

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: P331914

Luminaire Tested: **S123DIP-S560D365U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331914
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-S560D365U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 3610.8 lumens
Efficiency: N/A
Efficacy: 131.3 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

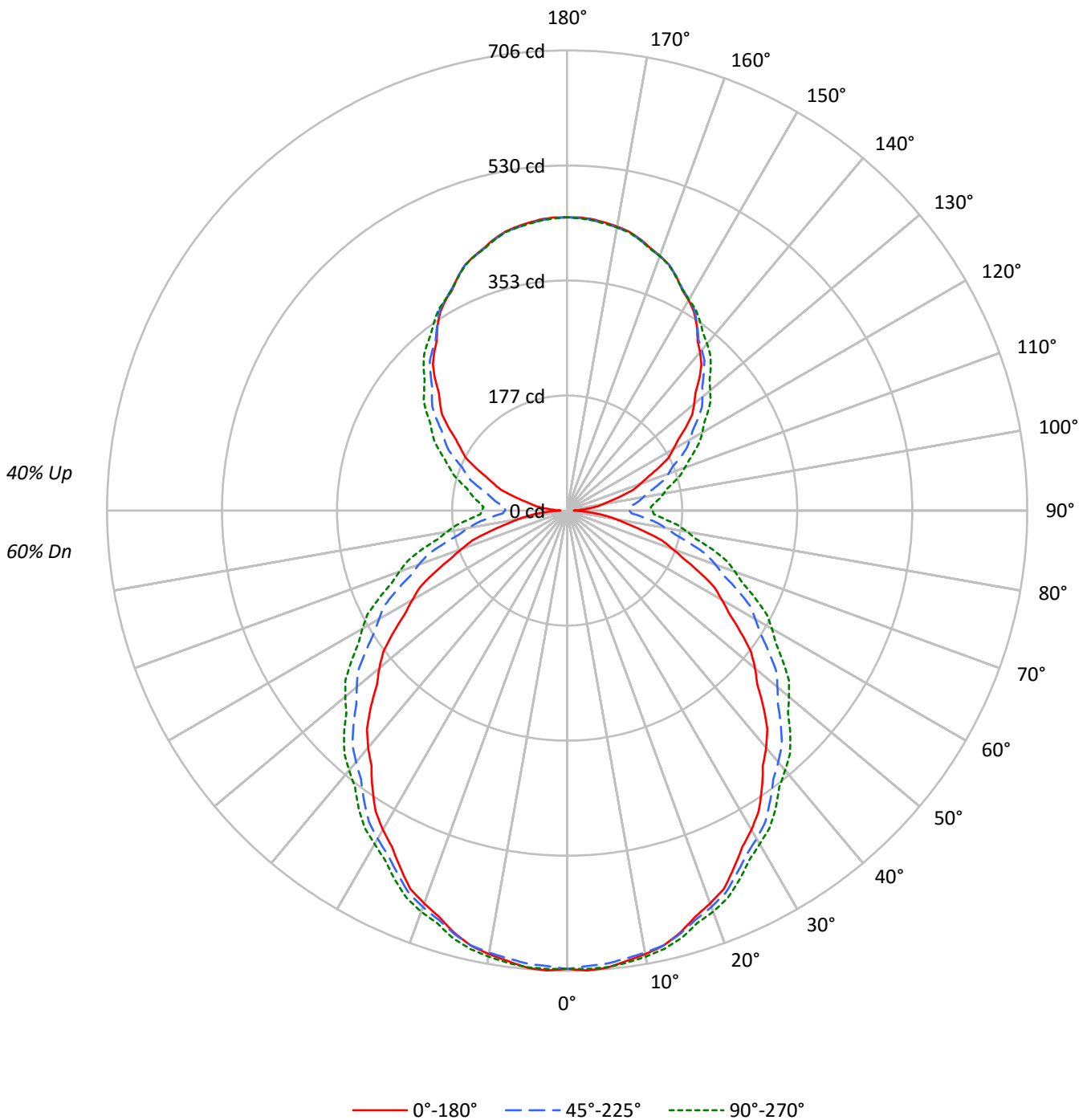
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331914

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D1

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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60
1	99	94	89	85	92	88	84	80	76	73	70	65	63	61	56	54	53	48
2	89	81	74	69	83	76	70	65	66	61	57	57	53	50	48	46	43	39
3	81	71	63	57	75	66	59	54	58	52	48	50	46	42	42	39	36	33
4	74	63	54	48	69	59	51	45	51	45	40	44	39	36	38	34	31	28
5	68	56	47	41	63	52	44	39	46	39	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	37	31	26	32	27	24	28	24	21	18
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	22	19	16
9	50	37	30	24	47	35	28	23	31	25	21	27	22	19	24	20	17	15
10	47	34	27	22	44	32	25	21	29	23	19	25	20	17	22	18	15	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: P331914

