

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: P332578-930

Luminaire Tested: **S124DIP-S575D1205U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332578-930  
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-S575D1205U930-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5433.4 lumens  
Efficiency: N/A  
Efficacy: 110.0 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: Semi-Indirect

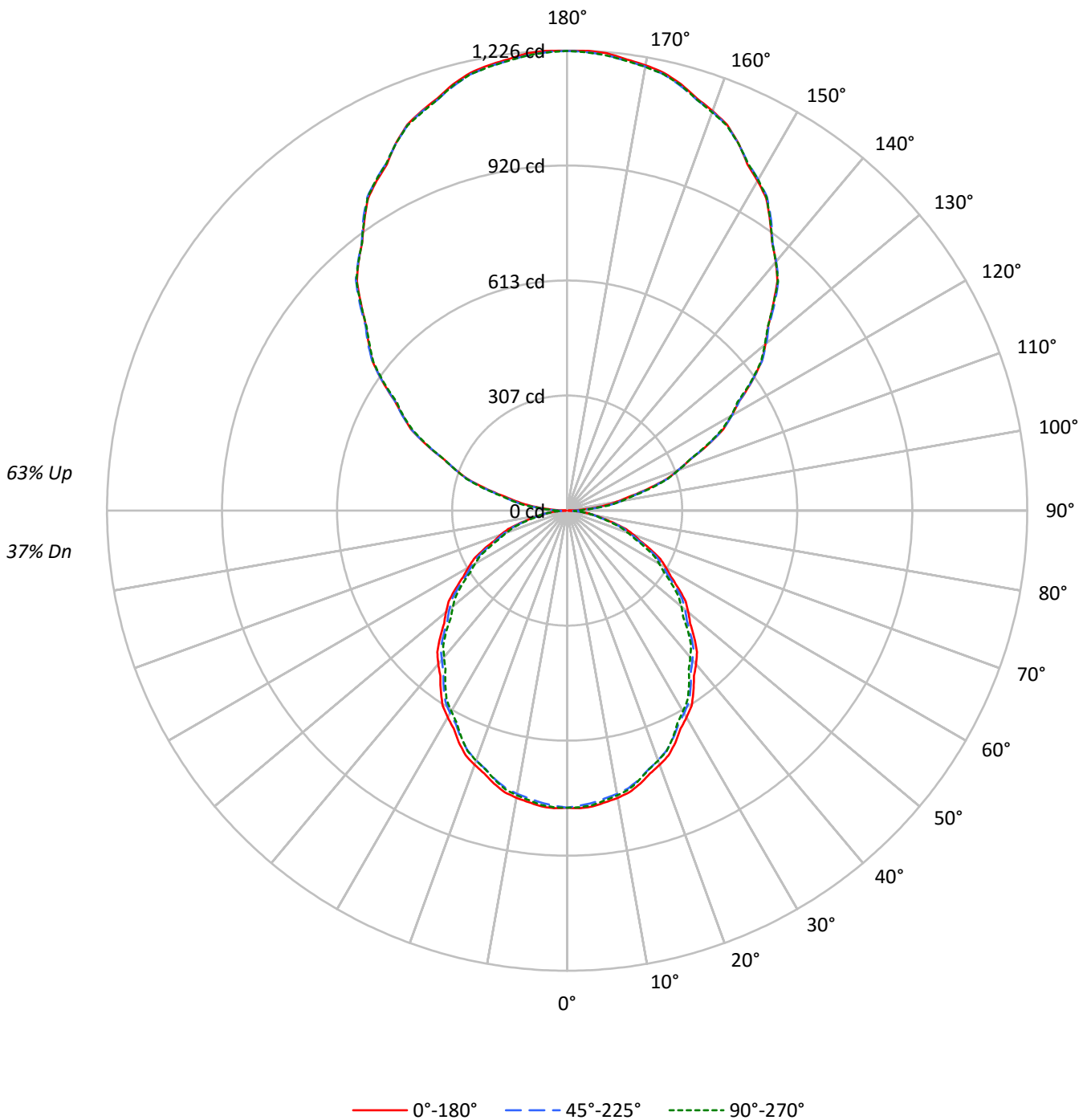
Input Watts (W): 49.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	95	91	87	83	86	82	79	76	67	65	62	53	51	50	39	38	38	31
2	86	79	73	68	78	72	67	62	58	55	52	46	44	41	35	33	32	26
3	79	70	62	57	71	63	57	52	52	47	43	41	38	35	31	29	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	32	28	29	26	23	22	20	18	15
7	56	44	36	31	51	40	34	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	21	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	12	9

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

	0°	45°	90°
0°	6391	6391	6391
5°	6412	6334	6380
10°	6370	6283	6314
15°	6294	6193	6209
20°	6192	6082	6088
25°	6075	5956	5940
30°	5931	5808	5754
35°	5784	5653	5577
40°	5630	5476	5376
45°	5469	5302	5200
50°	5291	5148	4987
55°	5098	4947	4787
60°	4907	4721	4579
65°	4690	4508	4327
70°	4447	4223	4057
75°	4077	3877	3780
80°	3626	3477	3394
85°	3168	3057	3001



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.6	1.4
10°-20°	210.1	3.9
20°-30°	309.2	5.7
30°-40°	359.5	6.6
40°-50°	359.5	6.6
50°-60°	314.5	5.8
60°-70°	233.5	4.3
70°-80°	132.7	2.4
80°-90°	41.9	0.8
90°-100°	80.8	1.5
100°-110°	239.3	4.4
110°-120°	406.2	7.5
120°-130°	535.6	9.9
130°-140°	601.5	11.1
140°-150°	591.0	10.9
150°-160°	497.1	9.1
160°-170°	330.7	6.1
170°-180°	115.8	2.1
0°-30°	593.9	10.9
0°-40°	953.4	17.5
0°-60°	1627.3	29.9
0°-90°	2035.5	37.5
90°-120°	726.2	13.4
90°-150°	2454.3	45.2
90°-180°	3398.0	62.5
0°-180°	5433.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	791	788	782	788	787	75
15°	753	750	741	744	743	212
25°	682	677	669	669	667	314
35°	587	582	574	569	566	367
45°	479	474	464	458	456	369
55°	362	360	352	344	340	324
65°	246	242	236	230	226	243
75°	131	128	124	122	121	139
85°	34	34	33	33	32	38
90°	3	13	21	26	28	5
95°	57	65	72	75	75	63
105°	221	222	225	228	231	234
115°	413	413	411	410	409	407
125°	601	601	600	599	597	536
135°	776	781	782	780	777	600
145°	942	946	947	946	944	590
155°	1080	1080	1079	1082	1079	497
