

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: P332790-935

Luminaire Tested: **S124DIW-S795D1050U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332790-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S795D1050U935-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

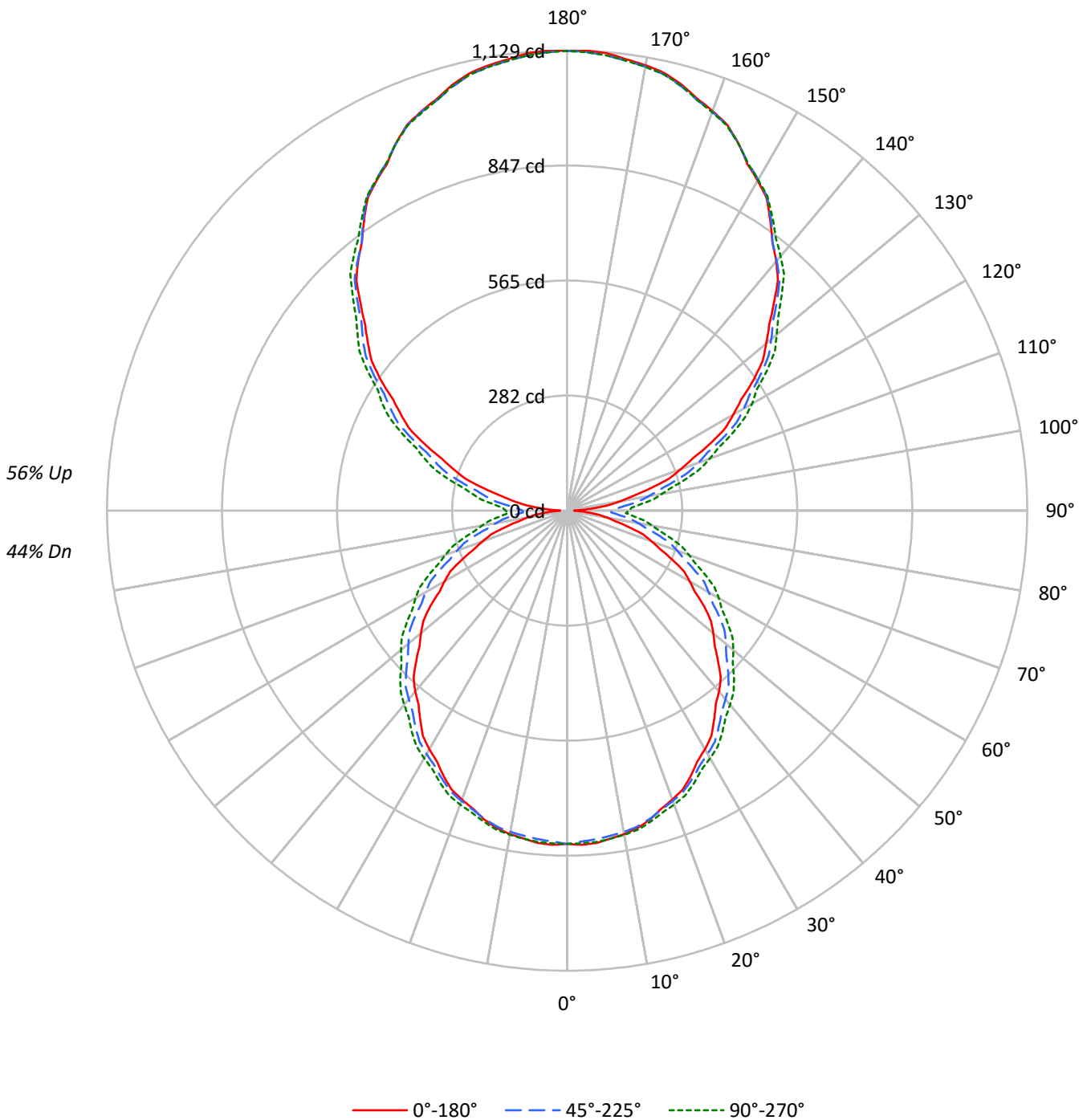
Lumens per Lamp: N/A  
Luminaire Lumens: 5920.2 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 52.6  
Input Voltage (V): 120  
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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	95	91	87	83	87	83	79	76	69	66	64	55	53	52	43	42	41	35
2	87	79	72	67	79	72	66	62	60	55	52	48	45	42	37	35	33	28
3	79	69	61	55	72	63	56	51	52	47	43	42	39	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	12	10

