

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: P332892-927

Luminaire Tested: **S124RDIP-S350D1205U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332892-927  
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: S124RDIP-S350D1205U927-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4941.8 lumens  
Efficiency: N/A  
Efficacy: 117.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

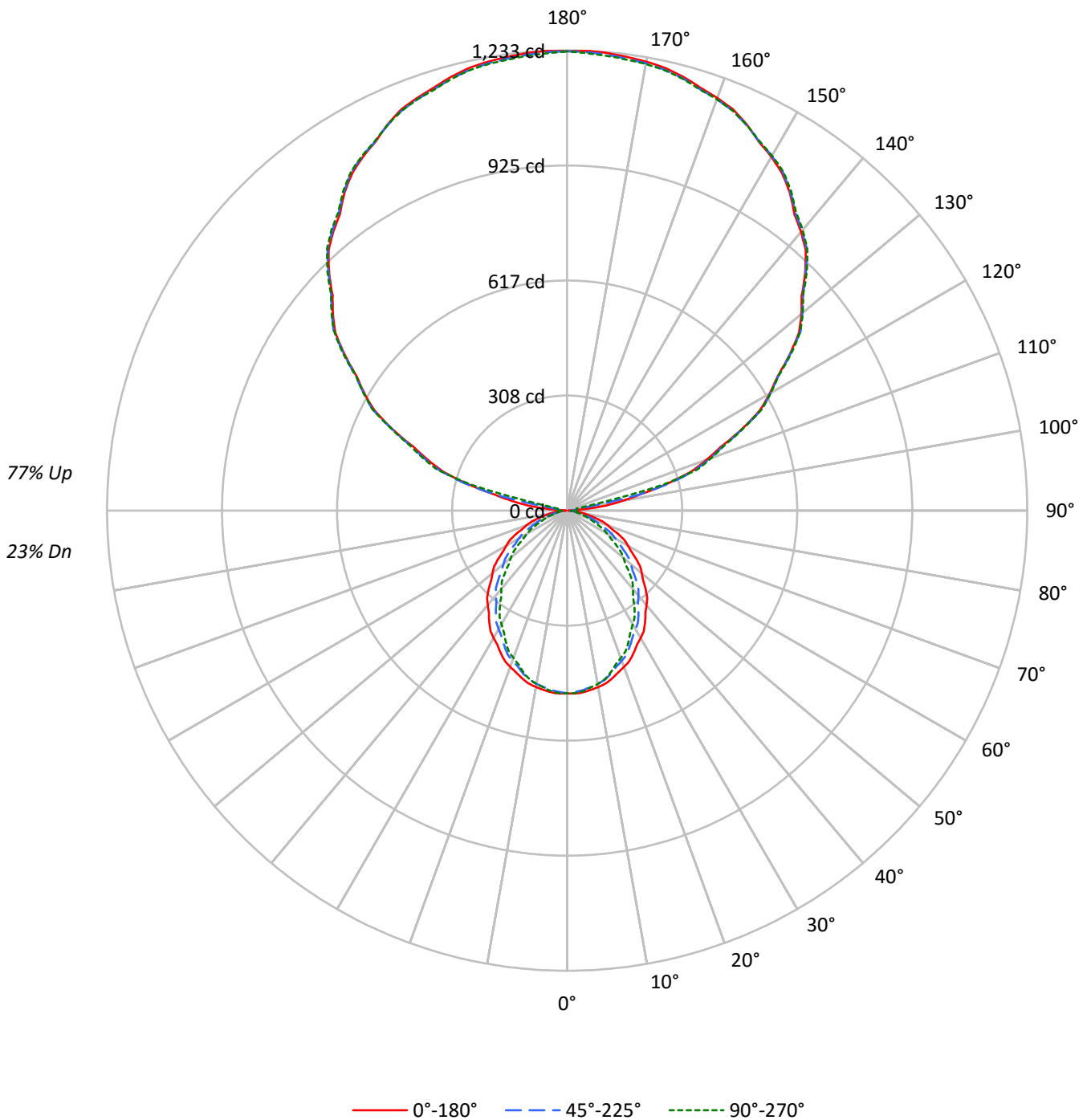
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332892-927

