

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: P332755

Luminaire Tested: **S124DIW-S575D770U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332755  
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-S575D770U835-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

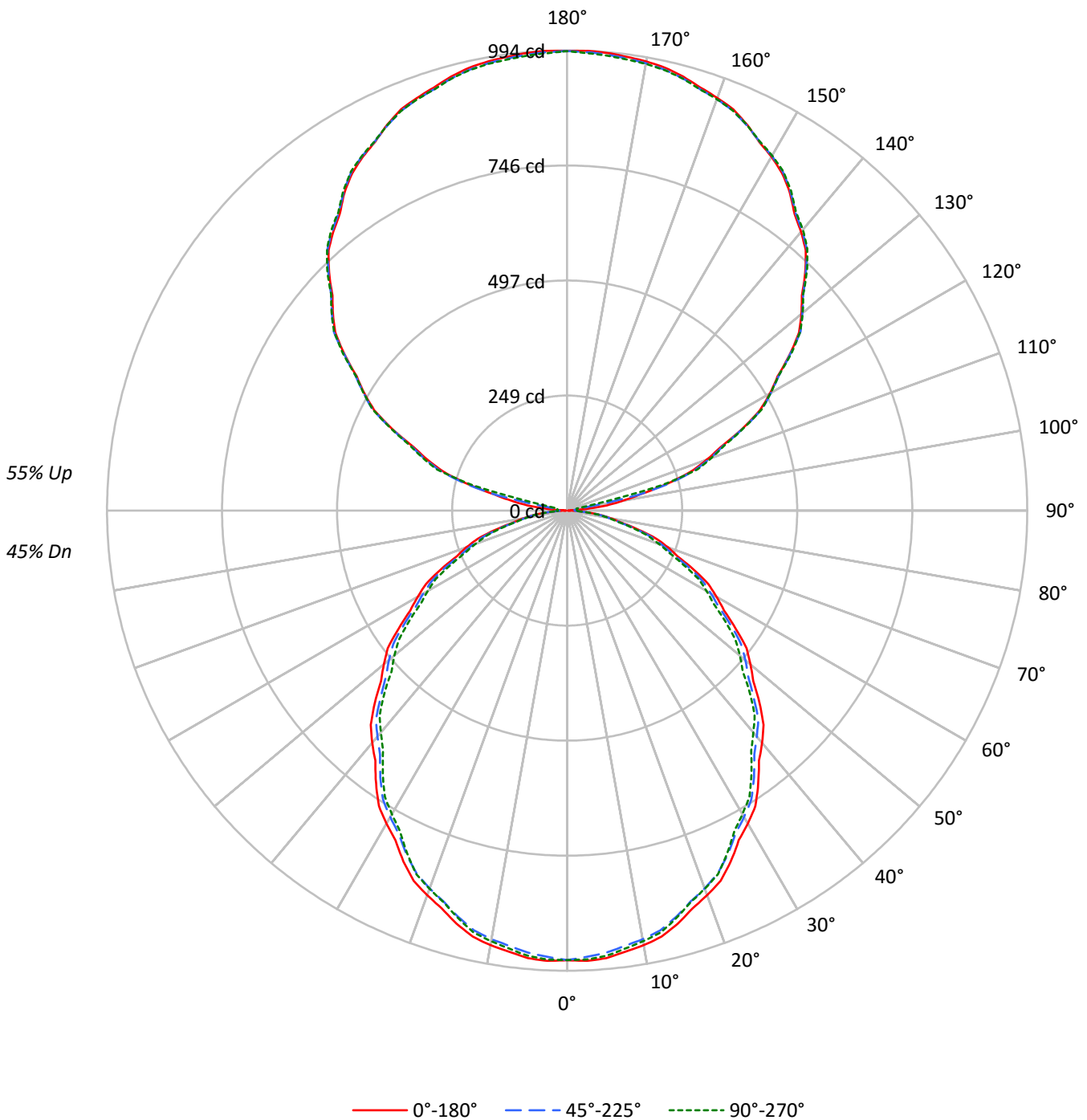
Lumens per Lamp: N/A  
Luminaire Lumens: 5564.9 lumens  
Efficiency: N/A  
Efficacy: 148.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (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





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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45					45			
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38					38			
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	32					32			
3	80	71	63	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27					27			
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23					23			
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20					20			
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17					17			
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16					16			
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14					14			
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	13					13			
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11					11			

