

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: P332032-927

Luminaire Tested: **S123DIP-S1000D1025U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332032-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D1025U927-4F0-1E-UDD-D4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6268.0 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

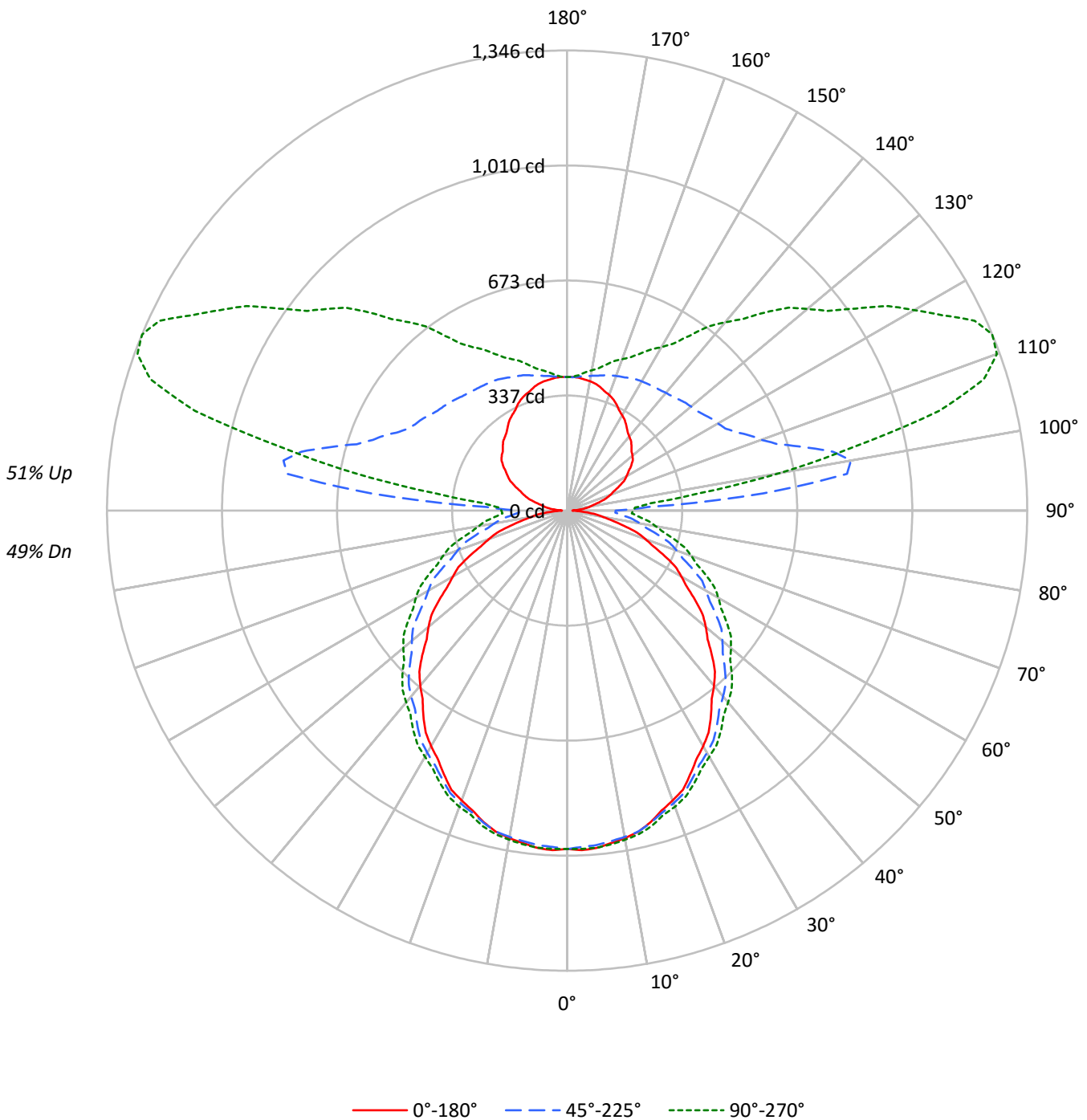
Input Watts (W): 60.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	96	92	87	84	89	84	81	77	71	68	66	58	56	55	47	46	44	39
2	87	79	73	67	80	73	68	63	61	57	54	51	48	45	41	38	37	32
3	79	70	62	56	73	64	57	52	54	49	45	44	41	37	36	33	31	26
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22
5	66	54	46	40	61	50	43	37	43	37	32	35	31	27	28	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	18	15	13	11

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

	0°	45°	90°
0°	10654	10654	10654
5°	10687	10385	10392
10°	10592	10146	10095
15°	10455	9874	9773
20°	10260	9565	9418
25°	10019	9208	9043
30°	9772	8886	8665
35°	9496	8547	8362
40°	9231	8238	8039
45°	8938	7941	7779
50°	8650	7648	7494
55°	8332	7348	7238
60°	8020	7044	6974
65°	7702	6718	6661
70°	7222	6352	6341
75°	6614	5933	6016
80°	5915	5522	5642
85°	5267	5241	5428



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.8	1.5
10°-20°	267.5	4.3
20°-30°	400.0	6.4
30°-40°	477.7	7.6
40°-50°	499.9	8.0
50°-60°	469.1	7.5
60°-70°	391.8	6.3
70°-80°	280.3	4.5
80°-90°	170.2	2.7
90°-100°	322.3	5.1
100°-110°	692.6	11.1
110°-120°	657.0	10.5
120°-130°	512.4	8.2
130°-140°	394.0	6.3
140°-150°	287.1	4.6
150°-160°	198.1	3.2
160°-170°	116.4	1.9
170°-180°	37.9	0.6
0°-30°	761.3	12.1
0°-40°	1239.1	19.8
0°-60°	2208.0	35.2
0°-90°	3050.2	48.7
90°-120°	1671.9	26.7
90°-150°	2865.4	45.7
90°-180°	3218.0	51.3
0°-180°	6268.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	991	988	982	990	990	94
15°	943	946	946	956	955	266
25°	852	862	866	879	880	392
35°	733	750	764	780	785	458
45°	599	625	652	672	681	462
55°	457	493	532	560	569	409
65°	316	358	405	436	448	312
75°	171	222	276	310	325	183
85°	53	107	164	199	211	55
90°	16	76	142	179	192	11
95°	39	142	576	276	243	38
105°	100	171	717	1222	1127	106
115°	168	222	543	1148	1315	166
125°	229	271	488	879	1029	203
135°	266	317	460	709	820	206
145°	302	345	442	564	624	189
155°	342	369	428	486	507	157
165°	374	385	410	434	442	105
