

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: P332579-940

Luminaire Tested: **S124DIP-S575D1205U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332579-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D1205U940-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6060.9 lumens  
Efficiency: N/A  
Efficacy: 122.7 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

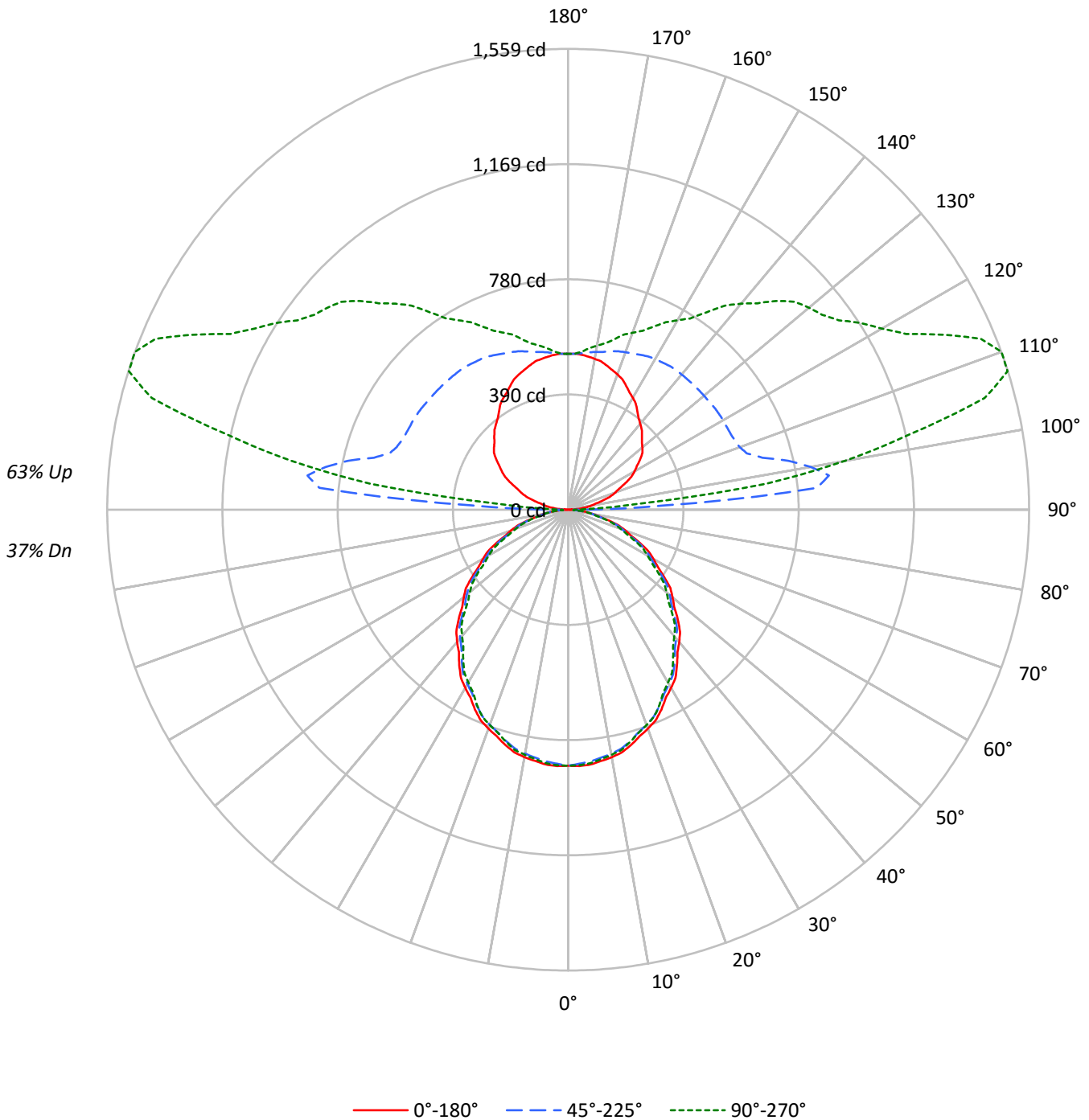
Input Watts (W): 49.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332579-940

CATALOG NUMBER: S124DIP-S575D1205U940-4F0-1E-UDD-F4

### 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	59	59	59	44	44	44	37
1	95	91	87	83	86	82	79	76	66	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	51	46	43	41	34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43	40	37	35	30	28	26	22
4	72	61	54	48	65	56	49	44	46	41	37	36	32	30	27	25	23	19
5	66	55	47	41	59	50	43	38	41	36	32	32	29	26	24	22	20	16
6	61	49	41	35	55	45	38	33	37	31	27	29	25	22	22	19	17	14
7	56	44	36	31	51	40	33	29	33	28	24	26	23	20	20	17	15	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	18	16	14	11
9	48	36	29	24	44	33	27	22	28	23	19	22	18	16	17	14	12	10
10	45	33	26	21	41	31	24	20	25	20	17	20	17	14	16	13	11	9