165°	1176	1173	1171	1176	1173	331
175°	1223	1218	1217	1223	1217	116
180°	1225	1225	1225	1225	1225	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7
2.5°	793.8	793.4	793.1	792.8	792.5	791.7	790.4	789.2	787.9	786.7	787.8
5°	791.2	790.6	790.0	789.5	788.9	787.8	786.3	784.7	783.2	781.6	783.2
7.5°	783.7	783.2	782.7	782.1	781.5	780.4	778.7	777.0	775.2	773.5	774.8
10°	777.1	776.7	776.1	775.5	774.9	773.7	771.9	770.1	768.3	766.4	767.5
12.5°	768.6	768.0	767.4	766.9	766.3	765.1	763.1	761.2	759.2	757.2	758.5
15°	753.1	752.5	752.0	751.4	750.8	749.5	747.4	745.3	743.1	741.0	741.8
17.5°	734.4	733.7	733.0	732.3	731.6	730.3	728.2	726.3	724.2	722.3	722.8
20°	720.7	720.0	719.3	718.6	717.9	716.5	714.4	712.2	710.1	708.0	708.4
22.5°	706.0	705.1	704.2	703.2	702.3	700.7	698.6	696.5	694.4	692.3	693.1
25°	682.0	681.0	680.0	679.1	678.1	676.6	674.6	672.6	670.7	668.7	668.9
27.5°	654.6	653.6	652.6	651.6	650.5	649.1	647.3	645.5	643.6	641.8	641.5
30°	636.3	635.2	634.1	632.9	631.9	630.3	628.5	626.6	624.8	623.1	622.5
32.5°	617.0	616.0	615.0	614.0	613.0	611.5	609.6	607.6	605.7	603.7	603.1
35°	586.9	585.9	584.9	583.9	582.9	581.4	579.4	577.5	575.5	573.6	572.5
37.5°	555.0	554.1	553.2	552.3	551.4	549.9	547.8	545.7	543.6	541.4	540.4
40°	534.2	533.0	531.9	530.8	529.7	528.1	525.9	523.8	521.7	519.6	518.2
42.5°	511.8	511.2	510.5	509.8	509.2	507.6	505.3	503.0	500.6	498.3	496.7
45°	479.0	478.0	477.0	476.1	475.1	473.4	471.2	468.9	466.7	464.4	462.8
47.5°	444.6	443.9	443.3	442.5	441.9	440.5	438.5	436.3	434.2	432.2	430.4
50°	421.3	420.7	420.1	419.6	419.0	417.8	415.8	413.8	411.8	409.9	407.9
52.5°	398.4	397.8	397.1	396.4	395.7	394.4	392.2	390.2	388.1	386.0	384.3
55°	362.2	361.8	361.4	361.0	360.6	359.4	357.4	355.4	353.4	351.5	349.8
57.5°	327.8	327.3	326.8	326.3	325.8	324.7	322.7	320.7	318.8	316.8	315.2
60°	303.9	303.2	302.5	301.7	301.1	299.8	298.0	296.1	294.3	292.4	291.2
62.5°	280.5	280.0	279.3	278.8	278.2	276.9	275.0	273.0	271.1	269.1	268.0
65°	245.5	244.8	244.1	243.4	242.7	241.7	240.3	238.8	237.4	236.0	234.6
67.5°	210.3	209.6	209.0	208.3	207.7	206.7	205.3	204.0	202.6	201.2	199.9
70°	188.4	187.4	186.5	185.5	184.5	183.4	182.3	181.2	180.0	178.9	177.8
72.5°	165.1	164.1	163.1	162.1	161.1	160.2	159.3	158.4	157.5	156.5	155.6
75°	130.7	130.0	129.3	128.6	127.8	127.2	126.5	125.7	125.1	124.3	123.8
77.5°	97.8	97.5	97.2	96.9	96.6	96.1	95.5	94.9	94.2	93.7	93.4
