

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: P331959-930

Luminaire Tested: **S123DIP-S775D365U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331959-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D365U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3650.8 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

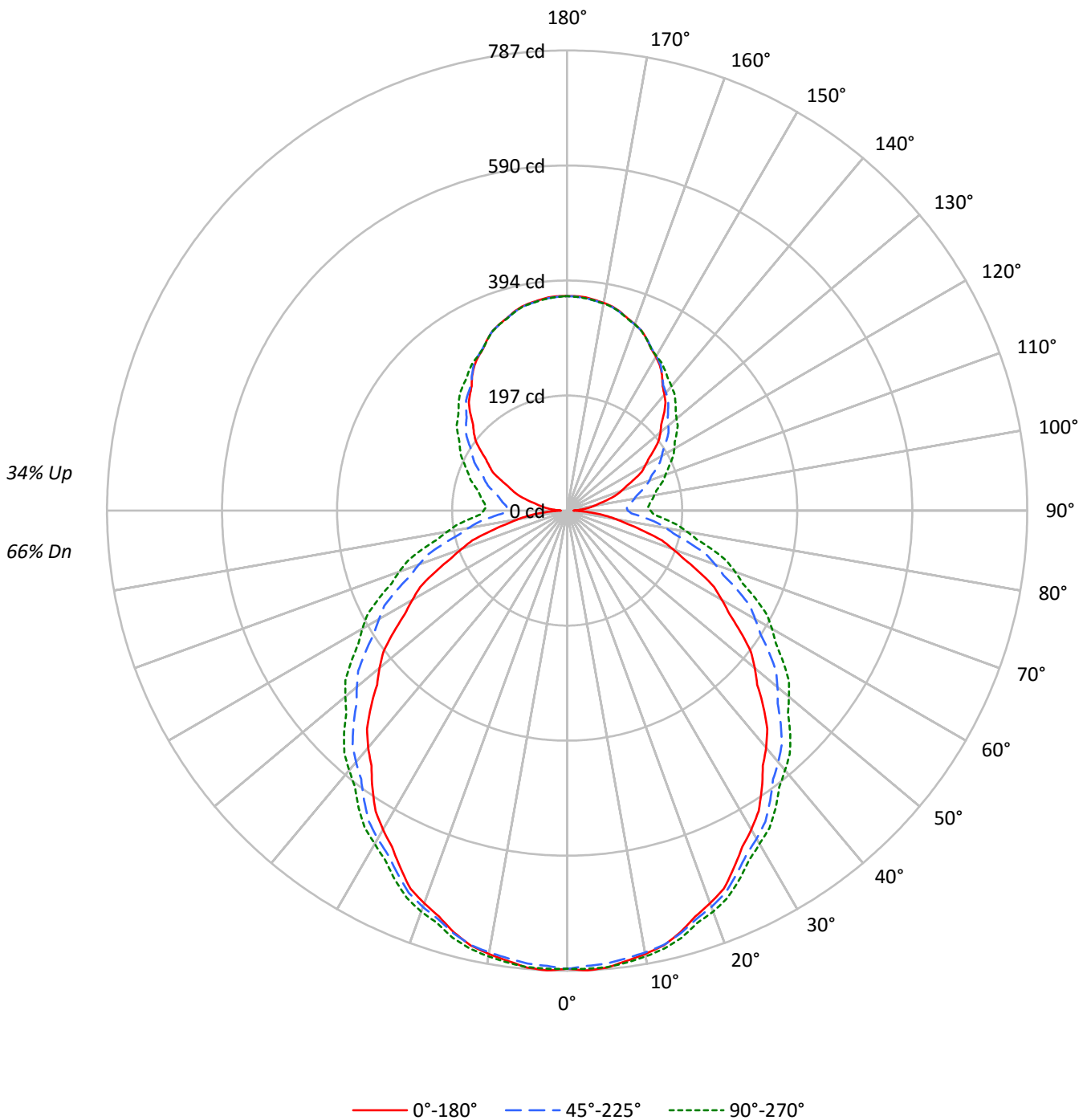
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331959-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66
1	100	95	90	86	94	89	85	82	79	76	73	69	67	65	61	59	57	53
2	91	82	75	69	85	77	71	66	68	64	59	60	56	53	52	50	47	43
3	82	72	64	57	77	68	60	55	60	54	49	53	48	44	46	43	39	36
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	30
5	69	56	48	41	64	53	45	39	47	41	36	42	37	32	37	33	29	26
6	63	51	42	36	59	48	40	34	43	36	31	38	32	28	33	29	26	23
7	59	46	37	31	55	43	35	30	39	32	27	34	29	25	30	26	23	20
8	55	41	33	28	51	39	32	27	35	29	24	31	26	22	28	23	20	18
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16
10	47	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



