

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: P332766-927

Luminaire Tested: **S124DIW-S575D1340U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332766-927  
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-S575D1340U927-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5566.0 lumens  
Efficiency: N/A  
Efficacy: 103.5 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: Semi-Indirect

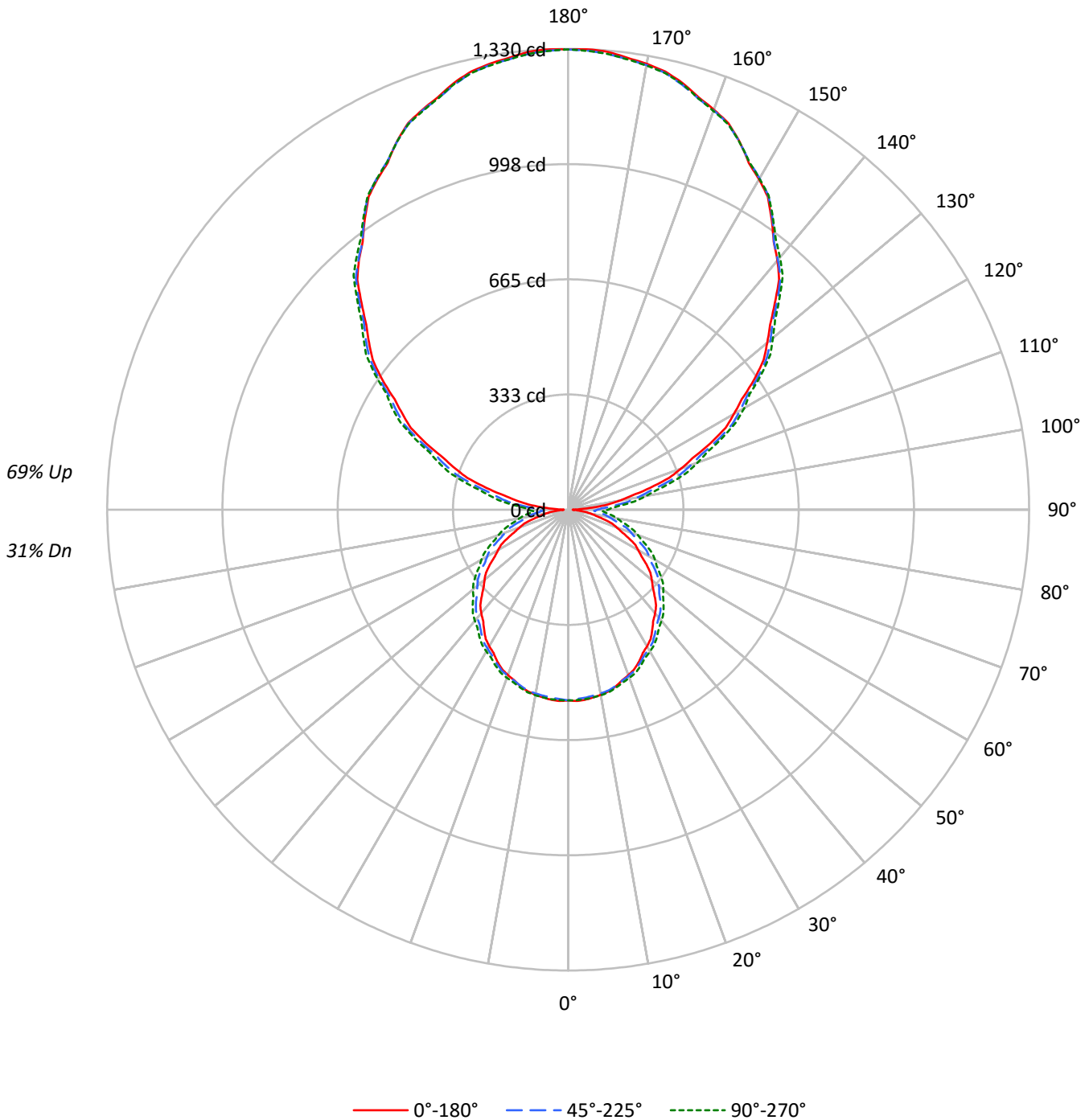
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	60	58	47	46	45	33	32	31	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	23	22	17
4	70	59	51	45	62	53	47	41	42	37	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	40	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	9
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	12	10	8
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

