

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: P332753-940

Luminaire Tested: **S124DIW-S575D770U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332753-940  
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: S124DIW-S575D770U940-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

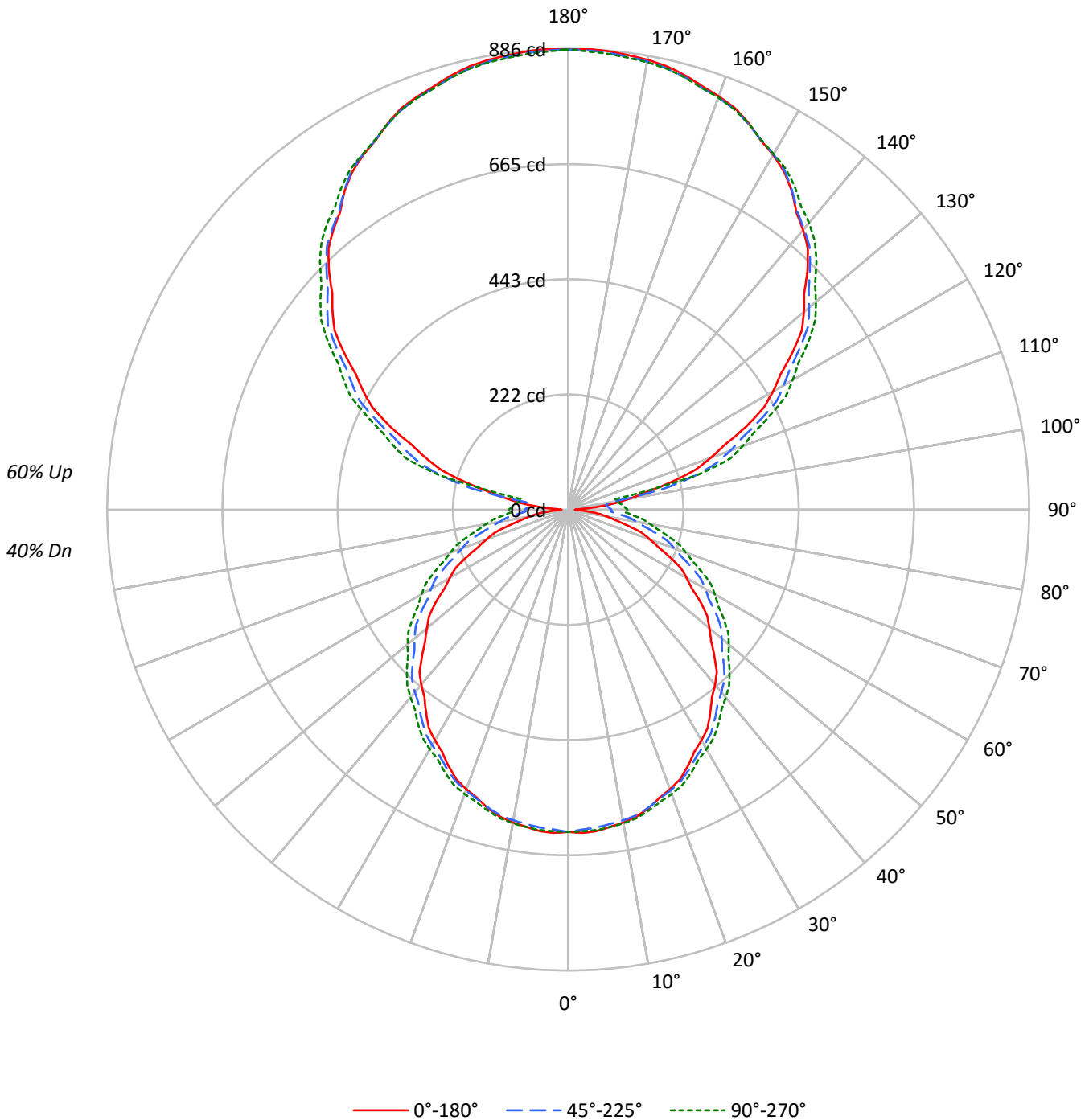
Lumens per Lamp: N/A  
Luminaire Lumens: 4852.3 lumens  
Efficiency: N/A  
Efficacy: 129.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 37.6  
Input Voltage (V): 120  
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





TEST NUMBER: P332753-940

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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	50	30	10	50	30	10	0		
RCR																										
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40					40			
1	95	90	86	82	86	82	79	75	67	65	62	53	51	50	40	39	38	32					32			
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26					26			
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	28	26	22					22			
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19					19			
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16					16			
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14					14			
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12					12			
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11					11			
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10					10			
10	45	32	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9					9			

