

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: P332750-940

Luminaire Tested: **S124DIW-S575D470U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332750-940
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: S124DIW-S575D470U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3673.3 lumens
Efficiency: N/A
Efficacy: 121.6 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

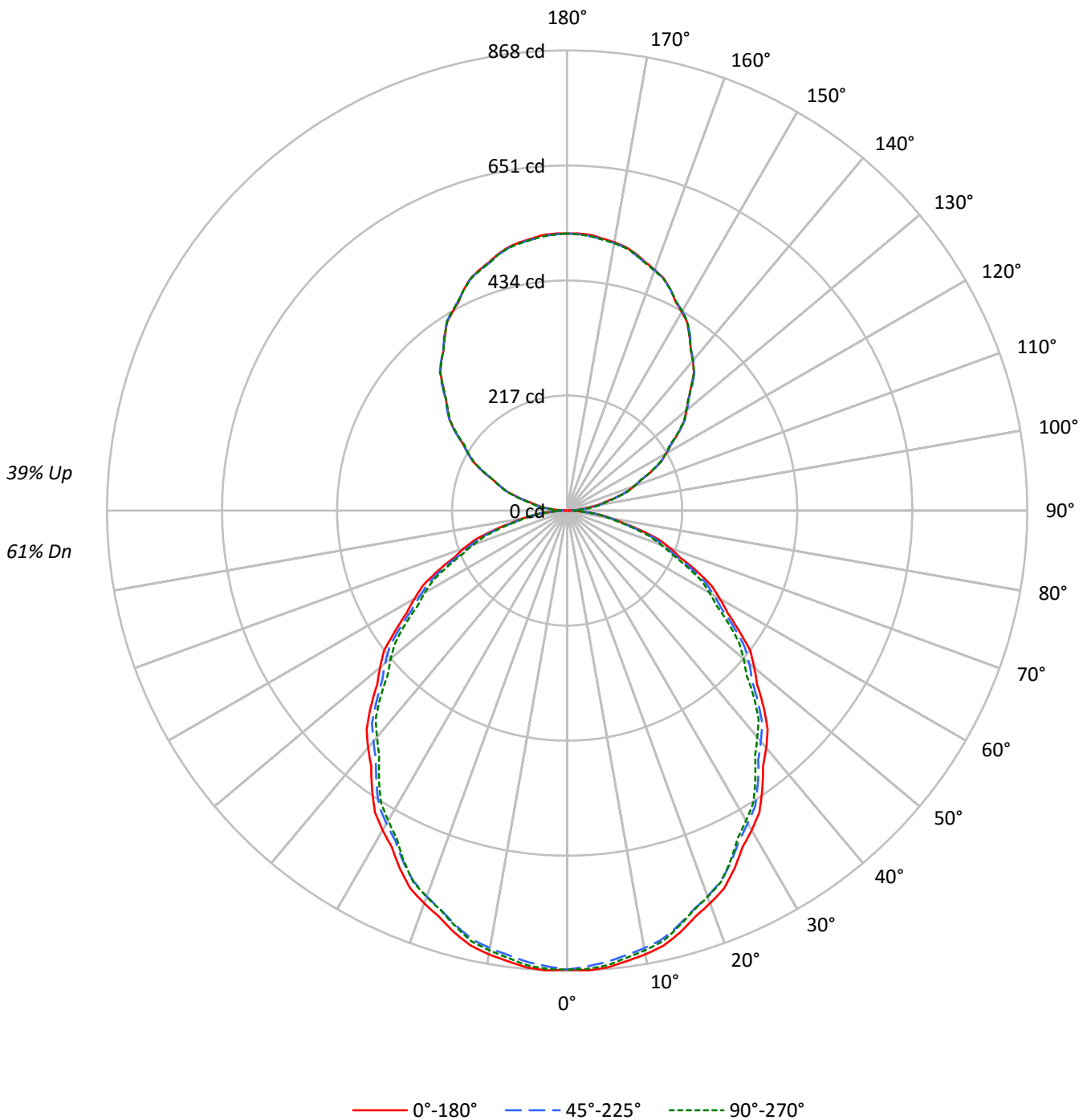
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	100	96	92	88	93	90	86	83	78	76	73	68	66	64	58	57	55	51
2	91	84	77	72	85	78	73	68	69	64	61	59	56	54	51	49	47	43
3	83	73	66	60	77	69	62	57	60	55	51	53	49	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	42	39	40	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	30	52	41	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	22	19	24	20	17	15