175°	390	390	393	398	398	37
180°	391	391	391	391	391	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	994.1	993.6	992.9	992.4	991.8	990.7	989.2	987.7	986.1	984.6	986.1
5°	990.9	990.4	989.9	989.4	989.0	988.0	986.6	985.1	983.7	982.2	984.1
7.5°	981.1	981.3	981.4	981.4	981.5	980.9	979.5	978.1	976.7	975.3	977.7
10°	972.6	973.0	973.5	974.0	974.5	974.1	972.9	971.7	970.5	969.3	971.7
12.5°	962.2	962.8	963.5	964.2	964.9	964.8	964.0	963.1	962.3	961.6	963.8
15°	943.4	944.1	944.8	945.5	946.3	946.5	946.3	946.0	945.8	945.5	948.0
17.5°	919.7	921.1	922.6	924.0	925.4	926.1	926.1	925.9	925.8	925.7	927.9
20°	902.5	903.9	905.3	906.7	908.2	909.2	909.7	910.1	910.6	911.1	913.2
22.5°	884.3	885.7	887.2	888.7	890.1	891.1	891.8	892.5	893.2	893.8	896.5
25°	851.8	854.1	856.6	859.0	861.3	862.9	863.6	864.4	865.1	865.8	868.9
27.5°	819.0	821.7	824.4	827.2	829.9	832.0	833.6	835.1	836.6	838.2	840.9
30°	795.7	798.8	801.9	805.0	808.2	810.6	812.6	814.5	816.4	818.3	821.3
32.5°	769.8	773.3	776.8	780.3	783.8	786.8	789.3	791.8	794.3	796.8	799.9
35°	733.2	737.0	740.8	744.7	748.5	751.9	755.1	758.2	761.3	764.5	768.0
37.5°	694.3	698.7	703.0	707.3	711.6	715.7	719.5	723.3	727.1	731.0	735.1
40°	668.4	672.8	677.1	681.4	685.7	690.3	695.1	699.9	704.6	709.5	713.5
42.5°	640.0	645.3	650.5	655.8	661.1	666.2	671.2	676.2	681.2	686.2	690.6
45°	599.4	605.2	611.0	616.7	622.5	628.4	634.3	640.3	646.3	652.3	656.9
47.5°	557.0	563.5	570.1	576.6	583.0	589.8	596.6	603.5	610.3	617.2	622.3
50°	529.4	536.1	542.8	549.5	556.2	563.3	570.7	578.1	585.6	593.0	598.5
52.5°	500.0	507.2	514.3	521.3	528.5	536.1	544.3	552.5	560.6	568.9	574.6
55°	457.2	465.1	472.9	480.9	488.8	497.0	505.6	514.3	522.9	531.6	538.1
57.5°	415.3	423.6	431.8	440.1	448.3	457.2	466.6	476.0	485.4	494.9	501.4
60°	386.0	394.6	403.2	411.9	420.5	429.7	439.5	449.4	459.2	469.1	475.7
62.5°	358.4	367.2	376.0	384.8	393.6	403.3	413.7	424.1	434.4	444.9	451.5
65°	315.9	325.3	334.6	344.0	353.3	363.2	373.8	384.3	394.8	405.4	412.6
67.5°	272.7	282.7	292.6	302.5	312.4	322.8	333.5	344.3	355.0	365.8	373.6
70°	242.6	252.9	263.2	273.5	283.8	294.7	306.2	317.7	329.2	340.7	348.4
72.5°	215.0	225.3	235.6	245.9	256.2	267.3	279.2	291.0	302.9	314.8	322.7
75°	171.4	182.7	193.9	205.3	216.5	228.1	240.1	252.1	264.0	276.0	283.9
77.5°	133.5	144.8	156.2	167.5	178.9	190.6	202.7	214.8	226.9	238.9	247.2