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

	0°	45°	90°
0°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	0.9
10°-20°	149.4	2.7
20°-30°	225.8	4.1
30°-40°	273.2	4.9
40°-50°	288.9	5.2
50°-60°	271.9	4.9
60°-70°	225.6	4.1
70°-80°	158.4	2.8
80°-90°	93.5	1.7
90°-100°	140.8	2.5
100°-110°	298.9	5.4
110°-120°	467.0	8.4
120°-130°	595.8	10.7
130°-140°	658.8	11.8
140°-150°	642.4	11.5
150°-160°	539.2	9.7
160°-170°	358.7	6.4
170°-180°	125.6	2.3
0°-30°	427.3	7.7
0°-40°	700.6	12.6
0°-60°	1261.3	22.7
0°-90°	1738.8	31.2
90°-120°	906.7	16.3
90°-150°	2803.6	50.4
90°-180°	3827.0	68.8
0°-180°	5566.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	13	49	84	107	115	10
95°	70	99	132	151	157	75
105°	245	259	285	303	312	260
115°	452	458	475	487	491	445
125°	655	655	669	678	680	584
135°	843	849	853	861	862	652
145°	1023	1026	1027	1030	1029	640
155°	1171	1171	1170	1174	1170	539
165°	1275	1272	1270	1275	1272	359
175°	1326	1321	1320	1327	1320	126
180°	1328	1328	1328	1328	1328	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.9	25.0	31.1	37.2	43.3	49.4	55.8	62.2	68.5	74.9	79.1
90°	12.9	20.9	28.9	36.9	44.9	52.8	60.4	68.2	75.9	83.7	89.0
92.5°	31.4	39.1	47.0	54.8	62.6	70.1	77.2	84.4	91.6	98.8	103.5
95°	69.6	76.2	82.8	89.4	95.9	102.8	110.0	117.2	124.5	131.7	136.1
97.5°	114.9	120.5	126.0	131.6	137.0	143.5	151.0	158.4	165.9	173.3	177.7
100°	150.6	155.1	159.5	164.1	168.5	174.4	181.8	189.3	196.6	204.1	208.2
102.5°	188.4	191.9	195.4	198.9	202.4	207.7	214.8	221.9	229.0	236.1	240.3
105°	244.9	247.9	250.9	253.8	256.8	261.3	267.3	273.2	279.2	285.2	289.3
107.5°	305.4	307.9	310.5	313.0	315.5	319.2	324.2	329.1	334.0	339.0	342.9
110°	346.0	348.4	350.8	353.2	355.5	359.0	363.5	368.1	372.7	377.2	379.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	388.2	390.1	391.8	393.6	395.5	398.4	402.6	406.7	410.9	415.0	418.0
115°	451.6	452.9	454.1	455.3	456.5	459.1	463.0	467.0	471.0	474.8	477.6
117.5°	511.9	512.9	513.7	514.7	515.6	517.9	521.7	525.5	529.3	533.0	535.0
120°	551.7	553.0	554.4	555.6	557.0	559.3	562.6	565.9	569.2	572.4	574.0
122.5°	593.6	594.1	594.5	594.9	595.4	597.3	600.8	604.2	607.7	611.1	613.1
125°	654.8	654.7	654.6	654.4	654.3	655.8	659.0	662.2	665.4	668.6	670.7
127.5°	710.8	711.4	711.9	712.5	713.0	714.4	716.7	718.9	721.2	723.5	725.5
130°	749.8	750.4	750.8	751.4	751.9	753.4	755.5	757.7	759.9	762.1	764.1
132.5°	790.0	790.4	790.8	791.2	791.5	792.5	794.1	795.6	797.2	798.8	800.7
135°	842.6	844.0	845.4	846.8	848.1	849.3	850.2	851.2	852.2	853.1	854.8
137.5°	900.6	901.1	901.6	902.1	902.6	903.2	904.1	904.9	905.8	906.6	908.0
140°	939.2	939.5	939.8	940.2	940.5	940.7	940.9	941.0	941.1	941.3	942.9
142.5°	974.1	974.5	974.9	975.3	975.8	975.9	975.6	975.3	975.1	974.8	976.3
145°	1022.9	1023.7	1024.4	1025.2	1026.0	1026.4	1026.7	1026.9	1027.1	1027.4	1027.9
147.5°	1071.3	1072.3	1073.2	1074.2	1075.1	1075.5	1075.4	1075.2	1075.0	1074.8	1074.8
150°	1100.9	1101.7	1102.5	1103.3	1104.1	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4
152.5°	1128.4	1128.9	1129.4	1130.0	1130.4	1130.8	1131.0	1131.2	1131.4	1131.6	1132.1
155°	1171.2	1171.2	1171.2	1171.2	1171.2	1171.1	1170.8	1170.6	1170.4	1170.2	1171.1
157.5°	1207.4	1207.0	1206.6	1206.1	1205.7	1205.5	1205.5	1205.4	1205.4	1205.3	1206.0
160°	1228.8	1228.5	1228.3	1228.0	1227.8	1227.6	1227.3	1227.2	1226.9	1226.7	1227.3
162.5°	1248.5	1247.8	1247.3	1246.7	1246.1	1245.7	1245.5	1245.2	1245.0	1244.8	1246.0
165°	1274.9	1274.3	1273.6	1272.9	1272.2	1271.7	1271.2	1270.7	1270.3	1269.8	1271.2
167.5°	1295.3	1294.3	1293.4	1292.4	1291.5	1291.0	1291.1	1291.1	1291.2	1291.2	1292.6
170°	1306.8	1305.7	1304.6	1303.4	1302.3	1301.8	1302.0	1302.3	1302.5	1302.7	1304.1
172.5°	1315.0	1314.1	1313.1	1312.2	1311.2	1310.7	1310.8	1310.8	1310.9	1310.9	1312.5
175°	1326.4	1325.2	1324.1	1322.9	1321.8	1321.0	1320.9	1320.6	1320.4	1320.2	1321.8
177.5°	1330.0	1329.1	1328.2	1327.3	1326.4	1326.0	1326.0	1326.0	1326.0	1326.0	1327.2
180°	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	83.4	87.7	91.9	94.7	96.0	97.3	98.5	99.9
90°	94.3	99.7	105.0	108.4	110.0	111.5	113.1	114.6
92.5°	108.1	112.8	117.5	120.5	121.9	123.3	124.6	126.0
95°	140.5	144.9	149.2	152.0	153.3	154.6	155.7	157.0
97.5°	182.1	186.6	190.9	193.8	194.9	196.1	197.3	198.4
100°	212.4	216.5	220.6	223.2	224.2	225.1	226.1	227.0
102.5°	244.5	248.7	253.0	255.7	257.0	258.3	259.5	260.8
105°	293.4	297.5	301.7	304.6	306.3	308.2	309.9	311.7
107.5°	347.0	351.0	355.0	357.4	358.4	359.3	360.3	361.2
110°	382.6	385.3	388.0	390.2	392.1	393.8	395.6	397.4





