

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: P332195-930

Luminaire Tested: **S123DIW-S1000D1030U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332195-930
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-S1000D1030U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6339.5 lumens
Efficiency: N/A
Efficacy: 103.6 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

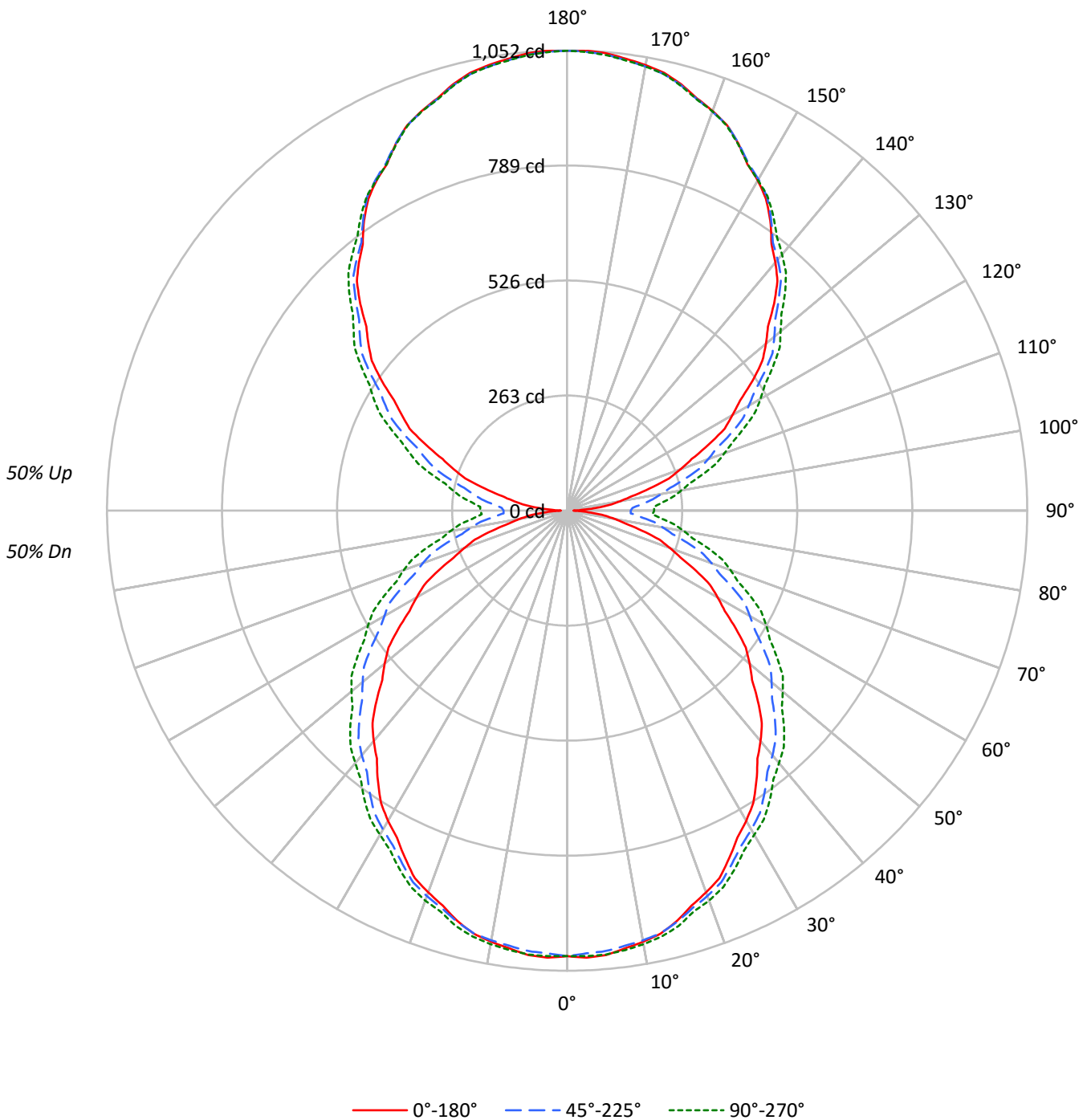
Input Watts (W): 61.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10964	10964	10964
5°	10999	10689	10694
10°	10900	10443	10390
15°	10759	10162	10058
20°	10559	9844	9692
25°	10311	9476	9308
30°	10057	9145	8918
35°	9773	8796	8606
40°	9500	8479	8272
45°	9199	8172	8007
50°	8904	7871	7713
55°	8574	7562	7449
60°	8255	7248	7178
65°	7926	6915	6856
70°	7430	6538	6527
75°	6807	6107	6190
80°	6087	5683	5807
85°	5426	5394	5585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	1.5
10°-20°	275.3	4.3
20°-30°	411.7	6.5
30°-40°	491.7	7.8
40°-50°	514.4	8.1
50°-60°	482.8	7.6
60°-70°	403.2	6.4
70°-80°	288.5	4.6
80°-90°	175.1	2.8
90°-100°	176.4	2.8
100°-110°	284.3	4.5
110°-120°	401.7	6.3
120°-130°	488.9	7.7
130°-140°	529.1	8.3
140°-150°	509.7	8.0
150°-160°	426.6	6.7
160°-170°	284.0	4.5
170°-180°	99.4	1.6
0°-30°	783.6	12.4
0°-40°	1275.2	20.1
0°-60°	2272.4	35.8
0°-90°	3139.2	49.5
90°-120°	862.5	13.6
90°-150°	2390.2	37.7
90°-180°	3200.0	50.5
0°-180°	6339.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1020	1017	1011	1019	1019	97
15°	971	974	973	984	983	273
25°	877	887	891	905	906	404
35°	755	772	787	803	808	472
45°	617	644	671	692	701	476
55°	470	507	547	576	586	421
65°	325	369	417	449	462	321
75°	176	229	284	319	334	188
85°	54	110	169	205	218	57
90°	15	78	145	185	199	13
95°	61	111	171	207	220	64
105°	195	224	278	308	321	208
115°	357	374	411	437	446	353
125°	517	521	550	569	574	461
135°	669	673	684	700	705	515
145°	810	810	813	820	822	505
155°	926	926	927	930	924	426
165°	1008	1006	1006	1010	1005	284
175°	1049	1046	1046	1050	1045	100
180°	1052	1052	1052	1052	1052	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1023.1	1022.5	1021.9	1021.3	1020.8	1019.6	1018.1	1016.5	1014.9	1013.3	1014.9
5°	1019.8	1019.3	1018.8	1018.3	1017.8	1016.8	1015.4	1013.8	1012.4	1010.9	1012.8
7.5°	1009.7	1009.9	1010.0	1010.1	1010.2	1009.5	1008.1	1006.7	1005.2	1003.8	1006.2
