

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

Luminaire Tested: **S124DIW-S575D470U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332747  
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-S575D470U835-4F0-1E-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: 4244.9 lumens  
Efficiency: N/A  
Efficacy: 140.6 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

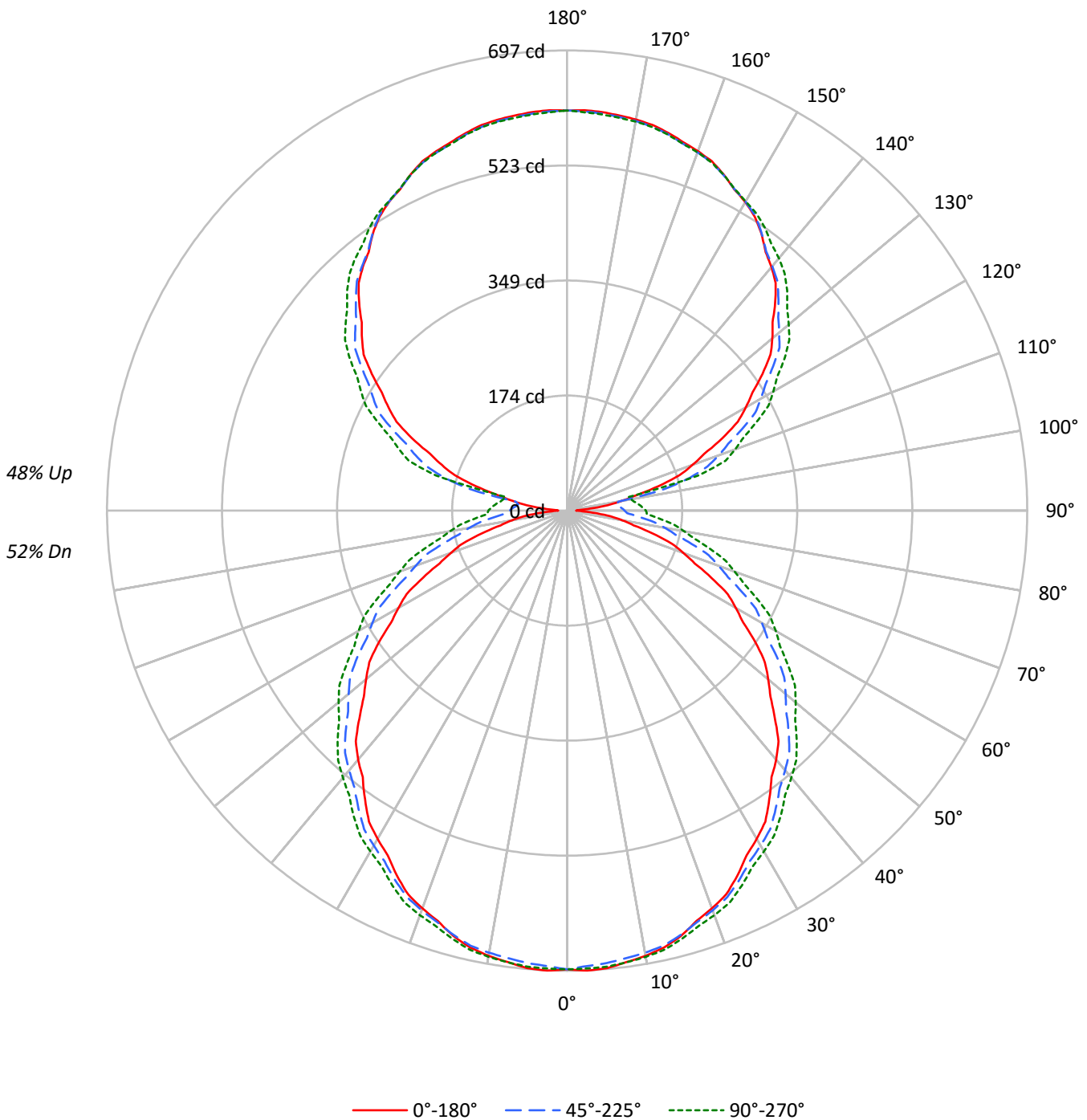
Input Watts (W): 30.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332747

CATALOG NUMBER: S124DIW-S575D470U835-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332747