80°	106.7	118.5	130.2	142.0	153.7	165.8	178.2	190.8	203.2	215.6	223.8
82.5°	83.4	95.4	107.3	119.2	131.2	143.5	156.1	168.7	181.4	194.1	202.2
85°	52.8	64.8	76.8	88.8	100.8	113.1	125.8	138.5	151.1	163.9	172.1
87.5°	29.0	41.3	53.5	65.9	78.1	90.5	103.2	115.9	128.7	141.3	149.3
90°	15.6	28.9	42.2	56.3	69.7	83.3	97.8	112.4	127.0	141.6	148.9
92.5°	23.0	38.3	55.5	72.2	89.5	112.5	145.3	191.3	236.7	236.5	214.6
95°	38.7	50.5	68.5	91.3	121.2	162.6	241.5	371.1	512.5	575.7	494.5
97.5°	56.4	65.7	80.9	101.0	129.7	172.9	248.3	392.4	619.8	825.7	883.6
100°	68.2	76.7	89.9	108.6	135.2	175.5	241.9	369.9	588.8	842.6	1005.4
102.5°	80.6	89.0	100.8	118.1	142.1	179.3	239.7	349.9	545.9	796.3	1006.3
105°	100.4	108.4	119.0	134.2	155.0	187.5	240.5	332.2	492.0	716.6	950.3
107.5°	120.3	127.5	137.0	151.2	170.2	200.3	247.6	325.0	455.3	645.5	858.0
110°	134.6	141.2	149.5	162.6	180.3	209.4	254.5	324.2	439.7	605.1	800.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.5	154.4	161.9	174.1	191.2	219.0	261.3	326.1	428.6	575.9	748.8
115°	167.5	173.6	181.2	191.9	208.3	235.4	274.0	330.9	420.2	543.4	686.0
117.5°	187.4	192.7	198.5	207.6	224.3	249.1	286.8	338.0	414.5	520.7	644.7
120°	200.4	204.0	209.1	218.2	234.5	258.8	295.2	344.2	413.0	509.5	622.5
122.5°	212.5	215.4	220.0	229.2	244.2	269.3	304.7	350.1	413.4	500.7	603.5
125°	228.6	230.2	234.9	243.6	258.6	283.4	318.1	359.8	414.2	488.4	578.1
127.5°	241.7	243.8	249.5	258.1	274.4	298.6	331.1	368.1	416.5	479.0	554.8
130°	249.9	252.1	259.0	268.2	284.6	308.2	339.1	373.9	418.3	472.9	541.5
132.5°	255.4	258.3	266.1	277.4	294.0	316.6	345.9	379.1	418.7	467.9	528.7
135°	266.3	269.2	277.7	289.3	305.6	328.2	355.3	384.8	419.1	460.5	511.4
137.5°	276.5	279.6	288.0	300.4	316.7	337.1	362.1	389.3	418.9	453.6	496.5
140°	282.6	286.5	294.5	307.1	322.9	343.0	366.7	391.1	418.7	449.5	487.1
142.5°	290.2	293.3	301.7	312.8	328.4	347.0	369.4	392.6	417.7	444.8	478.2
145°	302.4	304.5	311.3	323.0	336.2	354.3	374.8	396.2	418.3	442.0	469.2
147.5°	313.6	315.1	322.0	332.2	345.2	360.8	379.5	398.7	418.3	439.0	461.3
150°	321.9	322.7	328.9	339.2	350.3	364.6	382.7	399.3	418.3	436.5	456.2
152.5°	330.0	330.2	336.5	345.5	355.4	369.0	384.6	400.6	416.4	433.3	451.2
155°	342.4	342.4	347.1	355.1	363.8	374.8	388.2	400.9	414.3	427.8	443.6
157.5°	352.2	352.8	356.6	363.6	371.0	379.5	390.3	401.7	411.7	422.9	435.1
