

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: P332542

Luminaire Tested: **S124DIP-S575D365U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332542  
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: S124DIP-S575D365U835-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3761.1 lumens  
Efficiency: N/A  
Efficacy: 136.8 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: Semi-Direct

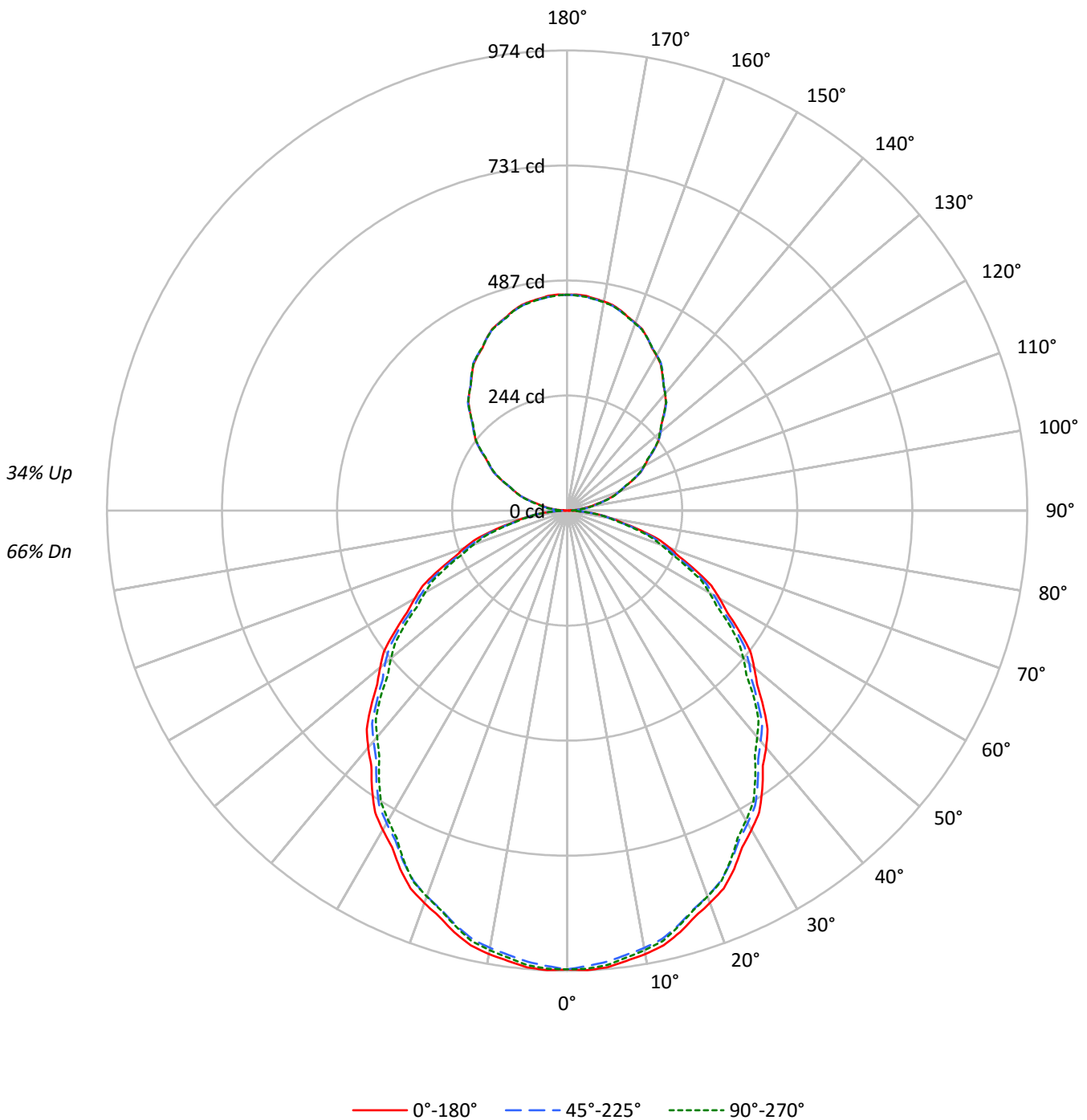
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332542

CATALOG NUMBER: S124DIP-S575D365U835-4F0-1E-UDD-F1

### 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	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66
1	101	97	93	89	95	91	88	85	81	78	76	72	70	68	63	61	60	56
2	92	85	78	73	87	80	74	70	71	67	63	63	59	57	55	53	50	47
3	84	74	67	61	79	70	64	58	63	57	53	56	51	48	49	46	43	40
4	77	66	58	52	72	62	55	49	56	50	45	50	45	41	44	40	37	34
5	71	59	50	44	66	56	48	43	50	44	39	45	40	36	39	35	32	29
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	36	32	28	26
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	25	23
8	56	44	36	30	53	41	34	29	37	31	27	34	29	25	30	26	23	21
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	24	21	19
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17

