

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: P331405-927

Luminaire Tested: **S122DIP-S865D925U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331405-927  
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: S122DIP-S865D925U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5699.8 lumens  
Efficiency: N/A  
Efficacy: 94.2 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

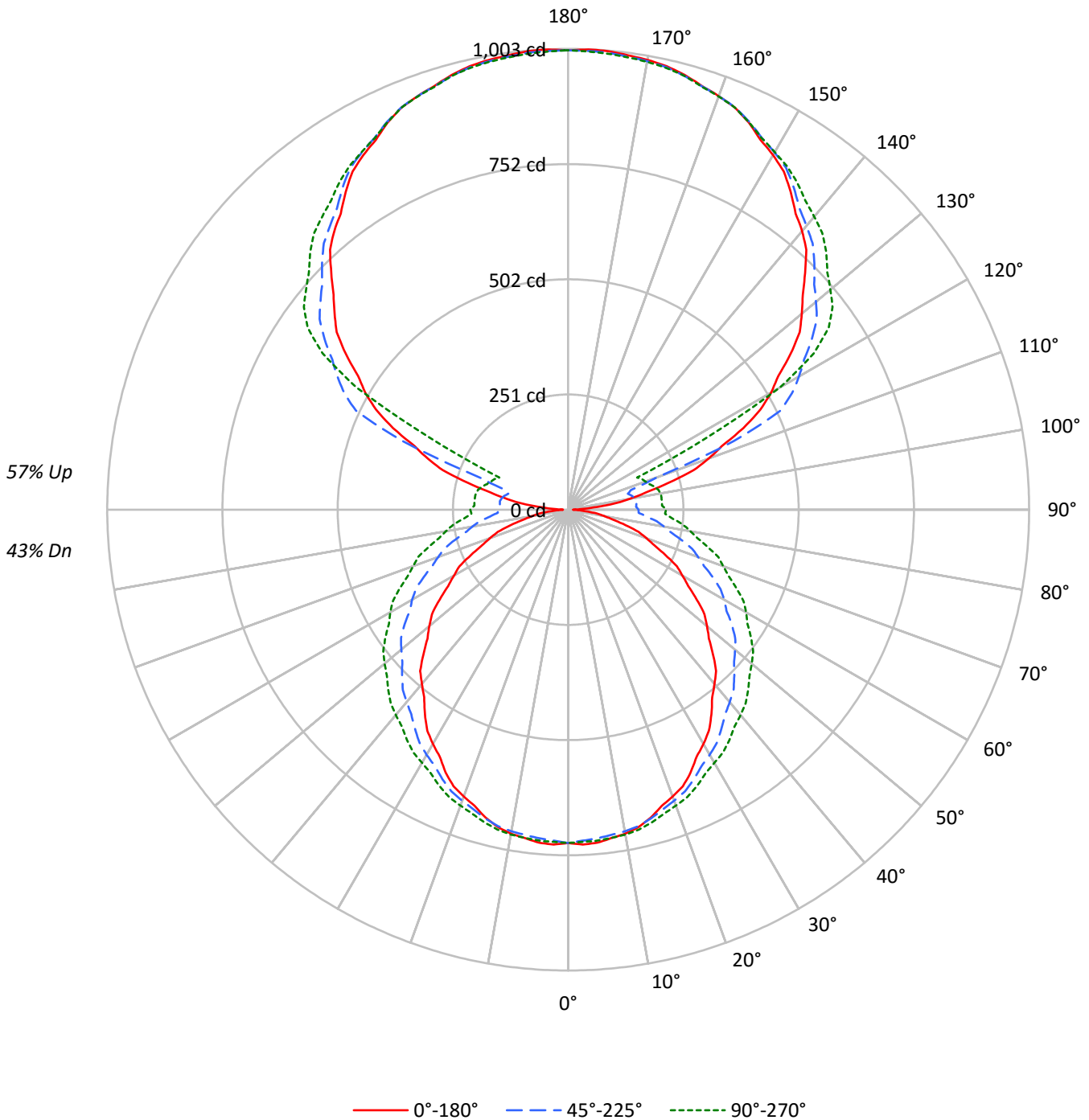
Input Watts (W): 60.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331405-927

CATALOG NUMBER: S122DIP-S865D925U927-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331405-927