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

	0°	45°	90°
0°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.4	1.3
10°-20°	221.9	3.7
20°-30°	335.5	5.7
30°-40°	405.9	6.9
40°-50°	429.2	7.2
50°-60°	403.9	6.8
60°-70°	335.1	5.7
70°-80°	235.4	4.0
80°-90°	136.4	2.3
90°-100°	153.4	2.6
100°-110°	278.9	4.7
110°-120°	413.3	7.0
120°-130°	515.3	8.7
130°-140°	563.4	9.5
140°-150°	546.2	9.2
150°-160°	457.8	7.7
160°-170°	304.6	5.1
170°-180°	106.6	1.8
0°-30°	634.9	10.7
0°-40°	1040.8	17.6
0°-60°	1873.9	31.7
0°-90°	2580.8	43.6
90°-120°	845.5	14.3
90°-150°	2470.5	41.7
90°-180°	3339.0	56.4
0°-180°	5920.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	17	64	110	140	151	13
95°	64	103	146	172	182	68
105°	212	232	268	293	304	225
115°	386	395	422	440	446	381
125°	558	558	579	594	598	497
135°	716	721	728	740	744	554
145°	869	871	872	877	878	544
155°	994	994	994	997	994	457
165°	1082	1080	1078	1083	1080	305
175°	1126	1122	1121	1126	1121	107
180°	1128	1128	1128	1128	1128	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.6	36.3	45.1	53.8	62.5	71.5	80.8	90.0	99.2	108.4	114.6
90°	17.3	27.6	37.8	48.1	58.4	68.6	79.0	89.3	99.5	109.9	116.9
92.5°	32.5	42.4	52.1	61.9	71.6	81.5	91.3	101.2	111.0	120.8	127.3
95°	64.2	72.7	81.2	89.6	98.1	107.2	116.8	126.6	136.3	145.9	152.1
97.5°	102.2	109.4	116.6	123.7	131.0	139.4	149.3	159.1	169.0	178.8	184.9
100°	132.2	138.3	144.3	150.4	156.4	164.4	174.0	183.7	193.4	203.0	209.0
102.5°	164.3	169.3	174.2	179.2	184.1	191.2	200.6	210.0	219.3	228.7	234.5
105°	211.5	215.8	220.0	224.3	228.5	234.8	243.1	251.4	259.8	268.0	273.7
107.5°	262.8	266.3	269.9	273.5	277.1	282.4	289.6	296.9	304.2	311.4	316.9
110°	296.9	300.1	303.4	306.6	309.9	315.0	321.8	328.8	335.7	342.7	347.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	332.4	335.1	337.7	340.3	342.9	347.4	353.9	360.2	366.7	373.2	377.6
115°	385.8	387.6	389.4	391.3	393.1	397.1	403.2	409.3	415.4	421.6	425.9
117.5°	436.9	438.2	439.4	440.7	441.9	445.4	451.3	457.0	462.8	468.6	472.2
120°	470.4	471.7	473.1	474.5	475.9	479.2	484.6	489.9	495.2	500.5	503.6
122.5°	505.9	506.4	506.8	507.2	507.6	510.6	515.8	521.2	526.4	531.8	535.2
125°	557.5	557.3	557.2	556.9	556.7	559.0	564.0	568.9	573.8	578.7	582.1
127.5°	604.9	605.4	605.7	606.1	606.5	608.5	612.1	615.7	619.2	622.8	626.1
130°	637.7	638.1	638.5	638.9	639.2	641.1	644.3	647.6	650.8	654.1	657.4
132.5°	671.9	672.2	672.4	672.6	672.8	674.2	676.6	679.1	681.5	684.0	687.1
135°	716.2	717.4	718.5	719.7	720.8	722.1	723.6	725.0	726.4	727.8	730.7
137.5°	765.3	765.7	766.0	766.4	766.7	767.4	768.4	769.4	770.4	771.5	773.9
140°	798.1	798.3	798.6	798.7	798.9	799.1	799.4	799.5	799.7	800.0	802.4
142.5°	827.4	827.8	828.1	828.5	828.8	828.9	828.6	828.3	828.0	827.8	830.0
145°	868.7	869.4	870.0	870.5	871.1	871.4	871.7	871.8	872.0	872.2	873.2
147.5°	910.0	910.7	911.4	912.1	912.8	913.2	913.0	912.8	912.7	912.5	912.6
150°	935.0	935.6	936.3	936.8	937.4	937.6	937.6	937.6	937.6	937.6	937.6
152.5°	958.0	958.5	958.9	959.3	959.8	960.0	960.2	960.4	960.5	960.7	961.1
155°	994.4	994.4	994.4	994.4	994.4	994.3	994.0	993.9	993.7	993.5	994.3
157.5°	1025.0	1024.7	1024.3	1024.0	1023.6	1023.5	1023.4	1023.4	1023.3	1023.3	1023.9
160°	1043.2	1043.0	1042.8	1042.6	1042.4	1042.2	1042.0	1041.8	1041.6	1041.5	1042.0
162.5°	1059.9	1059.5	1058.9	1058.4	1057.9	1057.6	1057.4	1057.2	1057.0	1056.8	1057.8
165°	1082.4	1081.8	1081.2	1080.7	1080.1	1079.6	1079.3	1078.8	1078.5	1078.1	1079.3
167.5°	1099.7	1098.9	1098.1	1097.3	1096.5	1096.1	1096.1	1096.1	1096.1	1096.2	1097.3
170°	1109.5	1108.5	1107.5	1106.6	1105.6	1105.2	1105.4	1105.6	1105.8	1106.0	1107.2
172.5°	1116.5	1115.6	1114.8	1114.0	1113.2	1112.8	1112.8	1112.9	1112.9	1112.9	1114.3
175°	1126.0	1125.1	1124.1	1123.2	1122.1	1121.6	1121.4	1121.2	1121.0	1120.8	1122.1
177.5°	1129.2	1128.4	1127.7	1126.9	1126.1	1125.7	1125.7	1125.7	1125.7	1125.7	1126.8
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	120.7	126.8	132.9	137.0	138.8	140.7	142.6	144.5
90°	124.0	131.0	138.1	142.7	144.6	146.7	148.7	150.8
92.5°	133.7	140.1	146.5	150.7	152.6	154.5	156.3	158.2
95°	158.1	164.2	170.3	174.3	176.1	177.9	179.7	181.6
97.5°	190.9	196.9	202.9	206.8	208.6	210.3	212.1	213.9
100°	214.8	220.7	226.6	230.2	231.7	233.1	234.5	235.9
102.5°	240.5	246.3	252.2	256.0	257.8	259.5	261.2	262.9
105°	279.4	285.1	290.7	294.6	296.9	299.1	301.3	303.5
107.5°	322.5	328.0	333.6	337.1	338.5	339.9	341.4	342.8
110°	351.2	355.5	359.8	363.1	365.3	367.5	369.7	372.0





