

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: P331593-830

Luminaire Tested: **S122DIW-S1005D710U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331593-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S1005D710U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6477.0 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

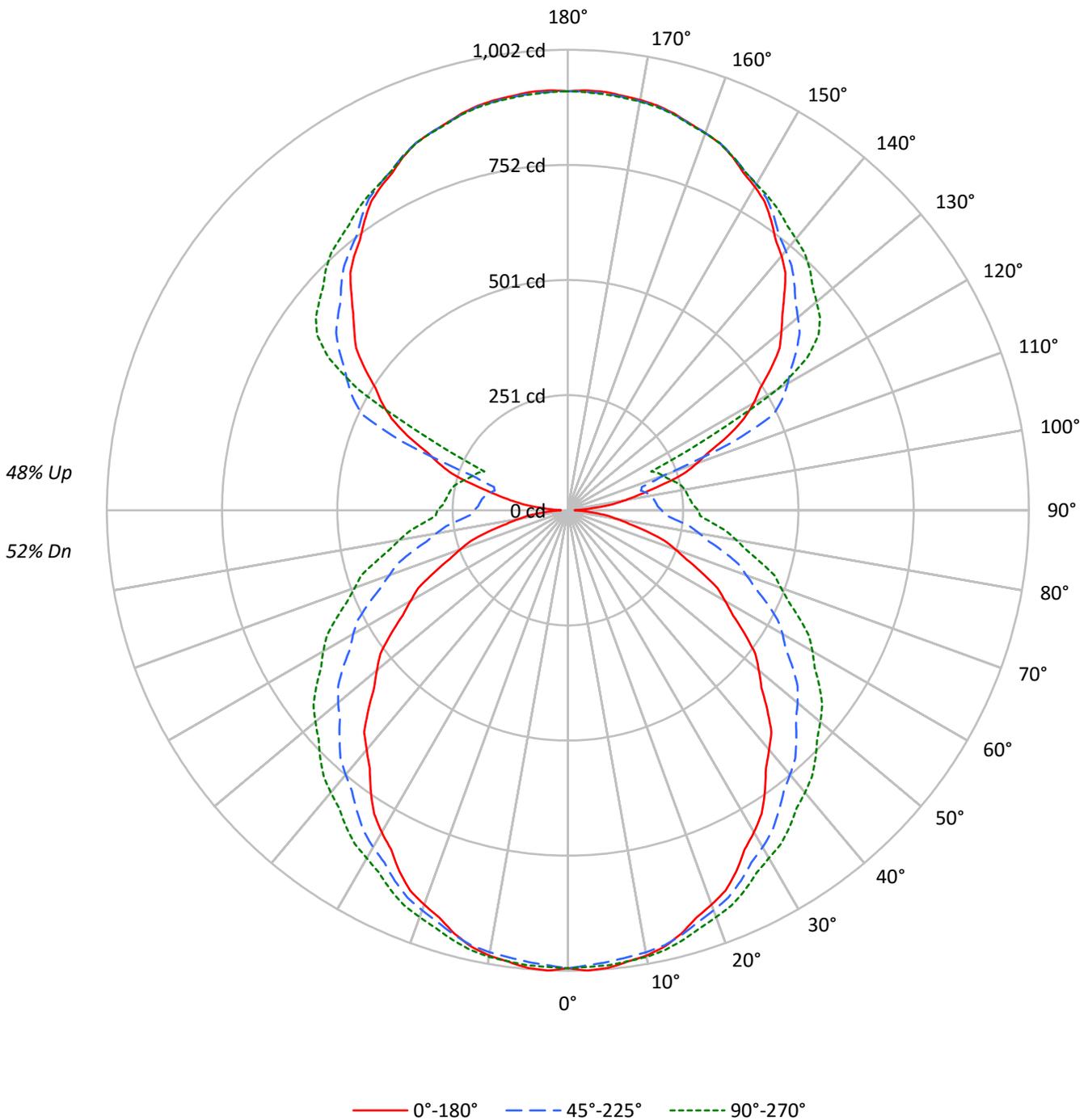
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	38
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	26
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14
10	45	33	25	20	42	31	24	19	26	21	17	23	18	15	19	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16091	16091	16091
5°	16172	15491	15432
10°	16069	15033	14865
15°	15848	14548	14266
20°	15567	14030	13691
25°	15292	13528	13167
30°	14902	13015	12643
35°	14508	12517	12274
40°	14092	12094	11903
45°	13700	11715	11587
50°	13277	11373	11276
55°	12834	11004	10959
60°	12292	10623	10624
65°	11728	10173	10227
70°	11096	9693	9797
75°	10286	9222	9401
80°	9006	8739	9001
85°	7780	8321	8687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.4	1.5
10°-20°	270.8	4.2
20°-30°	410.4	6.3
30°-40°	499.9	7.7
40°-50°	537.8	8.3
50°-60°	522.2	8.1
60°-70°	456.0	7.0
70°-80°	351.0	5.4
80°-90°	237.8	3.7
90°-100°	192.7	3.0
100°-110°	230.1	3.6
110°-120°	376.5	5.8
120°-130°	535.9	8.3
130°-140°	541.8	8.4
140°-150°	489.7	7.6
150°-160°	391.2	6.0
160°-170°	252.1	3.9
170°-180°	86.8	1.3
0°-30°	775.7	12.0
0°-40°	1275.5	19.7
0°-60°	2335.5	36.1
0°-90°	3380.4	52.2
90°-120°	799.2	12.3
90°-150°	2366.6	36.5
90°-180°	3097.0	47.8
0°-180°	6477.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	1000	995	987	995	994	95
15°	953	956	956	968	968	268
25°	867	877	890	906	911	398
35°	747	772	799	829	841	467
45°	612	652	702	745	761	473
55°	470	523	596	647	667	420
65°	321	392	477	534	555	318
75°	178	259	351	411	432	188
85°	52	142	234	292	315	56
90°	15	106	204	263	284	12
95°	54	103	192	248	267	62
105°	208	260	164	220	241	223
115°	385	415	494	244	200	379
125°	539	551	607	649	665	481
135°	665	676	696	732	743	514
145°	770	770	781	793	798	482
155°	848	843	850	853	849	391
165°	893	890	892	896	892	252
175°	914	910	911	915	909	87
180°	912	912	912	912	912	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	1002.5	1001.7	1000.9	1000.1	999.4	998.1	996.3	994.5	992.7	990.9	992.2