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

	0°	45°	90°
0°	7840	7840	7840
5°	7864	7769	7826
10°	7814	7706	7744
15°	7720	7596	7616
20°	7594	7460	7467
25°	7451	7306	7285
30°	7276	7124	7058
35°	7094	6933	6841
40°	6905	6716	6593
45°	6707	6503	6379
50°	6489	6314	6118
55°	6253	6068	5871
60°	6018	5792	5616
65°	5752	5530	5307
70°	5455	5179	4978
75°	5000	4757	4635
80°	4449	4268	4161
85°	3890	3751	3677



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.5	1.6
10°-20°	257.7	4.6
20°-30°	379.3	6.8
30°-40°	440.9	7.9
40°-50°	440.9	7.9
50°-60°	385.7	6.9
60°-70°	286.4	5.1
70°-80°	162.7	2.9
80°-90°	49.8	0.9
90°-100°	33.9	0.6
100°-110°	216.4	3.9
110°-120°	414.0	7.4
120°-130°	525.6	9.4
130°-140°	562.3	10.1
140°-150°	525.8	9.4
150°-160°	424.0	7.6
160°-170°	273.5	4.9
170°-180°	94.3	1.7
0°-30°	728.4	13.1
0°-40°	1169.3	21.0
0°-60°	1996.0	35.9
0°-90°	2495.0	44.8
90°-120°	664.4	11.9
90°-150°	2278.1	40.9
90°-180°	3070.0	55.2
0°-180°	5564.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	970	967	959	967	966	92
15°	924	920	909	913	911	260
25°	836	831	820	821	818	385
35°	720	714	704	698	694	450
45°	588	582	570	561	559	453
55°	444	442	431	422	417	398
65°	301	297	290	282	278	298
75°	160	156	152	150	149	170
85°	42	42	40	40	40	46
90°	2	10	16	21	22	4
95°	41	17	16	21	22	52
105°	223	228	232	236	212	234
115°	417	419	419	420	420	410
125°	586	589	588	590	591	523
135°	727	727	730	731	733	560
145°	839	841	841	842	843	524
155°	920	920	918	921	919	424
165°	970	967	966	972	966	274
175°	992	988	989	995	986	94
180°	992	992	992	992	992	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1
2.5°	973.6	973.2	972.8	972.4	972.0	971.0	969.5	968.0	966.4	964.9	966.3
5°	970.4	969.7	969.0	968.3	967.6	966.3	964.4	962.5	960.6	958.7	960.6
7.5°	961.3	960.6	960.0	959.3	958.6	957.2	955.1	953.0	950.8	948.7	950.3
10°	953.2	952.6	951.9	951.2	950.5	949.0	946.8	944.5	942.3	940.0	941.4
12.5°	942.7	942.0	941.3	940.6	939.9	938.4	936.0	933.6	931.2	928.8	930.3
15°	923.7	923.0	922.3	921.6	920.9	919.3	916.7	914.1	911.5	908.9	909.9
17.5°	900.8	899.9	899.1	898.2	897.3	895.7	893.2	890.8	888.3	885.9	886.5
20°	884.0	883.1	882.3	881.4	880.5	878.8	876.2	873.6	871.0	868.4	868.9
22.5°	865.9	864.8	863.7	862.5	861.4	859.5	856.9	854.3	851.7	849.1	850.1
25°	836.5	835.3	834.1	832.9	831.7	829.9	827.4	825.0	822.6	820.2	820.4
27.5°	802.9	801.7	800.4	799.2	797.9	796.2	793.9	791.7	789.4	787.2	786.8
30°	780.5	779.1	777.7	776.3	775.0	773.1	770.9	768.6	766.4	764.2	763.5
32.5°	756.8	755.6	754.3	753.1	751.9	750.0	747.7	745.3	742.9	740.5	739.7
35°	719.8	718.6	717.4	716.2	715.0	713.1	710.7	708.3	705.9	703.5	702.2
37.5°	680.7	679.6	678.5	677.4	676.3	674.5	671.9	669.3	666.7	664.1	662.8
40°	655.2	653.8	652.4	651.1	649.7	647.7	645.1	642.5	639.9	637.3	635.6
42.5°	627.8	627.0	626.2	625.3	624.5	622.6	619.8	616.9	614.0	611.2	609.2
45°	587.5	586.3	585.1	583.9	582.7	580.7	577.9	575.1	572.4	569.6	567.7
47.5°	545.3	544.5	543.7	542.8	542.0	540.3	537.8	535.2	532.6	530.1	527.9
50°	516.7	516.0	515.3	514.6	513.9	512.4	510.0	507.5	505.1	502.7	500.3