80°	78.0	77.6	77.2	76.8	76.3	76.0	75.7	75.4	75.2	74.8	74.6
82.5°	58.8	58.5	58.4	58.1	58.0	57.8	57.8	57.7	57.6	57.6	57.4
85°	34.2	34.2	34.2	34.2	34.2	34.1	33.8	33.6	33.3	33.0	33.0
87.5°	13.8	14.1	14.4	14.8	15.2	15.5	15.7	15.9	16.1	16.4	16.6
90°	2.9	5.1	7.5	9.8	12.1	14.1	15.8	17.4	19.2	20.9	22.1
92.5°	20.3	22.9	25.6	28.2	30.9	32.8	34.0	35.1	36.4	37.5	38.2
95°	56.8	58.7	60.7	62.5	64.4	66.1	67.6	69.1	70.5	72.0	72.6
97.5°	99.3	100.8	102.3	103.8	105.3	107.0	108.7	110.4	112.1	113.8	114.6
100°	132.6	133.5	134.3	135.1	136.0	137.4	139.3	141.1	143.0	145.0	145.4
102.5°	167.5	167.8	168.1	168.4	168.8	169.8	171.5	173.3	175.0	176.8	177.3
105°	220.7	220.9	221.1	221.4	221.5	222.1	222.9	223.7	224.6	225.4	226.1
107.5°	276.5	276.9	277.1	277.4	277.6	277.8	277.9	278.0	278.2	278.3	278.9
110°	314.5	314.9	315.3	315.8	316.2	316.3	316.1	315.8	315.6	315.4	315.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	353.8	354.0	354.1	354.2	354.2	354.1	353.7	353.4	352.9	352.5	352.5
115°	412.9	412.9	412.9	412.9	412.9	412.8	412.4	412.0	411.5	411.1	410.9
117.5°	468.7	468.9	469.0	469.2	469.4	469.3	469.0	468.7	468.4	468.1	467.4
120°	505.8	506.6	507.5	508.3	509.2	509.3	508.7	508.0	507.4	506.8	505.7
122.5°	544.5	544.8	545.1	545.4	545.8	545.8	545.5	545.3	544.9	544.6	544.0
125°	601.4	601.4	601.4	601.4	601.4	601.4	601.2	601.0	600.7	600.5	600.1
127.5°	653.2	653.9	654.4	655.1	655.7	655.9	655.5	655.2	654.8	654.5	654.1
130°	689.6	690.2	690.8	691.5	692.1	692.4	692.4	692.4	692.4	692.4	692.0
132.5°	726.7	727.2	727.7	728.1	728.6	728.7	728.6	728.4	728.2	728.1	727.6
135°	775.8	777.1	778.3	779.6	780.8	781.5	781.5	781.5	781.5	781.5	781.1
137.5°	829.2	829.8	830.4	831.0	831.5	832.0	832.3	832.7	833.0	833.3	832.8
140°	864.8	865.2	865.7	866.1	866.5	866.7	866.7	866.7	866.7	866.7	866.5
142.5°	897.4	897.8	898.2	898.6	899.1	899.2	899.0	898.9	898.7	898.5	898.5
145°	942.5	943.3	944.2	945.0	945.8	946.4	946.6	946.8	947.0	947.2	947.0
147.5°	987.2	988.2	989.2	990.2	991.2	991.6	991.5	991.3	991.2	991.0	990.8
150°	1014.5	1015.3	1016.2	1017.0	1017.8	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
152.5°	1040.2	1040.7	1041.2	1041.7	1042.3	1042.6	1042.8	1042.9	1043.1	1043.3	1043.7
155°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.7	1079.5	1079.3	1079.0	1078.9	1079.7
157.5°	1113.1	1112.8	1112.4	1112.1	1111.7	1111.4	1111.4	1111.3	1111.3	1111.3	1111.9