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

	0°	45°	90°
0°	6990	6990	6990
5°	7012	6928	6978
10°	6968	6871	6906
15°	6884	6774	6791
20°	6772	6653	6659
25°	6644	6515	6495
30°	6488	6352	6293
35°	6326	6182	6099
40°	6157	5989	5879
45°	5981	5799	5688
50°	5786	5630	5456
55°	5576	5410	5234
60°	5365	5165	5007
65°	5129	4932	4732
70°	4865	4617	4440
75°	4457	4242	4133
80°	3966	3808	3710
85°	3473	3344	3279



TEST NUMBER: P332579-940

CATALOG NUMBER: S124DIP-S575D1205U940-4F0-1E-UDD-F4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	1.3
10°-20°	229.8	3.8
20°-30°	338.2	5.6
30°-40°	393.2	6.5
40°-50°	393.2	6.5
50°-60°	343.9	5.7
60°-70°	255.4	4.2
70°-80°	145.1	2.4
80°-90°	44.8	0.7
90°-100°	380.9	6.3
100°-110°	792.8	13.1
110°-120°	710.1	11.7
120°-130°	597.3	9.9
130°-140°	498.1	8.2
140°-150°	380.5	6.3
150°-160°	267.5	4.4
160°-170°	157.3	2.6
170°-180°	51.2	0.8
0°-30°	649.5	10.7
0°-40°	1042.7	17.2
0°-60°	1779.8	29.4
0°-90°	2225.1	36.7
90°-120°	1883.9	31.1
90°-150°	3359.8	55.4
90°-180°	3836.0	63.3
0°-180°	6060.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	865	862	855	862	861	82
15°	824	820	810	814	812	232
25°	746	741	731	732	729	343
35°	642	637	627	622	619	401
45°	524	519	508	501	498	404
55°	396	394	384	376	372	355
65°	268	265	258	251	248	266
75°	143	139	136	133	132	152
85°	38	37	36	36	35	41
90°	1	8	19	21	22	4
95°	34	108	844	418	253	38
105°	121	176	680	1464	1458	129
115°	214	268	606	1165	1400	212
125°	297	353	603	991	1117	265
135°	353	421	598	880	999	273
145°	407	466	595	742	816	256
155°	463	500	578	655	683	213
165°	505	520	554	587	596	142
175°	526	527	532	539	537	50
180°	527	527	527	527	527	



