

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: P331913-830

Luminaire Tested: **S123DIP-S560D365U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331913-830
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-S560D365U830-4F0-1E-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: 3595.7 lumens
Efficiency: N/A
Efficacy: 130.8 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

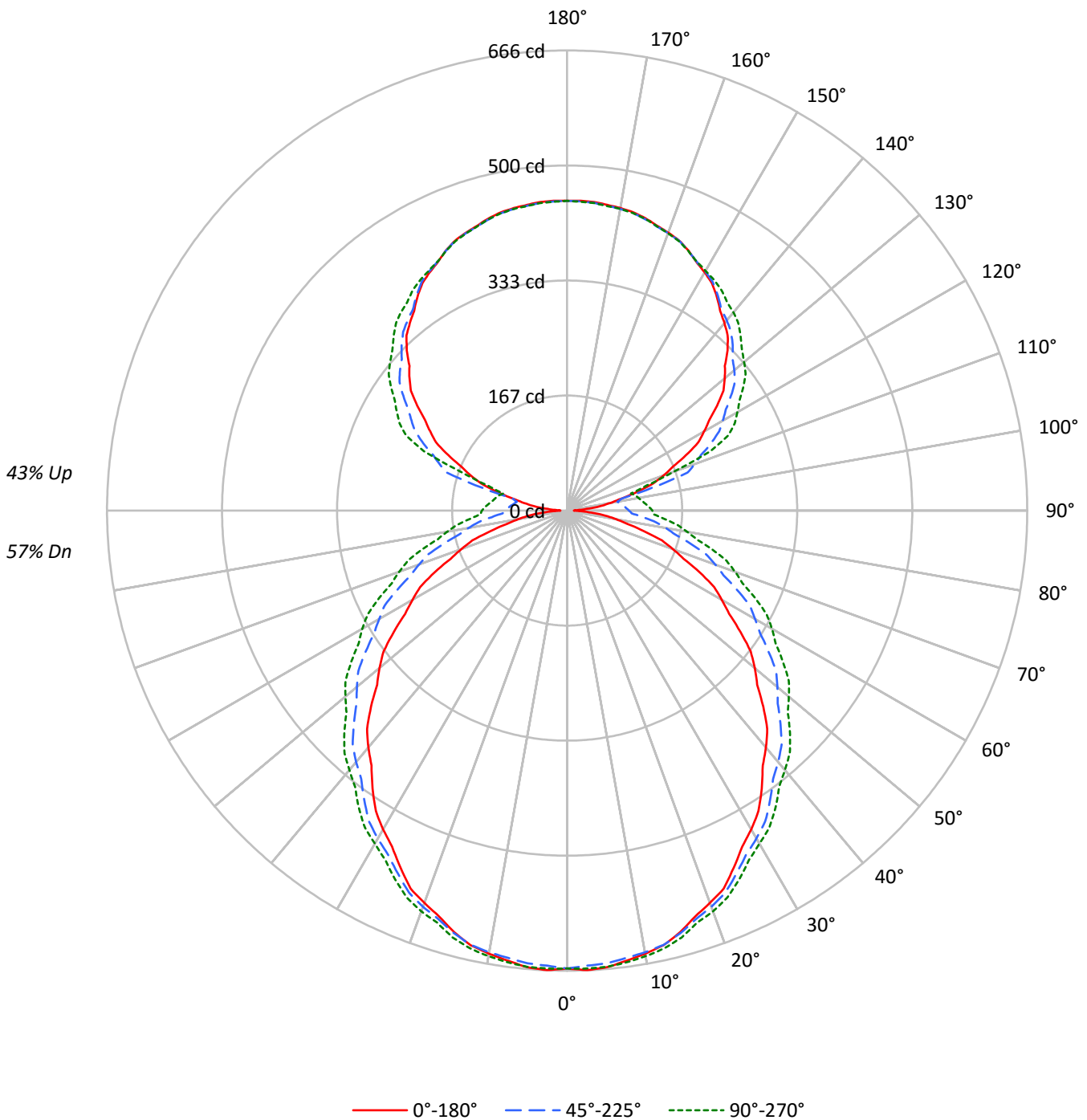
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331913-830

CATALOG NUMBER: S123DIP-S560D365U830-4F0-1E-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°	7134	7134	7134
5°	7156	6954	6959
10°	7093	6795	6761
15°	7001	6612	6544
20°	6871	6405	6306
25°	6709	6166	6056
30°	6544	5951	5803
35°	6359	5723	5601
40°	6181	5515	5382
45°	5986	5318	5210
50°	5793	5121	5019
55°	5578	4919	4848
60°	5369	4716	4670
65°	5156	4499	4462
70°	4837	4254	4245
75°	4430	3973	4029
80°	3958	3698	3779
85°	3521	3508	3633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.8	1.7
10°-20°	179.1	5.0
20°-30°	267.9	7.5
30°-40°	319.9	8.9
40°-50°	334.7	9.3
50°-60°	314.1	8.7
60°-70°	262.3	7.3
70°-80°	187.7	5.2
80°-90°	113.2	3.1
90°-100°	86.5	2.4
100°-110°	129.3	3.6
110°-120°	221.0	6.1
120°-130°	257.3	7.2
130°-140°	262.7	7.3
140°-150°	239.3	6.7
150°-160°	191.5	5.3
160°-170°	123.6	3.4
170°-180°	42.6	1.2
0°-30°	509.8	14.2
0°-40°	829.7	23.1
0°-60°	1478.6	41.1
0°-90°	2041.8	56.8
90°-120°	436.9	12.2
90°-150°	1196.2	33.3
90°-180°	1554.0	43.2
0°-180°	3595.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	664	662	658	663	663	63
15°	632	634	633	640	640	178
25°	570	577	580	589	589	263
35°	491	502	512	522	526	307
45°	401	419	437	450	456	310
55°	306	330	356	375	381	274
65°	212	240	272	292	300	209
75°	115	149	185	208	217	123
85°	35	72	110	133	142	37
90°	10	49	90	114	123	7
95°	28	44	82	106	114	31
105°	105	125	127	91	96	111
115°	190	202	229	249	257	187
125°	265	268	290	305	311	236
135°	328	330	339	352	355	253
145°	378	379	380	386	389	236
155°	415	415	415	416	415	191
165°	438	437	437	439	437	124
175°	448	447	447	449	447	43
180°	448	448	448	448	448	



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CATALOG NUMBER: S123DIP-S560D365U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8
2.5°	665.7	665.3	665.0	664.5	664.1	663.5	662.4	661.4	660.3	659.3	660.3
