

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: P331969-935

Luminaire Tested: **S123DIP-S775D585U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331969-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D585U935-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4608.2 lumens
Efficiency: N/A
Efficacy: 114.3 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: General Diffuse

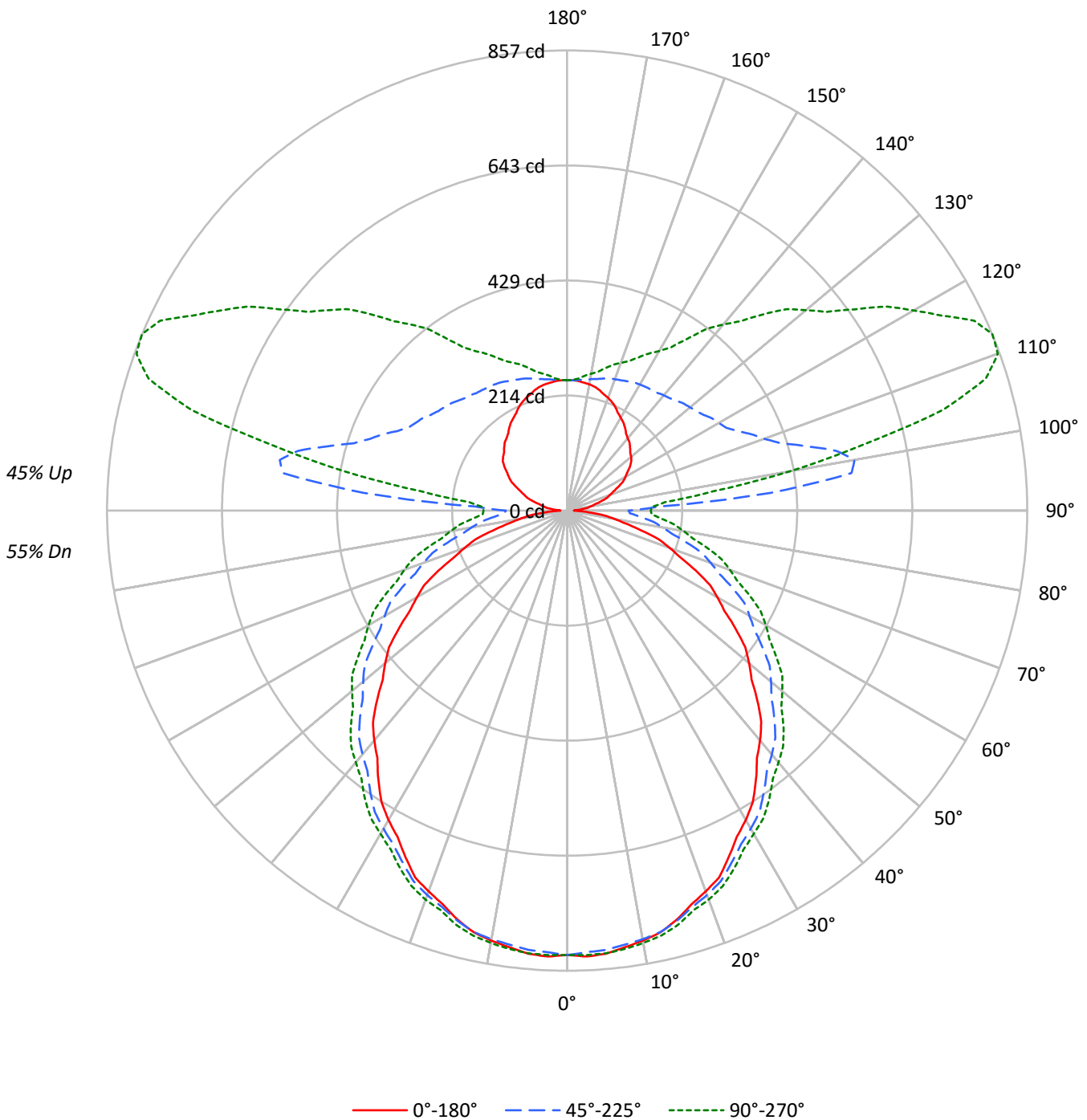
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

