

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: P332003-830

Luminaire Tested: **S123DIP-S1000D365U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332003-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D365U830-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5325.8 lumens
Efficiency: N/A
Efficacy: 122.4 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

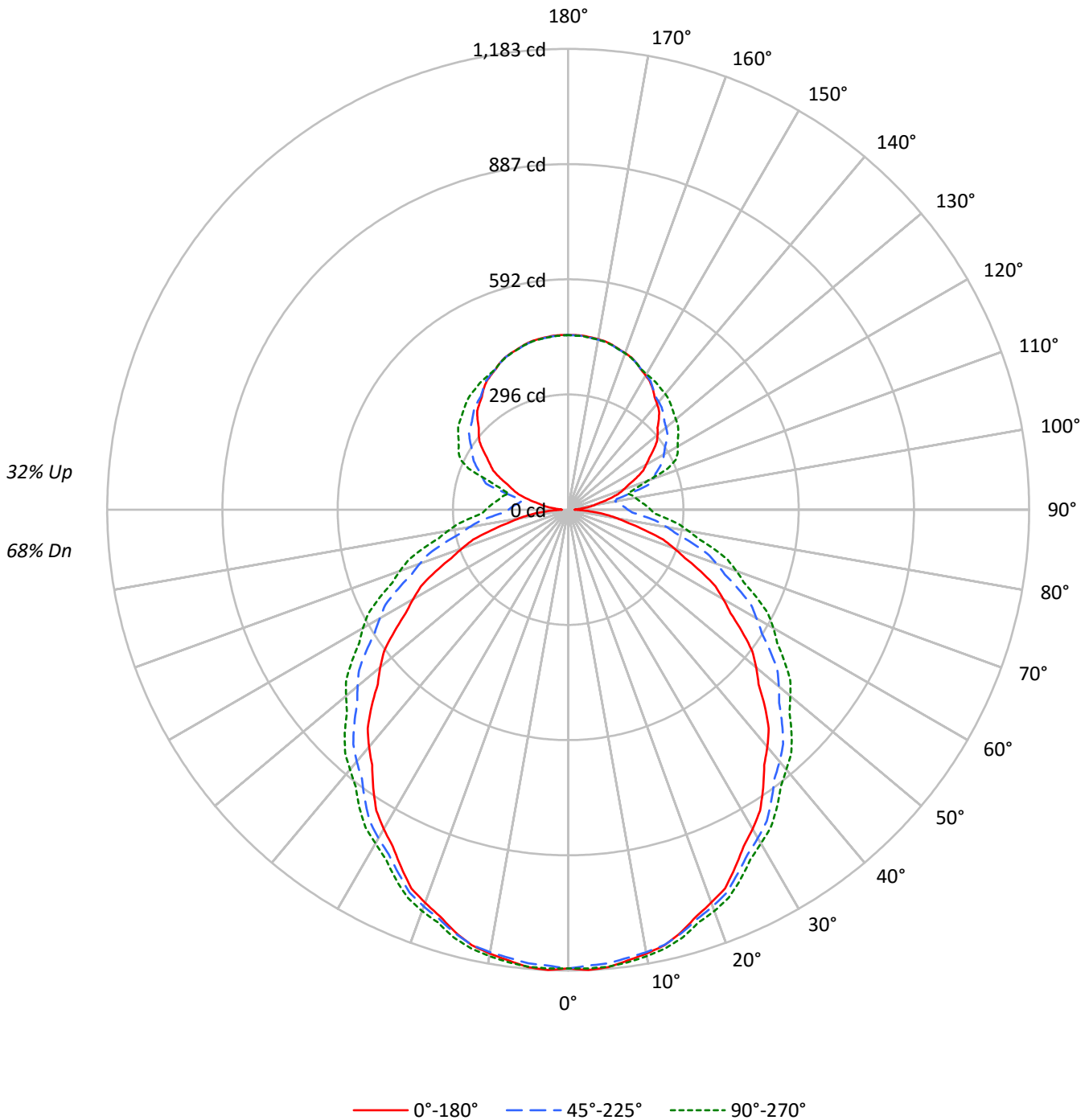
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	111	111	111	111	105	105	105	105	93	93	93	83	83	83	73	73	73	68
1	100	95	91	87	94	90	86	82	80	77	74	71	68	66	62	60	59	54
2	91	82	76	70	85	78	72	66	69	64	60	61	57	54	54	51	48	44
3	83	72	64	57	77	68	61	55	61	55	50	54	49	45	47	44	40	37
4	75	64	55	48	71	60	52	46	54	47	42	48	42	38	42	38	35	31
5	69	57	48	41	65	54	46	40	48	41	36	43	37	33	38	33	30	27
6	64	51	42	36	60	48	40	34	43	37	32	38	33	29	34	30	26	24
7	59	46	37	31	55	44	36	30	39	33	28	35	30	25	31	27	23	21
8	55	42	33	28	51	40	32	27	36	29	25	32	27	23	29	24	21	18
9	51	38	30	25	48	36	29	24	33	26	22	29	24	20	26	22	19	17
10	48	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15