5°	999.6	998.6	997.7	996.6	995.7	994.3	992.4	990.4	988.5	986.6	988.5
7.5°	990.6	990.0	989.3	988.7	988.1	987.0	985.5	984.0	982.6	981.1	983.4
10°	983.7	983.1	982.4	981.8	981.1	980.3	979.4	978.4	977.4	976.5	979.0
12.5°	972.1	972.2	972.4	972.5	972.6	972.3	971.7	970.9	970.3	969.5	972.1
15°	953.4	954.0	954.6	955.3	955.9	956.2	956.2	956.2	956.2	956.2	959.1
17.5°	929.1	930.5	931.8	933.1	934.4	935.7	936.7	937.7	938.8	939.8	942.8
20°	912.9	914.5	916.2	917.8	919.4	920.8	922.1	923.3	924.6	926.0	929.4
22.5°	895.6	897.4	899.3	901.2	903.1	904.8	906.6	908.4	910.2	912.0	915.6
25°	866.7	868.9	871.2	873.5	875.7	878.3	881.1	884.0	886.9	889.8	893.6
27.5°	832.0	835.7	839.3	843.0	846.7	850.2	853.6	857.0	860.4	863.8	868.6
30°	808.9	813.0	817.3	821.4	825.6	829.8	834.0	838.1	842.3	846.5	851.6
32.5°	783.4	788.2	792.9	797.6	802.2	807.0	812.0	816.9	821.9	826.8	832.7
35°	746.8	752.2	757.7	763.2	768.6	774.4	780.5	786.6	792.7	798.8	805.9
37.5°	706.9	713.2	719.5	725.8	732.1	739.1	747.1	755.0	762.9	770.8	778.6
40°	680.3	687.4	694.5	701.5	708.6	716.4	725.1	733.8	742.4	751.1	759.5
42.5°	655.0	661.9	669.0	676.1	683.2	691.6	701.6	711.6	721.5	731.5	740.6
45°	612.5	621.1	629.8	638.5	647.1	657.0	668.4	679.6	690.8	702.0	712.0
47.5°	570.6	580.0	589.5	598.9	608.3	619.6	632.8	645.9	659.1	672.2	682.7
50°	541.7	551.7	561.6	571.6	581.5	593.7	608.1	622.5	637.0	651.5	662.4
52.5°	514.0	524.4	534.9	545.4	555.8	568.6	583.8	599.1	614.3	629.5	640.6
55°	469.5	481.0	492.6	504.2	515.7	529.8	546.5	563.2	579.9	596.5	608.1
57.5°	425.6	438.6	451.6	464.7	477.7	492.7	509.7	526.7	543.8	560.7	573.2
60°	394.4	408.1	422.0	435.7	449.6	465.6	483.9	502.2	520.5	538.8	551.0
62.5°	366.6	380.9	395.2	409.5	423.9	440.2	458.5	476.7	495.1	513.4	526.3
65°	320.7	336.4	352.1	367.9	383.6	401.0	419.9	438.8	457.7	476.6	489.8
67.5°	278.5	294.9	311.3	327.8	344.2	362.1	381.5	401.0	420.3	439.7	453.0
70°	248.5	265.1	281.8	298.5	315.2	333.5	353.5	373.3	393.2	413.1	426.9
72.5°	220.7	237.9	255.1	272.3	289.5	308.2	328.4	348.6	368.7	388.9	402.4
75°	177.7	195.7	213.6	231.6	249.6	268.8	289.4	309.9	330.5	351.0	364.8
77.5°	136.1	154.9	173.7	192.5	211.3	231.1	252.0	272.9	293.7	314.6	328.4
80°	108.3	127.9	147.5	167.1	186.6	206.9	227.7	248.6	269.5	290.3	303.8
82.5°	85.2	104.5	123.9	143.2	162.5	182.8	203.9	225.0	246.1	267.2	280.7