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

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	1.2
10°-20°	168.1	3.5
20°-30°	254.2	5.2
30°-40°	307.6	6.3
40°-50°	325.2	6.7
50°-60°	306.0	6.3
60°-70°	253.9	5.2
70°-80°	178.3	3.7
80°-90°	103.4	2.1
90°-100°	90.1	1.9
100°-110°	237.3	4.9
110°-120°	398.9	8.2
120°-130°	485.4	10.0
130°-140°	508.7	10.5
140°-150°	470.4	9.7
150°-160°	378.1	7.8
160°-170°	243.9	5.0
170°-180°	84.1	1.7
0°-30°	481.0	9.9
0°-40°	788.6	16.3
0°-60°	1419.8	29.3
0°-90°	1955.4	40.3
90°-120°	726.4	15.0
90°-150°	2190.9	45.2
90°-180°	2897.0	59.7
0°-180°	4852.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	13	48	83	106	114	9
95°	45	47	75	97	104	54
105°	206	224	252	273	257	215
115°	376	385	406	422	427	370
125°	526	528	544	558	564	469
135°	650	650	657	669	675	501
145°	749	750	750	755	759	468
155°	820	821	819	821	820	378
165°	865	862	862	866	861	244
175°	885	881	882	887	880	84
180°	885	885	885	885	885	



TEST NUMBER: P332753-940

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	21.0	27.6	34.2	40.8	47.4	54.2	61.2	68.2	75.2	82.1	86.8
90°	13.1	20.9	28.6	36.5	44.2	52.0	59.8	67.7	75.4	83.3	88.6
92.5°	18.9	24.5	30.1	35.8	41.5	48.2	56.0	63.8	71.6	79.4	84.6
95°	45.4	45.5	45.6	45.7	45.7	49.0	55.6	62.0	68.5	74.9	80.0
97.5°	85.5	93.0	100.5	108.0	115.5	114.1	104.0	93.8	83.7	73.6	77.7
100°	116.2	122.9	129.5	136.2	142.9	139.0	124.8	110.4	96.1	81.9	83.6
102.5°	151.1	156.6	162.0	167.5	173.0	177.3	180.6	183.8	187.1	190.3	167.4
105°	205.5	209.5	213.4	217.4	221.3	226.6	233.0	239.4	245.8	252.4	257.5
107.5°	257.1	260.1	263.1	266.0	268.9	273.7	280.1	286.4	292.8	299.3	303.7
110°	291.5	294.1	296.7	299.3	301.9	306.3	312.6	318.9	325.2	331.4	335.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	324.9	327.5	330.2	333.0	335.6	339.8	345.4	350.9	356.5	362.0	365.4
115°	376.1	378.0	379.8	381.7	383.4	386.7	391.6	396.4	401.2	405.9	409.7
117.5°	423.0	424.5	425.9	427.3	428.7	431.9	436.8	441.7	446.7	451.6	454.7
120°	454.2	455.3	456.3	457.4	458.4	461.1	465.5	469.8	474.1	478.4	481.8
122.5°	483.8	484.3	484.7	485.2	485.6	488.1	492.5	497.0	501.4	505.9	509.1
125°	525.7	526.1	526.6	527.0	527.4	529.4	533.0	536.5	540.1	543.7	547.1
127.5°	565.8	565.8	565.8	565.8	565.8	567.6	571.2	574.9	578.5	582.1	584.8
130°	591.2	591.2	591.2	591.1	591.1	592.6	595.5	598.4	601.3	604.2	607.2
132.5°	615.0	615.1	615.2	615.4	615.5	616.8	619.3	621.9	624.4	626.9	629.7
135°	650.1	649.9	649.8	649.6	649.4	650.2	651.9	653.5	655.2	656.9	659.7
137.5°	681.7	681.6	681.5	681.4	681.4	681.9	683.1	684.2	685.4	686.5	689.1
140°	702.3	702.5	702.7	702.8	702.9	703.2	703.6	704.1	704.5	705.0	707.4
142.5°	720.3	720.9	721.3	721.8	722.3	722.6	722.7	722.8	722.8	722.9	725.1
145°	748.7	748.9	749.2	749.5	749.8	749.9	749.9	749.9	749.9	749.9	751.0
147.5°	771.2	772.0	772.6	773.3	774.0	774.2	774.1	773.9	773.7	773.6	773.9
150°	787.7	788.1	788.5	789.0	789.4	789.6	789.4	789.3	789.2	789.0	789.0
152.5°	800.9	801.4	801.8	802.3	802.6	802.7	802.5	802.3	802.0	801.7	801.9
155°	820.1	820.3	820.4	820.6	820.7	820.6	820.1	819.7	819.2	818.8	819.4
157.5°	836.4	836.3	836.2	836.2	836.1	835.7	835.3	834.7	834.2	833.7	834.5
160°	845.9	845.4	845.1	844.6	844.2	843.8	843.7	843.6	843.4	843.3	844.2
162.5°	854.3	853.8	853.3	852.7	852.1	851.8	851.7	851.5	851.3	851.2	852.1
165°	865.1	864.3	863.6	862.9	862.2	861.8	861.8	861.8	861.8	861.8	863.0
167.5°	873.6	872.8	872.1	871.3	870.5	870.1	870.0	870.0	869.9	869.8	871.0
170°	878.3	877.4	876.6	875.7	874.9	874.4	874.6	874.8	874.9	875.0	876.2
172.5°	881.5	880.7	879.8	878.9	878.0	877.6	877.8	877.9	878.1	878.2	879.4
175°	884.9	884.0	883.2	882.3	881.5	881.1	881.2	881.4	881.5	881.6	883.0
177.5°	886.5	885.7	884.9	884.0	883.2	883.0	883.2	883.4	883.7	883.9	884.8
180°	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	91.5	96.1	100.8	103.8	105.2	106.6	108.0	109.4
90°	94.0	99.3	104.7	108.1	109.7	111.2	112.7	114.2
92.5°	89.9	95.1	100.3	103.6	104.9	106.2	107.5	108.8
95°	85.0	90.1	95.1	98.4	100.0	101.5	103.0	104.5
97.5°	81.8	86.0	90.1	92.8	94.3	95.8	97.3	98.7
100°	85.2	86.9	88.5	90.0	91.2	92.4	93.6	94.9
102.5°	144.4	121.5	98.5	87.7	88.9	90.2	91.4	92.6
105°	262.7	267.9	273.0	273.6	269.6	265.5	261.4	257.3
107.5°	308.2	312.5	317.0	320.0	321.7	323.4	325.1	326.7
110°	339.1	343.0	346.8	349.6	351.2	352.9	354.6	356.2