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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	0	
RCR																						
0	101	101	101	101	89	89	89	89	68	68	68	49	49	49	31	31	31	23				
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27	20				
2	84	77	71	66	74	68	63	59	53	49	47	38	36	34	25	23	23	17				
3	76	67	61	55	68	60	54	50	46	42	39	34	31	29	22	20	19	14				
4	70	60	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12				
5	64	53	45	40	57	47	41	36	37	32	29	27	24	22	18	16	15	11				
6	59	47	40	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9				
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	11	8				
8	50	39	31	26	44	35	28	24	27	22	19	20	17	15	13	12	10	8				
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	12	11	9	7				
10	43	32	25	21	39	29	23	19	23	18	15	17	14	12	11	10	8	6				

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

	0°	45°	90°
0°	3953	3953	3953
5°	3962	3914	3938
10°	3937	3867	3867
15°	3892	3786	3758
20°	3830	3679	3611
25°	3751	3553	3463
30°	3674	3422	3278
35°	3588	3286	3094
40°	3485	3130	2893
45°	3391	2975	2689
50°	3282	2798	2473
55°	3167	2612	2238
60°	3039	2409	1997
65°	2923	2157	1761
70°	2752	1876	1496
75°	2539	1556	1216
80°	2213	1186	1116
85°	1880	1074	1010



TEST NUMBER: P332892-927

CATALOG NUMBER: S124RDIP-S350D1205U927-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	0.9
10°-20°	128.3	2.6
20°-30°	185.2	3.7
30°-40°	210.0	4.2
40°-50°	202.8	4.1
50°-60°	168.6	3.4
60°-70°	116.4	2.4
70°-80°	59.0	1.2
80°-90°	18.7	0.4
90°-100°	42.1	0.9
100°-110°	268.4	5.4
110°-120°	513.4	10.4
120°-130°	651.7	13.2
130°-140°	697.3	14.1
140°-150°	652.1	13.2
150°-160°	525.8	10.6
160°-170°	339.2	6.9
170°-180°	116.9	2.4
0°-30°	359.5	7.3
0°-40°	569.5	11.5
0°-60°	940.8	19.0
0°-90°	1135.0	23.0
90°-120°	823.9	16.7
90°-150°	2825.0	57.2
90°-180°	3807.0	77.0
0°-180°	4941.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	490	490	490	490	490	
5°	489	487	483	486	486	46
15°	466	462	453	452	450	131
25°	421	414	399	393	389	194
35°	364	352	333	321	314	227
45°	297	283	261	243	236	229
55°	225	209	186	167	159	201
65°	153	136	113	97	92	151
75°	81	67	50	42	39	86
85°	20	13	12	11	11	23
90°	3	13	20	26	28	3
95°	51	21	20	26	27	65
105°	277	282	287	293	262	290
115°	517	520	519	521	521	509
125°	727	731	729	732	733	649
135°	902	901	905	907	908	695
145°	1040	1043	1043	1044	1046	650
155°	1140	1141	1139	1142	1140	526
165°	1203	1199	1198	1205	1198	340
175°	1231	1226	1226	1233	1223	117
180°	1231	1231	1231	1231	1231	



