

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: P332747-840

Luminaire Tested: **S124DIW-S575D470U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332747-840
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-S575D470U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4286.7 lumens
Efficiency: N/A
Efficacy: 141.9 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

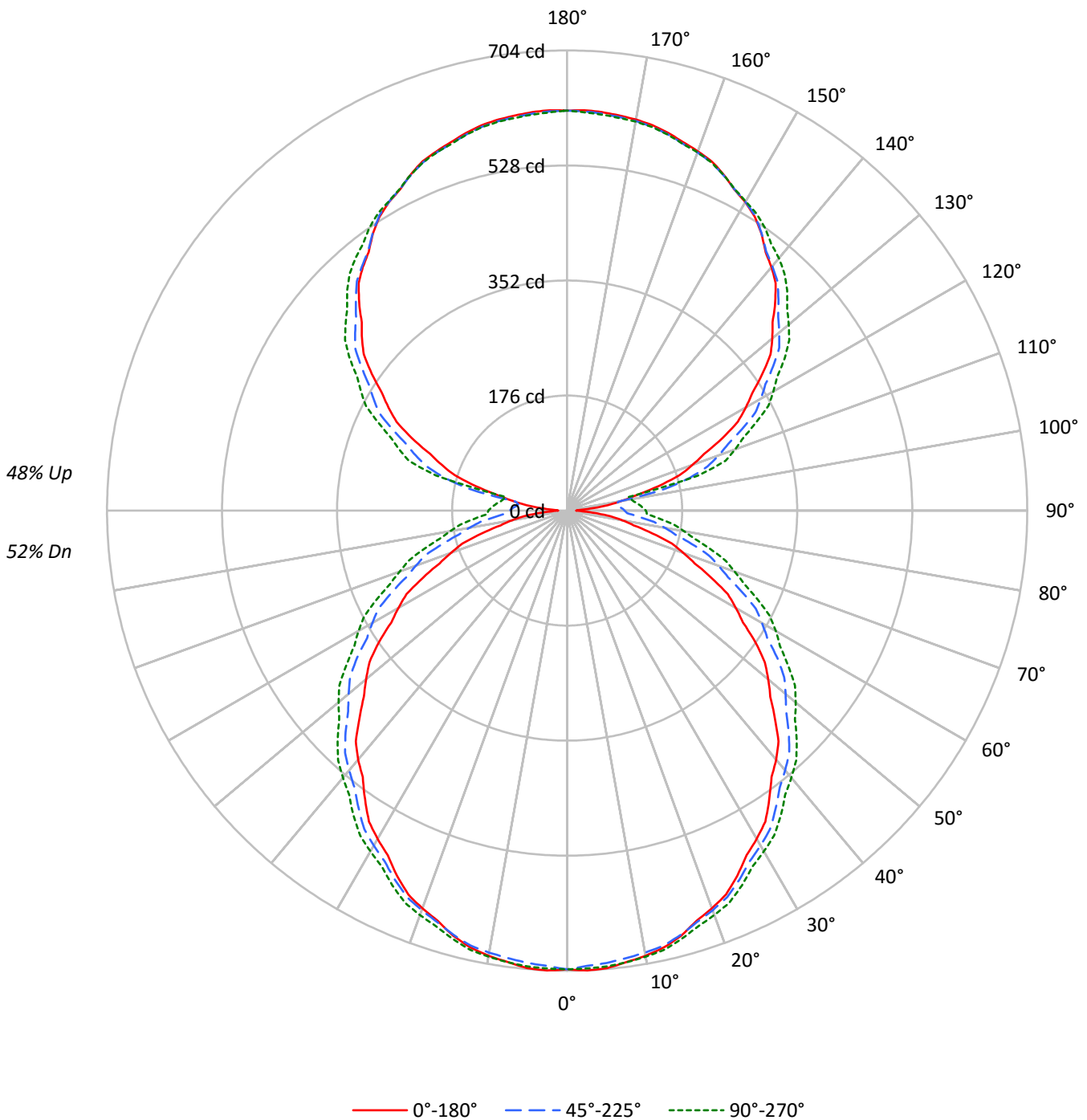
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	97	92	88	84	89	85	82	78	72	70	67	60	58	56	49	48	47	41
2	88	80	73	68	81	74	68	63	63	58	55	52	49	46	43	40	38	34
3	80	70	62	56	73	65	58	52	55	50	45	46	42	39	37	35	32	28
4	73	62	53	47	67	57	50	44	49	43	38	41	36	33	33	30	27	24
5	67	55	46	40	61	51	43	38	43	37	33	36	32	28	30	26	24	20
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	23	21	18
7	57	44	36	30	52	41	34	28	35	29	25	30	25	22	25	21	18	16
8	53	40	32	27	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	21	17	15	12
10	46	33	26	21	42	31	25	20	27	22	18	23	19	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.6
10°-20°	190.4	4.4
20°-30°	287.9	6.7
30°-40°	348.3	8.1
40°-50°	368.3	8.6
50°-60°	346.6	8.1
60°-70°	287.5	6.7
70°-80°	202.0	4.7
80°-90°	116.0	2.7
90°-100°	88.7	2.1
100°-110°	183.6	4.3
110°-120°	288.9	6.7
120°-130°	343.1	8.0
130°-140°	354.9	8.3
140°-150°	325.9	7.6
150°-160°	261.5	6.1
160°-170°	168.6	3.9
170°-180°	58.1	1.4
0°-30°	544.7	12.7
0°-40°	893.1	20.8
0°-60°	1607.9	37.5
0°-90°	2213.4	51.6
90°-120°	561.3	13.1
90°-150°	1585.2	37.0
90°-180°	2073.0	48.4
0°-180°	4286.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	14	50	88	112	121	9
95°	35	47	78	102	110	40
105°	145	164	195	217	208	152
115°	262	271	295	313	319	258
125°	365	367	384	400	406	326
135°	450	450	457	470	476	347
145°	518	519	519	524	528	324
155°	567	567	566	568	567	261
165°	598	596	596	599	595	169
175°	612	609	610	613	608	58
180°	612	612	612	612	612	



TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.5	30.9	38.3	45.5	52.9	60.5	68.4	76.1	83.9	91.8	96.9
90°	13.9	22.0	30.2	38.3	46.4	54.5	62.9	71.2	79.6	87.9	93.5
92.5°	17.7	24.0	30.4	36.8	43.1	50.4	58.8	67.1	75.4	83.7	89.3
95°	35.3	37.7	40.0	42.3	44.6	49.4	56.7	63.9	71.2	78.5	83.7
97.5°	62.7	69.9	77.0	84.1	91.2	92.6	88.4	84.1	79.9	75.5	80.2
100°	83.7	90.1	96.4	102.8	109.2	108.8	101.5	94.3	87.1	79.9	82.8
102.5°	107.9	113.2	118.6	123.8	129.2	134.2	139.1	143.9	148.8	153.6	139.6
105°	144.8	149.0	153.0	157.1	161.3	166.8	173.8	180.8	187.7	194.7	200.0
107.5°	180.5	183.6	186.8	190.0	193.2	198.1	204.9	211.8	218.5	225.3	230.0
110°	204.0	206.7	209.5	212.3	215.0	219.7	226.4	233.2	239.9	246.6	250.9



TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.8	229.5	232.3	235.0	237.6	242.1	248.2	254.3	260.4	266.5	270.3
115°	262.0	263.8	265.7	267.5	269.4	273.1	278.6	284.1	289.5	295.1	299.1
117.5°	294.3	295.6	297.0	298.3	299.6	303.1	308.5	313.9	319.3	324.8	328.3
120°	315.6	316.5	317.5	318.4	319.3	322.2	327.2	332.2	337.2	342.1	345.8
122.5°	336.1	336.5	336.8	337.2	337.5	340.1	345.1	350.0	355.0	359.8	363.5
125°	364.7	365.0	365.2	365.4	365.7	367.8	372.0	376.2	380.3	384.5	388.1
127.5°	392.3	392.3	392.2	392.1	392.1	393.9	397.8	401.6	405.5	409.2	412.3
130°	409.7	409.6	409.5	409.5	409.4	410.9	414.0	417.1	420.2	423.3	426.6
132.5°	426.2	426.2	426.2	426.2	426.2	427.5	430.1	432.7	435.4	438.0	441.1
135°	450.1	450.0	449.9	449.8	449.7	450.4	452.1	453.7	455.3	457.0	460.0
137.5°	472.0	471.8	471.7	471.6	471.4	471.9	472.9	473.9	475.0	476.1	478.8
140°	486.3	486.3	486.4	486.4	486.4	486.6	487.0	487.4	487.7	488.1	490.7
142.5°	498.5	498.8	499.1	499.4	499.8	499.9	500.0	500.0	500.0	500.0	502.2
145°	518.0	518.1	518.3	518.4	518.5	518.6	518.6	518.6	518.6	518.6	519.7
147.5°	533.6	534.0	534.4	534.8	535.2	535.3	535.2	535.1	535.0	534.9	535.1
150°	544.9	545.2	545.4	545.6	545.9	545.9	545.8	545.7	545.6	545.5	545.5
152.5°	553.8	554.1	554.4	554.7	555.0	555.0	554.9	554.7	554.5	554.3	554.5
155°	567.0	567.1	567.2	567.3	567.4	567.3	567.0	566.7	566.4	566.1	566.5
157.5°	578.3	578.2	578.1	578.1	578.0	577.8	577.5	577.1	576.8	576.5	577.0
160°	584.9	584.6	584.3	584.0	583.7	583.5	583.4	583.3	583.2	583.1	583.7
162.5°	590.8	590.4	590.0	589.6	589.3	589.0	588.9	588.8	588.7	588.5	589.2
165°	598.1	597.6	597.1	596.6	596.1	595.9	595.9	595.9	595.9	595.9	596.7
167.5°	604.0	603.5	603.0	602.5	601.9	601.6	601.6	601.5	601.5	601.4	602.3
170°	607.3	606.7	606.1	605.5	604.9	604.6	604.7	604.8	604.9	605.0	605.8
172.5°	609.6	608.9	608.3	607.7	607.1	606.8	606.9	607.0	607.1	607.2	608.0
175°	611.9	611.3	610.7	610.1	609.5	609.3	609.4	609.5	609.6	609.7	610.6
177.5°	613.0	612.5	611.9	611.3	610.8	610.6	610.7	610.9	611.0	611.2	611.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9



TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	102.1	107.3	112.5	115.9	117.4	119.1	120.6	122.2
90°	99.2	104.9	110.6	114.2	115.8	117.4	119.0	120.6
92.5°	94.8	100.4	105.8	109.4	110.8	112.2	113.7	115.1
95°	89.1	94.4	99.8	103.2	104.9	106.5	108.3	110.0
97.5°	84.8	89.5	94.1	97.3	98.9	100.5	102.1	103.6
100°	85.8	88.9	91.8	93.9	95.3	96.6	98.0	99.3
102.5°	125.4	111.4	97.3	91.0	92.3	93.7	95.1	96.4
105°	205.2	210.5	215.8	217.3	215.0	212.8	210.5	208.2
107.5°	234.8	239.5	244.3	247.5	249.1	250.7	252.5	254.1
110°	255.1	259.3	263.5	266.5	268.1	269.8	271.6	273.3



TEST NUMBER: P332747-840

CATALOG NUMBER: S124DIW-S575D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.2	278.0	281.9	284.7	286.5	288.3	290.0	291.9
115°	303.2	307.2	311.2	313.9	315.1	316.3	317.5	318.8
117.5°	331.9	335.6	339.1	341.6	343.0	344.4	345.7	347.0
120°	349.5	353.3	356.9	359.3	360.5	361.7	362.9	364.2
122.5°	367.1	370.7	374.4	376.7	377.7	378.8	379.8	380.8
125°	391.7	395.4	399.0	401.3	402.5	403.6	404.9	406.0
127.5°	415.4	418.5	421.5	423.6	424.7	425.9	427.0	428.1
130°	429.8	433.0	436.3	438.4	439.5	440.5	441.6	442.6
132.5°	444.2	447.3	450.4	452.4	453.4	454.3	455.3	456.4
135°	462.9	466.0	469.0	471.1	472.3	473.6	474.8	476.1
137.5°	481.6	484.3	487.2	489.0	489.8	490.6	491.4	492.2
140°	493.2	495.8	498.4	500.2	501.1	502.1	503.1	504.0
142.5°	504.4	506.6	508.9	510.4	511.1	511.9	512.6	513.3
145°	520.9	522.0	523.1	524.1	525.0	525.9	526.8	527.8
147.5°	535.3	535.6	535.8	536.2	536.9	537.6	538.3	538.9
150°	545.5	545.5	545.5	545.6	545.7	545.8	545.9	546.0
152.5°	554.6	554.8	555.0	555.0	555.0	554.9	554.8	554.8
155°	566.9	567.3	567.7	567.8	567.5	567.2	566.9	566.6
157.5°	577.5	578.0	578.6	578.6	578.0	577.5	577.0	576.5
160°	584.3	584.9	585.5	585.5	584.9	584.3	583.7	583.1
162.5°	589.8	590.4	591.0	591.0	590.3	589.6	588.9	588.2
165°	597.5	598.3	599.2	599.1	598.1	597.2	596.3	595.4
167.5°	603.2	604.1	605.0	604.9	603.9	602.9	601.9	600.9
170°	606.6	607.4	608.3	608.2	607.1	606.1	605.1	604.1
172.5°	608.8	609.7	610.5	610.4	609.3	608.1	607.0	605.9
175°	611.5	612.4	613.3	613.1	611.9	610.7	609.5	608.2
177.5°	612.5	613.1	613.8	613.6	612.7	611.7	610.7	609.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9

(END OF REPORT)