160°	359.8	359.8	363.0	369.2	374.8	382.7	392.2	401.7	410.4	419.1	429.4
162.5°	365.5	365.5	368.0	373.0	378.0	384.6	392.8	401.1	407.9	415.3	423.7
165°	374.0	373.2	374.8	378.7	381.9	387.5	393.8	399.3	404.1	409.6	415.9
167.5°	380.5	379.5	380.3	383.3	385.6	389.0	393.6	398.1	400.3	403.9	408.5
170°	384.3	382.7	383.5	385.9	387.5	389.0	393.0	396.2	397.8	400.1	404.1
172.5°	386.8	385.9	386.0	387.8	388.7	389.7	393.0	395.5	395.9	397.0	399.7
175°	389.8	389.0	388.2	389.8	389.8	390.6	392.2	393.8	393.0	393.0	394.6
177.5°	391.3	390.6	390.0	390.6	390.6	390.6	391.3	392.5	391.3	390.6	391.3
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	987.7	989.2	990.7	991.4	991.2	991.0	990.9	990.6
5°	986.0	988.0	989.9	990.7	990.5	990.2	990.0	989.8
7.5°	980.1	982.5	984.9	986.0	985.7	985.4	985.1	984.8
10°	974.1	976.4	978.9	979.9	979.4	978.9	978.4	977.9
12.5°	965.9	968.1	970.3	971.2	970.7	970.3	969.8	969.3
15°	950.4	952.8	955.1	956.2	956.0	955.8	955.5	955.3
17.5°	930.0	932.2	934.4	935.3	934.9	934.6	934.3	933.9
20°	915.4	917.5	919.7	920.9	921.1	921.4	921.6	921.9
22.5°	899.3	902.0	904.8	906.0	905.9	905.8	905.6	905.5
25°	872.0	875.1	878.2	879.8	879.8	879.8	879.8	879.8
27.5°	843.5	846.2	848.9	850.3	850.6	850.7	851.0	851.1
30°	824.1	827.0	829.8	831.3	831.3	831.3	831.3	831.3
32.5°	803.0	806.0	809.1	810.9	811.4	812.0	812.6	813.2
35°	771.6	775.2	778.8	781.1	782.0	783.0	783.9	784.9
37.5°	739.2	743.2	747.3	749.7	750.5	751.2	752.0	752.8
40°	717.6	721.7	725.7	728.3	729.2	730.2	731.1	732.1
42.5°	695.1	699.5	704.0	706.9	708.2	709.6	710.9	712.3
45°	661.4	666.0	670.5	673.8	675.7	677.6	679.5	681.4
47.5°	627.4	632.6	637.6	641.0	642.5	644.0	645.4	646.9
50°	604.0	609.5	615.1	618.6	620.4	622.0	623.7	625.3
52.5°	580.3	586.0	591.7	595.6	597.6	599.7	601.7	603.8
55°	544.5	551.0	557.5	561.6	563.6	565.5	567.4	569.3
57.5°	507.9	514.4	520.9	525.4	527.6	529.8	532.1	534.3
60°	482.4	489.2	495.8	500.5	503.2	505.8	508.4	511.0
62.5°	458.3	465.0	471.7	476.3	478.7	481.2	483.6	486.1
65°	419.8	427.0	434.1	438.9	441.3	443.7	446.2	448.5
67.5°	381.4	389.3	397.1	402.1	404.1	406.2	408.1	410.1
70°	356.0	363.7	371.4	376.4	378.8	381.2	383.6	386.0
72.5°	330.6	338.4	346.3	351.4	353.8	356.2	358.6	361.0
75°	291.8	299.8	307.6	313.1	315.9	318.8	321.6	324.6
77.5°	255.6	264.0	272.3	277.6	279.7	281.9	284.2	286.4
80°	232.0	240.1	248.2	253.5	255.9	258.3	260.7	263.1