TEST NUMBER: P332892-927

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	490.9	490.6	490.4	490.1	489.8	489.3	488.6	487.9	487.1	486.4	487.1
5°	488.9	488.6	488.3	488.0	487.6	487.0	485.9	485.0	483.9	483.0	483.8
7.5°	484.5	484.2	483.9	483.5	483.2	482.3	481.0	479.7	478.4	477.1	477.6
10°	480.3	479.9	479.5	479.1	478.6	477.7	476.2	474.7	473.2	471.7	472.1
12.5°	474.9	474.4	474.0	473.5	473.0	471.9	470.1	468.3	466.6	464.8	465.0
15°	465.7	464.9	464.2	463.4	462.7	461.3	459.2	457.1	455.0	453.0	452.8
17.5°	454.6	453.4	452.3	451.3	450.2	448.4	445.9	443.4	440.9	438.4	437.9
20°	445.8	444.7	443.7	442.6	441.5	439.6	436.7	433.9	431.0	428.2	427.5
22.5°	436.3	435.0	433.8	432.6	431.3	429.2	426.2	423.2	420.2	417.1	416.1
25°	421.1	419.6	418.1	416.6	415.1	412.6	409.2	405.8	402.3	398.9	397.5
27.5°	405.2	403.3	401.4	399.6	397.7	394.9	391.3	387.6	384.0	380.3	378.5
30°	394.1	392.0	389.9	387.9	385.8	382.8	378.8	374.9	371.0	367.1	365.0
32.5°	382.4	380.0	377.7	375.3	373.0	369.8	365.8	361.7	357.7	353.6	351.2
35°	364.1	361.4	358.8	356.1	353.4	350.0	345.9	341.7	337.5	333.4	330.5
37.5°	344.5	341.7	339.1	336.3	333.5	329.9	325.2	320.6	316.0	311.4	308.2
40°	330.7	328.0	325.2	322.5	319.7	316.0	311.2	306.5	301.7	297.0	293.5
42.5°	317.5	314.7	311.7	308.9	306.0	302.1	297.1	292.2	287.2	282.3	278.7
45°	297.0	293.9	290.8	287.7	284.6	280.6	275.6	270.6	265.6	260.6	256.5
47.5°	275.8	272.6	269.4	266.2	263.0	258.8	253.7	248.4	243.2	238.1	233.8
50°	261.3	258.1	254.8	251.6	248.3	244.1	238.8	233.4	228.1	222.8	218.6
52.5°	246.7	243.4	240.3	237.1	233.9	229.6	224.1	218.6	213.2	207.7	203.5
55°	225.0	221.7	218.3	215.0	211.7	207.2	201.8	196.5	191.0	185.6	181.3
57.5°	203.5	200.0	196.6	193.1	189.6	185.3	179.9	174.6	169.3	163.9	159.5
60°	188.2	184.9	181.6	178.2	174.9	170.6	165.2	159.9	154.6	149.2	144.9
62.5°	174.4	171.0	167.5	164.1	160.6	156.1	150.7	145.2	139.7	134.3	130.2
65°	153.0	149.4	145.8	142.3	138.6	134.2	128.9	123.5	118.2	112.9	109.3
67.5°	130.7	127.3	123.8	120.4	117.0	112.8	107.8	102.9	97.9	93.0	89.9
70°	116.6	113.1	109.6	106.2	102.6	98.5	93.7	89.0	84.2	79.5	76.8
72.5°	101.6	98.5	95.3	92.1	89.0	85.2	80.6	76.1	71.7	67.2	64.9
75°	81.4	78.3	75.2	72.1	69.0	65.5	61.6	57.7	53.8	49.9	47.9
77.5°	60.8	58.2	55.6	53.0	50.4	47.5	44.3	41.1	37.9	34.8	33.7
80°	47.6	45.2	42.8	40.4	37.9	35.5	33.0	30.5	28.0	25.5	25.3
82.5°	36.2	34.0	31.8	29.5	27.3	25.5	24.1	22.7	21.2	19.8	19.6
85°	20.3	18.6	17.0	15.2	13.5	12.6	12.4	12.1	11.9	11.6	11.5
87.5°	7.4	7.4	7.3	7.2	7.1	7.2	7.4	7.8	8.0	8.2	8.4
90°	2.8	5.0	7.3	9.5	11.7	13.7	15.4	17.0	18.6	20.3	21.5
92.5°	11.6	11.7	11.9	12.0	12.1	13.0	14.6	16.2	17.9	19.5	20.8
95°	50.6	43.6	36.7	29.8	22.8	19.4	19.6	19.8	20.0	20.3	21.5
97.5°	107.5	111.9	116.2	120.5	124.8	115.6	92.8	69.9	47.1	24.3	24.4
100°	151.0	154.6	158.4	162.0	165.7	153.4	125.2	97.0	68.8	40.5	37.0
102.5°	199.6	202.2	204.9	207.6	210.3	209.8	206.2	202.5	198.8	195.1	157.6
105°	277.0	278.3	279.5	280.7	281.9	283.1	284.2	285.1	286.1	287.2	289.1
107.5°	349.0	349.7	350.3	350.9	351.5	352.5	353.9	355.3	356.6	358.1	358.9
110°	397.7	398.2	398.9	399.5	400.1	401.0	402.3	403.5	404.7	405.9	406.3