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: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	2.2
10°-20°	229.8	6.3
20°-30°	338.2	9.2
30°-40°	393.2	10.7
40°-50°	393.2	10.7
50°-60°	343.9	9.4
60°-70°	255.4	7.0
70°-80°	145.1	4.0
80°-90°	43.4	1.2
90°-100°	34.5	0.9
100°-110°	102.1	2.8
110°-120°	173.3	4.7
120°-130°	228.5	6.2
130°-140°	256.6	7.0
140°-150°	252.1	6.9
150°-160°	212.1	5.8
160°-170°	141.1	3.8
170°-180°	49.4	1.3
0°-30°	649.5	17.7
0°-40°	1042.7	28.4
0°-60°	1779.8	48.5
0°-90°	2223.8	60.5
90°-120°	309.8	8.4
90°-150°	1047.0	28.5
90°-180°	1450.0	39.5
0°-180°	3673.3	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	6	9	11	12	4
95°	24	28	31	32	32	27
105°	94	95	96	97	99	100
115°	176	176	175	175	175	174
125°	256	256	256	255	255	229
135°	331	333	333	332	331	256
145°	402	404	404	404	402	252
155°	461	461	460	462	460	212
165°	501	500	499	502	500	141
175°	522	520	519	522	519	49
180°	522	522	522	522	522	



TEST NUMBER: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

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°	14.7	14.7	14.8	14.9	15.0	15.0	15.1	15.1	15.1	15.1	15.2
90°	1.2	2.2	3.2	4.2	5.2	6.0	6.8	7.5	8.2	8.9	9.5
92.5°	8.6	9.8	10.9	12.0	13.2	14.0	14.5	15.0	15.5	16.0	16.3
95°	24.3	25.1	25.9	26.7	27.5	28.2	28.8	29.4	30.1	30.7	30.9
97.5°	42.4	43.0	43.6	44.3	44.9	45.7	46.4	47.1	47.8	48.6	48.9
100°	56.5	56.9	57.2	57.6	58.1	58.6	59.4	60.2	61.0	61.8	62.0
102.5°	71.4	71.6	71.7	71.9	72.1	72.5	73.2	73.9	74.6	75.4	75.6
105°	94.2	94.3	94.3	94.4	94.5	94.7	95.1	95.4	95.8	96.1	96.4
107.5°	118.0	118.1	118.2	118.3	118.4	118.5	118.6	118.6	118.7	118.7	119.0
110°	134.1	134.3	134.5	134.6	134.8	134.9	134.8	134.7	134.6	134.6	134.4



TEST NUMBER: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	151.0	151.0	151.1	151.1	151.1	151.1	150.9	150.7	150.5	150.4	150.3
115°	176.2	176.2	176.2	176.2	176.2	176.1	175.9	175.8	175.6	175.4	175.3
117.5°	199.9	200.0	200.1	200.2	200.2	200.2	200.1	199.9	199.8	199.7	199.4
120°	215.8	216.2	216.5	216.9	217.2	217.2	217.0	216.7	216.4	216.2	215.7
122.5°	232.3	232.4	232.6	232.6	232.8	232.8	232.7	232.6	232.5	232.4	232.0
125°	256.5	256.5	256.5	256.5	256.5	256.5	256.5	256.4	256.3	256.2	256.0
127.5°	278.7	278.9	279.2	279.5	279.7	279.8	279.6	279.5	279.4	279.2	279.0
130°	294.2	294.4	294.7	295.0	295.2	295.3	295.3	295.3	295.3	295.3	295.2
132.5°	310.0	310.2	310.4	310.6	310.8	310.9	310.8	310.7	310.7	310.6	310.4
135°	330.9	331.4	332.0	332.5	333.1	333.3	333.3	333.3	333.3	333.3	333.1
137.5°	353.7	354.0	354.2	354.5	354.7	354.9	355.1	355.3	355.3	355.5	355.3
140°	368.9	369.1	369.3	369.4	369.6	369.7	369.7	369.7	369.7	369.7	369.6
142.5°	382.8	383.0	383.2	383.3	383.5	383.6	383.5	383.4	383.3	383.3	383.3
145°	402.1	402.4	402.8	403.1	403.5	403.7	403.8	403.9	403.9	404.0	403.9
147.5°	421.2	421.5	422.0	422.4	422.8	423.0	422.9	422.8	422.8	422.8	422.7
150°	432.7	433.1	433.5	433.8	434.2	434.4	434.4	434.4	434.4	434.4	434.4
152.5°	443.7	444.0	444.2	444.4	444.6	444.8	444.8	444.9	445.0	445.1	445.2
155°	460.7	460.7	460.7	460.7	460.7	460.6	460.5	460.4	460.3	460.2	460.6
157.5°	474.8	474.7	474.6	474.4	474.2	474.1	474.1	474.1	474.0	474.0	474.3
160°	483.3	483.2	483.1	483.0	483.0	482.9	482.8	482.7	482.6	482.5	482.8
162.5°	491.1	490.8	490.5	490.4	490.1	489.9	489.8	489.7	489.6	489.5	490.1
165°	501.4	501.1	500.9	500.6	500.3	500.2	500.0	499.8	499.6	499.4	500.0
167.5°	509.4	509.1	508.7	508.4	507.9	507.7	507.7	507.8	507.8	507.8	508.4
170°	514.0	513.5	513.1	512.6	512.2	512.0	512.1	512.2	512.3	512.4	512.9
172.5°	517.2	516.8	516.5	516.1	515.7	515.5	515.5	515.6	515.6	515.6	516.2
175°	521.7	521.2	520.8	520.3	519.9	519.6	519.5	519.4	519.3	519.2	519.9
177.5°	523.1	522.7	522.4	522.0	521.7	521.5	521.5	521.5	521.5	521.5	522.0
180°	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5