160°	1132.9	1132.7	1132.5	1132.2	1132.0	1131.8	1131.6	1131.4	1131.1	1131.0	1131.6
162.5°	1151.0	1150.5	1150.0	1149.4	1148.8	1148.5	1148.3	1148.1	1147.9	1147.6	1148.8
165°	1175.5	1174.8	1174.2	1173.6	1173.0	1172.4	1172.0	1171.6	1171.2	1170.8	1172.0
167.5°	1194.3	1193.4	1192.5	1191.6	1190.7	1190.3	1190.3	1190.3	1190.4	1190.4	1191.7
170°	1204.8	1203.8	1202.7	1201.7	1200.6	1200.2	1200.4	1200.6	1200.9	1201.1	1202.3
172.5°	1212.4	1211.5	1210.6	1209.7	1208.9	1208.4	1208.5	1208.6	1208.6	1208.7	1210.1
175°	1222.9	1221.8	1220.7	1219.7	1218.6	1218.0	1217.8	1217.6	1217.4	1217.2	1218.6
177.5°	1226.3	1225.4	1224.6	1223.8	1222.9	1222.5	1222.5	1222.5	1222.5	1222.5	1223.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7
2.5°	789.0	790.1	791.2	791.7	791.6	791.5	791.4	791.2
5°	784.7	786.3	787.8	788.5	788.1	787.9	787.6	787.3
7.5°	776.0	777.2	778.4	779.0	778.9	778.7	778.5	778.3
10°	768.7	769.8	770.9	771.4	771.0	770.8	770.5	770.2
12.5°	759.8	761.0	762.2	762.6	762.2	761.8	761.5	761.1
15°	742.7	743.6	744.4	744.6	744.2	743.8	743.3	742.9
17.5°	723.3	723.8	724.4	724.5	724.2	723.9	723.7	723.4
20°	708.9	709.3	709.7	709.8	709.5	709.2	709.0	708.7
22.5°	693.8	694.6	695.4	695.5	695.0	694.5	694.0	693.4
25°	669.0	669.1	669.3	669.0	668.5	667.9	667.3	666.8
27.5°	641.2	640.7	640.4	639.9	639.2	638.5	637.8	637.1
30°	621.9	621.3	620.8	620.1	619.4	618.7	618.0	617.3
32.5°	602.3	601.7	601.0	600.3	599.7	598.9	598.2	597.5
35°	571.5	570.5	569.6	568.8	568.0	567.3	566.6	565.9
37.5°	539.3	538.2	537.1	536.1	535.2	534.3	533.4	532.4
40°	516.8	515.4	514.0	512.9	512.2	511.5	510.8	510.1
42.5°	495.0	493.3	491.7	490.6	490.2	489.8	489.3	488.8
45°	461.3	459.7	458.2	457.2	456.8	456.4	455.9	455.5
47.5°	428.7	426.9	425.2	423.8	422.7	421.6	420.5	419.5
50°	405.9	403.9	401.9	400.6	399.7	398.8	398.0	397.1
52.5°	382.5	380.7	379.0	377.6	376.5	375.4	374.4	373.3
55°	348.1	346.4	344.7	343.4	342.6	341.8	340.9	340.1
57.5°	313.6	312.0	310.4	309.2	308.3	307.5	306.7	305.9
60°	289.9	288.7	287.4	286.4	285.7	285.0	284.3	283.6
62.5°	266.8	265.6	264.5	263.6	262.9	262.2	261.5	260.7
65°	233.2	231.8	230.4	229.3	228.6	227.9	227.2	226.5
67.5°	198.5	197.2	195.8	195.0	194.9	194.7	194.4	194.3
70°	176.7	175.5	174.4	173.7	173.2	172.8	172.4	171.9
72.5°	154.7	153.8	153.0	152.3	151.9	151.5	151.1	150.6
75°	123.2	122.6	122.1	121.7	121.6	121.5	121.3	121.2
77.5°	93.3	93.1	92.9	92.7	92.3	92.0	91.6	91.2
80°	74.3	74.0	73.7	73.5	73.4	73.2	73.1	73.0