5°	663.5	663.2	662.9	662.6	662.2	661.6	660.6	659.7	658.7	657.7	659.0
7.5°	657.0	657.0	657.1	657.2	657.3	656.9	655.9	655.0	654.0	653.1	654.7
10°	651.3	651.6	651.9	652.2	652.5	652.3	651.5	650.7	649.9	649.1	650.7
12.5°	644.3	644.8	645.3	645.6	646.1	646.1	645.5	645.0	644.4	643.9	645.4
15°	631.8	632.3	632.7	633.2	633.7	633.9	633.7	633.5	633.4	633.2	634.8
17.5°	615.9	616.8	617.8	618.8	619.7	620.2	620.1	620.0	620.0	619.9	621.3
20°	604.4	605.3	606.2	607.2	608.1	608.8	609.2	609.4	609.7	610.1	611.5
22.5°	592.2	593.1	594.1	595.1	596.1	596.7	597.2	597.7	598.1	598.5	600.4
25°	570.4	572.0	573.6	575.2	576.8	577.9	578.3	578.8	579.3	579.8	581.8
27.5°	548.5	550.3	552.1	553.9	555.7	557.1	558.2	559.2	560.2	561.3	563.1
30°	532.8	534.9	537.0	539.1	541.2	542.9	544.1	545.4	546.7	548.0	550.0
32.5°	515.5	517.8	520.2	522.5	524.9	526.9	528.6	530.2	531.9	533.6	535.6
35°	491.0	493.5	496.1	498.7	501.2	503.6	505.7	507.7	509.8	511.9	514.3
37.5°	465.0	467.9	470.7	473.6	476.5	479.3	481.8	484.4	486.9	489.6	492.3
40°	447.6	450.5	453.5	456.3	459.2	462.2	465.4	468.6	471.8	475.0	477.8
42.5°	428.6	432.2	435.6	439.1	442.7	446.1	449.5	452.8	456.2	459.5	462.5
45°	401.4	405.3	409.2	413.0	416.8	420.8	424.8	428.8	432.8	436.8	439.9
47.5°	373.0	377.4	381.7	386.1	390.4	394.9	399.5	404.1	408.7	413.3	416.7
50°	354.5	359.0	363.4	368.0	372.5	377.2	382.2	387.2	392.1	397.1	400.8
52.5°	334.9	339.6	344.4	349.1	353.8	359.0	364.5	369.9	375.4	381.0	384.7
55°	306.1	311.4	316.7	322.0	327.3	332.8	338.7	344.4	350.2	355.9	360.2
57.5°	278.1	283.6	289.2	294.6	300.2	306.1	312.5	318.8	325.1	331.4	335.7
60°	258.4	264.3	270.0	275.8	281.5	287.8	294.4	301.0	307.5	314.1	318.6
62.5°	240.0	245.9	251.8	257.7	263.6	270.0	277.0	284.0	291.0	297.9	302.4
65°	211.5	217.8	224.0	230.4	236.6	243.3	250.3	257.3	264.4	271.5	276.3
67.5°	182.7	189.4	196.0	202.6	209.2	216.1	223.4	230.5	237.7	244.9	250.2
70°	162.5	169.4	176.3	183.1	190.0	197.4	205.0	212.7	220.5	228.2	233.3
72.5°	143.9	150.9	157.8	164.7	171.5	179.0	186.9	194.9	202.8	210.8	216.1
75°	114.8	122.3	129.9	137.4	145.0	152.8	160.8	168.8	176.8	184.8	190.1
77.5°	89.4	97.0	104.6	112.2	119.8	127.6	135.7	143.8	151.9	160.0	165.6
80°	71.4	79.4	87.2	95.1	102.9	111.0	119.3	127.7	136.1	144.4	149.9
