

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: P331913

Luminaire Tested: **S123DIP-S560D365U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331913
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D365U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3814.9 lumens
Efficiency: N/A
Efficacy: 138.7 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

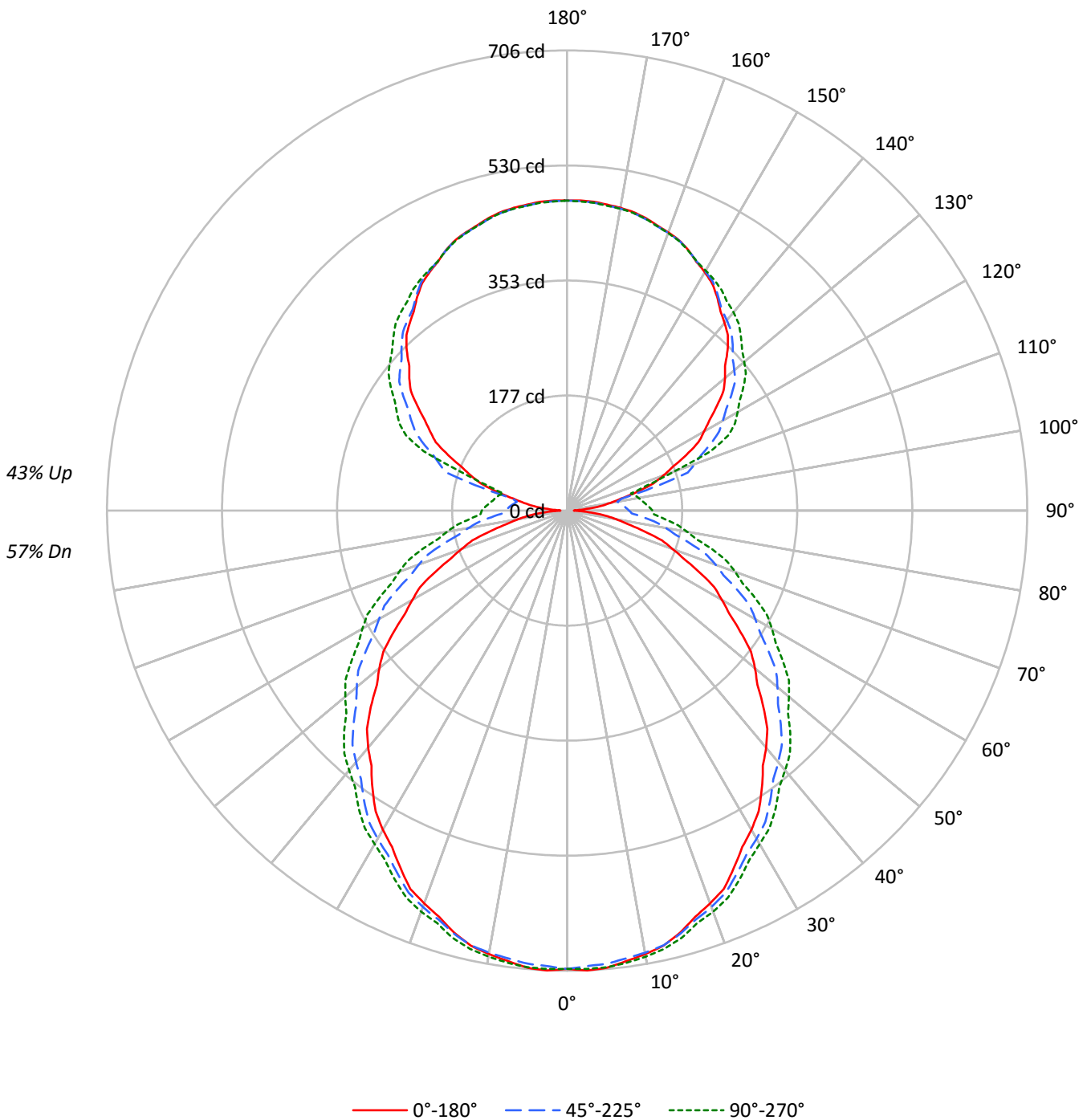
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	98	93	89	85	91	87	83	79	75	72	69	63	61	59	53	52	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	41	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	33	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	34	30	32	29	26	22
6	62	50	41	35	58	46	39	33	40	34	30	35	30	26	29	25	22	20
7	58	45	36	31	53	42	34	29	36	30	26	31	27	23	27	23	20	17
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	21	26	22	18	23	19	16	14
10	46	34	27	22	43	32	25	21	28	22	18	24	20	16	21	17	14	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7569	7569	7569
5°	7593	7378	7383
10°	7525	7209	7173
15°	7428	7016	6943
20°	7289	6795	6690
25°	7119	6541	6425
30°	6943	6313	6156
35°	6746	6072	5942
40°	6558	5852	5711
45°	6351	5641	5527
50°	6145	5433	5325
55°	5919	5219	5143
60°	5697	5003	4956
65°	5471	4772	4733
70°	5132	4514	4504
75°	4700	4216	4274
80°	4202	3924	4008
85°	3741	3722	3854



TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.7
10°-20°	190.0	5.0
20°-30°	284.2	7.5
30°-40°	339.4	8.9
40°-50°	355.1	9.3
50°-60°	333.2	8.7
60°-70°	278.3	7.3
70°-80°	199.1	5.2
80°-90°	120.1	3.1
90°-100°	91.8	2.4
100°-110°	137.2	3.6
110°-120°	234.5	6.1
120°-130°	273.0	7.2
130°-140°	278.7	7.3
140°-150°	253.9	6.7
150°-160°	203.2	5.3
160°-170°	131.1	3.4
170°-180°	45.2	1.2
0°-30°	540.9	14.2
0°-40°	880.3	23.1
0°-60°	1568.7	41.1
0°-90°	2166.3	56.8
90°-120°	463.5	12.1
90°-150°	1269.1	33.3
90°-180°	1649.0	43.2
0°-180°	3814.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	704	702	698	704	703	67
15°	670	672	672	679	679	189
25°	605	613	615	625	625	279
35°	521	533	543	554	558	326
45°	426	444	463	478	484	328
55°	325	350	378	398	404	291
65°	224	255	288	310	319	222
75°	122	158	196	220	231	130
85°	38	76	116	141	150	39
90°	10	52	95	121	131	8
95°	30	47	87	112	121	33
105°	111	132	135	96	101	118
115°	201	214	243	265	273	199
125°	281	285	307	323	330	251
135°	348	350	359	374	377	268
145°	401	402	403	410	413	251
155°	441	440	440	442	440	203
165°	465	464	463	466	464	131
175°	476	474	474	476	474	45
180°	476	476	476	476	476	



TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	706.3	705.9	705.5	705.0	704.6	703.9	702.8	701.7	700.6	699.5	700.6
5°	704.0	703.6	703.3	703.0	702.6	701.9	700.9	699.9	698.9	697.8	699.2
7.5°	697.1	697.1	697.2	697.3	697.4	696.9	695.9	694.9	693.9	692.9	694.6
10°	691.0	691.3	691.6	692.0	692.3	692.1	691.2	690.4	689.5	688.7	690.4
12.5°	683.6	684.1	684.6	685.0	685.5	685.5	684.9	684.3	683.7	683.1	684.7
15°	670.3	670.8	671.3	671.8	672.3	672.5	672.3	672.1	672.0	671.8	673.5
17.5°	653.4	654.4	655.5	656.5	657.5	658.0	657.9	657.8	657.8	657.7	659.2
20°	641.2	642.2	643.2	644.2	645.2	645.9	646.3	646.6	646.9	647.3	648.8
22.5°	628.3	629.3	630.3	631.4	632.4	633.1	633.6	634.1	634.6	635.0	637.0
25°	605.2	606.9	608.6	610.3	612.0	613.1	613.6	614.1	614.6	615.1	617.3
27.5°	581.9	583.8	585.8	587.7	589.6	591.1	592.2	593.3	594.4	595.5	597.4
30°	565.3	567.5	569.7	572.0	574.2	576.0	577.3	578.7	580.0	581.4	583.5
32.5°	546.9	549.4	551.9	554.4	556.9	559.0	560.8	562.5	564.3	566.1	568.3
35°	520.9	523.6	526.3	529.1	531.8	534.3	536.5	538.7	540.9	543.1	545.7
37.5°	493.3	496.4	499.4	502.5	505.6	508.5	511.2	513.9	516.6	519.4	522.3
40°	474.9	478.0	481.1	484.1	487.2	490.4	493.8	497.2	500.6	504.0	506.9
42.5°	454.7	458.5	462.2	465.9	469.7	473.3	476.9	480.4	484.0	487.5	490.7
45°	425.9	430.0	434.1	438.2	442.2	446.4	450.7	454.9	459.2	463.4	466.7
47.5°	395.7	400.4	405.0	409.6	414.2	419.0	423.9	428.7	433.6	438.5	442.1
50°	376.1	380.9	385.6	390.4	395.2	400.2	405.5	410.8	416.0	421.3	425.2
52.5°	355.3	360.3	365.4	370.4	375.4	380.9	386.7	392.5	398.3	404.2	408.2
55°	324.8	330.4	336.0	341.6	347.3	353.1	359.3	365.4	371.5	377.6	382.2
57.5°	295.1	300.9	306.8	312.6	318.5	324.8	331.5	338.2	344.9	351.6	356.2
60°	274.2	280.4	286.5	292.6	298.7	305.3	312.3	319.3	326.2	333.2	338.0
62.5°	254.6	260.9	267.2	273.4	279.7	286.5	293.9	301.3	308.7	316.1	320.8
65°	224.4	231.1	237.7	244.4	251.0	258.1	265.6	273.0	280.5	288.0	293.1
67.5°	193.8	200.9	207.9	214.9	222.0	229.3	237.0	244.6	252.2	259.8	265.4
70°	172.4	179.7	187.0	194.3	201.6	209.4	217.5	225.7	233.9	242.1	247.5
72.5°	152.7	160.1	167.4	174.7	182.0	189.9	198.3	206.8	215.2	223.7	229.3
75°	121.8	129.8	137.8	145.8	153.8	162.1	170.6	179.1	187.6	196.1	201.7
77.5°	94.8	102.9	111.0	119.0	127.1	135.4	144.0	152.6	161.2	169.8	175.7
80°	75.8	84.2	92.5	100.9	109.2	117.8	126.6	135.5	144.4	153.2	159.0
82.5°	59.3	67.8	76.2	84.7	93.2	101.9	110.9	119.9	128.9	137.9	143.7
85°	37.5	46.0	54.6	63.1	71.6	80.3	89.4	98.4	107.4	116.4	122.2
87.5°	20.4	29.1	37.7	46.3	55.0	63.7	72.6	81.5	90.4	99.3	105.1
90°	10.3	19.4	28.6	37.7	46.8	56.2	65.9	75.6	85.3	95.0	101.1
92.5°	15.9	23.2	30.5	37.8	45.1	53.4	62.8	72.1	81.4	90.7	96.9
95°	30.0	33.4	36.8	40.2	43.7	50.0	59.2	68.4	77.6	86.8	92.6
97.5°	50.8	55.4	59.9	64.5	69.0	72.4	74.8	77.1	79.4	81.7	87.4
100°	66.6	73.6	80.6	87.7	94.7	96.0	91.6	87.1	82.7	78.3	83.9
102.5°	84.7	90.7	96.7	102.8	108.8	109.0	103.3	97.6	91.9	86.2	89.1
105°	111.4	116.4	121.3	126.3	131.2	133.8	134.1	134.3	134.6	134.8	125.7
107.5°	138.9	143.1	147.3	151.4	155.6	161.7	169.8	177.8	185.9	193.9	188.3
110°	157.3	160.9	164.6	168.3	172.0	177.7	185.4	193.0	200.7	208.4	210.2



TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.3	178.4	181.5	184.6	187.7	192.9	200.3	207.7	215.1	222.5	226.9
115°	201.4	203.9	206.4	208.9	211.4	216.1	222.9	229.8	236.6	243.4	248.3
117.5°	227.1	229.0	230.8	232.7	234.5	238.5	244.6	250.7	256.8	262.9	267.6
120°	242.6	244.2	245.8	247.3	248.9	252.6	258.4	264.3	270.1	276.0	280.5
122.5°	259.0	260.1	261.1	262.1	263.1	266.5	272.1	277.8	283.4	289.0	293.3
125°	280.8	281.4	282.0	282.6	283.3	286.2	291.5	296.7	302.0	307.2	310.9
127.5°	302.5	303.0	303.4	303.9	304.4	306.8	311.3	315.7	320.2	324.7	328.3
130°	316.1	316.5	317.0	317.5	317.9	320.0	323.7	327.4	331.2	334.9	338.4
132.5°	328.5	329.1	329.7	330.3	330.9	332.6	335.6	338.6	341.6	344.5	348.0
135°	348.2	348.5	348.8	349.1	349.4	350.6	352.8	355.0	357.2	359.4	362.7
137.5°	365.0	365.5	365.9	366.4	366.8	367.7	368.9	370.1	371.4	372.6	375.7
140°	375.7	376.2	376.6	377.1	377.6	378.2	378.9	379.7	380.4	381.2	384.0
142.5°	386.2	386.5	386.8	387.2	387.5	387.8	388.2	388.5	388.8	389.2	391.7
145°	400.8	401.2	401.5	401.9	402.3	402.6	402.7	402.9	403.0	403.2	404.7
147.5°	413.8	414.2	414.5	414.9	415.2	415.5	415.7	415.8	416.0	416.1	416.7
150°	422.3	422.5	422.7	423.0	423.2	423.4	423.6	423.7	423.9	424.0	424.2
152.5°	429.9	430.0	430.1	430.2	430.3	430.5	430.5	430.6	430.7	430.8	431.1
155°	440.7	440.5	440.3	440.2	440.0	440.0	440.1	440.1	440.2	440.3	440.7
157.5°	449.0	449.0	449.0	448.9	448.9	448.9	448.8	448.7	448.6	448.6	449.0
160°	454.1	454.0	453.9	453.8	453.8	453.7	453.6	453.5	453.5	453.4	453.8
162.5°	458.9	458.7	458.5	458.3	458.1	457.9	457.8	457.8	457.7	457.6	458.1
165°	464.7	464.4	464.2	464.0	463.7	463.6	463.5	463.4	463.3	463.3	463.9
167.5°	469.2	468.9	468.6	468.3	467.9	467.8	467.8	467.8	467.8	467.8	468.4
170°	471.7	471.4	471.1	470.8	470.5	470.3	470.3	470.3	470.3	470.3	471.0
172.5°	473.4	473.1	472.7	472.3	471.9	471.8	471.8	471.9	472.0	472.0	472.7
175°	475.6	475.2	474.8	474.5	474.1	473.9	474.0	474.1	474.1	474.2	474.8
177.5°	476.2	475.9	475.6	475.3	474.9	474.8	474.9	474.9	475.0	475.1	475.6
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	701.7	702.8	703.9	704.4	704.2	704.1	704.0	703.8
5°	700.6	701.9	703.3	703.9	703.7	703.5	703.4	703.2
7.5°	696.3	698.0	699.8	700.5	700.3	700.1	699.9	699.7
10°	692.1	693.8	695.5	696.1	695.8	695.5	695.1	694.8
12.5°	686.3	687.8	689.4	690.0	689.7	689.3	689.0	688.7
15°	675.2	676.9	678.6	679.4	679.2	679.0	678.9	678.7
17.5°	660.8	662.3	663.8	664.5	664.2	664.0	663.8	663.5
20°	650.4	651.9	653.4	654.3	654.4	654.6	654.8	654.9
22.5°	638.9	640.9	642.8	643.7	643.6	643.5	643.4	643.3
25°	619.5	621.8	624.0	625.1	625.1	625.1	625.1	625.1
27.5°	599.3	601.2	603.1	604.2	604.3	604.4	604.6	604.7
30°	585.5	587.5	589.6	590.6	590.6	590.6	590.6	590.6
32.5°	570.4	572.6	574.8	576.1	576.5	576.9	577.3	577.7
35°	548.2	550.8	553.3	554.9	555.6	556.3	557.0	557.7
37.5°	525.1	528.0	530.9	532.7	533.2	533.7	534.3	534.8
40°	509.8	512.7	515.6	517.4	518.1	518.8	519.4	520.1
42.5°	493.8	497.0	500.2	502.2	503.2	504.1	505.1	506.0
45°	469.9	473.1	476.4	478.7	480.0	481.4	482.8	484.1
47.5°	445.8	449.4	453.0	455.4	456.4	457.5	458.6	459.6
50°	429.1	433.1	437.0	439.5	440.7	441.9	443.1	444.3
52.5°	412.3	416.3	420.4	423.1	424.6	426.0	427.5	429.0
55°	386.8	391.4	396.0	399.0	400.4	401.7	403.1	404.5
57.5°	360.9	365.5	370.1	373.2	374.8	376.4	378.0	379.6
60°	342.8	347.5	352.3	355.6	357.5	359.3	361.2	363.1
62.5°	325.6	330.4	335.1	338.4	340.1	341.8	343.6	345.3
65°	298.2	303.3	308.5	311.9	313.6	315.3	317.0	318.7
67.5°	271.0	276.6	282.2	285.7	287.1	288.5	290.0	291.4
70°	253.0	258.4	263.9	267.4	269.1	270.8	272.5	274.2
72.5°	234.8	240.4	246.0	249.7	251.4	253.1	254.8	256.5
75°	207.3	213.0	218.6	222.4	224.4	226.5	228.5	230.6
77.5°	181.6	187.5	193.4	197.2	198.8	200.3	201.9	203.5
80°	164.8	170.6	176.4	180.1	181.8	183.5	185.2	186.9
82.5°	149.5	155.2	161.0	164.8	166.5	168.2	169.9	171.6
85°	128.0	133.8	139.6	143.3	145.0	146.7	148.4	150.1
87.5°	111.0	116.8	122.7	126.5	128.2	129.9	131.7	133.4
90°	107.2	113.3	119.4	123.4	125.3	127.1	129.0	130.9
92.5°	103.0	109.2	115.3	119.2	120.9	122.5	124.2	125.9
95°	98.4	104.3	110.1	113.9	115.6	117.3	119.0	120.7
97.5°	93.1	98.8	104.5	108.2	110.0	111.8	113.6	115.4
100°	89.4	95.0	100.6	104.2	106.0	107.8	109.6	111.4
102.5°	91.9	94.8	97.6	100.0	101.8	103.7	105.5	107.4
105°	116.6	107.4	98.3	94.6	96.3	98.0	99.7	101.3
107.5°	182.7	177.0	171.4	164.1	155.1	146.2	137.2	128.2
110°	212.1	213.9	215.7	211.7	201.8	192.0	182.1	172.2