TEST NUMBER: P331959-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	2.0
10°-20°	211.8	5.8
20°-30°	316.7	8.7
30°-40°	378.3	10.4
40°-50°	395.8	10.8
50°-60°	371.4	10.2
60°-70°	310.2	8.5
70°-80°	221.9	6.1
80°-90°	133.4	3.7
90°-100°	106.9	2.9
100°-110°	132.5	3.6
110°-120°	162.4	4.4
120°-130°	183.3	5.0
130°-140°	190.3	5.2
140°-150°	179.0	4.9
150°-160°	148.8	4.1
160°-170°	99.1	2.7
170°-180°	34.7	1.0
0°-30°	602.8	16.5
0°-40°	981.1	26.9
0°-60°	1748.2	47.9
0°-90°	2413.8	66.1
90°-120°	401.9	11.0
90°-150°	954.4	26.1
90°-180°	1237.0	33.9
0°-180°	3650.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	11	56	103	132	143	9
95°	26	62	106	132	142	26
105°	72	94	132	155	164	76
115°	127	139	168	188	195	126
125°	182	184	207	223	228	162
135°	234	236	244	258	262	180
145°	283	283	284	290	292	176
155°	323	323	323	324	322	149
165°	352	351	351	352	351	99
175°	366	365	365	366	364	35
180°	367	367	367	367	367	



TEST NUMBER: P331959-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	22.7	32.4	41.9	51.5	61.1	70.8	80.6	90.5	100.3	110.1	116.7
90°	11.4	21.4	31.2	41.2	51.1	61.4	71.8	82.3	92.9	103.4	110.1
92.5°	17.4	26.2	35.1	43.9	52.7	62.0	72.1	82.1	92.0	102.1	108.6
95°	26.4	34.2	42.1	49.9	57.8	66.6	76.4	86.3	96.0	105.8	111.9
97.5°	38.6	45.6	52.6	59.6	66.6	74.8	84.0	93.3	102.5	111.7	117.6
100°	46.9	53.3	59.8	66.2	72.7	80.5	89.5	98.6	107.5	116.6	122.3
102.5°	56.6	62.3	67.9	73.6	79.3	86.7	95.7	104.7	113.7	122.7	128.2
105°	71.7	76.3	81.0	85.7	90.4	97.1	105.8	114.5	123.3	132.0	137.3
107.5°	88.4	92.3	96.3	100.2	104.2	110.1	118.1	126.0	134.0	142.0	147.3
110°	98.7	102.3	105.8	109.4	112.9	118.5	126.3	134.0	141.7	149.4	154.6



TEST NUMBER: P331959-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	110.3	113.2	116.0	119.0	121.8	126.9	134.2	141.5	148.9	156.1	161.3
115°	126.7	129.2	131.7	134.1	136.6	141.2	147.9	154.6	161.3	168.0	172.6
117.5°	144.0	145.4	147.0	148.5	150.1	153.9	160.2	166.5	172.7	179.0	183.4
120°	154.1	155.4	156.8	158.1	159.5	163.1	169.0	175.0	180.9	186.9	191.1
122.5°	165.4	166.2	167.0	167.7	168.5	171.8	177.6	183.4	189.1	194.9	199.0
125°	181.8	182.0	182.1	182.4	182.5	185.3	190.7	196.1	201.5	206.8	210.5
127.5°	197.7	197.9	198.1	198.4	198.5	200.9	205.3	209.7	214.1	218.5	221.9
130°	208.3	208.6	209.0	209.2	209.5	211.6	215.2	218.7	222.3	225.9	229.3
132.5°	218.2	218.7	219.2	219.6	220.1	221.8	224.7	227.6	230.5	233.3	236.5
135°	234.2	234.4	234.6	234.8	235.0	236.1	238.1	240.2	242.1	244.2	247.4
137.5°	249.0	249.2	249.4	249.6	249.7	250.5	251.8	253.2	254.5	255.8	258.5
140°	258.7	259.0	259.3	259.7	260.0	260.5	261.1	261.7	262.4	263.0	265.8
142.5°	268.2	268.3	268.5	268.6	268.8	269.0	269.3	269.5	269.7	269.9	272.5
145°	282.9	282.8	282.8	282.7	282.7	282.7	282.9	283.2	283.3	283.5	284.9
147.5°	295.0	295.2	295.5	295.7	295.9	296.1	296.3	296.4	296.6	296.9	297.3
150°	303.9	304.1	304.2	304.4	304.5	304.6	304.8	304.8	305.0	305.1	305.1
152.5°	311.4	311.5	311.7	311.9	312.1	312.2	312.3	312.3	312.4	312.5	312.6
155°	323.0	323.0	323.0	323.0	323.0	323.0	323.1	323.1	323.2	323.3	323.5
157.5°	332.9	332.8	332.7	332.6	332.6	332.6	332.6	332.6	332.7	332.8	333.0
160°	339.1	339.0	338.8	338.8	338.6	338.5	338.5	338.5	338.5	338.5	338.8
162.5°	344.6	344.5	344.3	344.1	343.9	343.9	343.9	344.0	344.1	344.1	344.4
165°	351.8	351.6	351.4	351.2	351.0	350.9	350.9	350.9	350.9	350.9	351.3
167.5°	357.5	357.3	357.0	356.7	356.4	356.4	356.4	356.4	356.5	356.6	356.9
170°	360.7	360.4	360.2	360.0	359.7	359.5	359.5	359.5	359.5	359.5	360.0
172.5°	363.3	363.0	362.7	362.5	362.2	362.1	362.1	362.1	362.1	362.1	362.5
175°	365.9	365.7	365.4	365.2	364.9	364.8	364.8	364.8	364.8	364.8	365.2
177.5°	367.0	366.8	366.6	366.4	366.2	366.1	366.1	366.1	366.1	366.1	366.4
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