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	2.1
10°-20°	318.2	6.0
20°-30°	476.0	8.9
30°-40°	568.4	10.7
40°-50°	594.7	11.2
50°-60°	558.1	10.5
60°-70°	466.1	8.8
70°-80°	333.5	6.3
80°-90°	200.1	3.8
90°-100°	141.1	2.6
100°-110°	169.4	3.2
110°-120°	247.8	4.7
120°-130°	272.6	5.1
130°-140°	269.6	5.1
140°-150°	240.8	4.5
150°-160°	191.5	3.6
160°-170°	123.6	2.3
170°-180°	42.6	0.8
0°-30°	905.9	17.0
0°-40°	1474.3	27.7
0°-60°	2627.1	49.3
0°-90°	3626.9	68.1
90°-120°	558.3	10.5
90°-150°	1341.2	25.2
90°-180°	1699.0	31.9
0°-180°	5325.8	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°	17	83	153	196	211	12
95°	34	72	137	178	192	36
105°	110	144	169	148	158	116
115°	193	212	259	292	305	190
125°	266	271	308	334	345	238
135°	329	331	345	368	375	253
145°	378	379	380	391	396	236
155°	415	415	415	416	415	191
165°	438	437	437	439	437	124
175°	448	447	447	449	447	43
180°	448	448	448	448	448	



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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°	34.2	48.5	62.9	77.2	91.6	106.1	120.8	135.5	150.3	165.0	174.7
90°	17.0	31.8	46.5	61.2	75.9	91.0	106.4	122.0	137.4	153.0	163.0
92.5°	21.9	34.2	46.7	59.0	71.4	85.1	100.2	115.2	130.3	145.2	155.2
95°	34.4	42.5	50.6	58.7	66.7	78.2	92.9	107.7	122.5	137.3	146.7
97.5°	53.4	62.1	70.8	79.5	88.1	96.4	104.4	112.4	120.5	128.5	137.6
100°	67.9	78.4	89.1	99.6	110.3	116.3	117.9	119.4	121.0	122.6	131.5
102.5°	84.4	93.7	102.9	112.3	121.5	126.3	126.6	126.8	127.1	127.3	133.6
105°	109.5	117.2	124.8	132.5	140.2	146.8	152.4	158.0	163.5	169.2	164.0
107.5°	134.8	141.2	147.7	154.2	160.6	170.2	182.9	195.6	208.2	220.9	219.0
110°	151.6	157.3	163.1	168.7	174.5	183.4	195.7	207.9	220.1	232.3	237.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	173.4	178.1	182.9	187.7	195.9	207.6	219.4	231.2	243.0	250.2
115°	192.6	196.4	200.3	204.2	208.0	215.5	226.4	237.3	248.3	259.2	266.7
117.5°	216.8	219.4	222.1	224.8	227.4	233.8	243.7	253.7	263.6	273.6	281.0
120°	230.9	233.0	235.2	237.2	239.3	245.2	254.8	264.5	274.1	283.7	290.9
122.5°	246.4	247.7	249.0	250.2	251.6	256.8	266.1	275.3	284.6	293.8	300.5
125°	266.3	266.9	267.5	268.1	268.7	273.2	281.8	290.4	299.0	307.5	313.7
127.5°	286.8	287.1	287.5	287.8	288.0	291.8	299.0	306.2	313.4	320.6	326.5
130°	299.6	299.9	300.2	300.6	300.9	304.0	310.0	315.9	322.0	328.0	333.7
132.5°	310.9	311.4	311.9	312.5	313.0	315.7	320.5	325.3	330.1	334.9	340.4
135°	329.3	329.4	329.6	329.8	330.0	331.8	335.2	338.6	342.0	345.4	350.8
137.5°	345.1	345.3	345.7	346.0	346.4	347.5	349.4	351.4	353.3	355.2	360.1
140°	354.7	355.2	355.5	356.0	356.5	357.2	358.3	359.4	360.4	361.5	366.1
142.5°	364.5	364.8	365.0	365.1	365.4	365.7	366.1	366.5	366.8	367.3	371.4
145°	378.3	378.5	378.8	379.0	379.3	379.5	379.6	379.8	379.8	380.0	382.5
147.5°	390.0	390.4	390.7	391.1	391.3	391.6	391.8	391.9	392.1	392.2	393.0
150°	398.0	398.2	398.4	398.7	398.9	399.1	399.3	399.4	399.5	399.6	399.8
152.5°	405.2	405.3	405.4	405.5	405.6	405.8	405.8	405.9	406.0	406.0	406.3
155°	415.4	415.2	415.0	414.9	414.7	414.7	414.8	414.8	414.9	415.0	415.4
157.5°	423.2	423.2	423.2	423.1	423.1	423.1	423.0	422.9	422.8	422.8	423.2
160°	428.0	427.9	427.8	427.7	427.7	427.6	427.5	427.4	427.4	427.3	427.7
162.5°	432.5	432.3	432.2	432.0	431.8	431.6	431.5	431.5	431.4	431.3	431.8
165°	438.0	437.7	437.5	437.3	437.1	437.0	436.9	436.8	436.7	436.7	437.2
167.5°	442.2	442.0	441.7	441.4	441.0	440.9	440.9	440.9	440.9	440.9	441.5
170°	444.6	444.3	444.0	443.7	443.5	443.3	443.3	443.3	443.3	443.3	443.9
172.5°	446.2	445.9	445.5	445.2	444.8	444.7	444.7	444.8	444.9	444.9	445.5
175°	448.3	447.9	447.5	447.2	446.9	446.7	446.8	446.9	446.9	447.0	447.5
177.5°	448.8	448.6	448.3	448.0	447.6	447.5	447.6	447.6	447.7	447.8	448.3
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