82.5°	55.9	63.9	71.8	79.8	87.8	96.0	104.5	113.0	121.5	130.0	135.4
85°	35.3	43.4	51.5	59.5	67.5	75.7	84.3	92.7	101.2	109.7	115.2
87.5°	19.2	27.4	35.5	43.6	51.8	60.0	68.4	76.8	85.2	93.6	99.1
90°	9.7	18.3	27.0	35.5	44.1	53.0	62.1	71.3	80.4	89.5	95.3
92.5°	15.0	21.9	28.7	35.6	42.5	50.3	59.2	68.0	76.7	85.5	91.3
95°	28.3	31.5	34.7	37.9	41.2	47.1	55.8	64.5	73.1	81.8	87.3
97.5°	47.9	52.2	56.5	60.8	65.0	68.2	70.5	72.7	74.8	77.0	82.4
100°	62.8	69.4	76.0	82.7	89.3	90.5	86.3	82.1	77.9	73.8	79.1
102.5°	79.8	85.5	91.1	96.9	102.5	102.7	97.4	92.0	86.6	81.2	84.0
105°	105.0	109.7	114.3	119.0	123.7	126.1	126.4	126.6	126.9	127.1	118.5
107.5°	130.9	134.9	138.8	142.7	146.7	152.4	160.0	167.6	175.2	182.8	177.5
110°	148.3	151.7	155.1	158.6	162.1	167.5	174.7	181.9	189.2	196.4	198.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	165.2	168.1	171.1	174.0	176.9	181.8	188.8	195.8	202.7	209.7	213.9
115°	189.8	192.2	194.5	196.9	199.3	203.7	210.1	216.6	223.0	229.4	234.0
117.5°	214.1	215.8	217.5	219.3	221.0	224.8	230.5	236.3	242.0	247.8	252.2
120°	228.7	230.2	231.7	233.1	234.6	238.1	243.6	249.1	254.6	260.1	264.4
122.5°	244.1	245.2	246.1	247.0	248.0	251.2	256.5	261.8	267.1	272.4	276.4
125°	264.7	265.2	265.8	266.4	267.0	269.8	274.8	279.7	284.6	289.5	293.0
127.5°	285.1	285.6	286.0	286.4	286.9	289.2	293.4	297.6	301.8	306.0	309.4
130°	297.9	298.3	298.8	299.3	299.6	301.6	305.1	308.6	312.2	315.7	319.0
132.5°	309.6	310.2	310.8	311.3	311.9	313.5	316.3	319.1	322.0	324.7	328.0
135°	328.2	328.5	328.8	329.0	329.3	330.5	332.5	334.6	336.7	338.7	341.9
137.5°	344.0	344.5	344.9	345.3	345.7	346.6	347.7	348.8	350.1	351.2	354.1
140°	354.1	354.6	355.0	355.4	355.9	356.5	357.1	357.9	358.5	359.3	361.9
142.5°	364.0	364.3	364.6	365.0	365.2	365.5	365.9	366.2	366.5	366.8	369.2
145°	377.8	378.1	378.4	378.8	379.2	379.5	379.6	379.8	379.8	380.0	381.4
147.5°	390.0	390.4	390.7	391.1	391.3	391.6	391.8	391.9	392.1	392.2	392.8
150°	398.0	398.2	398.4	398.7	398.9	399.1	399.3	399.4	399.5	399.6	399.8
152.5°	405.2	405.3	405.4	405.5	405.6	405.8	405.8	405.9	406.0	406.0	406.3
155°	415.4	415.2	415.0	414.9	414.7	414.7	414.8	414.8	414.9	415.0	415.4
157.5°	423.2	423.2	423.2	423.1	423.1	423.1	423.0	422.9	422.8	422.8	423.2
160°	428.0	427.9	427.8	427.7	427.7	427.6	427.5	427.4	427.4	427.3	427.7