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CATALOG NUMBER: S124DIW-S575D770U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	368.7	372.1	375.5	378.1	379.9	381.7	383.4	385.2
115°	413.3	417.0	420.7	423.0	424.1	425.3	426.3	427.4
117.5°	457.8	461.0	464.1	466.3	467.4	468.7	469.8	471.0
120°	485.2	488.6	492.0	494.1	495.0	496.0	497.0	497.8
122.5°	512.4	515.6	518.9	520.9	521.7	522.5	523.3	524.1
125°	550.4	553.8	557.1	559.4	560.4	561.5	562.6	563.7
127.5°	587.5	590.2	592.9	594.7	595.6	596.6	597.4	598.4
130°	610.1	613.0	615.9	617.9	618.8	619.7	620.6	621.5
132.5°	632.5	635.3	638.1	639.9	640.7	641.5	642.3	643.1
135°	662.5	665.2	668.0	669.9	671.2	672.3	673.6	674.8
137.5°	691.7	694.3	696.9	698.5	699.2	699.8	700.5	701.2
140°	709.9	712.3	714.8	716.5	717.4	718.3	719.3	720.1
142.5°	727.1	729.2	731.3	732.6	733.3	734.0	734.7	735.4
145°	752.1	753.1	754.2	755.2	756.2	757.1	758.0	758.8
147.5°	774.1	774.4	774.6	775.1	775.7	776.3	776.9	777.6
150°	789.0	789.0	789.0	789.1	789.3	789.3	789.5	789.6
152.5°	802.2	802.4	802.6	802.7	802.6	802.5	802.5	802.4
155°	819.9	820.6	821.1	821.2	820.7	820.3	819.8	819.5
157.5°	835.3	836.1	836.8	836.8	836.1	835.3	834.5	833.7
160°	845.1	845.9	846.8	846.8	845.9	845.1	844.2	843.3
162.5°	853.0	853.8	854.7	854.7	853.7	852.7	851.7	850.7
165°	864.2	865.3	866.5	866.5	865.1	863.8	862.5	861.1
167.5°	872.4	873.6	874.9	874.9	873.3	871.9	870.4	869.0
170°	877.4	878.6	879.8	879.6	878.2	876.6	875.2	873.7
172.5°	880.6	881.7	882.9	882.7	881.1	879.6	878.0	876.4
175°	884.3	885.6	887.0	886.7	884.9	883.2	881.5	879.7
177.5°	885.8	886.7	887.7	887.4	886.0	884.6	883.2	881.8
180°	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9

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