

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: P331542-930

Luminaire Tested: **S122DIW-S675D970U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331542-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D970U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4942.3 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

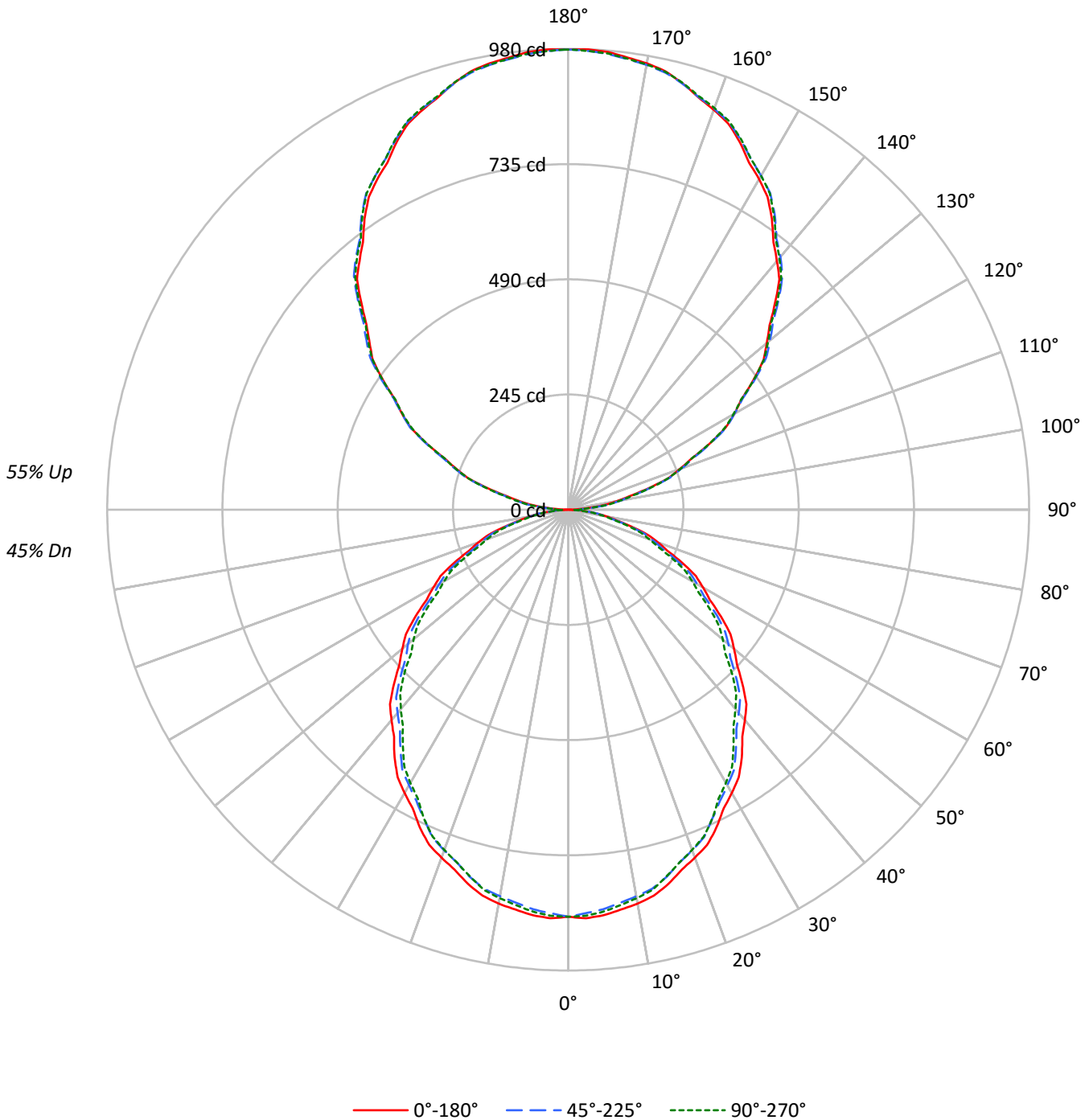
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331542-930

CATALOG NUMBER: S122DIW-S675D970U930-4F0-1E-UDD-F1

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	20	18
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	16	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391