10°	1000.9	1001.4	1001.9	1002.4	1002.9	1002.5	1001.3	1000.0	998.8	997.6	1000.0
12.5°	990.3	990.9	991.6	992.3	993.0	993.0	992.1	991.2	990.4	989.6	991.9
15°	970.9	971.7	972.4	973.1	973.9	974.1	973.9	973.6	973.4	973.1	975.7
17.5°	946.6	948.0	949.5	951.0	952.4	953.2	953.1	952.9	952.8	952.8	955.0
20°	928.8	930.3	931.7	933.2	934.7	935.7	936.2	936.7	937.2	937.7	939.9
22.5°	910.1	911.6	913.1	914.6	916.1	917.1	917.9	918.5	919.2	919.9	922.7
25°	876.6	879.1	881.6	884.0	886.5	888.1	888.8	889.6	890.3	891.0	894.2
27.5°	842.9	845.7	848.5	851.3	854.1	856.3	857.9	859.5	861.0	862.7	865.4
30°	818.9	822.1	825.3	828.5	831.8	834.3	836.3	838.3	840.2	842.2	845.2
32.5°	792.3	795.9	799.5	803.1	806.7	809.8	812.4	814.9	817.5	820.0	823.2
35°	754.6	758.5	762.5	766.4	770.4	773.9	777.1	780.3	783.5	786.8	790.4
37.5°	714.6	719.1	723.5	727.9	732.4	736.5	740.5	744.4	748.4	752.4	756.5
40°	687.9	692.4	696.8	701.3	705.7	710.5	715.3	720.3	725.2	730.2	734.3
42.5°	658.7	664.1	669.5	675.0	680.4	685.7	690.8	695.9	701.1	706.2	710.8
45°	616.9	622.9	628.8	634.7	640.7	646.7	652.8	659.0	665.2	671.3	676.0
47.5°	573.2	579.9	586.7	593.4	600.1	607.0	614.0	621.1	628.1	635.2	640.4
50°	544.9	551.7	558.6	565.6	572.4	579.8	587.3	595.0	602.7	610.3	616.0
52.5°	514.6	522.0	529.3	536.5	543.9	551.7	560.2	568.6	577.0	585.5	591.3
55°	470.5	478.7	486.7	494.9	503.0	511.5	520.4	529.3	538.2	547.1	553.8
57.5°	427.5	435.9	444.4	452.9	461.4	470.5	480.2	489.9	499.6	509.3	516.0
60°	397.3	406.1	415.0	423.9	432.8	442.2	452.3	462.5	472.6	482.7	489.6
62.5°	368.8	377.9	387.0	396.1	405.1	415.1	425.7	436.4	447.1	457.9	464.7
65°	325.1	334.8	344.4	354.0	363.6	373.8	384.7	395.5	406.3	417.3	424.6
67.5°	280.7	291.0	301.2	311.4	321.6	332.2	343.2	354.3	365.3	376.4	384.5
70°	249.6	260.2	270.8	281.5	292.1	303.3	315.1	327.0	338.8	350.7	358.6
72.5°	221.3	231.9	242.5	253.1	263.7	275.1	287.3	299.5	311.8	324.0	332.1
75°	176.4	188.0	199.6	211.2	222.8	234.7	247.1	259.4	271.7	284.1	292.2
77.5°	137.4	149.0	160.8	172.4	184.1	196.2	208.6	221.0	233.5	245.9	254.5
80°	109.8	122.0	134.0	146.1	158.2	170.6	183.4	196.3	209.1	221.9	230.3
82.5°	85.9	98.2	110.5	122.7	135.0	147.7	160.7	173.7	186.7	199.7	208.1
85°	54.4	66.7	79.0	91.4	103.7	116.4	129.5	142.5	155.6	168.7	177.1
87.5°	29.7	42.3	55.0	67.6	80.3	93.1	106.2	119.2	132.2	145.4	153.8