52.5°	488.7	487.9	487.0	486.2	485.4	483.7	481.1	478.6	476.0	473.4	471.3
55°	444.3	443.8	443.3	442.8	442.3	440.8	438.4	435.9	433.5	431.1	429.0
57.5°	402.0	401.4	400.8	400.2	399.6	398.2	395.8	393.4	391.0	388.6	386.6
60°	372.7	371.9	371.0	370.1	369.3	367.7	365.5	363.2	361.0	358.7	357.2
62.5°	344.1	343.4	342.6	341.9	341.2	339.6	337.3	334.9	332.5	330.1	328.7
65°	301.1	300.3	299.4	298.6	297.7	296.4	294.7	292.9	291.2	289.5	287.7
67.5°	257.9	257.1	256.3	255.5	254.7	253.5	251.8	250.2	248.5	246.8	245.2
70°	231.1	229.9	228.7	227.5	226.3	225.0	223.6	222.2	220.8	219.4	218.1
72.5°	202.5	201.3	200.1	198.8	197.6	196.5	195.4	194.3	193.2	192.0	190.9
75°	160.3	159.4	158.6	157.7	156.8	156.0	155.1	154.2	153.4	152.5	151.8
77.5°	120.0	119.6	119.2	118.9	118.5	117.9	117.1	116.4	115.6	114.9	114.6
80°	95.7	95.2	94.7	94.2	93.6	93.2	92.9	92.5	92.2	91.8	91.5
82.5°	72.1	71.8	71.6	71.3	71.1	70.9	70.9	70.8	70.7	70.7	70.4
85°	42.0	42.0	42.0	42.0	42.0	41.8	41.5	41.2	40.8	40.5	40.5
87.5°	16.6	16.9	17.1	17.3	17.5	17.7	17.8	18.0	18.1	18.2	18.4
90°	2.2	4.0	5.9	7.7	9.5	11.1	12.4	13.7	15.0	16.3	17.3
92.5°	9.4	9.5	9.6	9.6	9.7	10.5	11.8	13.1	14.4	15.7	16.7
95°	40.8	35.2	29.6	24.0	18.4	15.7	15.8	16.0	16.2	16.3	17.3
97.5°	86.7	90.2	93.7	97.2	100.7	93.2	74.8	56.4	38.0	19.6	19.7
100°	121.7	124.7	127.7	130.6	133.6	123.7	101.0	78.2	55.4	32.7	29.9
102.5°	160.9	163.1	165.3	167.5	169.6	169.2	166.3	163.3	160.3	157.4	127.1
105°	223.4	224.4	225.4	226.4	227.4	228.3	229.1	229.9	230.8	231.6	233.1
107.5°	281.5	282.0	282.5	283.0	283.5	284.3	285.4	286.5	287.6	288.7	289.5
110°	320.7	321.2	321.7	322.2	322.6	323.4	324.4	325.4	326.4	327.3	327.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	358.7	359.6	360.5	361.3	362.2	362.9	363.4	363.8	364.3	364.8	364.7
115°	417.2	417.7	418.2	418.6	419.1	419.3	419.1	419.0	418.8	418.6	419.0
117.5°	469.9	470.5	471.2	471.8	472.5	473.0	473.4	473.7	474.1	474.5	474.4
120°	505.5	506.2	506.8	507.5	508.1	508.4	508.2	508.1	507.9	507.7	508.1
122.5°	538.8	539.1	539.5	539.9	540.3	540.6	540.9	541.1	541.3	541.6	541.8
125°	586.4	587.1	587.7	588.4	589.0	589.2	588.9	588.6	588.2	587.9	588.4
127.5°	631.5	631.7	631.9	632.0	632.2	632.7	633.4	634.2	634.9	635.7	635.6
130°	660.6	660.8	661.0	661.1	661.3	661.6	662.1	662.6	663.1	663.6	663.8
132.5°	687.4	687.7	688.0	688.2	688.5	689.0	689.6	690.3	690.9	691.5	691.7
135°	727.4	727.3	727.1	726.9	726.8	727.0	727.7	728.3	729.0	729.7	730.0
137.5°	762.9	763.0	763.1	763.1	763.2	763.6	764.3	765.0	765.8	766.5	766.8
140°	786.1	786.4	786.7	787.1	787.4	787.7	788.1	788.4	788.7	789.1	789.5
142.5°	806.9	807.5	808.1	808.6	809.2	809.6	809.8	810.0	810.2	810.4	810.8
145°	838.8	839.3	839.8	840.3	840.8	841.0	841.0	841.0	841.0	841.0	841.2
147.5°	864.2	865.1	866.0	866.9	867.9	868.2	868.1	867.9	867.7	867.6	867.7
150°	882.6	883.2	883.9	884.6	885.2	885.5	885.3	885.1	885.0	884.8	884.8
152.5°	898.0	898.5	899.1	899.6	900.1	900.2	899.9	899.7	899.4	899.1	899.3
155°	919.7	919.9	920.0	920.2	920.4	920.2	919.7	919.2	918.7	918.2	918.9