TEST NUMBER: P331542-930

CATALOG NUMBER: S122DIW-S675D970U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	1.6
10°-20°	229.0	4.6
20°-30°	336.6	6.8
30°-40°	391.0	7.9
40°-50°	390.6	7.9
50°-60°	340.6	6.9
60°-70°	251.9	5.1
70°-80°	142.7	2.9
80°-90°	42.3	0.9
90°-100°	62.0	1.3
100°-110°	192.6	3.9
110°-120°	329.2	6.7
120°-130°	432.9	8.8
130°-140°	485.9	9.8
140°-150°	476.4	9.6
150°-160°	399.6	8.1
160°-170°	265.0	5.4
170°-180°	92.6	1.9
0°-30°	647.0	13.1
0°-40°	1038.1	21.0
0°-60°	1769.3	35.8
0°-90°	2206.1	44.6
90°-120°	583.8	11.8
90°-150°	1979.0	40.0
90°-180°	2736.0	55.4
0°-180°	4942.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
90°	1	11	29	27	28	4
95°	43	51	53	53	51	49
105°	178	180	182	183	183	188
115°	330	335	334	333	330	327
125°	481	488	486	483	482	429
135°	622	630	632	632	629	480
145°	755	760	766	766	763	471
155°	863	865	868	872	870	397
165°	939	938	938	943	940	265
175°	977	974	973	978	974	93
180°	978	978	978	978	978	



TEST NUMBER: P331542-930

CATALOG NUMBER: S122DIW-S675D970U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.1	12.3	12.5	12.6	12.7	13.0	13.5	14.1	14.6	15.1	14.6
90°	0.8	3.0	5.2	7.4	9.6	12.7	16.8	20.8	24.9	28.9	28.5
92.5°	14.7	16.3	17.9	19.6	21.2	22.4	23.4	24.4	25.3	26.3	26.3
95°	43.0	44.8	46.6	48.4	50.3	51.4	51.8	52.1	52.5	52.8	52.8
97.5°	78.4	80.1	81.7	83.3	84.9	86.1	86.7	87.5	88.1	88.9	88.9
100°	104.8	106.3	107.8	109.3	110.7	111.8	112.3	112.8	113.4	114.0	114.0
102.5°	132.6	133.8	134.9	136.2	137.3	138.3	138.9	139.7	140.3	141.0	141.2
105°	177.6	178.1	178.6	179.2	179.8	180.2	180.6	180.9	181.3	181.6	182.1
107.5°	222.8	223.6	224.4	225.2	226.0	226.4	226.4	226.4	226.4	226.4	226.6
110°	251.8	253.0	254.0	255.2	256.2	256.8	256.8	256.8	256.8	256.8	256.8



TEST NUMBER: P331542-930

CATALOG NUMBER: S122DIW-S675D970U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	283.6	284.7	285.8	286.9	288.0	288.5	288.3	288.1	288.0	287.9	287.4
115°	330.3	331.4	332.5	333.6	334.7	335.1	334.7	334.4	333.9	333.6	333.5
117.5°	376.9	378.4	379.8	381.3	382.8	382.9	382.0	380.9	379.9	378.9	378.5
120°	408.0	409.4	410.9	412.4	413.8	413.8	412.4	410.9	409.4	408.0	408.0
122.5°	436.3	438.1	439.9	441.6	443.4	443.8	442.7	441.7	440.7	439.6	439.2
125°	480.6	482.2	483.9	485.6	487.2	487.8	487.2	486.7	486.1	485.6	485.0
127.5°	523.7	525.8	527.9	530.0	532.1	532.8	532.1	531.5	530.8	530.2	529.5
130°	550.8	553.2	555.5	558.0	560.4	561.3	561.0	560.6	560.3	559.9	559.5
132.5°	581.1	583.1	585.1	587.0	589.0	590.0	590.0	590.1	590.2	590.3	589.5
135°	621.8	623.9	625.8	627.9	629.9	631.0	631.4	631.8	632.2	632.5	632.3
137.5°	664.6	666.3	667.9	669.5	671.2	672.3	672.7	673.2	673.7	674.2	674.0
140°	690.3	692.0	693.7	695.3	696.9	698.2	699.2	700.1	701.0	701.9	701.9
142.5°	716.8	718.4	720.1	721.7	723.4	724.6	725.1	725.8	726.4	727.0	727.2
145°	754.7	756.0	757.3	758.6	759.9	761.1	762.2	763.3	764.4	765.5	765.6
147.5°	788.6	790.2	791.7	793.2	794.8	795.9	796.6	797.4	798.1	798.8	799.2
150°	811.7	812.9	813.9	815.1	816.1	817.1	817.8	818.6	819.3	820.0	820.5
152.5°	832.3	833.3	834.5	835.5	836.7	837.6	838.5	839.4	840.2	841.1	841.8
155°	862.9	863.5	864.1	864.6	865.1	865.7	866.3	866.8	867.3	867.9	868.8
157.5°	889.2	889.6	889.9	890.3	890.6	891.0	891.4	891.7	892.0	892.3	893.6
160°	905.1	905.4	905.8	906.1	906.5	906.8	907.0	907.2	907.3	907.5	908.7
162.5°	919.6	919.7	919.7	919.8	919.9	920.0	920.2	920.4	920.6	920.7	922.0
165°	938.9	938.7	938.6	938.3	938.2	938.1	938.1	938.1	938.1	938.1	939.4
167.5°	955.1	954.6	954.0	953.4	952.9	952.6	952.6	952.5	952.5	952.4	953.7
170°	963.7	963.1	962.6	962.1	961.5	961.2	960.9	960.7	960.6	960.4	961.6
172.5°	969.6	969.1	968.5	968.0	967.4	967.0	966.9	966.7	966.5	966.3	967.6
175°	976.9	976.3	975.8	975.3	974.7	974.2	973.9	973.5	973.1	972.7	974.0
177.5°	979.9	979.4	979.0	978.5	978.1	977.7	977.5	977.1	976.9	976.6	977.5
180°	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5