**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



TEST NUMBER: P332542

CATALOG NUMBER: S124DIP-S575D365U835-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.5	2.4
10°-20°	257.7	6.9
20°-30°	379.3	10.1
30°-40°	440.9	11.7
40°-50°	440.9	11.7
50°-60°	385.7	10.3
60°-70°	286.4	7.6
70°-80°	162.7	4.3
80°-90°	48.3	1.3
90°-100°	30.1	0.8
100°-110°	89.3	2.4
110°-120°	151.5	4.0
120°-130°	199.8	5.3
130°-140°	224.4	6.0
140°-150°	220.5	5.9
150°-160°	185.4	4.9
160°-170°	123.4	3.3
170°-180°	43.2	1.1
0°-30°	728.4	19.4
0°-40°	1169.3	31.1
0°-60°	1996.0	53.1
0°-90°	2493.5	66.3
90°-120°	270.9	7.2
90°-150°	915.6	24.3
90°-180°	1268.0	33.7
0°-180°	3761.1	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°	1	5	8	10	11	4
95°	21	24	27	28	28	24
105°	82	83	84	85	86	87
115°	154	154	153	153	153	152
125°	224	224	224	223	223	200
135°	289	291	292	291	290	224
145°	352	353	353	353	352	220
155°	403	403	402	404	402	185
165°	438	438	437	439	438	124
175°	456	454	454	456	454	43
180°	457	457	457	457	457	



TEST NUMBER: P332542

CATALOG NUMBER: S124DIP-S575D365U835-4F0-1E-UDD-F1

**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°	16.4	16.4	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.6
90°	1.1	1.9	2.8	3.7	4.5	5.3	5.9	6.5	7.1	7.8	8.2
92.5°	7.6	8.6	9.5	10.5	11.5	12.2	12.7	13.1	13.6	14.0	14.3
95°	21.2	21.9	22.6	23.3	24.0	24.7	25.2	25.8	26.3	26.9	27.1
97.5°	37.0	37.6	38.2	38.7	39.3	39.9	40.5	41.2	41.8	42.5	42.8
100°	49.5	49.8	50.1	50.4	50.7	51.2	51.9	52.7	53.4	54.1	54.2
102.5°	62.5	62.6	62.7	62.9	63.0	63.4	64.0	64.7	65.3	65.9	66.2
105°	82.3	82.4	82.5	82.6	82.6	82.8	83.2	83.5	83.8	84.1	84.3
107.5°	103.2	103.3	103.4	103.5	103.6	103.6	103.7	103.7	103.8	103.8	104.0
110°	117.3	117.5	117.6	117.8	117.9	118.0	117.9	117.8	117.7	117.7	117.5



TEST NUMBER: P332542

CATALOG NUMBER: S124DIP-S575D365U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	132.0	132.0	132.1	132.1	132.1	132.1	131.9	131.8	131.7	131.5	131.5
115°	154.1	154.1	154.1	154.1	154.1	154.0	153.8	153.7	153.5	153.4	153.3
117.5°	174.8	174.9	175.0	175.0	175.1	175.1	175.0	174.9	174.7	174.6	174.4
120°	188.7	189.0	189.3	189.6	190.0	190.0	189.8	189.5	189.3	189.1	188.7
122.5°	203.1	203.2	203.4	203.5	203.6	203.6	203.5	203.4	203.3	203.2	202.9
125°	224.4	224.4	224.4	224.4	224.4	224.3	224.3	224.2	224.1	224.0	223.9
127.5°	243.7	243.9	244.2	244.4	244.6	244.7	244.6	244.4	244.3	244.2	244.0
130°	257.3	257.5	257.7	258.0	258.2	258.3	258.3	258.3	258.3	258.3	258.2
132.5°	271.1	271.3	271.4	271.6	271.8	271.8	271.8	271.7	271.7	271.6	271.4
135°	289.4	289.9	290.3	290.8	291.3	291.5	291.5	291.5	291.5	291.5	291.4
137.5°	309.3	309.6	309.8	310.0	310.2	310.4	310.5	310.6	310.8	310.9	310.7
140°	322.6	322.8	322.9	323.1	323.3	323.3	323.3	323.3	323.3	323.3	323.3
142.5°	334.8	334.9	335.1	335.2	335.4	335.5	335.4	335.3	335.3	335.2	335.2
145°	351.6	351.9	352.2	352.5	352.9	353.1	353.1	353.2	353.3	353.4	353.3
147.5°	368.3	368.7	369.0	369.4	369.8	369.9	369.9	369.8	369.8	369.7	369.6
150°	378.5	378.8	379.1	379.4	379.7	379.9	379.9	379.9	379.9	379.9	379.9
152.5°	388.1	388.3	388.4	388.6	388.8	388.9	389.0	389.1	389.1	389.2	389.4
155°	402.8	402.8	402.8	402.8	402.8	402.8	402.7	402.6	402.6	402.5	402.8
157.5°	415.3	415.1	415.0	414.9	414.7	414.6	414.6	414.6	414.6	414.6	414.8
160°	422.6	422.5	422.5	422.4	422.3	422.2	422.2	422.1	422.0	421.9	422.2
162.5°	429.4	429.2	429.0	428.8	428.6	428.5	428.4	428.3	428.2	428.1	428.6
165°	438.5	438.3	438.1	437.8	437.6	437.4	437.2	437.1	436.9	436.8	437.2
167.5°	445.5	445.2	444.9	444.5	444.2	444.0	444.1	444.1	444.1	444.1	444.6
170°	449.5	449.1	448.7	448.3	447.9	447.8	447.8	447.9	448.0	448.1	448.5
172.5°	452.3	452.0	451.6	451.3	451.0	450.8	450.8	450.9	450.9	450.9	451.4
175°	456.2	455.8	455.4	455.0	454.6	454.4	454.3	454.2	454.2	454.1	454.6
177.5°	457.5	457.2	456.8	456.5	456.2	456.1	456.1	456.1	456.1	456.1	456.5
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9