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CATALOG NUMBER: S124DIW-S795D1050U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	382.0	386.5	391.0	394.1	395.8	397.5	399.2	401.1
115°	430.2	434.5	438.8	441.5	442.7	443.9	445.1	446.4
117.5°	475.8	479.3	482.9	485.3	486.6	487.8	489.0	490.3
120°	506.7	509.8	512.9	515.5	517.5	519.5	521.5	523.6
122.5°	538.6	542.0	545.4	547.5	548.3	549.1	549.7	550.5
125°	585.6	589.1	592.5	594.7	595.6	596.4	597.2	598.1
127.5°	629.4	632.7	635.9	638.2	639.2	640.3	641.4	642.4
130°	660.6	663.9	667.2	669.1	669.5	669.9	670.4	670.8
132.5°	690.2	693.3	696.4	698.4	699.3	700.3	701.1	702.1
135°	733.6	736.4	739.3	741.1	741.7	742.4	743.0	743.6
137.5°	776.4	778.9	781.3	783.1	784.2	785.3	786.5	787.6
140°	804.9	807.3	809.8	811.4	812.2	813.0	813.8	814.7
142.5°	832.3	834.6	836.9	838.4	839.2	840.1	840.9	841.7
145°	874.3	875.3	876.3	876.9	877.2	877.4	877.7	877.9
147.5°	912.6	912.6	912.6	912.8	913.3	913.7	914.1	914.6
150°	937.6	937.6	937.6	937.5	937.4	937.2	936.9	936.8
152.5°	961.6	962.1	962.5	962.5	962.0	961.5	961.0	960.5
155°	995.1	995.8	996.6	996.6	995.8	995.1	994.3	993.5
157.5°	1024.5	1025.0	1025.6	1025.6	1024.9	1024.2	1023.6	1023.0
160°	1042.6	1043.2	1043.8	1043.5	1042.6	1041.6	1040.7	1039.7
162.5°	1058.9	1059.9	1061.0	1061.0	1060.1	1059.1	1058.1	1057.1
165°	1080.4	1081.6	1082.7	1082.9	1082.1	1081.3	1080.6	1079.8
167.5°	1098.5	1099.7	1100.9	1100.9	1099.7	1098.5	1097.3	1096.1
170°	1108.3	1109.5	1110.6	1110.5	1109.2	1107.8	1106.5	1105.1
172.5°	1115.6	1116.9	1118.3	1118.2	1116.9	1115.5	1114.1	1112.8
175°	1123.5	1124.9	1126.3	1126.3	1124.9	1123.5	1122.1	1120.8
177.5°	1127.9	1128.9	1130.1	1130.0	1128.7	1127.5	1126.3	1125.0
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8

(END OF REPORT)