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.8
10°-20°	190.0	5.3
20°-30°	284.2	7.9
30°-40°	339.4	9.4
40°-50°	355.1	9.8
50°-60°	333.2	9.2
60°-70°	278.3	7.7
70°-80°	199.1	5.5
80°-90°	120.1	3.3
90°-100°	103.8	2.9
100°-110°	142.5	3.9
110°-120°	185.8	5.1
120°-130°	217.1	6.0
130°-140°	229.9	6.4
140°-150°	218.8	6.1
150°-160°	182.5	5.1
160°-170°	121.5	3.4
170°-180°	42.5	1.2
0°-30°	540.9	15.0
0°-40°	880.3	24.4
0°-60°	1568.7	43.4
0°-90°	2166.3	60.0
90°-120°	432.0	12.0
90°-150°	1097.9	30.4
90°-180°	1445.0	40.0
0°-180°	3610.8	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°	29	62	102	126	135	30
105°	86	106	141	162	170	91
115°	154	165	191	209	216	153
125°	222	224	245	259	263	198
135°	287	288	296	308	312	221
145°	347	347	348	353	355	216
155°	396	396	396	398	395	182
165°	432	430	430	432	430	122
175°	449	448	447	449	447	43
180°	450	450	450	450	450	



TEST NUMBER: P331914

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D1

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°	17.9	26.0	34.0	42.1	50.1	58.7	67.8	77.0	86.1	95.2	101.1
95°	29.3	36.5	43.7	50.8	58.0	66.1	75.1	84.0	93.0	102.0	107.6
97.5°	44.5	50.9	57.3	63.7	70.1	77.6	86.0	94.4	102.8	111.2	116.7
100°	55.0	60.9	66.8	72.7	78.6	85.7	93.9	102.1	110.4	118.6	123.8
102.5°	67.1	72.2	77.4	82.6	87.8	94.5	102.7	110.9	119.1	127.4	132.4
105°	85.6	89.9	94.1	98.4	102.6	108.7	116.8	124.8	132.8	140.9	145.6
107.5°	106.5	110.1	113.6	117.2	120.8	126.2	133.4	140.6	147.8	155.1	159.9
110°	119.4	122.7	125.9	129.1	132.3	137.4	144.4	151.4	158.3	165.3	170.0



TEST NUMBER: P331914

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	133.6	136.2	138.8	141.4	144.0	148.6	155.2	161.8	168.3	174.9	179.6
115°	154.0	156.3	158.6	160.9	163.1	167.3	173.2	179.2	185.2	191.1	195.3
117.5°	175.2	176.6	178.0	179.5	180.9	184.4	189.9	195.5	201.0	206.6	210.6
120°	187.9	189.2	190.5	191.9	193.2	196.5	201.7	206.9	212.1	217.3	221.2
122.5°	201.7	202.5	203.3	204.1	204.9	207.9	213.0	218.1	223.3	228.4	232.0
125°	222.1	222.3	222.6	222.8	223.0	225.6	230.3	235.1	239.9	244.7	247.9
127.5°	241.6	241.9	242.3	242.6	242.9	245.1	249.0	252.9	256.8	260.7	263.6
130°	254.6	255.1	255.5	256.0	256.5	258.3	261.4	264.6	267.8	270.9	273.9
132.5°	267.0	267.6	268.2	268.8	269.4	271.0	273.5	276.1	278.6	281.2	283.9
135°	286.7	287.0	287.3	287.6	287.9	289.0	290.8	292.6	294.4	296.1	298.9
137.5°	304.9	305.2	305.5	305.7	306.0	306.7	308.0	309.2	310.5	311.8	314.1
140°	317.1	317.4	317.8	318.2	318.6	319.1	319.7	320.3	320.9	321.5	323.9
142.5°	328.6	328.9	329.2	329.4	329.7	329.9	330.2	330.4	330.6	330.9	333.1
145°	346.7	346.7	346.7	346.7	346.7	346.8	347.0	347.3	347.5	347.7	349.0
147.5°	361.8	362.1	362.4	362.7	362.9	363.2	363.4	363.6	363.8	364.1	364.5
150°	372.8	373.0	373.1	373.3	373.5	373.6	373.8	373.9	374.1	374.2	374.2
152.5°	381.9	382.1	382.3	382.5	382.8	382.9	383.0	383.1	383.2	383.3	383.4
155°	396.2	396.2	396.2	396.2	396.2	396.2	396.3	396.3	396.4	396.5	396.8
157.5°	408.3	408.2	408.1	408.0	407.9	407.9	408.0	408.0	408.1	408.2	408.5
160°	415.9	415.8	415.6	415.5	415.3	415.2	415.2	415.2	415.2	415.2	415.6
162.5°	422.7	422.5	422.3	422.1	421.8	421.8	421.8	421.9	422.0	422.0	422.4
165°	431.5	431.3	431.0	430.8	430.5	430.4	430.4	430.4	430.4	430.4	430.9
167.5°	438.5	438.2	437.9	437.5	437.2	437.1	437.2	437.2	437.3	437.4	437.8
170°	442.4	442.1	441.8	441.5	441.2	441.0	441.0	441.0	441.0	441.0	441.6
172.5°	445.6	445.2	444.9	444.6	444.3	444.1	444.1	444.1	444.1	444.1	444.6
175°	448.8	448.5	448.2	447.9	447.6	447.4	447.4	447.4	447.4	447.4	447.9
177.5°	450.1	449.9	449.6	449.4	449.1	449.0	449.0	449.0	449.0	449.0	449.4
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