TEST NUMBER: P332892-927

CATALOG NUMBER: S124RDIP-S350D1205U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	444.8	445.9	446.9	448.1	449.2	450.0	450.6	451.1	451.8	452.3	452.3
115°	517.3	517.9	518.6	519.1	519.8	520.0	519.8	519.6	519.4	519.1	519.6
117.5°	582.7	583.4	584.3	585.1	585.9	586.5	587.0	587.5	588.0	588.4	588.3
120°	626.9	627.6	628.5	629.3	630.1	630.4	630.3	630.0	629.8	629.6	630.0
122.5°	668.0	668.6	669.1	669.6	670.0	670.4	670.7	671.0	671.3	671.6	671.8
125°	727.1	728.0	728.8	729.6	730.5	730.6	730.2	729.8	729.4	729.0	729.6
127.5°	783.2	783.3	783.5	783.8	783.9	784.5	785.4	786.4	787.3	788.3	788.1
130°	819.2	819.4	819.7	819.8	820.1	820.5	821.1	821.7	822.3	822.9	823.1
132.5°	852.4	852.7	853.1	853.5	853.8	854.4	855.2	856.0	856.7	857.5	857.7
135°	902.1	901.9	901.7	901.4	901.3	901.6	902.4	903.2	904.0	904.8	905.2
137.5°	946.1	946.2	946.3	946.3	946.4	946.9	947.8	948.7	949.6	950.5	950.9
140°	974.8	975.2	975.6	976.0	976.4	976.8	977.2	977.6	978.0	978.5	979.1
142.5°	1000.5	1001.3	1002.0	1002.7	1003.5	1004.0	1004.2	1004.5	1004.7	1005.0	1005.4
145°	1040.1	1040.8	1041.4	1042.0	1042.6	1042.9	1042.9	1042.9	1042.9	1042.9	1043.1
147.5°	1071.6	1072.8	1073.9	1075.1	1076.2	1076.7	1076.5	1076.3	1076.0	1075.9	1076.0
150°	1094.5	1095.3	1096.1	1096.9	1097.7	1098.0	1097.8	1097.6	1097.4	1097.2	1097.2
152.5°	1113.6	1114.3	1114.9	1115.6	1116.2	1116.3	1116.0	1115.6	1115.2	1114.9	1115.2
155°	1140.5	1140.7	1140.9	1141.1	1141.3	1141.1	1140.5	1139.9	1139.2	1138.6	1139.5
157.5°	1163.1	1163.0	1162.8	1162.8	1162.6	1162.2	1161.5	1160.9	1160.2	1159.4	1160.5
160°	1176.4	1175.8	1175.1	1174.6	1173.9	1173.5	1173.3	1173.1	1172.9	1172.7	1173.9
162.5°	1188.1	1187.4	1186.6	1185.8	1185.0	1184.6	1184.3	1184.2	1183.9	1183.8	1184.9
165°	1203.1	1202.1	1201.0	1200.0	1199.0	1198.5	1198.5	1198.5	1198.5	1198.5	1200.1
167.5°	1214.8	1213.8	1212.8	1211.6	1210.6	1210.0	1209.9	1209.7	1209.7	1209.5	1211.3
170°	1221.5	1220.3	1219.0	1217.8	1216.6	1216.1	1216.2	1216.5	1216.6	1216.9	1218.5
172.5°	1225.9	1224.6	1223.4	1222.2	1221.0	1220.4	1220.7	1220.9	1221.1	1221.3	1222.9
175°	1230.7	1229.5	1228.2	1227.0	1225.7	1225.3	1225.4	1225.7	1225.9	1226.1	1227.9
177.5°	1232.9	1231.8	1230.6	1229.5	1228.3	1227.9	1228.2	1228.5	1228.9	1229.2	1230.5
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7