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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	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°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	1.6
10°-20°	188.5	4.4
20°-30°	285.1	6.7
30°-40°	344.9	8.1
40°-50°	364.7	8.6
50°-60°	343.2	8.1
60°-70°	284.7	6.7
70°-80°	200.0	4.7
80°-90°	114.8	2.7
90°-100°	87.9	2.1
100°-110°	181.8	4.3
110°-120°	286.1	6.7
120°-130°	339.7	8.0
130°-140°	351.5	8.3
140°-150°	322.7	7.6
150°-160°	258.9	6.1
160°-170°	167.0	3.9
170°-180°	57.6	1.4
0°-30°	539.4	12.7
0°-40°	884.4	20.8
0°-60°	1592.2	37.5
0°-90°	2191.7	51.6
90°-120°	555.8	13.1
90°-150°	1569.7	37.0
90°-180°	2053.0	48.4
0°-180°	4244.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	14	50	87	111	119	9
95°	35	47	78	100	109	40
105°	143	162	193	214	206	151
115°	259	269	292	310	316	256
125°	361	363	381	396	402	322
135°	446	446	452	465	471	344
145°	513	513	514	518	523	320
155°	562	562	561	562	561	259
165°	592	590	590	593	590	167
175°	606	603	604	607	602	58
180°	606	606	606	606	606	



TEST NUMBER: P332747

CATALOG NUMBER: S124DIW-S575D470U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.3	30.6	37.9	45.1	52.4	59.9	67.7	75.4	83.1	90.9	96.0
90°	13.8	21.8	29.9	37.9	45.9	54.0	62.3	70.5	78.8	87.0	92.6
92.5°	17.5	23.8	30.1	36.4	42.7	49.9	58.2	66.4	74.7	82.9	88.4
95°	35.0	37.3	39.6	41.9	44.2	48.9	56.1	63.3	70.5	77.7	82.9
97.5°	62.1	69.2	76.2	83.3	90.3	91.7	87.5	83.3	79.1	74.8	79.4
100°	82.9	89.2	95.5	101.8	108.1	107.7	100.5	93.4	86.2	79.1	82.0
102.5°	106.8	112.1	117.4	122.6	127.9	132.9	137.7	142.5	147.3	152.1	138.2
105°	143.4	147.5	151.5	155.6	159.7	165.2	172.1	179.0	185.9	192.8	198.0
107.5°	178.7	181.8	185.0	188.1	191.3	196.2	202.9	209.7	216.4	223.1	227.8
110°	202.0	204.7	207.5	210.2	212.9	217.6	224.2	230.9	237.6	244.2	248.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	224.6	227.3	230.0	232.7	235.3	239.7	245.8	251.8	257.9	263.9	267.7
115°	259.4	261.2	263.1	264.9	266.8	270.4	275.9	281.3	286.7	292.2	296.2
117.5°	291.4	292.7	294.1	295.4	296.7	300.1	305.5	310.8	316.2	321.6	325.1
120°	312.5	313.4	314.4	315.3	316.2	319.1	324.0	329.0	333.9	338.8	342.4
122.5°	332.8	333.2	333.5	333.9	334.2	336.8	341.7	346.6	351.5	356.3	359.9
125°	361.1	361.4	361.6	361.8	362.1	364.2	368.4	372.5	376.6	380.7	384.3
127.5°	388.5	388.5	388.4	388.3	388.3	390.1	393.9	397.7	401.5	405.2	408.3
130°	405.7	405.6	405.5	405.5	405.4	406.9	410.0	413.0	416.1	419.2	422.4
132.5°	422.0	422.0	422.0	422.0	422.0	423.3	425.9	428.5	431.1	433.7	436.8
135°	445.7	445.6	445.5	445.4	445.3	446.0	447.7	449.3	450.9	452.5	455.5
137.5°	467.4	467.2	467.1	467.0	466.8	467.3	468.3	469.3	470.4	471.4	474.1
140°	481.5	481.5	481.6	481.6	481.6	481.8	482.2	482.6	482.9	483.3	485.9
142.5°	493.6	493.9	494.2	494.5	494.9	495.0	495.1	495.1	495.1	495.1	497.3
145°	512.9	513.0	513.2	513.3	513.4	513.5	513.5	513.5	513.5	513.5	514.6
147.5°	528.4	528.8	529.2	529.6	530.0	530.1	530.0	529.9	529.8	529.7	529.9
150°	539.6	539.9	540.1	540.3	540.6	540.6	540.5	540.4	540.3	540.2	540.2
152.5°	548.4	548.7	549.0	549.3	549.6	549.6	549.5	549.3	549.1	548.9	549.1
155°	561.5	561.6	561.7	561.8	561.9	561.8	561.5	561.2	560.9	560.6	561.0
157.5°	572.7	572.6	572.5	572.5	572.4	572.2	571.9	571.5	571.2	570.9	571.4
160°	579.2	578.9	578.6	578.3	578.0	577.8	577.7	577.6	577.5	577.4	578.0
162.5°	585.0	584.6	584.2	583.8	583.5	583.2	583.1	583.0	582.9	582.8	583.4
165°	592.3	591.8	591.3	590.8	590.3	590.1	590.1	590.1	590.1	590.1	590.9
167.5°	598.1	597.6	597.1	596.6	596.0	595.7	595.7	595.6	595.6	595.5	596.4
170°	601.4	600.8	600.2	599.6	599.0	598.7	598.8	598.9	599.0	599.1	599.9
172.5°	603.6	603.0	602.4	601.8	601.2	600.9	601.0	601.1	601.2	601.3	602.1
175°	605.9	605.3	604.7	604.1	603.5	603.3	603.4	603.5	603.6	603.7	604.6
177.5°	607.0	606.5	605.9	605.3	604.8	604.6	604.7	604.9	605.0	605.2	605.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	101.1	106.3	111.4	114.8	116.3	117.9	119.4	121.0
90°	98.2	103.9	109.5	113.1	114.7	116.3	117.8	119.4
92.5°	93.9	99.4	104.8	108.3	109.7	111.1	112.6	114.0
95°	88.2	93.5	98.8	102.2	103.9	105.5	107.2	108.9
97.5°	84.0	88.6	93.2	96.3	97.9	99.5	101.1	102.6
100°	85.0	88.0	90.9	93.0	94.4	95.7	97.0	98.3
102.5°	124.2	110.3	96.3	90.1	91.4	92.8	94.2	95.5
105°	203.2	208.4	213.7	215.2	212.9	210.7	208.4	206.2
107.5°	232.5	237.2	241.9	245.1	246.7	248.3	250.0	251.6
110°	252.6	256.8	260.9	263.9	265.5	267.2	268.9	270.6