TEST NUMBER: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

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°	15.3	15.4	15.5	15.6	15.6	15.7	15.7	15.8
90°	10.0	10.5	11.1	11.4	11.6	11.8	11.9	12.1
92.5°	16.7	16.9	17.3	17.5	17.7	17.7	17.8	17.9
95°	31.2	31.5	31.7	31.9	31.9	31.9	31.9	31.9
97.5°	49.2	49.6	49.8	50.0	50.0	50.0	50.0	50.0
100°	62.2	62.3	62.5	62.6	62.6	62.6	62.6	62.6
102.5°	75.9	76.2	76.4	76.6	76.6	76.7	76.8	76.9
105°	96.8	97.0	97.3	97.6	97.8	98.1	98.4	98.6
107.5°	119.2	119.5	119.8	119.8	119.8	119.8	119.8	119.8
110°	134.2	134.0	133.8	133.8	134.1	134.4	134.6	134.9



TEST NUMBER: P332750-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	150.3	150.3	150.3	150.3	150.3	150.3	150.4	150.4
115°	175.2	175.1	175.0	175.0	174.9	174.8	174.7	174.6
117.5°	199.1	198.8	198.5	198.2	198.0	197.9	197.7	197.5
120°	215.3	214.8	214.4	214.3	214.5	214.6	214.8	215.0
122.5°	231.8	231.4	231.1	230.8	230.5	230.2	229.8	229.5
125°	255.8	255.7	255.5	255.3	255.1	254.9	254.8	254.6
127.5°	278.8	278.7	278.5	278.3	278.2	278.0	277.9	277.8
130°	295.0	294.8	294.6	294.4	294.0	293.6	293.3	292.9
132.5°	310.2	310.0	309.9	309.7	309.5	309.4	309.2	309.2
135°	333.0	332.8	332.6	332.4	332.2	331.9	331.6	331.4
137.5°	355.0	354.8	354.5	354.5	354.5	354.5	354.6	354.7
140°	369.5	369.4	369.3	369.3	369.2	369.1	369.0	368.9
142.5°	383.3	383.3	383.3	383.2	383.2	383.2	383.2	383.2
145°	403.9	403.8	403.7	403.5	403.2	403.0	402.7	402.4
147.5°	422.6	422.5	422.5	422.4	422.3	422.2	422.1	422.0
150°	434.4	434.4	434.4	434.4	434.3	434.2	434.1	434.0
152.5°	445.5	445.7	445.9	445.9	445.7	445.4	445.2	445.0
155°	460.9	461.3	461.6	461.6	461.3	460.9	460.6	460.2
157.5°	474.6	474.8	475.1	475.1	474.8	474.5	474.2	473.9
160°	483.0	483.3	483.6	483.5	483.0	482.6	482.1	481.6
162.5°	490.5	491.1	491.5	491.5	491.1	490.6	490.2	489.7
165°	500.5	501.1	501.6	501.7	501.3	501.0	500.6	500.2
167.5°	508.9	509.4	510.0	510.0	509.4	508.9	508.3	507.7
170°	513.4	514.0	514.5	514.4	513.8	513.2	512.6	511.9
172.5°	516.8	517.5	518.0	518.0	517.4	516.7	516.1	515.5
175°	520.5	521.1	521.7	521.7	521.1	520.5	519.9	519.2
177.5°	522.5	523.0	523.5	523.4	522.9	522.4	521.7	521.2
180°	522.5	522.5	522.5	522.5	522.5	522.5	522.5	522.5

(END OF REPORT)