157.5°	938.0	937.9	937.8	937.7	937.6	937.2	936.7	936.1	935.5	935.0	935.8
160°	948.6	948.1	947.7	947.2	946.7	946.3	946.2	946.0	945.8	945.7	946.7
162.5°	958.1	957.5	956.9	956.3	955.6	955.2	955.1	954.9	954.7	954.6	955.6
165°	970.2	969.3	968.5	967.7	966.9	966.5	966.5	966.5	966.5	966.5	967.8
167.5°	979.7	978.8	978.0	977.1	976.2	975.8	975.7	975.6	975.5	975.4	976.8
170°	985.0	984.0	983.0	982.0	981.1	980.6	980.8	981.0	981.1	981.3	982.6
172.5°	988.6	987.6	986.6	985.6	984.6	984.2	984.4	984.5	984.7	984.9	986.2
175°	992.4	991.4	990.5	989.5	988.5	988.1	988.2	988.4	988.6	988.7	990.2
177.5°	994.2	993.3	992.4	991.4	990.5	990.2	990.5	990.7	991.0	991.2	992.3
180°	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.1	971.1	971.1	971.1	971.1	971.1	971.1	971.1
2.5°	967.7	969.1	970.5	971.1	970.9	970.8	970.7	970.5
5°	962.5	964.4	966.3	967.1	966.7	966.4	966.0	965.7
7.5°	951.8	953.3	954.8	955.5	955.3	955.1	954.9	954.6
10°	942.8	944.2	945.6	946.1	945.7	945.4	945.0	944.7
12.5°	931.9	933.4	934.9	935.4	934.9	934.4	934.0	933.5
15°	911.0	912.0	913.0	913.3	912.8	912.3	911.7	911.2
17.5°	887.2	887.8	888.5	888.6	888.3	887.9	887.6	887.3
20°	869.5	870.0	870.5	870.6	870.2	869.9	869.6	869.2
22.5°	851.0	851.9	852.9	853.0	852.4	851.8	851.2	850.5
25°	820.5	820.7	820.9	820.6	819.9	819.2	818.5	817.8
27.5°	786.4	785.9	785.5	784.9	784.0	783.2	782.3	781.4
30°	762.8	762.1	761.4	760.6	759.7	758.9	758.0	757.1
32.5°	738.8	738.0	737.2	736.3	735.5	734.6	733.7	732.9
35°	701.0	699.8	698.6	697.6	696.7	695.8	695.0	694.1
37.5°	661.5	660.1	658.8	657.6	656.5	655.3	654.2	653.0
40°	633.9	632.1	630.4	629.1	628.2	627.4	626.5	625.6
42.5°	607.2	605.1	603.1	601.8	601.3	600.7	600.1	599.5
45°	565.8	563.9	562.0	560.8	560.3	559.8	559.2	558.7
47.5°	525.8	523.6	521.5	519.8	518.5	517.1	515.8	514.5
50°	497.8	495.4	493.0	491.3	490.2	489.2	488.2	487.1
52.5°	469.1	467.0	464.9	463.1	461.8	460.5	459.2	457.9
55°	427.0	424.9	422.8	421.2	420.2	419.2	418.1	417.1
57.5°	384.7	382.7	380.7	379.2	378.2	377.2	376.2	375.2
60°	355.6	354.1	352.5	351.3	350.4	349.6	348.7	347.8
62.5°	327.3	325.8	324.4	323.3	322.4	321.6	320.7	319.8
65°	286.0	284.3	282.6	281.3	280.4	279.5	278.7	277.8
67.5°	243.5	241.9	240.2	239.2	239.0	238.8	238.5	238.3
70°	216.7	215.3	213.9	213.0	212.4	211.9	211.4	210.9
72.5°	189.8	188.7	187.6	186.8	186.3	185.8	185.3	184.7
75°	151.1	150.4	149.8	149.3	149.1	149.0	148.8	148.6
77.5°	114.4	114.2	114.0	113.7	113.2	112.8	112.3	111.9
80°	91.1	90.8	90.4	90.2	90.0	89.8	89.7	89.5
82.5°	70.2	70.0	69.8	69.6	69.5	69.3	69.1	68.9
85°	40.5	40.5	40.5	40.4	40.2	40.0	39.9	39.7
87.5°	18.6	18.8	19.0	19.1	19.2	19.3	19.3	19.4
90°	18.3	19.3	20.3	20.9	21.3	21.6	21.9	22.3
92.5°	17.7	18.7	19.7	20.2	20.3	20.4	20.4	20.5
95°	18.3	19.3	20.3	20.9	21.0	21.2	21.4	21.5
97.5°	19.8	19.9	20.0	20.1	20.3	20.5	20.6	20.8
100°	27.1	24.2	21.4	20.1	20.3	20.5	20.6	20.8
102.5°	96.9	66.6	36.4	21.2	21.3	21.3	21.3	21.4
105°	234.6	236.0	237.5	235.3	229.4	223.4	217.5	211.6
107.5°	290.2	290.9	291.7	292.3	293.0	293.6	294.2	294.8
110°	328.0	328.3	328.7	329.1	329.6	330.1	330.6	331.1





