

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: P332189-830

Luminaire Tested: **S123DIW-S1000D755U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332189-830
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: S123DIW-S1000D755U830-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6427.5 lumens
Efficiency: N/A
Efficacy: 119.9 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: General Diffuse

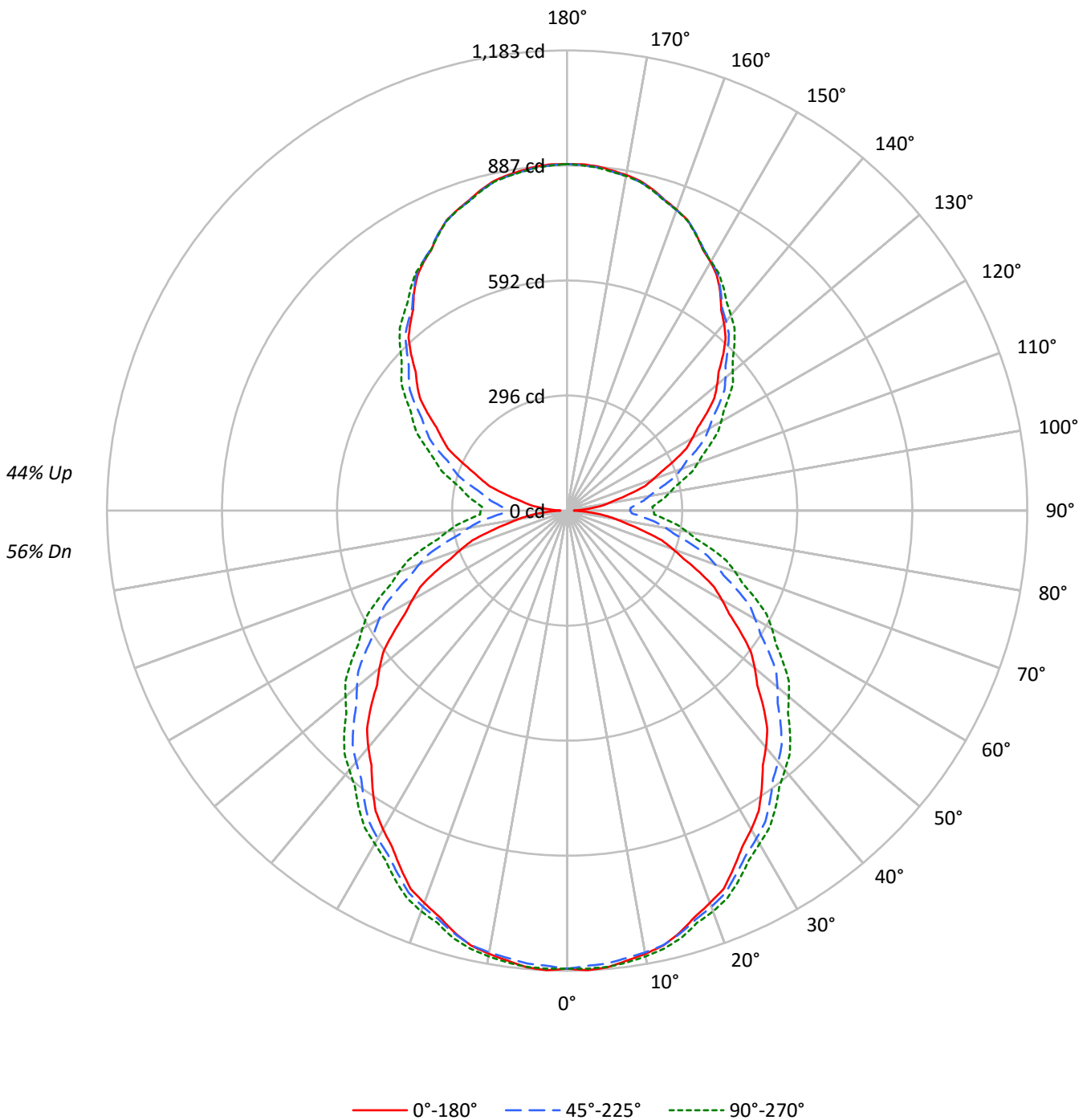
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50
2	89	81	74	68	82	75	69	64	65	60	56	55	51	49	46	43	41
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	29
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26
6	62	50	41	35	57	46	39	33	40	34	29	34	30	26	29	25	22
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14