TEST NUMBER: P332747

CATALOG NUMBER: S124DIW-S575D470U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.5	275.3	279.1	281.9	283.7	285.5	287.2	289.0
115°	300.2	304.2	308.2	310.8	312.0	313.2	314.4	315.7
117.5°	328.7	332.3	335.8	338.3	339.6	341.0	342.3	343.6
120°	346.1	349.8	353.4	355.8	357.0	358.2	359.4	360.6
122.5°	363.5	367.1	370.7	373.0	374.0	375.1	376.1	377.1
125°	387.9	391.5	395.1	397.4	398.6	399.7	400.9	402.0
127.5°	411.3	414.4	417.4	419.5	420.6	421.7	422.8	423.9
130°	425.6	428.8	432.0	434.1	435.2	436.2	437.3	438.3
132.5°	439.9	442.9	446.0	448.0	449.0	449.9	450.9	451.9
135°	458.4	461.4	464.4	466.5	467.7	469.0	470.2	471.4
137.5°	476.9	479.6	482.4	484.2	485.0	485.8	486.6	487.4
140°	488.4	491.0	493.5	495.3	496.2	497.2	498.2	499.1
142.5°	499.5	501.7	503.9	505.4	506.1	506.9	507.6	508.3
145°	515.8	516.9	518.0	519.0	519.9	520.8	521.7	522.6
147.5°	530.1	530.4	530.6	531.0	531.7	532.3	533.0	533.6
150°	540.2	540.2	540.2	540.3	540.4	540.5	540.6	540.7
152.5°	549.2	549.4	549.6	549.6	549.6	549.5	549.4	549.4
155°	561.4	561.8	562.2	562.3	562.0	561.7	561.4	561.1
157.5°	571.9	572.4	572.9	572.9	572.4	571.9	571.4	570.9
160°	578.6	579.2	579.8	579.8	579.2	578.6	578.0	577.4
162.5°	584.0	584.6	585.2	585.2	584.5	583.8	583.1	582.5
165°	591.7	592.5	593.3	593.2	592.3	591.4	590.5	589.6
167.5°	597.3	598.2	599.1	599.0	598.0	597.0	596.0	595.0
170°	600.7	601.5	602.4	602.3	601.2	600.2	599.2	598.2
172.5°	602.9	603.7	604.5	604.4	603.3	602.2	601.1	600.0
175°	605.5	606.4	607.3	607.1	605.9	604.7	603.5	602.3
177.5°	606.5	607.1	607.8	607.6	606.7	605.7	604.7	603.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9

(END OF REPORT)