

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: P332748-940

Luminaire Tested: **S124DIW-S575D470U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332748-940
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-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP 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: 3563.4 lumens
Efficiency: N/A
Efficacy: 118.0 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

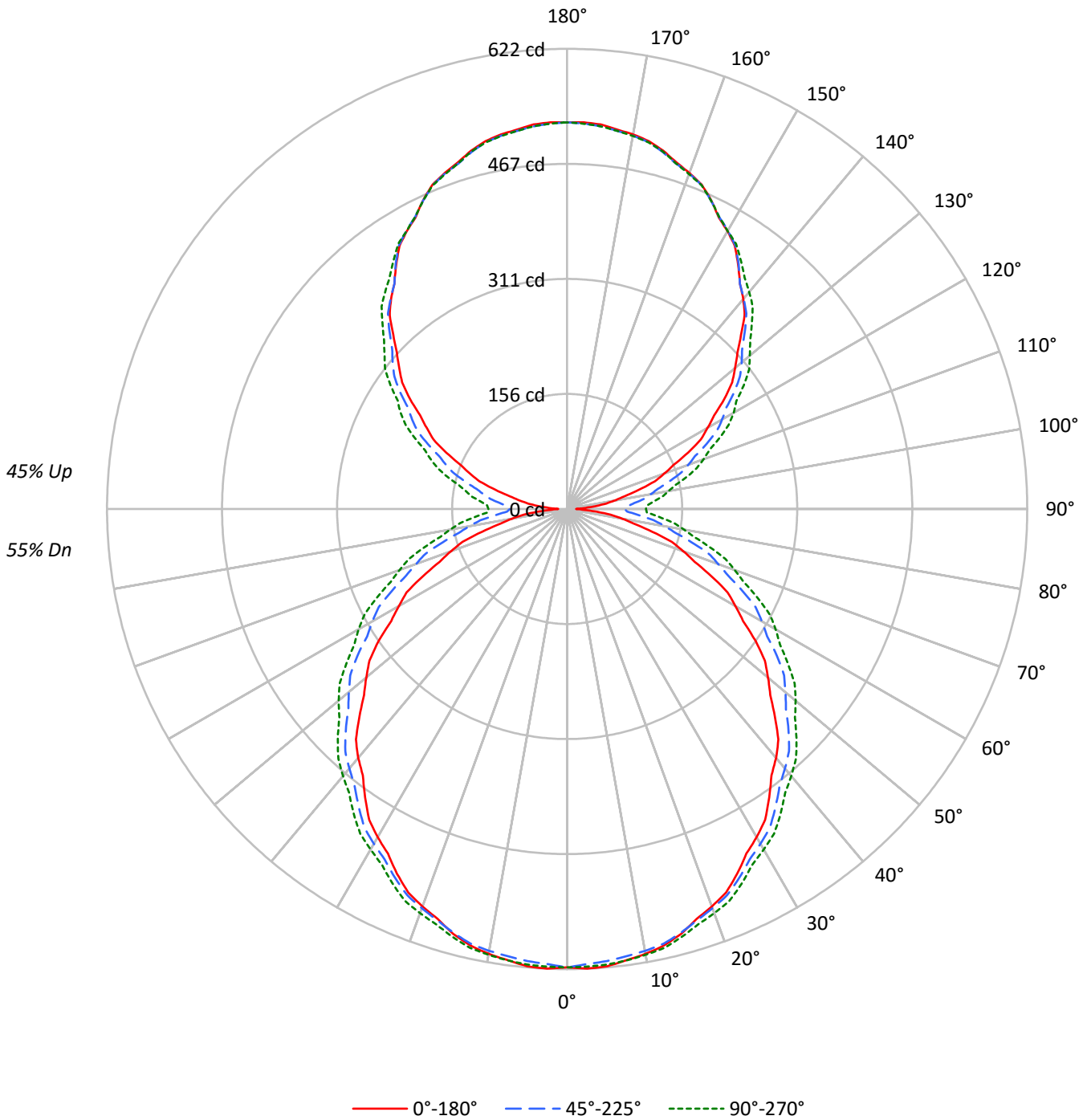
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332748-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D1