TEST NUMBER: P332892-927

CATALOG NUMBER: S124RDIP-S350D1205U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	487.9	488.6	489.3	489.6	489.6	489.6	489.5	489.4
5°	484.7	485.4	486.3	486.6	486.5	486.3	486.1	485.9
7.5°	478.2	478.7	479.3	479.3	479.1	478.9	478.6	478.3
10°	472.4	472.7	473.0	473.0	472.7	472.4	472.1	471.7
12.5°	465.2	465.4	465.6	465.5	465.0	464.5	464.1	463.6
15°	452.7	452.5	452.3	451.9	451.3	450.8	450.2	449.6
17.5°	437.4	437.0	436.6	435.9	435.0	434.1	433.2	432.4
20°	426.9	426.2	425.6	424.7	423.6	422.5	421.4	420.3
22.5°	415.1	414.1	413.1	412.2	411.3	410.4	409.6	408.6
25°	396.1	394.7	393.3	392.2	391.3	390.5	389.7	388.8
27.5°	376.8	375.0	373.3	371.9	370.6	369.4	368.2	367.0
30°	362.9	360.8	358.8	357.0	355.7	354.4	353.1	351.7
32.5°	348.8	346.3	344.0	342.1	340.8	339.5	338.3	337.0
35°	327.6	324.9	322.0	319.9	318.4	316.9	315.4	313.9
37.5°	305.1	301.9	298.7	296.4	294.9	293.3	291.8	290.3
40°	289.9	286.5	283.0	280.5	279.0	277.5	276.0	274.5
42.5°	275.1	271.6	268.0	265.5	263.9	262.3	260.7	259.2
45°	252.5	248.3	244.2	241.5	240.0	238.4	236.9	235.5
47.5°	229.6	225.3	221.1	218.2	216.5	214.8	213.2	211.6
50°	214.4	210.2	206.0	203.2	201.6	200.0	198.4	196.9
52.5°	199.2	195.0	190.8	187.8	186.2	184.6	182.9	181.3
55°	177.0	172.6	168.3	165.3	163.7	162.2	160.6	159.0
57.5°	155.1	150.8	146.3	143.5	142.4	141.2	139.9	138.7
60°	140.5	136.3	131.9	129.0	127.7	126.4	125.1	123.7
62.5°	126.3	122.2	118.3	115.7	114.6	113.6	112.5	111.5
65°	105.7	102.1	98.5	96.3	95.2	94.3	93.2	92.2
67.5°	86.8	83.7	80.6	78.6	77.5	76.4	75.3	74.1
70°	74.0	71.2	68.5	66.7	65.8	65.0	64.2	63.4
72.5°	62.5	60.1	57.8	56.2	55.5	54.7	53.9	53.2
75°	46.0	44.1	42.2	41.0	40.5	40.0	39.5	39.0
77.5°	32.6	31.4	30.3	29.7	29.5	29.4	29.2	29.1
80°	25.0	24.7	24.5	24.3	24.2	24.2	24.1	24.0
82.5°	19.4	19.3	19.1	18.9	18.9	18.8	18.7	18.6
85°	11.3	11.1	10.9	10.9	10.9	10.9	10.9	10.9
87.5°	8.6	8.8	9.0	9.1	9.3	9.4	9.6	9.7
90°	22.7	23.9	25.2	26.0	26.4	26.8	27.2	27.6
92.5°	21.9	23.2	24.4	25.1	25.2	25.3	25.3	25.4
95°	22.7	23.9	25.2	25.9	26.1	26.3	26.5	26.7
97.5°	24.6	24.6	24.8	25.0	25.2	25.3	25.6	25.7
100°	33.5	30.1	26.6	25.0	25.2	25.3	25.6	25.7
102.5°	120.1	82.6	45.1	26.4	26.4	26.5	26.5	26.5
105°	290.9	292.7	294.5	291.8	284.4	277.0	269.7	262.4
107.5°	359.9	360.8	361.6	362.5	363.3	364.1	364.8	365.6
110°	406.8	407.2	407.6	408.1	408.7	409.3	410.0	410.5





