	76	140	179	193	12
95°	31	79	138	175	188	30
105°	78	108	160	191	204	83
115°	135	152	192	219	229	134
125°	193	196	227	250	257	172
135°	248	249	261	280	286	191
145°	299	299	299	308	312	186
155°	341	341	341	342	340	157
165°	372	371	371	372	370	105
175°	386	385	385	387	385	37
180°	387	387	387	387	387	



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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	44.3	57.4	70.5	83.7	96.9	110.4	123.8	137.3	150.8	159.6
90°	15.5	29.0	42.4	55.9	69.3	83.1	97.2	111.4	125.5	139.7	148.9
92.5°	21.7	33.7	45.6	57.6	69.6	82.3	95.9	109.4	123.0	136.6	145.4
95°	30.8	41.5	52.1	62.8	73.4	85.3	98.6	111.9	125.2	138.5	146.9
97.5°	43.4	52.9	62.4	71.9	81.5	92.5	105.0	117.6	130.3	142.8	150.8
100°	51.9	60.7	69.4	78.2	86.9	97.4	109.7	122.0	134.4	146.7	154.5
102.5°	61.9	69.7	77.4	85.2	92.9	102.9	115.1	127.3	139.6	151.8	159.3
105°	77.8	84.2	90.6	96.9	103.4	112.4	124.2	136.1	147.9	159.7	166.9
107.5°	95.1	100.6	106.0	111.3	116.8	124.8	135.8	146.6	157.5	168.3	175.6
110°	105.9	110.7	115.5	120.4	125.2	132.9	143.4	154.0	164.5	175.1	182.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	118.1	122.0	126.0	129.9	133.8	140.8	150.8	160.8	170.9	180.9	187.8
115°	135.2	138.5	141.8	145.2	148.5	154.8	164.0	173.2	182.4	191.7	198.0
117.5°	153.3	155.4	157.5	159.5	161.5	166.9	175.6	184.2	192.8	201.4	207.6
120°	163.8	165.6	167.2	168.9	170.7	175.6	183.9	192.2	200.4	208.6	214.6
122.5°	175.7	176.8	177.7	178.7	179.6	184.2	192.2	200.1	208.1	216.1	221.7
125°	192.8	193.0	193.2	193.4	193.6	197.4	204.8	212.2	219.6	227.0	232.3
127.5°	209.6	209.7	209.9	210.1	210.3	213.4	219.5	225.6	231.7	237.8	242.5
130°	220.8	221.0	221.4	221.6	221.9	224.5	229.5	234.5	239.5	244.5	249.3
132.5°	231.0	231.5	232.0	232.5	233.0	235.2	239.3	243.2	247.3	251.3	255.7
135°	247.9	248.1	248.1	248.3	248.5	249.9	252.7	255.5	258.3	261.1	265.5
137.5°	263.5	263.6	263.7	263.9	264.0	264.9	266.7	268.5	270.4	272.1	276.0
140°	273.5	273.8	274.1	274.5	274.8	275.4	276.3	277.2	278.0	278.8	282.7
142.5°	283.4	283.6	283.7	283.9	284.0	284.2	284.5	284.7	285.0	285.3	288.7
145°	299.0	298.9	298.8	298.7	298.5	298.6	298.8	299.0	299.2	299.4	301.4
147.5°	311.5	311.8	312.0	312.3	312.5	312.7	312.9	313.1	313.2	313.5	314.1
150°	321.0	321.2	321.2	321.4	321.6	321.7	321.8	321.9	322.1	322.2	322.2
152.5°	328.8	329.0	329.2	329.3	329.6	329.7	329.8	329.8	329.9	330.0	330.1
155°	341.1	341.1	341.1	341.1	341.1	341.1	341.2	341.2	341.3	341.4	341.6
157.5°	351.5	351.5	351.4	351.3	351.2	351.2	351.3	351.3	351.4	351.5	351.7
160°	358.1	358.0	357.8	357.7	357.6	357.5	357.5	357.5	357.5	357.5	357.8
162.5°	363.9	363.8	363.6	363.4	363.2	363.2	363.2	363.3	363.3	363.3	363.7
165°	371.5	371.3	371.1	370.9	370.7	370.6	370.6	370.6	370.6	370.6	371.0
167.5°	377.5	377.3	377.0	376.7	376.4	376.3	376.4	376.4	376.5	376.6	376.9
170°	380.9	380.6	380.4	380.1	379.9	379.7	379.7	379.7	379.7	379.7	380.2
172.5°	383.7	383.3	383.1	382.8	382.5	382.4	382.4	382.4	382.4	382.4	382.8
175°	386.4	386.2	385.9	385.6	385.4	385.2	385.2	385.2	385.2	385.2	385.6
177.5°	387.5	387.4	387.1	386.9	386.7	386.6	386.6	386.6	386.6	386.6	386.9
180°	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4