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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	106	106	106	106	96	96	96	96	80	80	80	64	64	64	50	50	50	43
1	95	90	86	82	86	82	79	75	68	65	63	54	52	51	42	41	39	34
2	86	78	71	66	78	71	65	61	59	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	17	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11711	11711	11711
5°	11768	11274	11230
10°	11694	10940	10818
15°	11533	10587	10382
20°	11328	10209	9963
25°	11128	9845	9582
30°	10845	9471	9201
35°	10557	9109	8932
40°	10256	8801	8662
45°	9969	8526	8433
50°	9662	8276	8207
55°	9341	8008	7975
60°	8945	7730	7732
65°	8536	7405	7441
70°	8073	7053	7130
75°	7484	6710	6841
80°	6553	6361	6548
85°	5671	6056	6323



TEST NUMBER: P331405-927

CATALOG NUMBER: S122DIP-S865D925U927-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.7	1.2
10°-20°	197.1	3.5
20°-30°	298.7	5.2
30°-40°	363.8	6.4
40°-50°	391.3	6.9
50°-60°	380.0	6.7
60°-70°	331.8	5.8
70°-80°	255.5	4.5
80°-90°	173.9	3.1
90°-100°	151.5	2.7
100°-110°	208.6	3.7
110°-120°	383.9	6.7
120°-130°	571.5	10.0
130°-140°	587.3	10.3
140°-150°	535.8	9.4
150°-160°	428.9	7.5
160°-170°	276.4	4.8
170°-180°	95.1	1.7
0°-30°	564.5	9.9
0°-40°	928.2	16.3
0°-60°	1699.6	29.8
0°-90°	2460.8	43.2
90°-120°	743.9	13.1
90°-150°	2438.5	42.8
90°-180°	3239.0	56.8
0°-180°	5699.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	725	725	725	725	725	
5°	727	724	718	724	723	69
15°	694	696	696	705	704	195
25°	631	638	648	660	663	290
35°	543	562	581	604	612	340
45°	446	475	511	542	554	344
55°	342	380	434	471	486	305
65°	233	286	347	388	404	232
75°	129	189	255	299	314	137
85°	38	103	170	213	229	41
90°	11	80	153	197	213	9
95°	56	83	149	191	204	64
105°	225	267	134	178	194	241
115°	420	446	510	221	166	413
125°	590	602	647	679	692	527
135°	729	741	758	786	794	563
145°	844	844	856	867	869	528
155°	930	924	932	936	930	428
165°	980	976	978	982	978	277
175°	1002	997	998	1003	996	95
180°	1000	1000	1000	1000	1000	