TEST NUMBER: P331959-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	123.1	129.6	136.2	140.4	142.3	144.2	146.1	148.1
90°	116.8	123.5	130.2	134.6	136.6	138.6	140.6	142.7
92.5°	115.0	121.6	128.1	132.2	133.9	135.5	137.1	138.8
95°	118.1	124.3	130.4	134.4	136.3	138.2	140.1	142.0
97.5°	123.6	129.6	135.5	139.4	141.3	143.2	145.0	146.9
100°	128.0	133.7	139.4	143.2	145.3	147.3	149.4	151.3
102.5°	133.8	139.3	144.8	148.5	150.4	152.3	154.2	156.0
105°	142.7	148.0	153.3	156.9	158.7	160.5	162.3	164.2
107.5°	152.6	157.8	163.1	166.6	168.2	169.8	171.4	173.0
110°	159.8	165.0	170.2	173.5	174.9	176.3	177.7	179.0



TEST NUMBER: P331959-930

CATALOG NUMBER: S123DIP-S775D365U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	166.3	171.5	176.5	179.9	181.5	183.2	184.8	186.5
115°	177.2	181.8	186.5	189.5	190.9	192.4	193.9	195.3
117.5°	187.9	192.5	197.0	199.8	201.1	202.4	203.7	205.0
120°	195.4	199.7	204.0	206.8	208.0	209.2	210.3	211.6
122.5°	203.0	207.1	211.1	213.7	214.8	216.1	217.2	218.3
125°	214.3	218.0	221.8	224.1	225.2	226.2	227.3	228.4
127.5°	225.3	228.7	232.1	234.3	235.3	236.3	237.3	238.3
130°	232.6	235.9	239.4	241.3	242.1	242.7	243.4	244.1
132.5°	239.6	242.8	246.0	248.0	248.9	249.9	250.8	251.8
135°	250.5	253.6	256.8	258.9	259.7	260.5	261.3	262.1
137.5°	261.3	264.0	266.8	268.5	269.1	269.9	270.6	271.3
140°	268.6	271.3	274.1	275.8	276.3	276.8	277.3	277.8
142.5°	274.9	277.4	279.9	281.4	282.0	282.6	283.2	283.8
145°	286.4	287.9	289.3	290.3	290.8	291.3	291.8	292.3
147.5°	297.7	298.2	298.6	299.1	299.3	299.6	299.9	300.2
150°	305.1	305.1	305.1	305.1	305.1	305.1	305.1	305.1
152.5°	312.7	312.8	312.9	312.8	312.6	312.3	312.0	311.8
155°	323.8	324.0	324.3	324.2	323.8	323.3	322.9	322.4
157.5°	333.3	333.6	333.9	333.8	333.5	333.1	332.7	332.4
160°	339.2	339.5	339.8	339.8	339.6	339.3	339.1	338.8
162.5°	344.7	345.0	345.4	345.3	344.9	344.5	344.1	343.6
165°	351.7	352.0	352.5	352.5	352.0	351.6	351.1	350.7
167.5°	357.3	357.8	358.2	358.2	357.8	357.3	356.9	356.6
170°	360.4	360.9	361.3	361.3	360.9	360.4	360.0	359.5
172.5°	362.9	363.3	363.7	363.7	363.2	362.8	362.3	361.9
175°	365.5	365.9	366.3	366.2	365.8	365.3	364.9	364.4
177.5°	366.7	367.0	367.3	367.3	367.0	366.6	366.2	365.8
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8

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