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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°	168.6	177.5	186.4	192.2	194.8	197.4	200.0	202.7
90°	158.0	167.1	176.2	182.2	184.9	187.6	190.4	193.1
92.5°	154.3	163.2	172.0	177.6	179.9	182.3	184.6	186.9
95°	155.2	163.6	171.9	177.4	179.9	182.6	185.2	187.8
97.5°	158.9	167.0	175.1	180.4	183.0	185.5	188.1	190.7
100°	162.2	170.0	177.7	183.0	185.7	188.4	191.1	193.9
102.5°	166.9	174.4	181.9	187.0	189.6	192.2	194.8	197.3
105°	174.3	181.6	188.9	193.7	196.2	198.7	201.2	203.6
107.5°	182.7	189.9	197.2	201.8	204.1	206.3	208.4	210.7
110°	189.2	196.2	203.3	207.8	209.7	211.6	213.6	215.6



TEST NUMBER: P332004-935

CATALOG NUMBER: S123DIP-S1000D365U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	194.7	201.6	208.4	213.0	215.3	217.6	219.8	222.1
115°	204.4	210.7	217.0	221.2	223.2	225.2	227.2	229.2
117.5°	213.8	220.0	226.2	230.1	232.0	233.8	235.7	237.5
120°	220.5	226.4	232.4	236.2	237.8	239.5	241.3	242.9
122.5°	227.4	233.0	238.6	242.2	243.8	245.5	247.1	248.7
125°	237.5	242.6	247.9	251.2	252.8	254.3	255.9	257.4
127.5°	247.4	252.1	256.9	260.0	261.5	262.9	264.4	265.9
130°	253.9	258.6	263.3	266.1	267.3	268.3	269.4	270.5
132.5°	260.1	264.6	269.0	271.9	273.3	274.7	276.1	277.5
135°	269.9	274.4	278.8	281.5	282.8	284.0	285.1	286.3
137.5°	279.7	283.6	287.4	289.9	290.9	292.0	293.0	294.0
140°	286.5	290.3	294.2	296.5	297.4	298.2	299.0	299.8
142.5°	292.1	295.6	299.0	301.2	302.1	303.1	304.0	304.9
145°	303.4	305.5	307.5	308.8	309.6	310.4	311.2	311.9
147.5°	314.7	315.3	316.0	316.5	317.1	317.6	318.1	318.7
150°	322.2	322.2	322.2	322.3	322.4	322.5	322.6	322.7
152.5°	330.2	330.4	330.5	330.4	330.1	329.8	329.6	329.4
155°	341.9	342.2	342.5	342.3	341.9	341.4	341.0	340.4
157.5°	352.0	352.3	352.6	352.5	352.1	351.8	351.4	351.0
160°	358.2	358.5	358.9	358.9	358.6	358.3	358.1	357.8
162.5°	364.0	364.4	364.7	364.6	364.2	363.8	363.3	362.9
165°	371.4	371.8	372.2	372.2	371.7	371.3	370.7	370.3
167.5°	377.4	377.8	378.2	378.2	377.8	377.4	376.9	376.6
170°	380.6	381.2	381.6	381.6	381.2	380.6	380.2	379.7
172.5°	383.2	383.7	384.1	384.1	383.6	383.1	382.6	382.2
175°	386.0	386.4	386.8	386.8	386.3	385.8	385.4	384.9
177.5°	387.3	387.5	387.9	387.9	387.5	387.1	386.8	386.3
180°	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4

(END OF REPORT)