85°	52.0	71.9	91.8	111.7	131.6	151.8	172.4	192.9	213.5	234.0	247.5
87.5°	28.5	47.9	67.4	86.8	106.2	126.4	147.1	168.0	188.7	209.5	222.7
90°	15.1	35.3	55.6	75.8	96.0	117.0	138.7	160.4	182.2	203.9	217.4
92.5°	26.6	43.8	61.0	78.1	95.4	114.1	134.5	154.9	175.2	195.6	208.6
95°	54.5	64.7	74.9	85.2	95.5	110.7	131.0	151.3	171.5	191.8	204.8
97.5°	95.2	95.0	94.8	94.5	94.3	104.7	125.5	146.4	167.3	188.1	200.6
100°	126.9	118.7	110.5	102.3	94.1	100.2	120.6	141.1	161.6	182.1	195.1
102.5°	160.6	167.2	173.8	180.4	187.0	188.6	185.2	181.8	178.4	175.0	188.1
105°	207.8	221.5	235.3	248.9	262.7	257.8	234.5	211.1	187.8	164.5	177.3
107.5°	263.3	274.4	285.3	296.3	307.4	296.8	264.8	232.8	200.8	168.7	177.9
110°	298.1	307.6	317.1	326.6	336.1	327.5	300.9	274.2	247.6	220.9	216.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	331.9	340.0	348.1	356.2	364.4	370.6	375.1	379.7	384.1	388.6	345.3
115°	385.2	391.2	397.2	403.2	409.3	421.3	439.4	457.6	475.7	493.8	435.5
117.5°	431.4	436.5	441.6	446.7	451.8	462.2	478.2	494.0	509.9	525.8	518.9
120°	466.2	469.7	473.2	476.6	480.1	489.7	505.1	520.6	536.0	551.6	562.3
122.5°	495.8	498.6	501.4	504.3	507.1	515.9	530.9	545.8	560.8	575.8	585.5
125°	539.3	541.2	543.2	545.1	547.0	554.4	567.5	580.5	593.6	606.7	616.3
127.5°	580.1	581.9	583.7	585.5	587.3	593.3	603.7	614.1	624.4	634.8	644.2
130°	606.0	608.0	610.0	612.1	614.1	619.3	627.6	635.9	644.3	652.7	662.0
132.5°	632.4	634.0	635.7	637.3	639.0	643.3	650.1	657.0	663.7	670.5	679.4
135°	665.2	667.6	670.0	672.3	674.6	678.1	682.6	687.1	691.6	696.2	704.4
137.5°	699.9	701.5	703.1	704.6	706.2	708.5	711.4	714.4	717.2	720.1	727.5
140°	722.6	723.5	724.3	725.2	726.0	727.6	729.8	732.1	734.3	736.6	743.1
142.5°	741.7	742.3	743.1	743.9	744.6	745.9	747.9	749.9	751.9	753.8	759.1
145°	770.1	769.9	769.8	769.6	769.4	770.6	773.1	775.6	778.1	780.6	783.5
147.5°	796.0	795.5	794.9	794.4	793.8	794.8	797.2	799.7	802.1	804.6	805.6
150°	812.9	811.9	810.9	809.8	808.8	809.5	811.8	814.2	816.5	818.9	819.7
152.5°	827.2	826.0	824.9	823.7	822.6	823.1	825.4	827.6	829.8	832.1	832.9
155°	847.9	846.6	845.3	844.0	842.6	842.8	844.6	846.3	848.1	849.9	850.7
157.5°	864.1	863.0	861.9	860.7	859.7	859.7	860.9	862.1	863.4	864.6	865.6
160°	873.6	872.7	871.9	871.0	870.1	870.1	871.0	871.9	872.7	873.6	874.5