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	91	86	83	79	74	71	68	63	60	59	52	51	49	44
2	89	81	74	68	82	75	69	64	64	60	56	54	51	48	45	43	41	36
3	81	70	63	56	74	65	59	53	56	51	46	48	44	40	40	37	34	30
4	74	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	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	19	17
8	53	40	32	27	49	38	31	26	33	27	23	28	24	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	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°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.7
10°-20°	223.7	4.9
20°-30°	334.5	7.3
30°-40°	399.5	8.7
40°-50°	418.0	9.1
50°-60°	392.2	8.5
60°-70°	327.6	7.1
70°-80°	234.4	5.1
80°-90°	141.6	3.1
90°-100°	222.7	4.8
100°-110°	446.7	9.7
110°-120°	419.1	9.1
120°-130°	324.5	7.0
130°-140°	247.5	5.4
140°-150°	178.9	3.9
150°-160°	123.1	2.7
160°-170°	72.3	1.6
170°-180°	23.5	0.5
0°-30°	636.6	13.8
0°-40°	1036.1	22.5
0°-60°	1846.2	40.1
0°-90°	2549.8	55.3
90°-120°	1088.5	23.6
90°-150°	1839.5	39.9
90°-180°	2058.0	44.7
0°-180°	4608.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	13	62	114	145	156	9
95°	27	100	380	201	183	26
105°	64	114	462	782	726	68
115°	105	142	350	731	836	104
125°	143	169	311	558	653	127
135°	166	197	289	447	517	128
145°	188	214	274	352	390	118
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.2	34.4	44.5	54.8	65.0	75.3	85.8	96.3	106.8	117.3	124.0
90°	12.7	23.5	34.3	45.5	56.4	67.4	79.0	90.7	102.5	114.2	120.5
92.5°	17.0	28.9	41.8	54.6	67.5	84.3	107.2	138.4	169.1	171.6	159.7
95°	26.6	35.9	49.1	65.3	85.8	113.8	165.4	248.4	338.7	380.5	331.7
97.5°	37.3	44.9	56.1	70.4	90.1	119.0	168.2	260.2	403.8	534.1	571.5
100°	44.4	51.3	61.2	74.5	92.7	119.7	163.2	245.1	383.5	543.5	646.1
102.5°	52.0	58.6	67.4	79.7	96.1	121.1	161.0	231.7	355.8	513.7	645.5
105°	64.1	70.4	78.2	88.9	103.1	125.0	160.1	219.3	320.7	462.4	609.0
107.5°	76.3	81.8	88.8	98.7	111.5	131.7	163.2	213.4	296.4	416.6	550.0
110°	85.0	90.1	96.1	105.1	117.1	136.6	166.8	212.1	285.9	390.6	513.2



TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	93.6	98.1	103.5	111.8	123.1	141.8	170.0	212.3	277.9	371.4	480.1
115°	105.2	109.5	114.9	122.2	132.9	151.0	176.9	214.0	271.4	349.8	439.5
117.5°	117.4	121.2	125.2	131.1	142.0	158.3	183.7	217.1	266.4	334.1	412.3
120°	125.4	127.9	131.3	137.2	147.6	163.7	188.0	220.1	264.5	326.1	397.5
122.5°	132.9	134.8	137.8	143.6	153.1	169.6	193.1	223.0	264.0	319.8	384.7
125°	142.7	143.6	146.6	152.0	161.4	177.5	200.5	227.9	263.2	310.7	367.5
127.5°	150.8	152.1	155.5	160.8	170.9	186.5	207.9	232.1	263.5	303.6	351.6
130°	155.9	157.2	161.4	167.1	177.2	192.3	212.6	235.2	263.8	298.8	342.3
132.5°	159.1	160.9	165.7	172.8	183.0	197.5	216.5	238.0	263.4	294.8	333.5
135°	165.8	167.6	172.8	179.9	190.1	204.3	221.8	240.6	262.5	288.8	321.3
137.5°	172.1	174.0	179.2	186.8	196.9	209.7	225.6	242.8	261.5	283.4	310.8
140°	175.7	178.2	183.1	191.0	200.8	213.4	228.2	243.5	260.8	280.1	304.2
142.5°	180.5	182.4	187.5	194.4	204.1	215.5	229.5	243.9	259.6	276.4	297.9
145°	188.0	189.2	193.5	200.7	208.8	220.0	232.8	246.1	259.8	274.5	291.9
147.5°	194.8	195.6	200.0	206.4	214.4	224.0	235.7	247.6	259.8	272.7	286.6
150°	199.8	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.0	283.4
152.5°	205.0	205.1	209.1	214.6	220.7	229.1	238.8	248.8	258.6	269.1	280.3
155°	212.7	212.7	215.6	220.5	225.9	232.8	241.2	249.0	257.4	265.7	275.5
157.5°	218.7	219.1	221.4	225.8	230.4	235.7	242.4	249.5	255.6	262.6	270.2
160°	223.4	223.4	225.4	229.4	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.0	227.0	228.6	231.7	234.7	238.8	244.0	249.1	253.3	258.0	263.1
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.5	248.0	251.0	254.4	258.3
167.5°	236.3	235.7	236.2	238.1	239.4	241.6	244.4	247.2	248.6	250.8	253.7
170°	238.7	237.7	238.2	239.6	240.6	241.6	244.1	246.1	247.0	248.5	251.0
172.5°	240.2	239.6	239.8	240.8	241.4	242.0	244.1	245.6	245.8	246.5	248.2
175°	242.1	241.6	241.2	242.1	242.1	242.6	243.6	244.5	244.1	244.1	245.0
177.5°	243.0	242.6	242.2	242.6	242.6	242.6	243.0	243.7	243.0	242.6	243.0
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	131.0	137.8	144.7	149.4	151.3	153.3	155.5	157.4
90°	127.8	135.1	142.4	147.7	149.3	151.8	154.3	155.8
92.5°	150.8	148.9	151.7	153.3	154.4	154.7	157.0	158.0
95°	278.4	227.7	207.9	194.3	187.0	184.6	183.1	183.2
97.5°	535.4	453.7	396.3	341.6	307.3	287.2	276.0	273.7
100°	669.1	635.1	583.4	517.6	470.0	436.2	419.0	421.5
102.5°	710.4	714.7	686.9	646.5	609.9	583.6	569.6	560.3
105°	717.2	772.0	787.0	777.8	757.1	740.2	726.3	725.7
107.5°	671.8	756.9	805.3	826.3	828.5	824.0	820.4	817.7
110°	630.9	726.5	793.6	831.4	846.7	852.2	852.8	853.5



TEST NUMBER: P331969-935

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	589.7	687.1	761.5	809.1	836.0	850.0	855.4	857.4
115°	535.2	625.5	702.5	759.2	797.6	820.9	832.3	836.4
117.5°	493.8	572.3	641.9	699.4	739.3	765.7	781.4	786.3
120°	471.4	542.3	605.8	658.4	698.6	727.5	740.7	745.1
122.5°	452.9	517.4	576.4	625.4	661.3	687.4	701.8	707.0
125°	427.7	485.4	536.7	578.9	611.7	634.7	648.4	653.2
127.5°	404.9	456.6	503.1	541.5	570.8	590.7	603.1	607.7
130°	390.4	438.3	482.0	517.9	545.1	564.0	575.5	580.6
132.5°	376.6	420.9	461.6	495.9	521.8	540.8	551.3	555.4
135°	357.8	396.3	431.9	462.2	487.2	503.0	512.8	517.2
137.5°	340.6	372.3	402.9	429.3	450.6	466.5	474.9	478.2
140°	330.3	358.3	385.0	408.0	427.7	442.5	451.3	451.9
142.5°	320.1	344.3	367.4	387.6	404.5	417.7	425.8	426.3
145°	309.2	326.9	344.3	359.7	372.8	383.9	388.7	390.5
147.5°	300.3	313.7	326.8	337.5	347.6	355.3	359.7	360.8
150°	294.6	305.9	316.2	325.8	333.6	339.4	342.7	343.1
152.5°	290.3	300.1	309.2	317.0	322.9	328.0	329.8	329.8
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	277.0	283.5	289.3	293.9	297.7	300.7	301.4	301.4
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	268.4	272.9	277.5	280.5	282.8	285.3	285.3	284.8
165°	262.3	265.2	268.6	271.0	273.0	275.0	274.5	274.5
167.5°	256.9	259.2	261.1	262.9	263.8	265.2	264.7	264.7
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	250.3	251.3	252.9	253.5	253.6	254.6	253.7	253.3
175°	246.1	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.4	243.7	244.2	244.2	243.7	244.2	243.4	243.4
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

(END OF REPORT)