TEST NUMBER: P332579-940

CATALOG NUMBER: S124DIP-S575D1205U940-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	868.2	867.8	867.5	867.1	866.7	865.9	864.5	863.2	861.7	860.4	861.7
5°	865.3	864.7	864.1	863.4	862.8	861.7	860.0	858.3	856.6	854.9	856.6
7.5°	857.2	856.6	856.0	855.4	854.8	853.5	851.7	849.8	847.8	846.0	847.4
10°	850.0	849.4	848.8	848.2	847.6	846.2	844.3	842.2	840.3	838.2	839.5
12.5°	840.6	840.0	839.4	838.7	838.1	836.8	834.6	832.5	830.4	828.2	829.6
15°	823.7	823.0	822.4	821.8	821.2	819.7	817.4	815.1	812.8	810.5	811.4
17.5°	803.3	802.5	801.7	800.9	800.1	798.7	796.5	794.3	792.1	790.0	790.5
20°	788.3	787.5	786.8	786.0	785.2	783.6	781.3	779.0	776.7	774.4	774.8
22.5°	772.1	771.2	770.2	769.1	768.1	766.4	764.1	761.8	759.5	757.2	758.0
25°	745.9	744.8	743.8	742.7	741.6	740.0	737.8	735.7	733.5	731.4	731.6
27.5°	716.0	714.9	713.7	712.7	711.5	710.0	707.9	706.0	703.9	702.0	701.6
30°	696.0	694.7	693.5	692.2	691.1	689.4	687.4	685.4	683.4	681.4	680.8
32.5°	674.8	673.8	672.6	671.5	670.5	668.8	666.7	664.6	662.5	660.3	659.6
35°	641.9	640.8	639.7	638.6	637.6	635.9	633.7	631.6	629.5	627.3	626.2
37.5°	607.0	606.0	605.0	604.0	603.1	601.5	599.1	596.8	594.5	592.2	591.0
40°	584.2	583.0	581.8	580.6	579.3	577.6	575.2	572.9	570.6	568.3	566.8
42.5°	559.8	559.1	558.4	557.6	556.9	555.2	552.7	550.1	547.5	545.0	543.2
45°	523.9	522.8	521.7	520.7	519.6	517.8	515.3	512.8	510.4	507.9	506.2
47.5°	486.2	485.5	484.8	484.0	483.3	481.8	479.6	477.2	474.9	472.7	470.7
50°	460.7	460.1	459.5	458.9	458.3	456.9	454.8	452.5	450.4	448.3	446.1
52.5°	435.8	435.1	434.3	433.5	432.8	431.3	429.0	426.8	424.5	422.1	420.3
55°	396.2	395.7	395.3	394.8	394.4	393.1	390.9	388.7	386.6	384.4	382.5
57.5°	358.5	357.9	357.4	356.9	356.3	355.1	352.9	350.8	348.7	346.5	344.7
60°	332.3	331.6	330.8	330.0	329.3	327.9	325.9	323.9	321.9	319.9	318.5
62.5°	306.8	306.2	305.5	304.9	304.3	302.8	300.8	298.6	296.5	294.4	293.1
65°	268.5	267.8	267.0	266.3	265.5	264.3	262.8	261.2	259.7	258.2	256.5
67.5°	230.0	229.3	228.5	227.8	227.1	226.0	224.5	223.1	221.6	220.1	218.6
70°	206.1	205.0	203.9	202.9	201.8	200.6	199.4	198.1	196.9	195.6	194.5
72.5°	180.6	179.5	178.4	177.3	176.2	175.2	174.2	173.3	172.3	171.2	170.2
75°	142.9	142.1	141.4	140.6	139.8	139.1	138.3	137.5	136.8	136.0	135.4
77.5°	107.0	106.6	106.3	106.0	105.7	105.1	104.4	103.8	103.1	102.5	102.2
80°	85.3	84.9	84.4	84.0	83.5	83.1	82.8	82.5	82.2	81.9	81.6
82.5°	64.3	64.0	63.8	63.6	63.4	63.2	63.2	63.1	63.0	63.0	62.8
85°	37.5	37.5	37.5	37.5	37.5	37.3	37.0	36.7	36.4	36.1	36.1
87.5°	14.6	14.9	15.4	15.5	15.6	15.5	16.6	16.5	16.8	17.0	16.9
90°	1.1	3.1	6.2	7.2	8.3	8.3	14.5	14.5	16.6	18.6	17.7
92.5°	11.8	17.2	26.9	39.6	54.8	76.2	128.9	209.3	287.7	328.7	273.8
95°	34.2	37.3	47.7	61.2	86.0	129.6	219.6	389.6	637.2	844.5	868.3
97.5°	61.3	61.3	70.3	82.7	104.1	140.5	209.9	350.3	596.4	889.5	1090.9
100°	78.7	78.7	86.0	98.4	118.2	151.3	212.4	329.5	540.9	833.0	1098.3
102.5°	95.3	97.0	103.4	115.0	133.8	165.4	220.7	323.7	503.5	762.6	1036.2
105°	121.3	124.3	129.6	142.0	160.6	190.6	240.4	326.4	471.4	679.8	923.2
107.5°	149.8	151.9	157.1	170.3	188.2	217.8	263.4	341.7	465.7	633.3	832.1
110°	168.9	170.9	176.1	188.6	207.2	235.2	280.8	353.3	467.3	617.6	786.5