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CATALOG NUMBER: S124DIW-S575D1340U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	421.0	423.9	426.8	429.0	430.2	431.4	432.6	433.9
115°	480.5	483.2	486.0	487.7	488.5	489.2	490.0	490.7
117.5°	537.2	539.2	541.3	542.6	543.3	543.9	544.5	545.2
120°	575.7	577.3	578.8	580.4	581.9	583.5	585.1	586.6
122.5°	615.0	617.0	618.9	620.0	620.2	620.4	620.5	620.7
125°	672.9	675.0	677.2	678.4	678.8	679.2	679.5	679.9
127.5°	727.5	729.5	731.5	732.8	733.4	734.0	734.5	735.1
130°	766.1	768.1	770.2	771.1	771.0	771.0	770.8	770.7
132.5°	802.6	804.5	806.4	807.6	808.0	808.4	808.9	809.4
135°	856.6	858.3	860.1	861.0	861.1	861.3	861.4	861.6
137.5°	909.4	910.8	912.2	913.3	914.2	915.0	915.8	916.6
140°	944.4	945.9	947.5	948.5	949.0	949.4	949.8	950.3
142.5°	977.9	979.4	980.9	981.9	982.4	982.9	983.5	984.0
145°	1028.6	1029.1	1029.8	1030.0	1029.8	1029.7	1029.6	1029.4
147.5°	1074.7	1074.6	1074.5	1074.6	1074.8	1075.0	1075.2	1075.5
150°	1104.4	1104.4	1104.4	1104.3	1104.1	1103.8	1103.6	1103.4
152.5°	1132.7	1133.2	1133.8	1133.7	1133.1	1132.5	1131.9	1131.3
155°	1172.0	1172.9	1173.9	1173.9	1172.9	1172.0	1171.1	1170.2
157.5°	1206.7	1207.4	1208.1	1208.0	1207.2	1206.4	1205.7	1204.9
160°	1228.0	1228.8	1229.4	1229.2	1228.0	1226.9	1225.7	1224.6
162.5°	1247.2	1248.5	1249.7	1249.7	1248.6	1247.4	1246.3	1245.2
165°	1272.6	1273.9	1275.3	1275.6	1274.6	1273.7	1272.8	1271.8
167.5°	1294.0	1295.3	1296.6	1296.6	1295.2	1293.8	1292.4	1291.0
170°	1305.4	1306.8	1308.2	1308.1	1306.5	1304.9	1303.3	1301.7
172.5°	1314.0	1315.6	1317.2	1317.1	1315.5	1313.9	1312.3	1310.7
175°	1323.3	1324.9	1326.6	1326.6	1324.9	1323.3	1321.8	1320.2
177.5°	1328.5	1329.8	1331.0	1330.9	1329.5	1328.0	1326.6	1325.1
180°	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4	1328.4

(END OF REPORT)