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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	98	93	89	85	90	86	82	79	74	71	68	62	60	58	52	50	49	44
2	89	80	74	68	82	75	69	64	64	60	56	54	51	48	45	42	40	36
3	80	70	63	56	74	65	58	53	56	51	46	47	43	40	39	36	34	30
4	73	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	25
5	67	55	47	40	62	51	44	38	44	38	34	38	33	29	31	28	25	22
6	62	49	41	35	57	46	38	33	40	34	29	34	29	25	28	25	22	19
7	57	44	36	30	53	42	34	29	36	30	26	31	26	22	26	22	19	17
8	53	40	32	27	49	38	30	25	33	27	23	28	23	20	24	20	17	15
9	49	37	29	24	46	34	27	23	30	24	20	26	21	18	22	18	15	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



TEST NUMBER: P332748-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	1.6
10°-20°	168.1	4.7
20°-30°	254.2	7.1
30°-40°	307.6	8.6
40°-50°	325.2	9.1
50°-60°	306.0	8.6
60°-70°	253.9	7.1
70°-80°	178.3	5.0
80°-90°	102.4	2.9
90°-100°	94.3	2.6
100°-110°	146.4	4.1
110°-120°	203.0	5.7
120°-130°	245.2	6.9
130°-140°	263.8	7.4
140°-150°	253.6	7.1
150°-160°	212.1	6.0
160°-170°	141.1	4.0
170°-180°	49.4	1.4
0°-30°	481.0	13.5
0°-40°	788.6	22.1
0°-60°	1419.8	39.8
0°-90°	1954.4	54.8
90°-120°	443.7	12.5
90°-150°	1206.4	33.9
90°-180°	1609.0	45.2
0°-180°	3563.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	12	45	78	99	106	9
95°	33	60	91	110	117	34
105°	100	115	142	160	167	107
115°	180	187	208	222	227	178
125°	259	260	276	288	291	231
135°	332	335	340	350	353	257
145°	403	404	404	408	409	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: P332748-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	20.8	27.3	33.8	40.2	46.7	53.4	60.4	67.2	74.1	81.1	85.6
90°	12.3	19.4	26.7	33.8	40.9	48.2	55.6	62.9	70.3	77.6	82.6
92.5°	19.2	25.9	32.5	39.2	45.9	52.8	59.9	67.1	74.2	81.3	86.1
95°	33.3	39.1	45.0	50.9	56.9	63.3	70.3	77.1	84.1	91.0	95.5
97.5°	50.6	55.6	60.5	65.6	70.6	76.7	83.6	90.6	97.6	104.6	109.0
100°	64.2	68.6	72.9	77.3	81.7	87.3	94.1	100.9	107.7	114.6	118.9
102.5°	79.1	82.8	86.4	90.1	93.7	98.9	105.5	112.1	118.8	125.4	129.7
105°	100.4	103.5	106.7	109.9	113.1	117.7	123.8	129.8	135.9	142.0	146.1
107.5°	124.1	126.7	129.4	132.0	134.6	138.7	144.1	149.6	155.1	160.5	164.5
110°	139.7	142.0	144.4	146.7	149.1	152.8	158.2	163.5	168.8	174.2	177.5