90°	15.2	29.2	43.0	57.0	70.9	85.4	100.4	115.3	130.3	145.2	154.3
92.5°	33.5	45.7	57.8	70.0	82.1	95.1	108.8	122.5	136.2	150.0	158.8
95°	60.9	71.8	82.8	93.7	104.5	116.8	130.3	143.9	157.4	171.0	179.4
97.5°	97.4	107.0	116.7	126.4	136.0	147.1	159.7	172.3	184.9	197.5	205.7
100°	122.3	131.3	140.3	149.3	158.3	168.9	181.2	193.5	205.7	217.9	225.7
102.5°	151.2	158.9	166.7	174.5	182.2	192.2	204.6	217.0	229.3	241.7	249.2
105°	194.7	201.0	207.3	213.6	219.9	229.1	241.4	253.6	265.9	278.2	285.0
107.5°	244.3	249.6	254.8	260.0	265.3	273.3	284.0	294.7	305.4	316.2	323.3
110°	275.1	279.9	284.7	289.5	294.3	301.8	312.1	322.3	332.6	342.8	349.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.2	312.0	315.8	319.8	323.6	330.4	339.9	349.4	359.0	368.5	375.6
115°	356.6	360.1	363.6	367.1	370.6	376.7	385.1	393.6	402.2	410.7	416.8
117.5°	406.3	408.5	410.7	412.9	415.1	420.0	428.0	435.8	443.6	451.5	457.3
120°	436.4	438.8	441.1	443.4	445.8	450.5	457.8	465.0	472.2	479.4	484.9
122.5°	468.8	470.3	471.7	473.1	474.6	479.0	486.2	493.5	500.8	508.0	513.0
125°	517.1	517.6	518.2	518.8	519.3	522.9	529.8	536.5	543.3	550.1	554.6
127.5°	562.7	563.6	564.5	565.5	566.4	569.6	575.1	580.7	586.2	591.7	595.6
130°	593.0	594.3	595.5	596.7	597.9	600.8	605.2	609.5	613.9	618.3	622.2
132.5°	622.6	624.0	625.4	626.9	628.3	630.7	634.3	637.8	641.4	644.9	648.5
135°	668.8	669.7	670.5	671.4	672.2	673.9	676.5	679.0	681.5	684.0	687.7
137.5°	711.5	712.2	713.0	713.7	714.4	715.8	717.8	719.7	721.8	723.8	726.9
140°	740.4	741.3	742.2	743.1	744.0	744.9	745.9	746.8	747.7	748.7	752.2
142.5°	767.4	768.2	768.9	769.6	770.4	770.9	771.4	771.9	772.4	772.8	776.0
145°	809.8	809.8	810.0	810.1	810.2	810.6	811.1	811.7	812.2	812.8	814.6
147.5°	845.6	846.3	846.9	847.7	848.3	848.9	849.4	849.9	850.4	850.9	851.5
150°	871.4	871.8	872.1	872.5	872.9	873.3	873.6	874.0	874.3	874.7	874.7
152.5°	892.6	893.1	893.6	894.1	894.6	895.0	895.2	895.4	895.7	895.9	896.2
155°	925.9	925.9	925.9	925.9	925.9	926.0	926.2	926.4	926.6	926.8	927.5
157.5°	954.4	954.1	953.9	953.7	953.5	953.4	953.6	953.7	953.9	954.0	954.8
160°	972.2	971.8	971.4	971.1	970.7	970.5	970.5	970.5	970.5	970.5	971.4
162.5°	988.1	987.6	987.0	986.5	986.0	985.8	985.9	986.1	986.3	986.4	987.3
165°	1008.5	1008.0	1007.5	1006.9	1006.3	1006.1	1006.1	1006.1	1006.1	1006.1	1007.1
