

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: P332601-840

Luminaire Tested: **S124DIP-S795D810U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332601-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D810U840-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6538.5 lumens  
Efficiency: N/A  
Efficacy: 142.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

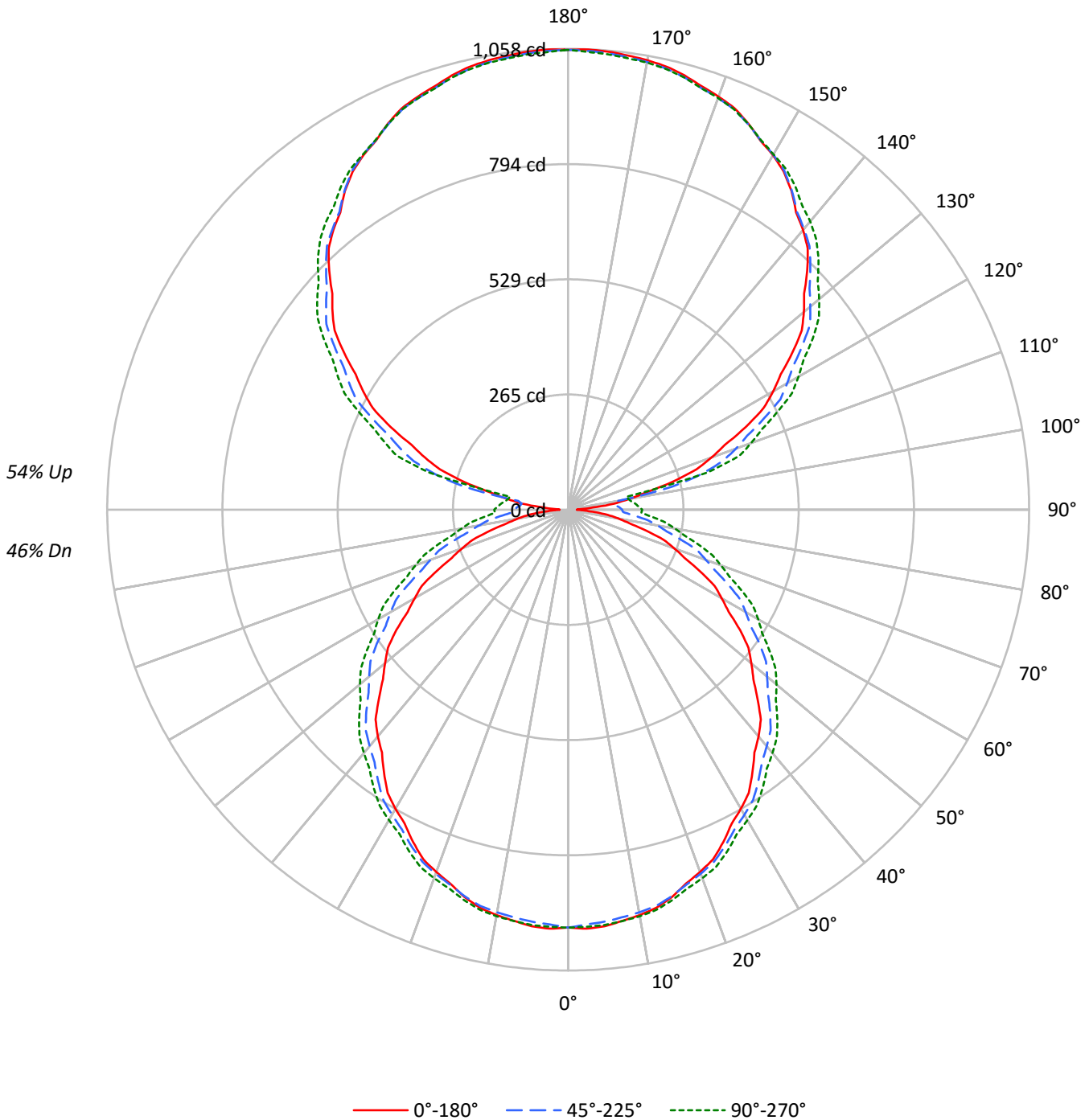
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332601-840