TEST NUMBER: P331913

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	231.2	235.5	239.9	241.6	240.7	239.9	239.0	238.1
115°	253.2	258.0	262.9	266.2	267.9	269.5	271.2	272.9
117.5°	272.3	277.0	281.7	284.7	286.1	287.5	288.9	290.3
120°	285.1	289.6	294.2	297.0	298.2	299.4	300.6	301.8
122.5°	297.5	301.7	305.9	308.7	309.9	311.2	312.4	313.7
125°	314.7	318.4	322.1	324.7	326.0	327.4	328.7	330.1
127.5°	331.9	335.5	339.1	341.5	342.5	343.5	344.5	345.5
130°	342.0	345.5	349.1	351.3	352.1	353.0	353.9	354.7
132.5°	351.4	354.8	358.2	360.4	361.3	362.2	363.2	364.1
135°	366.0	369.3	372.6	374.5	375.2	375.8	376.4	377.0
137.5°	378.7	381.8	384.9	386.7	387.4	388.1	388.8	389.5
140°	386.9	389.8	392.6	394.4	395.1	395.8	396.5	397.2
142.5°	394.2	396.8	399.3	400.9	401.5	402.2	402.8	403.4
145°	406.2	407.8	409.3	410.4	411.1	411.7	412.4	413.1
147.5°	417.3	417.8	418.4	418.8	419.1	419.3	419.6	419.8
150°	424.4	424.5	424.7	424.8	424.9	425.0	425.1	425.2
152.5°	431.4	431.7	432.0	432.0	431.7	431.4	431.1	430.8
155°	441.1	441.5	441.9	441.8	441.4	440.9	440.4	439.9
157.5°	449.5	450.0	450.5	450.4	449.8	449.2	448.5	447.9
160°	454.3	454.8	455.3	455.2	454.7	454.1	453.6	453.0
162.5°	458.7	459.2	459.7	459.8	459.3	458.8	458.3	457.8
165°	464.5	465.2	465.8	465.8	465.3	464.7	464.2	463.6
167.5°	469.0	469.7	470.3	470.3	469.7	469.0	468.4	467.8
170°	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3
172.5°	473.3	473.9	474.5	474.5	473.8	473.1	472.4	471.7
175°	475.3	475.9	476.4	476.4	475.8	475.1	474.5	473.9
177.5°	476.1	476.6	477.1	477.0	476.4	475.8	475.1	474.5
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

(END OF REPORT)