167.5°	1024.9	1024.2	1023.4	1022.7	1022.0	1021.7	1021.8	1022.0	1022.1	1022.2	1023.4
170°	1034.1	1033.4	1032.7	1031.9	1031.2	1030.9	1030.9	1030.9	1030.9	1030.9	1032.1
172.5°	1041.4	1040.6	1039.9	1039.2	1038.4	1038.1	1038.1	1038.1	1038.1	1038.1	1039.3
175°	1049.0	1048.3	1047.6	1046.8	1046.1	1045.7	1045.7	1045.7	1045.7	1045.7	1046.8
177.5°	1052.1	1051.6	1051.0	1050.4	1049.8	1049.5	1049.5	1049.5	1049.5	1049.5	1050.4
180°	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1016.5	1018.1	1019.6	1020.3	1020.1	1019.9	1019.8	1019.5
5°	1014.8	1016.8	1018.8	1019.6	1019.4	1019.1	1018.9	1018.6
7.5°	1008.7	1011.2	1013.7	1014.7	1014.5	1014.2	1013.8	1013.6
10°	1002.5	1004.9	1007.5	1008.4	1008.0	1007.5	1007.0	1006.5
12.5°	994.1	996.4	998.7	999.6	999.1	998.6	998.1	997.6
15°	978.1	980.6	983.0	984.1	983.9	983.7	983.4	983.2
17.5°	957.2	959.4	961.6	962.5	962.2	961.9	961.6	961.2
20°	942.1	944.3	946.6	947.8	948.0	948.3	948.5	948.8
22.5°	925.5	928.3	931.2	932.5	932.3	932.2	932.1	931.9
25°	897.5	900.7	903.8	905.5	905.5	905.5	905.5	905.5
27.5°	868.1	870.9	873.7	875.1	875.4	875.5	875.8	876.0
30°	848.2	851.1	854.0	855.6	855.6	855.6	855.6	855.6
32.5°	826.4	829.5	832.7	834.5	835.1	835.7	836.3	836.9
35°	794.1	797.9	801.5	803.9	804.9	805.8	806.8	807.8
37.5°	760.8	764.9	769.2	771.6	772.4	773.1	774.0	774.8
40°	738.5	742.7	746.9	749.5	750.5	751.5	752.4	753.4
42.5°	715.3	719.9	724.6	727.5	728.9	730.3	731.6	733.0
45°	680.7	685.4	690.1	693.4	695.4	697.3	699.4	701.3
47.5°	645.7	651.0	656.2	659.7	661.2	662.8	664.2	665.8
50°	621.7	627.3	633.0	636.7	638.5	640.2	641.9	643.6
52.5°	597.2	603.1	608.9	612.9	615.1	617.2	619.3	621.4
55°	560.4	567.0	573.7	578.0	580.0	582.0	583.9	585.9
57.5°	522.8	529.5	536.1	540.7	543.0	545.3	547.6	549.9
60°	496.5	503.4	510.3	515.1	517.9	520.6	523.3	525.9
62.5°	471.7	478.6	485.4	490.2	492.7	495.2	497.7	500.3
65°	432.0	439.4	446.8	451.8	454.2	456.6	459.2	461.6
67.5°	392.6	400.6	408.7	413.8	415.9	418.0	420.0	422.1
70°	366.4	374.3	382.2	387.4	389.9	392.3	394.8	397.3
72.5°	340.2	348.3	356.4	361.7	364.1	366.6	369.1	371.5
75°	300.4	308.5	316.6	322.2	325.1	328.1	331.0	334.0
77.5°	263.1	271.7	280.2	285.7	287.9	290.2	292.4	294.7
80°	238.7	247.1	255.4	260.9	263.3	265.8	268.3	270.8
82.5°	216.5	224.9	233.3	238.7	241.2	243.6	246.1	248.6
85°	185.4	193.8	202.2	207.7	210.1	212.5	215.0	217.5