TEST NUMBER: P331914

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D1

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°	107.0	112.9	118.8	122.5	124.0	125.5	126.9	128.4
95°	113.2	118.8	124.4	128.0	129.7	131.4	133.1	134.8
97.5°	122.1	127.5	133.0	136.5	138.2	139.9	141.5	143.2
100°	128.9	134.1	139.3	142.8	144.7	146.5	148.4	150.2
102.5°	137.4	142.5	147.5	150.9	152.5	154.2	155.9	157.5
105°	150.4	155.2	159.9	163.1	164.8	166.5	168.2	169.9
107.5°	164.7	169.5	174.3	177.4	178.8	180.2	181.6	183.0
110°	174.8	179.5	184.3	187.2	188.4	189.6	190.8	192.0



TEST NUMBER: P331914

CATALOG NUMBER: S123DIP-S560D365U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	184.2	188.9	193.6	196.6	198.1	199.6	201.0	202.5
115°	199.5	203.6	207.8	210.5	211.8	213.1	214.4	215.7
117.5°	214.6	218.7	222.7	225.3	226.4	227.5	228.6	229.7
120°	225.0	228.9	232.7	235.1	236.2	237.2	238.2	239.3
122.5°	235.6	239.1	242.7	245.0	246.0	246.9	247.9	248.9
125°	251.2	254.5	257.7	259.8	260.7	261.5	262.4	263.3
127.5°	266.6	269.5	272.4	274.3	275.1	275.9	276.7	277.5
130°	276.8	279.7	282.6	284.3	284.8	285.3	285.7	286.2
132.5°	286.6	289.3	292.0	293.8	294.5	295.2	296.0	296.7
135°	301.6	304.4	307.1	308.9	309.6	310.3	310.9	311.6
137.5°	316.5	318.8	321.2	322.7	323.2	323.8	324.3	324.9
140°	326.4	328.9	331.4	332.8	333.1	333.4	333.7	334.0
142.5°	335.3	337.5	339.7	341.0	341.4	341.9	342.3	342.7
145°	350.3	351.6	352.9	353.7	354.1	354.4	354.8	355.2
147.5°	364.9	365.3	365.7	366.0	366.1	366.3	366.4	366.5
150°	374.2	374.2	374.2	374.2	374.0	373.9	373.8	373.7
152.5°	383.5	383.7	383.8	383.7	383.3	383.0	382.7	382.3
155°	397.1	397.4	397.8	397.6	397.1	396.5	396.0	395.4
157.5°	408.8	409.2	409.5	409.4	409.0	408.6	408.1	407.7
160°	416.0	416.4	416.8	416.8	416.5	416.2	415.9	415.6
162.5°	422.8	423.2	423.6	423.5	423.0	422.5	422.0	421.5
165°	431.4	431.8	432.3	432.3	431.7	431.2	430.6	430.1
167.5°	438.3	438.8	439.3	439.3	438.8	438.3	437.8	437.4
170°	442.1	442.7	443.2	443.2	442.7	442.1	441.6	441.0
172.5°	445.1	445.6	446.1	446.1	445.5	445.0	444.4	443.9
175°	448.3	448.8	449.3	449.2	448.7	448.1	447.6	447.0
177.5°	449.8	450.1	450.5	450.5	450.1	449.6	449.2	448.7
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9

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