162.5°	432.5	432.3	432.2	432.0	431.8	431.6	431.5	431.5	431.4	431.3	431.8
165°	438.0	437.7	437.5	437.3	437.1	437.0	436.9	436.8	436.7	436.7	437.2
167.5°	442.2	442.0	441.7	441.4	441.0	440.9	440.9	440.9	440.9	440.9	441.5
170°	444.6	444.3	444.0	443.7	443.5	443.3	443.3	443.3	443.3	443.3	443.9
172.5°	446.2	445.9	445.5	445.2	444.8	444.7	444.7	444.8	444.9	444.9	445.5
175°	448.3	447.9	447.5	447.2	446.9	446.7	446.8	446.9	446.9	447.0	447.5
177.5°	448.8	448.6	448.3	448.0	447.6	447.5	447.6	447.6	447.7	447.8	448.3
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8
2.5°	661.4	662.4	663.5	663.9	663.7	663.6	663.5	663.4
5°	660.3	661.6	662.9	663.5	663.3	663.1	663.0	662.8
7.5°	656.3	657.9	659.6	660.3	660.1	659.9	659.7	659.5
10°	652.3	653.9	655.5	656.1	655.8	655.5	655.2	654.9
12.5°	646.9	648.3	649.8	650.4	650.1	649.7	649.4	649.1
15°	636.4	638.0	639.6	640.4	640.2	640.0	639.9	639.7
17.5°	622.8	624.2	625.7	626.3	626.0	625.8	625.7	625.4
20°	613.0	614.4	615.9	616.7	616.8	617.0	617.2	617.3
22.5°	602.2	604.1	605.9	606.7	606.6	606.5	606.4	606.3
25°	583.9	586.1	588.1	589.2	589.2	589.2	589.2	589.2
27.5°	564.9	566.7	568.4	569.5	569.6	569.7	569.9	570.0
30°	551.9	553.7	555.7	556.7	556.7	556.7	556.7	556.7
32.5°	537.6	539.7	541.8	543.0	543.4	543.8	544.1	544.5
35°	516.7	519.2	521.5	523.0	523.7	524.3	525.0	525.7
37.5°	494.9	497.7	500.4	502.1	502.6	503.0	503.6	504.1
40°	480.5	483.2	486.0	487.7	488.3	489.0	489.6	490.2
42.5°	465.4	468.4	471.5	473.3	474.3	475.1	476.1	476.9
45°	442.9	445.9	449.0	451.2	452.4	453.7	455.1	456.3
47.5°	420.2	423.6	427.0	429.2	430.2	431.2	432.3	433.2
50°	404.4	408.2	411.9	414.2	415.4	416.5	417.6	418.8
52.5°	388.6	392.4	396.2	398.8	400.2	401.5	402.9	404.4
55°	364.6	368.9	373.2	376.1	377.4	378.6	379.9	381.3
57.5°	340.2	344.5	348.8	351.8	353.3	354.8	356.3	357.8
60°	323.1	327.5	332.1	335.2	337.0	338.7	340.4	342.2
62.5°	306.9	311.4	315.8	319.0	320.6	322.2	323.9	325.5
65°	281.1	285.9	290.8	294.0	295.6	297.2	298.8	300.4
67.5°	255.4	260.7	266.0	269.3	270.6	271.9	273.3	274.7
70°	238.5	243.6	248.7	252.0	253.6	255.2	256.8	258.4
72.5°	221.3	226.6	231.9	235.4	237.0	238.6	240.2	241.8
75°	195.4	200.8	206.0	209.6	211.5	213.5	215.4	217.4
77.5°	171.2	176.7	182.3	185.9	187.4	188.8	190.3	191.8
80°	155.3	160.8	166.3	169.8	171.4	173.0	174.6	176.2
82.5°	140.9	146.3	151.7	155.3	156.9	158.5	160.1	161.7