82.5°	57.2	57.1	56.9	56.7	56.7	56.5	56.3	56.2
85°	33.0	33.0	33.0	32.9	32.8	32.6	32.5	32.4
87.5°	16.9	17.1	17.4	17.5	17.6	17.7	17.8	17.9
90°	23.4	24.6	25.9	26.7	27.1	27.6	28.0	28.5
92.5°	39.1	39.8	40.5	41.0	41.3	41.6	41.8	42.1
95°	73.2	73.9	74.5	74.8	74.8	74.8	74.8	74.8
97.5°	115.4	116.1	116.9	117.2	117.2	117.2	117.2	117.2
100°	145.8	146.2	146.6	146.8	146.8	146.8	146.8	146.8
102.5°	177.9	178.6	179.1	179.4	179.7	179.9	180.0	180.2
105°	226.7	227.3	228.0	228.6	229.3	229.8	230.5	231.1
107.5°	279.5	280.1	280.6	281.0	280.9	280.9	280.8	280.8
110°	314.5	314.1	313.7	313.8	314.5	315.1	315.8	316.3





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CATALOG NUMBER: S124DIP-S575D1205U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	352.4	352.3	352.2	352.2	352.4	352.5	352.6	352.8
115°	410.7	410.4	410.3	410.0	409.9	409.6	409.4	409.2
117.5°	466.7	465.9	465.2	464.7	464.2	463.8	463.4	463.0
120°	504.7	503.6	502.6	502.2	502.6	503.0	503.5	503.9
122.5°	543.2	542.5	541.8	541.0	540.3	539.6	538.7	538.0
125°	599.7	599.2	598.8	598.4	598.0	597.6	597.1	596.7
127.5°	653.7	653.3	652.8	652.5	652.2	651.8	651.4	651.1
130°	691.5	691.1	690.7	690.1	689.3	688.4	687.5	686.7
132.5°	727.2	726.8	726.4	725.9	725.6	725.3	725.0	724.6
135°	780.6	780.2	779.8	779.3	778.6	778.0	777.3	776.7
137.5°	832.3	831.7	831.2	831.0	831.1	831.2	831.4	831.4
140°	866.3	866.1	865.8	865.7	865.4	865.2	865.0	864.8
142.5°	898.5	898.4	898.4	898.3	898.3	898.2	898.2	898.1
145°	946.8	946.6	946.4	945.9	945.3	944.7	944.0	943.5
147.5°	990.7	990.5	990.3	990.1	989.9	989.7	989.4	989.3
150°	1018.2	1018.2	1018.2	1018.1	1017.9	1017.7	1017.5	1017.3
152.5°	1044.2	1044.8	1045.3	1045.3	1044.7	1044.2	1043.6	1043.1
155°	1080.6	1081.4	1082.2	1082.2	1081.4	1080.6	1079.7	1078.9
157.5°	1112.6	1113.1	1113.8	1113.8	1113.0	1112.3	1111.6	1110.9
160°	1132.2	1132.9	1133.5	1133.3	1132.2	1131.1	1130.2	1129.1
162.5°	1149.9	1151.0	1152.2	1152.3	1151.2	1150.1	1149.1	1148.0
165°	1173.3	1174.5	1175.8	1176.0	1175.2	1174.4	1173.5	1172.6
167.5°	1192.9	1194.3	1195.5	1195.5	1194.2	1192.9	1191.6	1190.3
170°	1203.6	1204.8	1206.2	1206.0	1204.5	1203.1	1201.6	1200.1
172.5°	1211.5	1212.9	1214.4	1214.4	1212.8	1211.4	1209.9	1208.4
175°	1220.1	1221.6	1223.0	1223.0	1221.6	1220.1	1218.6	1217.2
177.5°	1224.8	1226.0	1227.2	1227.1	1225.7	1224.4	1223.0	1221.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7

(END OF REPORT)