87.5°	162.4	170.9	179.4	185.0	187.5	190.0	192.6	195.2
90°	163.5	172.6	181.6	187.7	190.5	193.3	196.2	199.0
92.5°	167.5	176.3	185.1	190.5	192.6	194.6	196.7	198.7
95°	187.8	196.1	204.5	209.9	212.4	214.8	217.3	219.8
97.5°	213.9	222.1	230.3	235.5	238.0	240.4	242.8	245.2
100°	233.3	241.1	248.7	254.0	256.9	259.7	262.5	265.4
102.5°	256.7	264.2	271.7	276.7	279.1	281.4	283.9	286.3
105°	292.0	298.9	305.7	310.5	313.1	315.7	318.3	320.9
107.5°	330.5	337.8	345.0	349.5	351.5	353.4	355.4	357.3
110°	357.0	364.2	371.4	375.7	377.3	379.0	380.6	382.1



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CATALOG NUMBER: S123DIW-S1000D1030U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	382.7	389.8	396.9	401.5	403.6	405.7	407.7	409.9
115°	422.9	429.0	435.1	439.0	440.8	442.6	444.4	446.2
117.5°	463.2	469.0	474.8	478.4	479.8	481.3	482.7	484.0
120°	490.4	495.9	501.4	504.8	506.1	507.5	508.9	510.2
122.5°	518.0	523.0	528.0	531.1	532.3	533.5	534.8	536.0
125°	559.0	563.5	567.9	570.6	571.6	572.6	573.6	574.5
127.5°	599.4	603.2	607.1	609.4	610.3	611.1	612.0	612.8
130°	626.2	630.1	634.1	636.2	636.3	636.6	636.7	637.0
132.5°	652.2	655.7	659.3	661.5	662.2	662.8	663.6	664.2
135°	691.5	695.1	698.9	701.2	702.0	702.9	703.7	704.6
137.5°	730.0	733.2	736.3	738.1	738.7	739.2	739.7	740.3
140°	755.7	759.2	762.7	764.4	764.4	764.3	764.3	764.3
142.5°	779.1	782.2	785.4	787.0	787.3	787.5	787.7	788.0
145°	816.4	818.2	819.9	820.9	821.2	821.5	821.7	822.0
147.5°	852.2	852.7	853.3	853.5	853.3	853.0	852.9	852.6
150°	874.7	874.7	874.7	874.4	873.8	873.2	872.6	872.0
152.5°	896.4	896.7	897.1	896.7	895.9	895.0	894.2	893.3
155°	928.2	929.0	929.7	929.4	928.1	926.8	925.6	924.3
157.5°	955.5	956.3	957.1	957.0	955.9	955.0	953.9	952.8
160°	972.4	973.3	974.2	974.3	973.5	972.8	972.1	971.3
162.5°	988.2	989.1	990.1	989.9	988.8	987.6	986.4	985.2
165°	1008.3	1009.3	1010.5	1010.4	1009.1	1007.8	1006.5	1005.3
167.5°	1024.5	1025.6	1026.8	1026.8	1025.6	1024.5	1023.4	1022.2
170°	1033.4	1034.7	1036.0	1036.0	1034.7	1033.4	1032.1	1030.9
172.5°	1040.4	1041.5	1042.7	1042.6	1041.3	1040.0	1038.7	1037.5
175°	1047.9	1049.0	1050.1	1050.0	1048.7	1047.4	1046.2	1044.9
177.5°	1051.2	1052.1	1053.0	1053.0	1051.9	1050.9	1049.9	1048.9
180°	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5	1051.5

(END OF REPORT)