82.5°	210.4	218.5	226.6	232.0	234.3	236.7	239.1	241.5
85°	180.1	188.3	196.5	201.8	204.1	206.5	208.9	211.4
87.5°	157.6	165.9	174.2	179.8	182.0	184.6	187.1	189.4
90°	157.9	166.8	175.8	182.6	184.3	187.4	190.6	192.2
92.5°	197.4	191.6	193.4	194.4	195.2	195.0	198.0	198.8
95°	406.2	321.9	287.5	264.0	251.3	246.6	243.4	242.6
97.5°	822.8	688.8	593.9	504.1	448.1	414.9	396.0	391.6
100°	1040.0	982.9	897.3	789.7	712.3	656.9	628.4	631.6
102.5°	1108.4	1113.2	1066.0	999.3	939.6	896.3	872.9	857.1
105°	1122.2	1208.0	1229.8	1213.6	1179.4	1151.5	1128.4	1126.6
107.5°	1051.8	1186.6	1262.3	1294.7	1297.5	1289.5	1283.0	1277.9
110°	987.6	1139.4	1245.2	1304.6	1328.7	1337.0	1337.3	1337.6





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CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	923.3	1077.9	1195.6	1270.9	1313.5	1335.2	1343.3	1345.8
115°	838.0	981.4	1103.4	1193.4	1254.6	1291.3	1309.1	1314.9
117.5°	774.0	898.4	1008.4	1099.7	1163.4	1205.1	1229.8	1237.1
120°	739.5	851.8	952.2	1035.6	1099.8	1145.7	1166.4	1172.8
122.5°	711.4	813.3	906.6	984.3	1041.5	1083.0	1105.6	1113.3
125°	673.2	764.5	845.3	912.0	964.2	1000.8	1022.2	1029.4
127.5°	639.0	720.6	793.8	854.5	901.3	932.6	952.1	958.8
130°	617.2	692.9	761.5	818.2	861.6	891.5	909.6	917.3
132.5°	596.7	666.5	730.5	784.7	825.7	855.8	872.2	878.2
135°	568.8	629.2	684.9	732.8	772.7	797.6	813.0	819.8
137.5°	543.0	592.9	641.0	682.5	716.3	741.5	754.7	759.5
140°	527.8	571.8	613.3	649.7	681.0	704.3	718.2	718.6
142.5°	512.9	550.7	586.8	618.6	645.4	666.2	678.8	679.2
145°	496.5	524.5	551.7	576.1	596.8	614.3	621.6	624.2
147.5°	483.2	504.5	525.5	542.5	558.3	570.5	577.3	578.8
150°	474.4	492.7	509.2	524.5	536.9	546.1	551.3	551.8
152.5°	467.5	483.2	497.9	510.4	519.8	528.0	530.9	531.0
155°	457.0	469.7	481.6	491.1	498.2	504.5	506.0	506.8
157.5°	446.0	456.5	465.7	473.2	479.3	484.1	485.4	485.2
160°	439.7	448.4	456.2	461.8	467.3	472.1	472.1	471.3
162.5°	432.1	439.5	446.8	451.7	455.3	459.4	459.4	458.6
165°	422.2	427.0	432.5	436.5	439.7	442.8	442.0	442.0
167.5°	413.7	417.3	420.5	423.3	424.8	427.0	426.2	426.2
170°	408.1	410.4	413.5	415.1	415.9	417.5	416.7	416.7
172.5°	403.0	404.7	407.3	408.2	408.4	410.0	408.5	407.9
175°	396.2	397.0	398.5	398.5	398.5	399.3	398.5	397.8
177.5°	391.9	392.5	393.2	393.2	392.5	393.2	391.9	391.9
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6

(END OF REPORT)