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CATALOG NUMBER: S124DIW-S575D770U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	364.6	364.6	364.5	364.8	365.4	366.0	366.7	367.3
115°	419.3	419.6	420.0	420.1	420.1	420.1	420.1	420.1
117.5°	474.3	474.3	474.2	474.1	474.1	474.0	473.9	473.9
120°	508.4	508.7	509.0	509.0	508.7	508.4	508.1	507.7
122.5°	542.0	542.2	542.4	542.3	542.0	541.6	541.3	541.0
125°	588.9	589.4	589.9	590.2	590.4	590.5	590.7	590.9
127.5°	635.5	635.4	635.3	635.2	635.1	634.9	634.8	634.7
130°	663.9	664.1	664.3	664.3	664.3	664.3	664.3	664.3
132.5°	691.8	692.0	692.2	692.2	692.1	691.9	691.8	691.7
135°	730.3	730.7	731.0	731.3	731.6	732.0	732.3	732.6
137.5°	767.2	767.6	767.9	768.1	768.0	767.9	767.8	767.7
140°	790.0	790.5	791.0	791.4	791.5	791.7	791.9	792.0
142.5°	811.2	811.5	811.9	812.1	812.1	812.1	812.2	812.2
145°	841.3	841.5	841.7	841.9	842.2	842.6	842.9	843.2
147.5°	867.8	868.0	868.1	868.3	868.4	868.6	868.8	868.9
150°	884.8	884.8	884.8	884.9	885.1	885.2	885.4	885.5
152.5°	899.6	899.8	900.1	900.2	900.1	900.0	899.9	899.8
155°	919.5	920.2	920.8	920.9	920.4	919.9	919.4	919.0
157.5°	936.7	937.6	938.4	938.4	937.6	936.7	935.8	935.0
160°	947.7	948.6	949.6	949.6	948.6	947.7	946.7	945.7
162.5°	956.6	957.5	958.5	958.5	957.4	956.2	955.1	954.0
165°	969.1	970.4	971.7	971.7	970.2	968.7	967.2	965.7
167.5°	978.3	979.7	981.2	981.1	979.4	977.8	976.1	974.5
170°	983.9	985.3	986.6	986.4	984.8	983.1	981.5	979.8
172.5°	987.5	988.8	990.1	989.9	988.1	986.4	984.6	982.8
175°	991.7	993.2	994.7	994.4	992.4	990.5	988.5	986.5
177.5°	993.4	994.4	995.5	995.2	993.6	992.0	990.5	988.9
180°	992.4	992.4	992.4	992.4	992.4	992.4	992.4	992.4

(END OF REPORT)