TEST NUMBER: P331405-927

CATALOG NUMBER: S122DIP-S865D925U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	729.5	729.0	728.4	727.9	727.3	726.4	725.0	723.7	722.4	721.1	722.1
5°	727.4	726.7	726.0	725.3	724.6	723.6	722.2	720.7	719.4	718.0	719.4
7.5°	720.9	720.4	719.9	719.5	719.1	718.3	717.2	716.1	715.0	714.0	715.7
10°	715.9	715.4	714.9	714.5	714.0	713.4	712.7	712.0	711.3	710.6	712.5
12.5°	707.4	707.6	707.7	707.7	707.8	707.6	707.1	706.5	706.1	705.5	707.4
15°	693.8	694.3	694.7	695.2	695.6	695.9	695.9	695.9	695.9	695.9	698.0
17.5°	676.1	677.1	678.1	679.1	680.0	680.9	681.7	682.4	683.2	683.9	686.1
20°	664.3	665.5	666.7	667.9	669.0	670.1	671.0	671.9	672.9	673.8	676.4
22.5°	651.7	653.1	654.4	655.8	657.1	658.5	659.8	661.1	662.4	663.7	666.3
25°	630.7	632.3	634.0	635.6	637.2	639.1	641.2	643.3	645.4	647.5	650.3
27.5°	605.5	608.2	610.8	613.5	616.2	618.7	621.2	623.7	626.1	628.6	632.2
30°	588.7	591.7	594.8	597.8	600.8	603.9	606.9	609.9	613.0	616.0	619.7
32.5°	570.1	573.5	576.9	580.4	583.8	587.3	590.9	594.5	598.1	601.7	606.0
35°	543.4	547.4	551.4	555.4	559.4	563.6	568.0	572.4	576.9	581.3	586.5
37.5°	514.4	519.0	523.6	528.1	532.7	537.9	543.7	549.5	555.2	560.9	566.6
40°	495.1	500.3	505.4	510.6	515.6	521.4	527.7	534.0	540.3	546.6	552.7
42.5°	476.6	481.7	486.9	492.0	497.2	503.4	510.6	517.8	525.1	532.3	538.9
45°	445.7	452.0	458.3	464.6	471.0	478.2	486.3	494.6	502.7	510.9	518.1
47.5°	415.2	422.1	429.0	435.9	442.7	450.9	460.5	470.1	479.7	489.3	496.8
50°	394.2	401.4	408.7	415.9	423.2	432.1	442.5	453.0	463.6	474.1	482.0
52.5°	374.0	381.6	389.3	396.9	404.5	413.8	424.9	435.9	447.0	458.1	466.2
55°	341.7	350.1	358.5	366.9	375.3	385.6	397.7	409.9	422.0	434.1	442.5
57.5°	309.7	319.2	328.7	338.1	347.6	358.5	370.9	383.3	395.7	408.1	417.2
60°	287.0	297.0	307.0	317.1	327.2	338.8	352.1	365.4	378.7	392.1	401.0
62.5°	266.8	277.2	287.6	298.0	308.5	320.4	333.7	347.0	360.3	373.6	383.0
65°	233.4	244.8	256.3	267.7	279.2	291.8	305.5	319.3	333.1	346.9	356.5
67.5°	202.6	214.6	226.6	238.5	250.5	263.6	277.7	291.8	305.9	320.0	329.6
70°	180.8	193.0	205.1	217.2	229.4	242.7	257.2	271.6	286.1	300.6	310.7
72.5°	160.7	173.2	185.7	198.2	210.7	224.3	239.0	253.7	268.3	283.0	292.9
75°	129.3	142.4	155.4	168.6	181.6	195.7	210.6	225.5	240.5	255.4	265.5
77.5°	99.0	112.7	126.4	140.1	153.8	168.2	183.4	198.6	213.7	228.9	238.9
80°	78.8	93.1	107.3	121.6	135.9	150.5	165.7	180.9	196.1	211.3	221.1
82.5°	62.0	76.0	90.2	104.2	118.3	133.0	148.4	163.7	179.1	194.5	204.3
85°	37.9	52.4	66.8	81.3	95.8	110.5	125.4	140.4	155.3	170.3	180.1
87.5°	20.8	35.0	49.3	63.6	77.9	92.6	107.8	123.0	138.2	153.4	163.1
90°	11.2	26.5	41.9	57.2	72.5	88.2	104.5	120.7	137.0	153.2	163.3
92.5°	24.3	36.8	49.2	61.6	74.1	87.9	102.9	117.9	132.9	148.0	157.6
95°	55.5	61.1	66.8	72.5	78.1	88.6	103.7	118.8	134.0	149.1	158.8
97.5°	100.7	95.5	90.3	85.2	79.9	85.4	101.4	117.5	133.6	149.6	158.9
100°	135.4	122.0	108.7	95.3	81.9	83.1	98.9	114.7	130.6	146.4	156.3
102.5°	172.8	176.0	179.3	182.4	185.7	182.3	172.1	161.9	151.8	141.6	151.8
105°	225.2	236.8	248.4	260.0	271.6	261.5	229.7	198.0	166.3	134.5	144.5
107.5°	286.2	295.5	304.8	314.1	323.4	307.6	266.6	225.6	184.6	143.5	149.6
110°	324.7	332.8	340.8	348.9	356.9	343.4	308.4	273.4	238.4	203.4	194.7