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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°	184.5	194.3	204.1	210.4	213.2	216.1	219.0	221.9
90°	173.0	182.9	192.9	199.4	202.4	205.4	208.4	211.4
92.5°	165.1	175.1	185.0	191.3	194.1	196.8	199.4	202.2
95°	156.0	165.4	174.7	180.9	183.7	186.5	189.4	192.3
97.5°	146.7	155.7	164.9	170.9	173.8	176.7	179.6	182.6
100°	140.3	149.2	158.1	163.9	166.8	169.8	172.7	175.6
102.5°	139.8	146.0	152.2	156.7	159.8	162.8	165.7	168.7
105°	158.9	153.8	148.6	147.5	150.1	152.9	155.6	158.3
107.5°	217.0	215.0	213.0	208.4	201.0	193.7	186.3	178.9
110°	242.2	247.2	252.2	250.5	242.2	233.9	225.6	217.4



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CATALOG NUMBER: S123DIP-S1000D365U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.4	264.7	271.8	275.6	275.9	276.2	276.4	276.7
115°	274.4	281.9	289.5	294.5	297.2	299.7	302.3	304.9
117.5°	288.4	295.8	303.1	307.9	310.3	312.5	314.8	317.1
120°	298.0	305.1	312.3	316.9	318.9	320.8	322.8	324.8
122.5°	307.3	314.0	320.7	325.1	327.2	329.2	331.3	333.4
125°	319.8	325.9	332.1	336.2	338.3	340.4	342.6	344.8
127.5°	332.3	338.3	344.1	348.0	349.8	351.6	353.4	355.2
130°	339.4	345.2	350.8	354.5	356.0	357.6	359.2	360.7
132.5°	345.8	351.3	356.8	360.4	362.1	363.8	365.6	367.3
135°	356.2	361.6	366.8	370.1	371.4	372.6	373.7	374.9
137.5°	365.0	369.8	374.7	377.8	379.0	380.3	381.5	382.9
140°	370.7	375.2	379.8	382.8	384.0	385.3	386.5	387.9
142.5°	375.4	379.5	383.5	386.2	387.4	388.6	389.7	391.0
145°	384.8	387.3	389.7	391.5	392.7	393.8	394.9	396.1
147.5°	393.9	394.7	395.6	396.3	397.0	397.7	398.3	399.1
150°	400.0	400.1	400.3	400.5	400.9	401.2	401.5	401.9
152.5°	406.6	406.9	407.2	407.2	406.9	406.7	406.5	406.2
155°	415.8	416.1	416.5	416.4	416.0	415.6	415.1	414.6
157.5°	423.7	424.1	424.6	424.5	424.0	423.4	422.7	422.2
160°	428.2	428.7	429.1	429.0	428.6	428.0	427.5	427.0
162.5°	432.3	432.8	433.3	433.4	432.9	432.4	432.0	431.5
165°	437.8	438.5	439.0	439.0	438.6	438.0	437.5	437.0
167.5°	442.1	442.7	443.3	443.3	442.7	442.1	441.5	440.9
170°	444.5	445.1	445.6	445.6	445.1	444.5	443.9	443.3
172.5°	446.1	446.7	447.2	447.2	446.6	445.9	445.3	444.6
175°	448.0	448.6	449.0	449.0	448.5	447.8	447.2	446.7
177.5°	448.7	449.2	449.7	449.6	449.0	448.5	447.8	447.2
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3

(END OF REPORT)