CATALOG NUMBER: S124DIP-S795D810U840-4F0-1E-UDD-D

**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	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

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

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	1.4
10°-20°	260.3	4.0
20°-30°	393.5	6.0
30°-40°	476.1	7.3
40°-50°	503.4	7.7
50°-60°	473.7	7.2
60°-70°	393.1	6.0
70°-80°	276.1	4.2
80°-90°	159.1	2.4
90°-100°	128.8	2.0
100°-110°	298.8	4.6
110°-120°	486.4	7.4
120°-130°	585.0	8.9
130°-140°	609.4	9.3
140°-150°	561.6	8.6
150°-160°	451.1	6.9
160°-170°	290.9	4.4
170°-180°	100.3	1.5
0°-30°	744.6	11.4
0°-40°	1220.8	18.7
0°-60°	2197.9	33.6
0°-90°	3026.1	46.3
90°-120°	914.0	14.0
90°-150°	2670.1	40.8
90°-180°	3512.0	53.7
0°-180°	6538.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	20	71	124	158	170	13
95°	57	68	111	143	155	67
105°	247	274	317	348	331	260
115°	450	463	496	520	529	443
125°	628	632	655	677	686	561
135°	776	776	786	804	813	598
145°	893	894	895	902	908	558
155°	978	979	977	980	978	451
165°	1032	1028	1028	1034	1027	292
175°	1056	1051	1052	1058	1049	100
180°	1056	1056	1056	1056	1056	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.3	42.4	52.5	62.6	72.8	83.2	93.9	104.6	115.4	126.1	133.3
90°	19.6	31.0	42.5	54.0	65.4	77.1	88.7	100.4	112.1	123.7	131.7
92.5°	26.3	34.9	43.6	52.4	61.1	71.3	82.9	94.6	106.2	118.0	125.7
95°	57.4	59.3	61.2	63.1	65.0	71.0	80.9	90.9	100.9	110.8	118.4
97.5°	104.9	115.4	125.9	136.4	146.9	147.2	137.3	127.4	117.5	107.7	114.0
100°	141.3	150.7	160.1	169.5	178.7	176.0	161.1	146.2	131.3	116.3	119.9
102.5°	183.0	190.8	198.5	206.3	214.0	220.9	226.8	232.8	238.7	244.7	218.8
105°	247.3	253.2	259.0	264.8	270.6	278.4	288.1	297.8	307.5	317.3	324.8
107.5°	308.9	313.4	317.7	322.1	326.6	333.7	343.2	352.7	362.2	371.8	378.5
110°	349.7	353.6	357.4	361.3	365.2	371.8	381.2	390.6	400.0	409.4	415.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	389.3	393.1	397.1	401.0	404.9	411.1	419.6	428.0	436.5	444.9	450.2
115°	450.2	452.9	455.6	458.3	460.9	466.0	473.4	480.9	488.4	495.8	501.4
117.5°	506.0	508.1	510.0	512.0	514.0	518.8	526.2	533.7	541.3	548.8	553.6
120°	543.1	544.5	545.9	547.3	548.8	552.8	559.6	566.3	573.1	579.9	584.9
122.5°	578.5	579.1	579.6	580.2	580.8	584.4	591.2	597.9	604.7	611.6	616.5
125°	628.0	628.5	629.0	629.4	630.0	633.0	638.6	644.2	649.8	655.4	660.6
127.5°	675.9	675.8	675.7	675.7	675.6	678.3	683.7	689.0	694.5	699.8	704.1
130°	706.0	705.9	705.8	705.8	705.7	707.8	712.2	716.6	720.9	725.3	729.7
132.5°	734.4	734.5	734.6	734.7	734.7	736.6	740.3	744.1	747.8	751.5	755.8
135°	776.0	775.8	775.6	775.5	775.3	776.4	778.7	781.1	783.5	785.9	790.0
137.5°	813.7	813.5	813.3	813.2	813.0	813.7	815.4	816.9	818.5	820.1	823.9
140°	838.3	838.5	838.6	838.7	838.8	839.1	839.7	840.3	840.9	841.5	845.2
142.5°	859.6	860.2	860.7	861.3	861.9	862.2	862.3	862.4	862.4	862.5	865.7
145°	893.3	893.6	893.9	894.2	894.4	894.6	894.6	894.6	894.6	894.6	896.3
147.5°	920.3	921.1	921.8	922.6	923.3	923.6	923.4	923.2	923.0	922.9	923.2
150°	939.9	940.4	940.8	941.3	941.8	941.9	941.7	941.6	941.4	941.2	941.2
152.5°	955.4	956.0	956.5	957.0	957.6	957.7	957.4	957.0	956.6	956.3	956.6
155°	978.4	978.5	978.7	978.9	979.1	978.9	978.4	977.8	977.2	976.7	977.4
157.5°	997.7	997.6	997.5	997.4	997.3	996.9	996.3	995.8	995.2	994.6	995.5
160°	1009.2	1008.6	1008.0	1007.5	1007.0	1006.6	1006.5	1006.3	1006.1	1005.9	1007.0
162.5°	1019.3	1018.5	1017.8	1017.2	1016.5	1016.1	1015.9	1015.8	1015.6	1015.4	1016.5
165°	1032.0	1031.2	1030.3	1029.4	1028.5	1028.0	1028.0	1028.0	1028.0	1028.0	1029.5
167.5°	1042.1	1041.2	1040.3	1039.4	1038.4	1037.9	1037.8	1037.7	1037.6	1037.5	1039.1
170°	1047.8	1046.7	1045.7	1044.6	1043.6	1043.2	1043.3	1043.5	1043.7	1043.9	1045.2
172.5°	1051.6	1050.6	1049.5	1048.4	1047.4	1046.9	1047.1	1047.3	1047.4	1047.6	1049.0
175°	1055.7	1054.6	1053.6	1052.6	1051.5	1051.1	1051.3	1051.4	1051.6	1051.8	1053.3
177.5°	1057.6	1056.6	1055.6	1054.6	1053.7	1053.3	1053.6	1053.9	1054.2	1054.4	1055.5
180°	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	140.4	147.5	154.7	159.4	161.5	163.7	165.8	168.0
90°	139.7	147.6	155.6	160.8	163.0	165.2	167.5	169.8
92.5°	133.5	141.3	149.1	153.9	155.9	157.9	159.9	161.9
95°	125.8	133.3	140.8	145.7	148.0	150.4	152.7	155.0
97.5°	120.4	126.7	133.1	137.3	139.6	141.8	144.0	146.3
100°	123.3	126.7	130.3	132.9	134.7	136.5	138.5	140.3
102.5°	192.9	166.9	141.1	129.1	130.9	132.8	134.7	136.6
105°	332.3	339.9	347.4	349.0	344.6	340.2	335.8	331.3
107.5°	385.1	391.7	398.4	402.9	405.3	407.7	410.1	412.4
110°	421.1	427.0	432.8	437.0	439.4	441.8	444.2	446.7