TEST NUMBER: P331405-927

CATALOG NUMBER: S122DIP-S865D925U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	361.8	368.7	375.6	382.5	389.4	392.6	392.0	391.4	390.8	390.2	339.1
115°	420.3	425.5	430.8	436.1	441.4	451.3	465.9	480.4	495.0	509.5	442.0
117.5°	471.4	476.1	480.9	485.6	490.4	499.0	511.4	523.9	536.4	548.9	537.8
120°	509.6	512.9	516.3	519.7	523.0	530.8	543.0	555.2	567.5	579.7	588.2
122.5°	542.0	544.9	547.9	550.7	553.7	561.1	573.1	584.9	596.9	608.8	616.3
125°	590.3	592.4	594.5	596.6	598.7	605.0	615.5	626.1	636.6	647.1	654.5
127.5°	635.0	637.1	639.2	641.3	643.3	648.6	656.9	665.2	673.4	681.8	689.2
130°	663.4	665.7	668.0	670.4	672.7	677.2	683.9	690.6	697.3	703.9	711.3
132.5°	692.3	694.3	696.2	698.2	700.1	703.9	709.4	715.0	720.6	726.1	733.0
135°	728.9	731.4	734.0	736.6	739.2	742.4	746.2	750.0	753.7	757.5	764.0
137.5°	766.9	768.7	770.5	772.2	774.0	776.2	778.9	781.5	784.2	786.9	792.7
140°	791.9	792.9	793.9	795.0	796.1	797.6	799.9	802.2	804.4	806.6	811.8
142.5°	812.7	813.6	814.5	815.5	816.3	817.8	820.0	822.1	824.3	826.3	830.7
145°	844.3	844.1	844.0	843.8	843.7	844.9	847.7	850.4	853.2	855.9	858.4
147.5°	872.8	872.2	871.6	871.0	870.4	871.4	874.1	876.9	879.6	882.3	883.3
150°	891.4	890.3	889.1	888.0	886.8	887.6	890.2	892.7	895.3	897.9	898.8
152.5°	907.0	905.7	904.4	903.2	902.0	902.5	905.0	907.4	909.9	912.4	913.3
155°	929.7	928.3	926.8	925.3	923.9	924.2	926.1	928.0	929.9	931.8	932.8
157.5°	947.5	946.3	945.1	943.8	942.6	942.7	944.0	945.4	946.7	948.1	949.2
160°	957.9	957.0	956.0	955.0	954.0	954.0	955.0	956.0	957.0	957.9	958.9
162.5°	967.2	966.2	965.3	964.2	963.3	963.2	964.1	964.9	965.7	966.6	967.7
165°	979.6	978.7	977.7	976.7	975.7	975.5	976.0	976.4	977.0	977.5	978.6
167.5°	988.9	987.9	987.0	986.0	985.0	984.8	985.2	985.6	986.1	986.6	987.7
170°	994.1	993.1	992.1	991.2	990.2	989.9	990.2	990.5	990.9	991.2	992.3
172.5°	997.5	996.6	995.6	994.7	993.7	993.4	993.7	994.0	994.3	994.7	995.8
175°	1002.0	1000.9	999.8	998.6	997.5	997.1	997.4	997.8	998.1	998.4	999.6
177.5°	1002.7	1001.9	1001.0	1000.1	999.2	998.8	998.9	999.0	999.2	999.3	1000.2
180°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9



TEST NUMBER: P331405-927

CATALOG NUMBER: S122DIP-S865D925U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	722.9	723.9	724.8	725.2	724.8	724.4	724.0	723.7
5°	720.7	722.2	723.6	724.1	723.9	723.7	723.4	723.2
7.5°	717.3	719.0	720.7	721.4	721.2	721.0	720.7	720.5
10°	714.3	716.2	718.1	718.9	718.7	718.4	718.2	718.0
12.5°	709.3	711.1	713.0	713.8	713.6	713.4	713.1	712.9
15°	700.1	702.2	704.3	705.2	705.0	704.7	704.5	704.3
17.5°	688.3	690.5	692.7	693.8	693.8	693.8	693.8	693.8
20°	679.0	681.5	684.0	685.4	685.4	685.4	685.4	685.4
22.5°	668.8	671.5	674.0	675.5	675.8	676.2	676.6	677.0
25°	653.2	655.9	658.8	660.5	661.2	661.9	662.6	663.3
27.5°	635.7	639.3	642.8	644.8	645.4	645.9	646.4	646.9
30°	623.4	627.2	631.0	633.2	633.8	634.5	635.3	636.0
32.5°	610.3	614.6	618.9	621.7	622.9	624.2	625.4	626.7
35°	591.6	596.8	601.9	605.2	606.9	608.6	610.1	611.8
37.5°	572.3	578.0	583.7	587.4	589.1	590.9	592.6	594.4
40°	558.7	564.8	570.9	575.0	577.1	579.2	581.3	583.4
42.5°	545.6	552.2	558.9	563.2	565.3	567.4	569.5	571.6
45°	525.4	532.6	539.9	544.6	547.0	549.3	551.7	554.0
47.5°	504.4	511.9	519.5	524.6	527.1	529.7	532.3	534.9
50°	490.0	497.9	505.9	511.1	513.7	516.3	518.8	521.4
52.5°	474.4	482.5	490.6	496.1	498.8	501.6	504.3	507.1
55°	451.0	459.4	467.8	473.5	476.5	479.6	482.6	485.6
57.5°	426.2	435.2	444.3	450.4	453.4	456.5	459.6	462.7
60°	409.9	418.7	427.6	433.6	437.0	440.2	443.5	446.8
62.5°	392.4	401.9	411.3	417.6	420.6	423.7	426.8	429.9
65°	366.1	375.7	385.2	391.5	394.5	397.6	400.6	403.6
67.5°	339.3	349.0	358.7	365.1	368.3	371.5	374.6	377.8
70°	320.8	330.7	340.8	347.2	350.1	352.8	355.7	358.5
72.5°	302.7	312.5	322.4	329.0	332.4	335.7	339.1	342.5
75°	275.5	285.6	295.6	302.1	305.2	308.2	311.2	314.3
77.5°	249.0	259.0	268.9	275.6	278.8	282.1	285.4	288.7
80°	230.9	240.7	250.6	257.1	260.3	263.6	266.9	270.1
82.5°	214.1	223.9	233.7	240.2	243.3	246.3	249.4	252.5
85°	189.9	199.7	209.5	216.1	219.4	222.6	225.9	229.2
87.5°	172.8	182.5	192.2	198.6	201.6	204.7	207.7	210.8
90°	173.5	183.7	193.8	200.4	203.6	206.7	209.8	212.9
92.5°	167.2	176.7	186.2	192.6	195.6	198.5	201.5	204.5
95°	168.5	178.2	187.8	194.0	196.6	199.2	201.9	204.5
97.5°	168.2	177.4	186.8	192.9	195.8	198.8	201.7	204.7
100°	166.2	176.2	186.1	192.5	195.4	198.3	201.1	204.1
102.5°	161.9	172.0	182.1	188.7	191.7	194.7	197.8	200.8
105°	154.4	164.4	174.3	180.9	184.1	187.4	190.5	193.8
107.5°	155.7	161.7	167.8	172.4	175.6	178.8	182.0	185.2
110°	186.2	177.5	169.0	166.3	169.4	172.7	175.9	179.1





