

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: P332753-935

Luminaire Tested: **S124DIW-S575D770U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332753-935
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-S575D770U935-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4685.2 lumens
Efficiency: N/A
Efficacy: 124.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

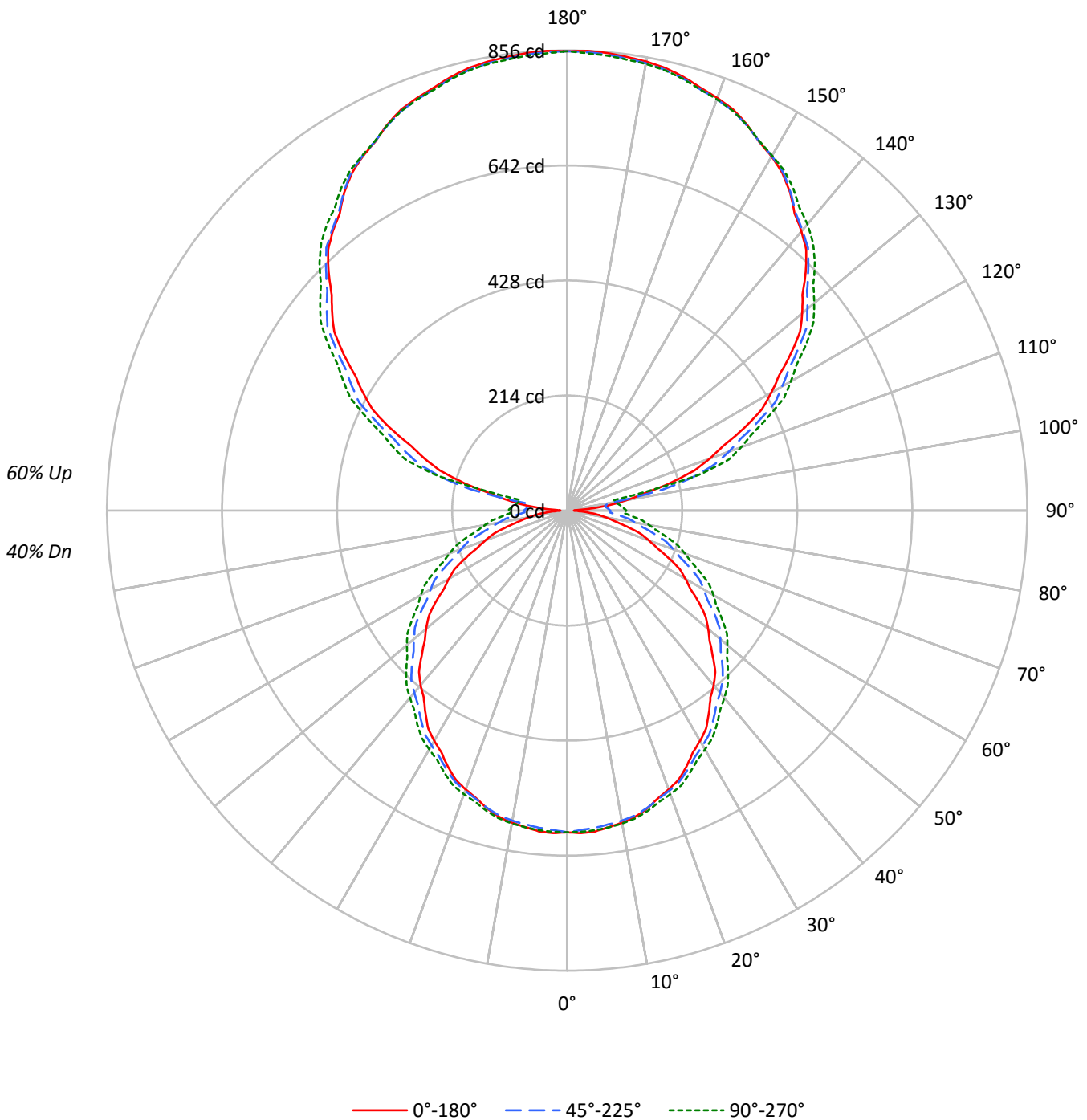
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	79	75	67	65	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	28	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	32	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4845	4721	4734
10°	4816	4644	4639
15°	4772	4554	4529
20°	4707	4455	4422
25°	4634	4345	4302
30°	4555	4235	4181
35°	4464	4122	4074
40°	4393	4015	3964
45°	4286	3916	3867
50°	4195	3803	3767
55°	4102	3695	3648
60°	3957	3557	3541
65°	3798	3411	3409
70°	3603	3243	3253
75°	3334	3060	3114
80°	3035	2882	2977
85°	2656	2725	2896



TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.2
10°-20°	162.3	3.5
20°-30°	245.5	5.2
30°-40°	297.0	6.3
40°-50°	314.0	6.7
50°-60°	295.5	6.3
60°-70°	245.2	5.2
70°-80°	172.2	3.7
80°-90°	99.8	2.1
90°-100°	87.0	1.9
100°-110°	229.1	4.9
110°-120°	385.2	8.2
120°-130°	468.7	10.0
130°-140°	491.2	10.5
140°-150°	454.2	9.7
150°-160°	365.1	7.8
160°-170°	235.5	5.0
170°-180°	81.2	1.7
0°-30°	464.5	9.9
0°-40°	761.4	16.3
0°-60°	1370.9	29.3
0°-90°	1888.0	40.3
90°-120°	701.3	15.0
90°-150°	2115.4	45.2
90°-180°	2797.0	59.7
0°-180°	4685.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	599	597	592	597	597	57
15°	574	575	573	578	578	162
25°	525	529	531	538	539	242
35°	460	468	474	483	486	288
45°	383	396	409	420	423	296
55°	300	314	334	347	352	267
65°	208	229	252	268	274	206
75°	115	140	168	186	193	123
85°	36	64	94	113	121	38
90°	13	46	80	103	110	9
95°	44	46	72	94	101	52
105°	198	216	244	264	248	208
115°	363	372	392	407	413	358
125°	508	510	525	539	544	453
135°	628	627	634	646	652	484
145°	723	724	724	729	733	452
155°	792	792	791	793	791	365
165°	835	832	832	837	832	236
175°	854	851	851	856	849	81
180°	854	854	854	854	854	



TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	600.5	600.1	599.8	599.3	599.0	598.4	597.4	596.5	595.5	594.5	595.4
5°	599.0	598.6	598.1	597.6	597.2	596.4	595.4	594.3	593.3	592.3	593.5
7.5°	593.9	593.6	593.3	593.1	592.8	592.3	591.4	590.6	589.6	588.8	590.1
10°	589.6	589.4	589.3	589.2	589.0	588.6	587.8	587.0	586.3	585.6	586.9
12.5°	583.7	583.7	583.7	583.6	583.6	583.3	582.8	582.3	581.8	581.3	582.5
15°	574.2	574.4	574.5	574.6	574.8	574.6	574.2	573.8	573.3	572.8	574.2
17.5°	561.2	561.6	562.1	562.5	563.0	563.2	563.1	563.0	562.9	562.8	564.1
20°	552.1	552.5	552.9	553.5	553.9	554.1	554.3	554.5	554.6	554.7	556.2
22.5°	541.9	542.4	543.0	543.5	544.2	544.6	544.8	545.1	545.4	545.6	547.2
25°	525.3	526.2	527.1	528.0	528.8	529.5	529.9	530.4	530.9	531.3	533.0
27.5°	506.8	508.1	509.4	510.7	512.0	513.0	513.7	514.4	515.1	515.7	517.3
30°	494.5	495.7	496.8	498.0	499.2	500.3	501.4	502.4	503.4	504.5	506.2
32.5°	481.0	482.5	483.9	485.3	486.8	488.1	489.2	490.4	491.5	492.8	494.6
35°	459.6	461.4	463.2	464.9	466.7	468.4	469.8	471.4	472.9	474.3	476.5
37.5°	438.1	440.1	442.1	444.2	446.3	448.2	450.0	451.9	453.7	455.6	457.7
40°	424.1	426.0	428.0	429.9	431.9	433.9	435.9	438.0	440.1	442.2	444.4
42.5°	408.0	410.2	412.3	414.6	416.7	419.0	421.5	423.9	426.4	428.8	431.3
45°	383.2	386.1	388.9	391.8	394.5	397.4	400.2	403.0	405.9	408.7	411.2
47.5°	359.6	362.4	365.3	368.2	371.2	374.3	377.5	380.8	384.1	387.4	390.0
50°	342.3	345.6	348.9	352.2	355.5	358.8	362.1	365.3	368.6	371.9	374.8
52.5°	325.2	328.5	331.7	335.0	338.3	341.8	345.6	349.3	353.1	356.8	359.8
55°	300.1	303.2	306.4	309.5	312.6	316.4	320.9	325.4	329.8	334.3	337.3
57.5°	272.2	276.0	279.9	283.8	287.7	291.8	296.2	300.7	305.1	309.5	313.1
60°	253.9	257.8	261.7	265.5	269.4	273.8	278.7	283.6	288.5	293.4	296.9
62.5°	236.3	240.5	244.7	248.9	253.1	257.7	262.6	267.5	272.5	277.4	280.8
65°	207.7	212.5	217.2	222.0	226.8	231.7	236.7	241.8	246.8	251.9	255.6
67.5°	180.2	185.3	190.4	195.4	200.4	205.7	211.1	216.5	222.0	227.4	231.2
70°	161.4	166.5	171.6	176.7	181.8	187.1	192.7	198.4	204.1	209.7	213.7
72.5°	143.3	148.4	153.6	158.8	163.9	169.5	175.6	181.6	187.6	193.6	197.5
75°	115.2	120.7	126.2	131.7	137.2	143.2	149.4	155.7	162.0	168.2	172.4
77.5°	89.1	95.0	100.8	106.6	112.4	118.6	125.2	131.7	138.3	144.8	149.0
80°	73.0	79.0	85.0	90.9	96.9	103.1	109.7	116.2	122.8	129.3	133.8
82.5°	56.9	63.1	69.3	75.5	81.7	88.1	94.6	101.2	107.7	114.3	118.9
85°	35.5	41.8	48.0	54.2	60.5	67.0	73.7	80.4	87.1	93.8	98.2
87.5°	20.2	26.6	33.0	39.3	45.8	52.3	59.1	65.9	72.6	79.3	83.8
90°	12.7	20.1	27.6	35.2	42.7	50.2	57.8	65.3	72.8	80.4	85.6
92.5°	18.3	23.7	29.1	34.6	40.0	46.5	54.1	61.6	69.1	76.6	81.7
95°	43.8	43.9	44.0	44.1	44.2	47.4	53.6	59.8	66.1	72.3	77.2
97.5°	82.6	89.8	97.0	104.3	111.5	110.2	100.4	90.6	80.8	71.0	75.0
100°	112.2	118.6	125.0	131.5	137.9	134.2	120.5	106.6	92.8	79.0	80.7
102.5°	145.9	151.2	156.4	161.7	167.0	171.2	174.4	177.5	180.6	183.7	161.6
105°	198.4	202.2	206.0	209.9	213.7	218.8	225.0	231.2	237.4	243.7	248.7
107.5°	248.2	251.2	254.0	256.8	259.7	264.2	270.4	276.6	282.8	289.0	293.3
110°	281.5	284.0	286.5	289.0	291.5	295.8	301.9	307.9	314.0	320.0	323.7



TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.7	316.2	318.8	321.5	324.1	328.1	333.5	338.8	344.2	349.6	352.8
115°	363.2	365.0	366.7	368.5	370.2	373.4	378.1	382.7	387.4	391.9	395.5
117.5°	408.5	409.8	411.2	412.6	414.0	417.0	421.7	426.5	431.3	436.0	439.0
120°	438.6	439.6	440.6	441.6	442.6	445.2	449.4	453.6	457.8	461.9	465.2
122.5°	467.2	467.6	468.0	468.5	468.9	471.3	475.5	479.8	484.1	488.4	491.5
125°	507.6	508.0	508.4	508.9	509.3	511.2	514.6	518.1	521.5	525.0	528.2
127.5°	546.3	546.3	546.3	546.3	546.3	548.0	551.6	555.1	558.5	562.1	564.6
130°	570.8	570.8	570.8	570.8	570.8	572.2	575.0	577.8	580.6	583.4	586.3
132.5°	593.8	593.9	594.0	594.2	594.3	595.6	598.0	600.5	602.9	605.3	608.0
135°	627.7	627.5	627.4	627.2	627.1	627.8	629.5	631.0	632.7	634.3	637.0
137.5°	658.2	658.1	658.1	658.0	657.9	658.4	659.5	660.6	661.8	662.9	665.4
140°	678.1	678.3	678.5	678.6	678.7	679.0	679.4	679.8	680.3	680.7	683.0
142.5°	695.5	696.0	696.5	697.0	697.4	697.8	697.8	697.9	697.9	698.0	700.1
145°	722.9	723.2	723.4	723.7	723.9	724.1	724.1	724.1	724.1	724.1	725.1
147.5°	744.7	745.4	746.0	746.7	747.3	747.5	747.4	747.3	747.1	747.0	747.3
150°	760.6	761.0	761.4	761.8	762.2	762.4	762.2	762.1	762.0	761.8	761.8
152.5°	773.4	773.8	774.2	774.6	775.0	775.1	774.8	774.6	774.4	774.1	774.3
155°	791.9	792.0	792.1	792.3	792.5	792.3	791.9	791.4	791.0	790.6	791.2
157.5°	807.6	807.5	807.4	807.4	807.3	806.9	806.5	806.0	805.5	805.0	805.7
160°	816.7	816.3	816.0	815.5	815.1	814.8	814.7	814.5	814.3	814.2	815.1
162.5°	824.9	824.4	823.9	823.4	822.8	822.4	822.3	822.2	822.0	821.9	822.8
165°	835.3	834.6	833.9	833.2	832.5	832.2	832.2	832.2	832.2	832.2	833.3
167.5°	843.5	842.7	842.1	841.3	840.5	840.2	840.1	840.0	839.9	839.8	841.0
170°	848.1	847.2	846.4	845.5	844.7	844.3	844.5	844.6	844.7	844.9	846.0
172.5°	851.2	850.3	849.5	848.6	847.7	847.4	847.6	847.7	847.8	848.0	849.1
175°	854.5	853.6	852.8	852.0	851.1	850.8	850.8	851.0	851.2	851.3	852.6
177.5°	856.0	855.2	854.5	853.6	852.8	852.6	852.8	853.0	853.3	853.4	854.4
180°	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5



TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	596.2	597.0	597.9	598.2	598.1	598.0	597.9	597.8
5°	594.7	595.8	597.0	597.5	597.4	597.3	597.1	596.9
7.5°	591.5	592.8	594.2	594.8	594.6	594.4	594.3	594.2
10°	588.2	589.6	590.9	591.5	591.4	591.2	591.1	590.9
12.5°	583.8	585.0	586.2	586.8	586.8	586.7	586.7	586.7
15°	575.5	576.9	578.2	578.8	578.7	578.5	578.3	578.2
17.5°	565.5	566.9	568.3	568.9	568.8	568.7	568.5	568.4
20°	557.8	559.2	560.7	561.5	561.5	561.5	561.5	561.5
22.5°	548.6	550.1	551.6	552.5	552.7	552.9	553.2	553.5
25°	534.6	536.2	537.9	538.7	538.9	539.1	539.2	539.3
27.5°	518.8	520.3	521.9	522.7	522.9	523.1	523.2	523.4
30°	507.8	509.5	511.1	512.0	512.3	512.6	512.9	513.2
32.5°	496.5	498.3	500.2	501.3	501.6	501.9	502.2	502.5
35°	478.5	480.6	482.7	484.0	484.4	484.8	485.3	485.8
37.5°	459.9	461.9	464.1	465.4	465.8	466.3	466.7	467.3
40°	446.7	448.9	451.2	452.5	453.1	453.7	454.3	455.0
42.5°	433.8	436.2	438.7	440.1	440.7	441.1	441.6	442.0
45°	413.8	416.3	418.8	420.4	421.2	422.0	422.7	423.4
47.5°	392.6	395.3	397.9	399.6	400.5	401.4	402.3	403.2
50°	377.8	380.8	383.7	385.7	386.6	387.4	388.4	389.3
52.5°	362.8	365.8	368.8	370.7	371.6	372.5	373.3	374.3
55°	340.3	343.3	346.2	348.2	349.0	350.0	350.9	351.7
57.5°	316.6	320.2	323.7	325.9	326.7	327.5	328.4	329.2
60°	300.3	303.8	307.1	309.4	310.6	311.9	313.1	314.3
62.5°	284.2	287.7	291.1	293.3	294.5	295.8	297.0	298.2
65°	259.3	263.1	266.8	269.2	270.4	271.6	272.9	274.1
67.5°	235.0	238.8	242.5	245.0	246.2	247.3	248.5	249.6
70°	217.7	221.8	225.8	228.3	229.4	230.4	231.4	232.5
72.5°	201.4	205.3	209.2	211.7	212.9	214.0	215.2	216.4
75°	176.5	180.6	184.9	187.6	188.9	190.3	191.7	193.0
77.5°	153.3	157.6	161.8	164.6	166.0	167.5	168.8	170.3
80°	138.3	142.7	147.1	150.0	151.2	152.4	153.6	154.8
82.5°	123.5	128.0	132.7	135.6	136.9	138.2	139.5	140.9
85°	102.7	107.2	111.7	114.7	116.1	117.6	119.1	120.6
87.5°	88.3	92.8	97.3	100.2	101.6	103.0	104.3	105.6
90°	90.7	95.9	101.1	104.4	105.9	107.4	108.8	110.3
92.5°	86.8	91.8	96.9	100.0	101.3	102.5	103.8	105.0
95°	82.1	87.0	91.9	95.1	96.5	98.0	99.4	100.9
97.5°	79.0	83.0	87.0	89.6	91.1	92.5	93.9	95.3
100°	82.2	83.9	85.5	86.9	88.1	89.2	90.4	91.6
102.5°	139.4	117.3	95.1	84.6	85.8	87.0	88.3	89.5
105°	253.7	258.6	263.6	264.2	260.3	256.3	252.4	248.5
107.5°	297.6	301.8	306.1	309.0	310.6	312.3	313.9	315.5
110°	327.4	331.1	334.8	337.5	339.1	340.8	342.4	344.0