TEST NUMBER: P332892-927

CATALOG NUMBER: S124RDIP-S350D1205U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	452.2	452.1	452.0	452.3	453.1	453.9	454.7	455.4
115°	520.0	520.4	520.8	521.0	521.0	521.0	521.0	521.0
117.5°	588.2	588.1	588.0	588.0	587.9	587.8	587.7	587.6
120°	630.4	630.8	631.2	631.2	630.8	630.4	630.0	629.6
122.5°	672.1	672.3	672.6	672.5	672.1	671.7	671.2	670.8
125°	730.2	730.9	731.5	731.9	732.1	732.3	732.5	732.7
127.5°	788.1	787.9	787.8	787.7	787.5	787.3	787.2	787.0
130°	823.3	823.6	823.7	823.8	823.8	823.8	823.8	823.8
132.5°	857.9	858.2	858.3	858.3	858.2	858.0	857.9	857.7
135°	905.6	906.0	906.5	906.9	907.3	907.7	908.1	908.5
137.5°	951.4	951.8	952.3	952.4	952.4	952.2	952.0	952.0
140°	979.7	980.3	981.0	981.4	981.5	981.8	981.9	982.1
142.5°	1005.9	1006.3	1006.8	1007.0	1007.1	1007.1	1007.2	1007.2
145°	1043.3	1043.5	1043.7	1044.0	1044.4	1044.8	1045.3	1045.7
147.5°	1076.2	1076.3	1076.5	1076.7	1076.9	1077.1	1077.3	1077.5
150°	1097.2	1097.2	1097.2	1097.3	1097.5	1097.7	1098.0	1098.1
152.5°	1115.6	1115.9	1116.2	1116.3	1116.2	1116.0	1115.9	1115.8
155°	1140.3	1141.1	1141.9	1142.0	1141.4	1140.7	1140.2	1139.6
157.5°	1161.6	1162.6	1163.7	1163.7	1162.6	1161.6	1160.5	1159.4
160°	1175.1	1176.4	1177.6	1177.6	1176.4	1175.1	1173.9	1172.7
162.5°	1186.2	1187.4	1188.7	1188.6	1187.2	1185.8	1184.4	1183.0
165°	1201.7	1203.4	1205.0	1204.9	1203.1	1201.2	1199.4	1197.5
167.5°	1213.1	1214.9	1216.7	1216.6	1214.6	1212.5	1210.5	1208.4
170°	1220.1	1221.8	1223.4	1223.2	1221.1	1219.1	1217.1	1215.0
172.5°	1224.6	1226.2	1227.8	1227.6	1225.3	1223.1	1220.9	1218.7
175°	1229.8	1231.6	1233.4	1233.1	1230.7	1228.2	1225.7	1223.3
177.5°	1231.8	1233.1	1234.5	1234.1	1232.2	1230.2	1228.2	1226.3
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7

(END OF REPORT)