TEST NUMBER: P331405-927

CATALOG NUMBER: S122DIP-S865D925U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	287.9	236.7	185.5	161.4	164.5	167.6	170.7	173.8
115°	374.6	307.2	239.7	201.5	192.5	183.5	174.5	165.5
117.5°	526.7	515.6	504.5	481.2	445.5	409.8	374.1	338.5
120°	596.7	605.1	613.6	608.2	589.1	570.0	550.9	531.7
122.5°	623.8	631.4	638.9	641.6	639.6	637.6	635.6	633.6
125°	661.9	669.4	676.8	681.8	684.4	687.0	689.6	692.2
127.5°	696.6	704.1	711.5	716.3	718.4	720.6	722.8	724.9
130°	718.7	726.0	733.4	738.0	739.7	741.4	743.1	744.8
132.5°	740.0	746.9	753.8	758.1	759.9	761.5	763.3	764.9
135°	770.5	777.1	783.5	787.6	789.1	790.7	792.2	793.8
137.5°	798.6	804.5	810.3	813.8	814.8	815.9	816.9	817.9
140°	817.0	822.2	827.4	830.3	830.8	831.5	832.0	832.7
142.5°	835.0	839.3	843.6	846.0	846.4	846.8	847.2	847.6
145°	860.9	863.5	866.0	867.4	867.8	868.2	868.5	868.9
147.5°	884.3	885.3	886.3	886.8	886.7	886.5	886.5	886.3
150°	899.8	900.8	901.7	901.8	901.0	900.2	899.4	898.6
152.5°	914.3	915.2	916.2	916.2	915.0	914.0	913.0	911.9
155°	933.8	934.8	935.7	935.6	934.3	933.0	931.7	930.4
157.5°	950.2	951.3	952.4	952.4	951.1	949.8	948.6	947.4
160°	959.8	960.8	961.8	961.7	960.5	959.4	958.3	957.2
162.5°	968.8	969.9	971.0	970.8	969.5	968.0	966.7	965.3
165°	979.7	980.8	981.9	981.9	980.8	979.7	978.6	977.5
167.5°	988.8	989.9	991.1	990.9	989.4	988.0	986.6	985.1
170°	993.5	994.6	995.7	995.5	994.1	992.6	991.2	989.8
172.5°	996.9	998.1	999.2	999.0	997.5	996.1	994.7	993.2
175°	1000.7	1001.8	1002.9	1002.7	1001.1	999.5	997.8	996.2
177.5°	1001.1	1002.0	1002.9	1002.7	1001.6	1000.4	999.3	998.1
180°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9

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