TEST NUMBER: P331542-930

CATALOG NUMBER: S122DIW-S675D970U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	14.1	13.5	13.0	12.7	12.6	12.5	12.4	12.3
90°	28.1	27.8	27.4	27.3	27.6	27.7	27.9	28.0
92.5°	26.4	26.5	26.6	26.6	26.7	26.7	26.7	26.7
95°	52.8	52.8	52.8	52.7	52.3	51.9	51.5	51.2
97.5°	88.9	88.9	88.9	88.9	88.8	88.8	88.7	88.7
100°	114.0	114.0	114.0	113.9	113.7	113.5	113.3	113.2
102.5°	141.4	141.5	141.6	141.6	141.5	141.2	141.0	140.9
105°	182.4	182.8	183.1	183.4	183.4	183.4	183.4	183.4
107.5°	226.7	226.9	227.0	226.7	225.8	224.9	224.1	223.3
110°	256.8	256.8	256.8	256.6	256.0	255.4	254.9	254.4



TEST NUMBER: P331542-930

CATALOG NUMBER: S122DIW-S675D970U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	287.0	286.6	286.1	285.7	285.3	284.9	284.5	284.1
115°	333.2	333.0	332.9	332.5	332.0	331.4	330.8	330.3
117.5°	378.0	377.6	377.1	376.6	376.1	375.5	375.0	374.4
120°	408.0	408.0	408.0	407.6	407.1	406.6	406.0	405.4
122.5°	438.8	438.3	437.9	437.5	437.1	436.7	436.3	435.9
125°	484.5	483.9	483.4	483.0	482.8	482.7	482.4	482.2
127.5°	528.8	528.2	527.5	526.8	526.3	525.7	525.1	524.6
130°	559.1	558.8	558.4	557.8	557.1	556.4	555.6	554.9
132.5°	588.6	587.8	587.0	586.4	585.8	585.1	584.6	584.0
135°	632.2	632.0	631.8	631.4	630.9	630.3	629.8	629.2
137.5°	673.8	673.8	673.6	673.1	672.4	671.6	670.9	670.2
140°	701.9	701.9	701.9	701.6	700.8	700.1	699.4	698.6
142.5°	727.3	727.5	727.6	727.3	726.6	725.9	725.1	724.4
145°	765.9	766.1	766.2	766.0	765.2	764.5	763.8	763.0
147.5°	799.6	800.1	800.5	800.3	799.6	798.9	798.3	797.5
150°	821.1	821.7	822.2	822.2	821.7	821.1	820.5	820.0
152.5°	842.5	843.3	843.9	843.9	843.3	842.5	841.8	841.1
155°	869.8	870.7	871.6	871.7	871.2	870.7	870.1	869.5
157.5°	894.9	896.1	897.3	897.5	896.7	895.8	894.9	894.0
160°	909.7	910.9	911.9	912.2	911.4	910.7	910.0	909.2
162.5°	923.2	924.5	925.8	925.9	925.0	924.1	923.2	922.4
165°	940.7	941.9	943.2	943.4	942.5	941.6	940.7	939.7
167.5°	955.0	956.3	957.6	957.7	956.8	955.9	954.9	954.0
170°	963.0	964.3	965.6	965.6	964.5	963.4	962.3	961.2
172.5°	968.9	970.2	971.4	971.6	970.5	969.4	968.2	967.2
175°	975.3	976.6	977.9	978.0	976.9	975.8	974.7	973.6
177.5°	978.4	979.2	980.1	980.1	979.2	978.4	977.5	976.6
180°	978.5	978.5	978.5	978.5	978.5	978.5	978.5	978.5

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