TEST NUMBER: P332579-940

CATALOG NUMBER: S124DIP-S575D1205U940-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.2	189.2	195.2	206.8	225.5	253.4	297.4	365.8	472.3	610.1	760.7
115°	213.5	216.6	223.8	234.2	253.9	281.9	323.2	385.5	481.8	606.2	736.7
117.5°	240.8	243.7	250.1	261.5	280.0	309.0	348.4	405.6	492.0	605.1	725.9
120°	259.0	261.1	268.4	279.7	297.4	326.4	365.8	419.6	499.4	605.1	720.1
122.5°	275.6	277.7	285.0	295.5	314.8	343.0	382.4	432.9	506.9	604.3	713.5
125°	297.4	301.5	307.7	319.1	338.9	367.8	405.1	452.8	518.1	603.1	702.5
127.5°	316.6	319.9	327.4	340.5	361.0	390.2	426.2	470.0	527.0	600.7	687.8
130°	327.4	331.5	339.8	355.4	375.1	405.1	440.4	480.8	533.6	599.9	678.7
132.5°	338.2	341.5	352.3	367.0	388.3	416.8	452.0	491.6	539.4	599.1	670.4
135°	353.3	357.5	367.8	385.5	407.2	434.2	468.3	505.7	548.1	597.9	658.0
137.5°	368.5	372.4	383.8	400.6	423.2	448.9	480.8	515.6	553.3	597.6	647.2
140°	379.2	382.4	393.8	411.3	433.1	458.0	489.1	522.2	557.5	596.8	641.4
142.5°	390.8	394.0	404.5	421.3	442.2	466.3	496.5	527.2	560.8	596.8	636.4
145°	407.2	410.4	420.7	435.2	454.9	477.7	504.6	532.6	562.7	594.8	627.9
147.5°	425.6	426.7	435.8	450.8	467.1	487.6	512.9	537.3	563.7	591.0	620.3
150°	437.3	438.3	446.6	459.1	474.6	494.3	517.0	539.8	563.7	588.5	614.5
152.5°	448.0	448.3	456.6	468.1	482.1	500.1	520.4	541.5	562.0	584.4	607.8
155°	463.2	464.2	470.4	480.8	492.2	507.7	525.3	543.0	559.5	578.2	597.9
157.5°	477.9	477.9	483.7	491.8	501.7	514.0	528.9	543.0	556.9	571.8	587.7
160°	487.0	487.0	491.2	498.4	506.7	518.1	530.5	543.0	554.4	566.8	580.2
162.5°	495.3	494.5	497.8	504.2	511.7	520.6	532.2	543.0	551.9	561.8	573.6
165°	504.6	504.6	506.7	511.8	517.0	523.3	532.6	540.9	547.1	554.4	562.7
167.5°	514.0	512.9	514.0	517.9	520.8	525.6	532.4	538.4	542.2	546.9	552.7
170°	518.1	517.0	518.1	521.2	523.3	526.4	531.5	536.7	538.8	541.9	546.1
172.5°	522.2	521.2	521.4	523.7	525.0	527.2	530.7	535.1	535.5	536.9	540.3
175°	526.4	525.3	525.3	526.4	527.4	527.4	529.5	532.6	531.5	531.5	533.6
177.5°	528.2	527.4	526.6	527.4	527.4	527.4	528.2	529.9	528.2	528.2	529.1
180°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4



TEST NUMBER: P332579-940

CATALOG NUMBER: S124DIP-S575D1205U940-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	862.9	864.2	865.4	865.9	865.8	865.7	865.6	865.4
5°	858.3	860.0	861.7	862.4	862.0	861.7	861.4	861.1
7.5°	848.7	850.1	851.4	852.0	851.9	851.7	851.5	851.2
10°	840.7	842.0	843.2	843.6	843.3	843.0	842.7	842.4
12.5°	831.0	832.3	833.7	834.1	833.7	833.2	832.9	832.4
15°	812.3	813.2	814.1	814.4	814.0	813.5	813.0	812.5
17.5°	791.1	791.7	792.3	792.4	792.1	791.8	791.5	791.2
20°	775.3	775.8	776.2	776.3	776.0	775.7	775.4	775.1
22.5°	758.8	759.6	760.5	760.6	760.1	759.6	759.0	758.4
25°	731.6	731.8	732.0	731.7	731.1	730.5	729.9	729.2
27.5°	701.2	700.8	700.4	699.9	699.1	698.4	697.6	696.8
30°	680.2	679.6	678.9	678.2	677.4	676.7	675.9	675.1
32.5°	658.8	658.1	657.4	656.6	655.9	655.1	654.2	653.5
35°	625.1	624.0	622.9	622.1	621.3	620.5	619.7	618.9
37.5°	589.9	588.6	587.5	586.4	585.4	584.3	583.4	582.3
40°	565.3	563.7	562.1	561.0	560.2	559.5	558.7	557.9
42.5°	541.4	539.6	537.8	536.6	536.2	535.7	535.1	534.6
45°	504.5	502.8	501.1	500.1	499.6	499.2	498.6	498.2
47.5°	468.9	466.9	465.0	463.5	462.4	461.1	459.9	458.8
50°	443.9	441.8	439.6	438.1	437.1	436.2	435.3	434.4
52.5°	418.3	416.4	414.6	413.0	411.8	410.6	409.5	408.3
55°	380.8	378.9	377.0	375.6	374.7	373.8	372.8	371.9
57.5°	343.0	341.3	339.5	338.1	337.2	336.4	335.5	334.6
60°	317.1	315.8	314.3	313.3	312.5	311.7	310.9	310.1
62.5°	291.9	290.5	289.3	288.3	287.5	286.8	286.0	285.2
65°	255.0	253.5	252.0	250.8	250.0	249.2	248.5	247.7
67.5°	217.1	215.7	214.2	213.3	213.1	212.9	212.7	212.5
70°	193.2	192.0	190.7	189.9	189.4	189.0	188.5	188.1
72.5°	169.2	168.3	167.3	166.6	166.1	165.7	165.2	164.7
75°	134.7	134.1	133.6	133.1	133.0	132.9	132.7	132.5
77.5°	102.0	101.8	101.7	101.4	100.9	100.6	100.1	99.8
80°	81.2	81.0	80.6	80.4	80.3	80.1	80.0	79.8
82.5°	62.6	62.4	62.2	62.1	62.0	61.8	61.6	61.4
85°	36.1	36.1	36.1	36.0	35.8	35.7	35.6	35.4
87.5°	17.0	17.3	17.5	17.5	17.7	17.9	17.7	17.7
90°	18.6	19.7	20.7	20.7	21.8	22.8	21.8	21.8
92.5°	203.5	153.1	121.9	101.1	88.9	83.3	79.8	79.8
95°	767.8	607.2	468.3	367.8	317.1	285.0	266.3	252.8
97.5°	1134.4	1074.7	973.4	865.2	790.8	728.4	697.3	675.8
100°	1249.6	1270.3	1219.6	1142.9	1052.8	989.5	958.5	950.2
102.5°	1243.8	1346.6	1361.3	1329.4	1274.1	1228.2	1195.5	1188.9
105°	1160.5	1339.8	1442.3	1484.8	1486.9	1478.6	1464.1	1457.9
107.5°	1042.1	1233.1	1377.5	1469.9	1521.1	1544.7	1555.1	1557.8
110°	970.9	1150.1	1300.4	1414.3	1487.9	1531.4	1550.2	1559.4