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	1.7
10°-20°	318.2	5.0
20°-30°	476.0	7.4
30°-40°	568.4	8.8
40°-50°	594.7	9.3
50°-60°	558.1	8.7
60°-70°	466.1	7.3
70°-80°	333.5	5.2
80°-90°	201.5	3.1
90°-100°	182.8	2.8
100°-110°	265.4	4.1
110°-120°	356.6	5.5
120°-130°	423.5	6.6
130°-140°	452.4	7.0
140°-150°	432.6	6.7
150°-160°	361.4	5.6
160°-170°	240.5	3.7
170°-180°	84.2	1.3
0°-30°	905.9	14.1
0°-40°	1474.3	22.9
0°-60°	2627.1	40.9
0°-90°	3628.2	56.4
90°-120°	804.7	12.5
90°-150°	2113.2	32.9
90°-180°	2799.0	43.5
0°-180°	6427.5	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°	17	88	162	206	222	14
95°	55	111	179	220	234	57
105°	168	201	261	296	310	179
115°	304	323	366	396	407	301
125°	439	443	477	500	507	392
135°	567	571	583	603	609	437
145°	686	686	688	698	700	428
155°	784	784	785	787	783	361
165°	854	852	852	856	851	241
175°	888	886	886	889	885	84
180°	891	891	891	891	891	



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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	77.8	92.3	107.0	122.0	137.0	151.8	166.8	176.6
90°	17.3	32.9	48.4	63.9	79.5	95.5	112.1	128.7	145.2	161.7	172.1
92.5°	32.6	46.3	59.9	73.5	87.2	101.8	117.3	132.7	148.2	163.6	173.6
95°	55.4	67.6	79.8	92.0	104.2	117.9	133.1	148.4	163.5	178.8	188.2
97.5°	85.9	96.7	107.5	118.4	129.2	141.8	156.1	170.3	184.5	198.8	208.0
100°	106.7	116.8	126.8	136.9	146.9	158.9	172.8	186.6	200.6	214.4	223.2
102.5°	130.8	139.6	148.4	157.1	165.9	177.3	191.1	205.1	219.0	232.9	241.4
105°	167.7	174.8	182.0	189.2	196.2	206.7	220.4	234.0	247.7	261.3	269.3
107.5°	209.2	215.2	221.2	227.2	233.3	242.3	254.5	266.7	278.9	291.1	299.3
110°	235.1	240.5	245.9	251.4	256.8	265.4	277.1	288.8	300.6	312.3	320.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	263.1	267.5	271.8	276.3	280.7	288.4	299.4	310.4	321.4	332.4	340.4
115°	303.8	307.6	311.5	315.4	319.3	326.2	336.2	346.1	356.1	366.0	373.1
117.5°	345.7	348.2	350.6	353.0	355.4	361.3	370.5	379.8	389.0	398.1	404.9
120°	371.0	373.3	375.7	378.1	380.4	386.0	394.5	403.2	411.8	420.5	426.9
122.5°	398.4	399.8	401.3	402.7	404.2	409.2	417.6	426.2	434.8	443.3	449.2
125°	439.0	439.5	439.9	440.4	440.8	445.1	453.0	461.0	468.9	476.9	482.3
127.5°	477.6	478.3	479.0	479.8	480.4	484.1	490.6	497.1	503.6	510.0	514.8
130°	503.3	504.4	505.3	506.2	507.2	510.3	515.6	520.8	526.0	531.2	536.0
132.5°	528.1	529.2	530.5	531.6	532.8	535.6	539.7	543.9	548.2	552.4	556.9
135°	567.1	567.8	568.4	569.1	569.8	571.6	574.5	577.5	580.5	583.4	588.0
137.5°	603.2	603.8	604.4	604.9	605.5	606.8	609.0	611.1	613.3	615.5	619.3
140°	627.5	628.2	629.0	629.7	630.6	631.4	632.4	633.5	634.4	635.5	639.6
142.5°	650.4	650.9	651.5	652.1	652.5	653.1	653.6	653.9	654.4	654.9	658.6
145°	686.2	686.2	686.3	686.3	686.3	686.5	687.0	687.5	688.0	688.4	690.5
147.5°	716.2	716.8	717.4	717.9	718.5	719.0	719.4	719.8	720.3	720.8	721.4
150°	738.1	738.4	738.7	739.0	739.3	739.6	739.9	740.3	740.6	740.8	740.8
152.5°	756.0	756.4	756.9	757.3	757.7	758.0	758.2	758.4	758.6	758.7	759.0
155°	784.3	784.3	784.3	784.3	784.3	784.3	784.5	784.7	784.8	784.9	785.6
157.5°	808.3	808.1	807.9	807.8	807.6	807.6	807.7	807.8	807.9	808.0	808.7
160°	823.4	823.1	822.8	822.5	822.2	822.0	822.0	822.0	822.0	822.0	822.8
162.5°	836.9	836.4	835.9	835.6	835.1	835.0	835.1	835.2	835.4	835.5	836.2
165°	854.2	853.8	853.3	852.8	852.3	852.1	852.1	852.1	852.1	852.1	853.0
167.5°	868.1	867.4	866.9	866.2	865.5	865.3	865.4	865.5	865.7	865.8	866.8
170°	875.9	875.2	874.7	874.0	873.4	873.1	873.1	873.1	873.1	873.1	874.2
172.5°	882.0	881.5	880.8	880.1	879.6	879.2	879.2	879.2	879.2	879.2	880.2
175°	888.4	887.9	887.2	886.6	886.0	885.7	885.7	885.7	885.7	885.7	886.6
177.5°	891.2	890.6	890.1	889.7	889.2	888.9	888.9	888.9	888.9	888.9	889.7
180°	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6