TEST NUMBER: P332753-935

CATALOG NUMBER: S124DIW-S575D770U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	356.0	359.3	362.6	365.1	366.8	368.5	370.2	372.0
115°	399.1	402.6	406.2	408.5	409.5	410.6	411.6	412.7
117.5°	442.0	445.1	448.2	450.2	451.3	452.5	453.7	454.8
120°	468.5	471.7	475.0	477.1	477.9	478.9	479.8	480.7
122.5°	494.7	497.8	501.0	503.0	503.8	504.5	505.3	506.1
125°	531.4	534.7	538.0	540.1	541.1	542.2	543.2	544.2
127.5°	567.2	569.9	572.5	574.2	575.1	576.0	576.9	577.8
130°	589.1	591.9	594.7	596.6	597.4	598.4	599.3	600.1
132.5°	610.7	613.4	616.1	617.9	618.6	619.4	620.2	621.0
135°	639.6	642.3	645.0	646.9	648.1	649.2	650.4	651.6
137.5°	667.9	670.4	672.9	674.4	675.1	675.7	676.4	677.0
140°	685.4	687.8	690.2	691.8	692.7	693.5	694.5	695.3
142.5°	702.1	704.0	706.1	707.4	708.1	708.7	709.4	710.1
145°	726.2	727.2	728.2	729.2	730.1	731.0	731.8	732.7
147.5°	747.4	747.7	748.0	748.4	749.0	749.6	750.2	750.8
150°	761.8	761.8	761.8	761.9	762.1	762.2	762.3	762.4
152.5°	774.6	774.7	775.0	775.1	775.0	774.9	774.8	774.7
155°	791.7	792.3	792.8	792.9	792.5	792.0	791.6	791.3
157.5°	806.5	807.3	808.0	808.0	807.3	806.5	805.7	805.0
160°	816.0	816.7	817.6	817.6	816.7	816.0	815.1	814.2
162.5°	823.6	824.4	825.3	825.3	824.3	823.3	822.3	821.4
165°	834.4	835.5	836.6	836.6	835.3	834.1	832.8	831.5
167.5°	842.3	843.5	844.8	844.7	843.3	841.9	840.4	839.0
170°	847.1	848.3	849.5	849.3	847.9	846.4	845.1	843.6
172.5°	850.2	851.4	852.5	852.3	850.8	849.3	847.7	846.2
175°	853.9	855.1	856.4	856.2	854.5	852.8	851.1	849.4
177.5°	855.3	856.2	857.1	856.9	855.5	854.1	852.8	851.4
180°	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5

(END OF REPORT)