TEST NUMBER: P332542

CATALOG NUMBER: S124DIP-S575D365U835-4F0-1E-UDD-F1

**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°	16.7	16.8	16.9	16.9	17.0	17.0	17.0	17.1
90°	8.7	9.2	9.7	10.0	10.1	10.3	10.4	10.6
92.5°	14.6	14.8	15.1	15.3	15.4	15.5	15.6	15.7
95°	27.3	27.6	27.8	27.9	27.9	27.9	27.9	27.9
97.5°	43.0	43.3	43.6	43.7	43.7	43.7	43.7	43.7
100°	54.4	54.5	54.7	54.8	54.8	54.8	54.8	54.8
102.5°	66.4	66.6	66.8	67.0	67.0	67.1	67.1	67.2
105°	84.6	84.8	85.0	85.3	85.5	85.8	86.0	86.2
107.5°	104.3	104.5	104.7	104.8	104.8	104.8	104.8	104.7
110°	117.4	117.2	117.0	117.1	117.3	117.6	117.8	118.0





TEST NUMBER: P332542

CATALOG NUMBER: S124DIP-S575D365U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	131.5	131.4	131.4	131.4	131.5	131.5	131.5	131.6
115°	153.2	153.1	153.0	153.0	152.9	152.8	152.7	152.7
117.5°	174.1	173.8	173.6	173.4	173.2	173.0	172.9	172.7
120°	188.3	187.9	187.5	187.4	187.5	187.7	187.8	188.0
122.5°	202.7	202.4	202.1	201.8	201.6	201.3	201.0	200.7
125°	223.7	223.6	223.4	223.2	223.1	222.9	222.8	222.6
127.5°	243.9	243.7	243.5	243.4	243.3	243.2	243.0	242.9
130°	258.0	257.8	257.7	257.4	257.1	256.8	256.5	256.2
132.5°	271.3	271.1	271.0	270.8	270.7	270.6	270.5	270.3
135°	291.2	291.1	290.9	290.7	290.5	290.2	290.0	289.8
137.5°	310.5	310.3	310.1	310.0	310.0	310.1	310.1	310.2
140°	323.2	323.1	323.0	322.9	322.9	322.8	322.7	322.6
142.5°	335.2	335.2	335.1	335.1	335.1	335.1	335.1	335.1
145°	353.2	353.1	353.1	352.9	352.7	352.4	352.2	352.0
147.5°	369.6	369.5	369.4	369.4	369.3	369.2	369.1	369.1
150°	379.9	379.9	379.9	379.8	379.8	379.7	379.6	379.5
152.5°	389.6	389.8	390.0	389.9	389.7	389.5	389.3	389.1
155°	403.1	403.4	403.7	403.7	403.4	403.1	402.8	402.5
157.5°	415.0	415.3	415.5	415.5	415.2	415.0	414.7	414.4
160°	422.4	422.6	422.9	422.8	422.4	422.0	421.6	421.2
162.5°	429.0	429.4	429.8	429.8	429.5	429.1	428.7	428.3
165°	437.7	438.2	438.6	438.7	438.4	438.1	437.8	437.5
167.5°	445.1	445.5	446.0	446.0	445.5	445.0	444.5	444.0
170°	449.0	449.5	450.0	449.9	449.4	448.8	448.3	447.7
172.5°	452.0	452.5	453.0	453.0	452.5	451.9	451.4	450.8
175°	455.2	455.7	456.3	456.3	455.7	455.2	454.6	454.1
177.5°	456.9	457.4	457.8	457.8	457.3	456.8	456.3	455.8
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9

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