TEST NUMBER: P332748-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	156.0	157.9	159.9	161.8	163.7	167.2	172.2	177.2	182.2	187.2	190.6
115°	180.3	181.7	183.2	184.5	185.9	189.0	193.7	198.5	203.2	207.9	211.2
117.5°	203.9	204.8	205.8	206.7	207.6	210.3	214.7	219.2	223.6	228.1	231.0
120°	219.3	220.1	220.9	221.7	222.6	225.1	229.3	233.4	237.6	241.8	244.5
122.5°	235.8	235.9	236.2	236.5	236.7	238.8	242.9	247.0	251.1	255.2	258.1
125°	259.4	259.2	259.0	258.9	258.8	260.6	264.3	268.0	271.9	275.6	278.4
127.5°	281.2	281.4	281.5	281.6	281.8	283.2	286.1	288.8	291.7	294.4	297.1
130°	296.2	296.4	296.5	296.6	296.7	298.0	300.5	302.9	305.4	307.9	310.5
132.5°	312.1	312.1	312.2	312.2	312.3	313.3	315.1	317.0	319.0	320.8	323.3
135°	332.3	332.9	333.4	333.9	334.5	335.3	336.4	337.4	338.5	339.6	341.9
137.5°	355.1	355.2	355.3	355.4	355.5	355.9	356.6	357.2	357.8	358.6	360.6
140°	370.3	370.3	370.3	370.4	370.4	370.5	370.7	370.8	371.0	371.1	373.0
142.5°	383.6	383.8	384.0	384.1	384.2	384.2	384.1	383.9	383.7	383.6	385.3
145°	402.8	403.0	403.1	403.3	403.6	403.7	403.8	403.9	403.9	404.0	404.9
147.5°	421.8	422.1	422.4	422.7	422.9	423.0	422.9	422.8	422.8	422.8	422.8
150°	433.5	433.6	433.9	434.1	434.3	434.4	434.4	434.4	434.4	434.4	434.4
152.5°	443.9	444.1	444.3	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: P332748-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	90.2	94.8	99.3	102.4	103.7	105.1	106.5	107.9
90°	87.6	92.6	97.6	100.9	102.3	103.7	105.0	106.5
92.5°	90.7	95.4	100.0	103.1	104.4	105.8	107.1	108.4
95°	100.0	104.4	108.8	111.7	113.1	114.5	115.9	117.3
97.5°	113.3	117.7	122.1	124.9	126.3	127.6	128.9	130.3
100°	123.2	127.6	132.0	134.6	135.7	136.8	137.9	138.9
102.5°	133.9	138.2	142.5	145.3	146.6	147.8	149.1	150.4
105°	150.3	154.4	158.5	161.3	162.7	164.3	165.8	167.3
107.5°	168.5	172.6	176.6	179.2	180.3	181.5	182.5	183.6
110°	180.8	184.2	187.6	190.0	191.5	193.1	194.5	196.0



TEST NUMBER: P332748-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	193.9	197.3	200.7	203.0	204.4	205.6	206.9	208.2
115°	214.5	217.8	221.2	223.4	224.4	225.3	226.3	227.3
117.5°	234.0	236.8	239.8	241.7	242.8	243.8	244.9	245.9
120°	247.1	249.8	252.4	254.4	255.8	257.3	258.7	260.1
122.5°	260.8	263.6	266.4	268.1	268.9	269.7	270.5	271.3
125°	281.1	283.8	286.6	288.4	289.1	289.8	290.6	291.3
127.5°	299.7	302.3	304.9	306.6	307.6	308.4	309.3	310.2
130°	313.1	315.7	318.3	319.9	320.4	320.9	321.6	322.1
132.5°	325.7	328.2	330.7	332.3	333.1	333.9	334.7	335.5
135°	344.2	346.4	348.7	350.3	350.9	351.5	352.2	352.8
137.5°	362.6	364.6	366.6	368.0	368.9	369.7	370.5	371.3
140°	375.0	376.8	378.8	380.0	380.8	381.5	382.1	382.8
142.5°	387.1	388.8	390.6	391.7	392.4	393.0	393.6	394.2
145°	405.7	406.6	407.4	408.0	408.3	408.7	409.0	409.4
147.5°	422.8	422.8	422.9	423.2	423.6	424.0	424.4	424.8
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)