TEST NUMBER: P332579-940

CATALOG NUMBER: S124DIP-S575D1205U940-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	918.6	1077.2	1219.1	1333.1	1416.7	1469.3	1495.4	1510.6
115°	866.2	993.7	1114.9	1214.4	1296.3	1358.4	1391.6	1399.9
117.5°	840.5	946.0	1041.3	1125.7	1195.5	1247.8	1281.3	1287.7
120°	828.9	925.3	1008.2	1081.7	1140.9	1186.4	1213.4	1224.8
122.5°	818.9	912.0	987.5	1052.0	1101.9	1140.9	1163.6	1175.0
125°	802.0	891.1	962.6	1019.6	1061.0	1091.1	1110.8	1117.0
127.5°	781.2	866.5	937.7	991.8	1033.5	1060.2	1076.8	1083.0
130°	764.7	846.6	917.0	972.0	1014.4	1040.3	1056.9	1063.1
132.5°	747.3	824.2	893.0	947.9	989.5	1018.8	1034.5	1040.7
135°	723.3	790.6	853.8	905.6	947.1	976.1	992.7	998.9
137.5°	701.5	758.5	811.7	858.5	897.3	926.0	939.6	947.1
140°	689.0	737.7	784.3	827.9	864.2	887.0	901.4	909.7
142.5°	677.4	720.3	760.4	798.1	830.2	851.3	864.2	870.0
145°	661.1	696.3	727.4	756.4	782.3	800.0	810.3	815.5
147.5°	647.6	675.6	700.4	723.3	742.3	757.4	765.4	767.1
150°	639.4	663.2	683.9	702.5	719.1	732.5	738.8	739.9
152.5°	630.2	650.7	669.8	685.1	699.2	710.2	713.9	715.0
155°	616.5	633.1	648.6	661.1	671.5	679.8	682.9	682.9
157.5°	601.8	615.7	628.7	638.7	646.6	652.8	654.7	654.7
160°	592.7	604.0	615.5	623.8	630.0	636.2	637.2	637.2
162.5°	583.5	593.3	602.3	609.7	614.2	620.5	621.5	620.6
165°	571.0	577.1	584.4	589.6	593.7	597.9	596.8	595.8
167.5°	558.7	563.5	569.3	572.4	574.4	577.1	576.9	576.1
170°	551.3	554.4	558.5	561.6	563.7	564.7	563.7	563.7
172.5°	544.6	546.9	549.4	551.6	552.9	553.9	552.9	551.3
175°	535.7	536.7	538.8	538.8	538.8	540.9	538.8	536.7
177.5°	529.9	530.7	530.7	531.5	530.7	531.5	529.9	528.2
180°	527.4	527.4	527.4	527.4	527.4	527.4	527.4	527.4

(END OF REPORT)