162.5°	882.0	881.2	880.3	879.4	878.5	878.4	879.2	880.1	880.8	881.6	882.5
165°	893.4	892.5	891.6	890.8	889.9	889.7	890.1	890.5	891.0	891.5	892.5
167.5°	901.8	901.0	900.1	899.2	898.3	898.1	898.5	898.9	899.4	899.8	900.8
170°	906.6	905.7	904.8	904.0	903.1	902.8	903.1	903.4	903.7	904.0	905.0
172.5°	909.7	908.9	908.0	907.1	906.3	906.0	906.3	906.5	906.8	907.1	908.1
175°	913.9	912.9	911.8	910.8	909.7	909.4	909.6	910.0	910.3	910.6	911.6
177.5°	914.5	913.7	912.9	912.1	911.3	910.9	911.0	911.2	911.3	911.3	912.2
180°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	993.4	994.8	996.1	996.5	995.9	995.4	994.9	994.4
5°	990.4	992.4	994.3	995.0	994.8	994.5	994.1	993.8
7.5°	985.7	988.1	990.3	991.4	991.0	990.7	990.3	990.0
10°	981.6	984.2	986.7	987.9	987.5	987.2	986.9	986.6
12.5°	974.7	977.2	979.8	980.9	980.6	980.2	980.0	979.7
15°	962.1	964.9	967.8	969.1	968.7	968.5	968.1	967.8
17.5°	945.8	948.9	951.9	953.4	953.4	953.4	953.4	953.4
20°	932.9	936.5	940.0	941.8	941.8	941.8	941.8	941.8
22.5°	919.1	922.7	926.1	928.2	928.7	929.3	929.7	930.3
25°	897.5	901.4	905.2	907.6	908.6	909.6	910.5	911.4
27.5°	873.5	878.4	883.4	886.1	886.8	887.5	888.3	888.9
30°	856.8	861.9	867.0	870.1	871.0	871.9	873.0	873.9
32.5°	838.7	844.5	850.5	854.2	856.0	857.7	859.5	861.2
35°	812.9	820.0	827.1	831.7	834.0	836.2	838.5	840.7
37.5°	786.5	794.3	802.1	807.2	809.5	812.0	814.4	816.7
40°	767.8	776.2	784.5	790.1	793.1	795.9	798.8	801.7
42.5°	749.7	758.8	768.0	773.9	776.8	779.8	782.6	785.5
45°	721.9	731.9	741.8	748.4	751.6	754.8	758.0	761.2
47.5°	693.1	703.4	713.9	720.9	724.3	727.9	731.4	735.0
50°	673.3	684.2	695.1	702.4	705.9	709.4	712.9	716.4
52.5°	651.9	663.0	674.2	681.6	685.4	689.3	693.1	696.8
55°	619.7	631.2	642.8	650.6	654.8	659.0	663.2	667.3
57.5°	585.7	598.1	610.6	618.9	623.1	627.4	631.6	635.8
60°	563.2	575.4	587.6	596.0	600.4	604.9	609.4	613.9
62.5°	539.3	552.2	565.2	573.8	578.1	582.3	586.5	590.8
65°	503.0	516.1	529.3	538.0	542.2	546.3	550.5	554.7
67.5°	466.3	479.6	492.9	501.7	506.1	510.4	514.8	519.2
70°	440.7	454.5	468.3	477.1	481.0	484.8	488.7	492.6
72.5°	415.9	429.5	443.0	452.1	456.8	461.4	466.0	470.6
75°	378.6	392.4	406.2	415.2	419.3	423.6	427.7	431.9
77.5°	342.0	355.8	369.6	378.7	383.1	387.7	392.2	396.6
80°	317.3	330.8	344.3	353.3	357.8	362.2	366.7	371.3
82.5°	294.2	307.6	321.1	330.0	334.2	338.5	342.7	346.9