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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°	186.4	196.2	206.0	212.4	215.4	218.3	221.1	224.0
90°	182.4	192.7	203.0	209.7	212.9	216.0	219.2	222.4
92.5°	183.5	193.5	203.5	209.6	212.1	214.5	217.0	219.4
95°	197.7	207.2	216.6	222.7	225.6	228.5	231.3	234.1
97.5°	217.2	226.4	235.6	241.6	244.4	247.2	250.0	252.8
100°	232.0	240.6	249.4	255.3	258.4	261.6	264.9	268.0
102.5°	250.0	258.4	266.9	272.6	275.4	278.1	281.0	283.7
105°	277.3	285.3	293.2	298.7	301.5	304.4	307.3	310.2
107.5°	307.4	315.5	323.7	328.9	331.2	333.5	335.8	338.2
110°	328.4	336.4	344.4	349.4	351.4	353.4	355.3	357.3



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CATALOG NUMBER: S123DIW-S1000D755U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	348.3	356.2	364.1	369.3	371.7	374.2	376.6	379.1
115°	380.0	387.0	394.0	398.6	400.7	402.8	404.9	407.1
117.5°	411.7	418.4	425.2	429.4	431.2	433.0	434.8	436.6
120°	433.3	439.7	446.1	450.2	451.8	453.5	455.2	456.9
122.5°	455.2	461.1	467.0	470.8	472.3	473.9	475.4	477.0
125°	487.7	492.9	498.3	501.7	503.1	504.4	505.9	507.2
127.5°	519.6	524.3	529.1	532.2	533.4	534.6	535.8	537.1
130°	540.8	545.6	550.4	553.1	553.7	554.4	555.0	555.6
132.5°	561.3	565.7	570.1	573.0	574.0	575.1	576.3	577.3
135°	592.5	597.0	601.5	604.4	605.4	606.5	607.7	608.8
137.5°	623.2	627.1	630.9	633.3	634.0	634.9	635.7	636.6
140°	643.7	647.8	652.0	654.2	654.5	654.9	655.2	655.5
142.5°	662.2	665.9	669.5	671.7	672.2	672.8	673.4	674.0
145°	692.7	694.7	696.9	698.2	698.7	699.3	699.7	700.3
147.5°	722.1	722.7	723.5	723.9	724.0	724.1	724.2	724.2
150°	740.8	740.8	740.8	740.6	740.4	740.0	739.6	739.2
152.5°	759.3	759.5	759.8	759.6	758.8	758.2	757.4	756.8
155°	786.2	786.8	787.4	787.2	786.1	785.0	783.9	782.9
157.5°	809.4	810.0	810.7	810.5	809.6	808.8	807.9	807.0
160°	823.6	824.3	825.1	825.2	824.6	824.0	823.3	822.7
162.5°	837.0	837.8	838.6	838.5	837.4	836.5	835.5	834.4
165°	853.9	854.9	855.8	855.7	854.7	853.6	852.5	851.4
167.5°	867.7	868.7	869.7	869.7	868.7	867.7	866.8	865.8
170°	875.2	876.4	877.4	877.4	876.4	875.2	874.2	873.1
172.5°	881.2	882.1	883.1	883.1	881.9	880.9	879.8	878.7
175°	887.6	888.4	889.4	889.4	888.3	887.1	886.1	885.0
177.5°	890.4	891.2	891.9	891.8	891.0	890.0	889.2	888.3
180°	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6

(END OF REPORT)