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CATALOG NUMBER: S124DIP-S795D810U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	455.4	460.6	465.9	469.8	472.3	474.9	477.5	480.1
115°	507.1	512.6	518.3	521.9	523.5	525.2	526.8	528.6
117.5°	558.6	563.4	568.4	571.7	573.5	575.4	577.2	579.1
120°	590.1	595.2	600.4	603.7	605.2	606.8	608.3	610.0
122.5°	621.5	626.5	631.5	634.7	636.0	637.4	638.7	640.2
125°	665.6	670.7	675.7	679.0	680.6	682.3	683.9	685.5
127.5°	708.2	712.5	716.6	719.4	720.9	722.5	723.9	725.4
130°	734.2	738.6	743.2	746.1	747.5	748.9	750.3	751.8
132.5°	760.0	764.4	768.6	771.4	772.6	774.0	775.3	776.6
135°	794.2	798.4	802.5	805.5	807.3	809.1	810.8	812.6
137.5°	827.8	831.7	835.6	838.0	839.1	840.2	841.3	842.4
140°	848.8	852.4	856.1	858.5	859.9	861.2	862.6	864.0
142.5°	868.7	871.8	874.9	877.1	878.1	879.1	880.1	881.2
145°	897.9	899.5	901.1	902.5	903.8	905.1	906.5	907.8
147.5°	923.5	923.9	924.2	924.8	925.7	926.8	927.7	928.6
150°	941.2	941.2	941.2	941.3	941.5	941.6	941.8	942.0
152.5°	956.9	957.3	957.5	957.6	957.5	957.4	957.3	957.2
155°	978.2	978.9	979.6	979.7	979.1	978.6	978.1	977.5
157.5°	996.4	997.3	998.3	998.3	997.3	996.4	995.5	994.6
160°	1008.0	1009.2	1010.2	1010.2	1009.2	1008.0	1007.0	1005.9
162.5°	1017.5	1018.5	1019.7	1019.6	1018.3	1017.1	1016.0	1014.8
165°	1030.9	1032.3	1033.7	1033.6	1032.0	1030.5	1028.9	1027.2
167.5°	1040.7	1042.2	1043.7	1043.6	1041.9	1040.1	1038.3	1036.6
170°	1046.6	1048.0	1049.5	1049.2	1047.5	1045.8	1044.0	1042.3
172.5°	1050.5	1051.9	1053.3	1053.0	1051.2	1049.2	1047.3	1045.4
175°	1054.9	1056.5	1058.0	1057.8	1055.7	1053.6	1051.5	1049.4
177.5°	1056.7	1057.8	1058.9	1058.6	1056.9	1055.3	1053.6	1051.9
180°	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7	1055.7

(END OF REPORT)