85°	120.6	126.1	131.6	135.1	136.7	138.3	139.9	141.5
87.5°	104.6	110.1	115.6	119.2	120.8	122.4	124.1	125.7
90°	101.0	106.8	112.5	116.3	118.1	119.8	121.6	123.4
92.5°	97.1	102.9	108.7	112.4	114.0	115.5	117.1	118.7
95°	92.7	98.3	103.8	107.4	109.0	110.6	112.2	113.8
97.5°	87.8	93.1	98.5	102.0	103.7	105.4	107.1	108.8
100°	84.3	89.5	94.8	98.2	99.9	101.6	103.3	105.0
102.5°	86.6	89.4	92.0	94.3	96.0	97.7	99.4	101.2
105°	109.9	101.2	92.7	89.2	90.8	92.4	94.0	95.5
107.5°	172.2	166.8	161.6	154.7	146.2	137.8	129.3	120.8
110°	199.9	201.6	203.3	199.5	190.2	181.0	171.6	162.3



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CATALOG NUMBER: S123DIP-S560D365U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	217.9	222.0	226.1	227.7	226.9	226.1	225.3	224.4
115°	238.7	243.2	247.8	250.9	252.5	254.0	255.6	257.2
117.5°	256.7	261.1	265.5	268.3	269.7	271.0	272.3	273.6
120°	268.7	273.0	277.3	279.9	281.1	282.2	283.3	284.5
122.5°	280.4	284.4	288.3	291.0	292.1	293.3	294.5	295.7
125°	296.6	300.1	303.6	306.0	307.3	308.6	309.8	311.1
127.5°	312.8	316.2	319.6	321.9	322.8	323.8	324.7	325.6
130°	322.3	325.6	329.0	331.1	331.9	332.7	333.6	334.3
132.5°	331.2	334.4	337.6	339.7	340.5	341.4	342.3	343.2
135°	345.0	348.1	351.2	353.0	353.6	354.2	354.8	355.3
137.5°	356.9	359.9	362.8	364.5	365.1	365.8	366.5	367.1
140°	364.7	367.4	370.0	371.7	372.4	373.1	373.7	374.4
142.5°	371.6	374.0	376.4	377.9	378.4	379.1	379.7	380.2
145°	382.9	384.4	385.8	386.8	387.5	388.0	388.7	389.4
147.5°	393.3	393.8	394.4	394.7	395.0	395.2	395.5	395.7
150°	400.0	400.1	400.3	400.4	400.5	400.6	400.7	400.8
152.5°	406.6	406.9	407.2	407.2	406.9	406.6	406.3	406.0
155°	415.8	416.1	416.5	416.4	416.0	415.6	415.1	414.6
157.5°	423.7	424.1	424.6	424.5	424.0	423.4	422.7	422.2
160°	428.2	428.7	429.1	429.0	428.6	428.0	427.5	427.0
162.5°	432.3	432.8	433.3	433.4	432.9	432.4	432.0	431.5
165°	437.8	438.5	439.0	439.0	438.6	438.0	437.5	437.0
167.5°	442.1	442.7	443.3	443.3	442.7	442.1	441.5	440.9
170°	444.5	445.1	445.6	445.6	445.1	444.5	443.9	443.3
172.5°	446.1	446.7	447.2	447.2	446.6	445.9	445.3	444.6
175°	448.0	448.6	449.0	449.0	448.5	447.8	447.2	446.7
177.5°	448.7	449.2	449.7	449.6	449.0	448.5	447.8	447.2
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3

(END OF REPORT)