85°	261.0	274.5	287.9	296.9	301.4	305.9	310.4	314.9
87.5°	236.0	249.2	262.5	271.2	275.3	279.5	283.7	287.9
90°	231.0	244.6	258.2	267.0	271.2	275.3	279.5	283.6
92.5°	221.5	234.5	247.4	255.9	260.0	264.0	268.1	272.0
95°	217.7	230.6	243.6	251.8	255.6	259.3	263.0	266.7
97.5°	213.1	225.6	238.0	246.2	250.2	254.1	258.1	262.0
100°	208.1	221.2	234.2	242.7	246.5	250.3	254.2	258.0
102.5°	201.3	214.4	227.6	236.1	240.1	244.0	248.0	251.9
105°	190.2	203.0	215.8	224.3	228.5	232.6	236.7	240.8
107.5°	187.0	196.1	205.3	212.0	216.0	220.2	224.3	228.4
110°	212.2	207.7	203.3	203.2	207.4	211.4	215.6	219.7



TEST NUMBER: P331593-830

CATALOG NUMBER: S122DIW-S1005D710U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	302.2	258.9	215.7	196.1	200.1	204.2	208.1	212.2
115°	377.3	319.1	260.7	228.1	221.1	214.1	207.0	200.0
117.5°	511.9	505.0	498.0	478.9	447.5	416.0	384.7	353.3
120°	573.1	583.8	594.6	591.8	575.5	559.2	543.0	526.7
122.5°	595.3	605.1	614.9	619.3	618.6	617.7	616.9	616.0
125°	626.0	635.7	645.5	652.0	655.3	658.6	661.9	665.2
127.5°	653.7	663.2	672.6	678.8	681.7	684.7	687.6	690.5
130°	671.3	680.6	689.9	695.8	698.2	700.7	703.0	705.5
132.5°	688.2	697.0	705.9	711.5	713.9	716.3	718.8	721.1
135°	712.6	720.8	729.0	734.2	736.5	738.8	741.0	743.4
137.5°	734.8	742.2	749.5	754.0	755.7	757.4	759.0	760.7
140°	749.5	756.0	762.4	766.3	767.4	768.6	769.9	771.0
142.5°	764.5	769.8	775.1	778.2	779.1	780.0	781.0	781.9
145°	786.5	789.5	792.4	794.3	795.1	796.1	796.9	797.8
147.5°	806.6	807.7	808.7	809.3	809.5	809.5	809.7	809.8
150°	820.6	821.5	822.4	822.5	821.7	821.0	820.2	819.5
152.5°	833.8	834.7	835.6	835.6	834.5	833.6	832.6	831.6
155°	851.6	852.5	853.4	853.2	852.1	850.9	849.7	848.6
157.5°	866.7	867.6	868.6	868.6	867.4	866.3	865.2	863.9
160°	875.3	876.3	877.1	877.0	876.0	875.0	874.0	873.0
162.5°	883.5	884.5	885.5	885.4	884.1	882.9	881.6	880.3
165°	893.5	894.5	895.5	895.5	894.5	893.5	892.5	891.5
167.5°	901.8	902.9	903.8	903.7	902.4	901.1	899.8	898.4
170°	906.1	907.0	908.0	908.0	906.6	905.3	904.0	902.7
172.5°	909.2	910.2	911.3	911.1	909.7	908.4	907.1	905.8
175°	912.7	913.6	914.6	914.5	912.9	911.5	910.0	908.6
177.5°	913.0	913.8	914.6	914.5	913.5	912.4	911.3	910.3
180°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9

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