

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: P331557-930

Luminaire Tested: **S122DIW-S865D435U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331557-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D435U930-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4260.4 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

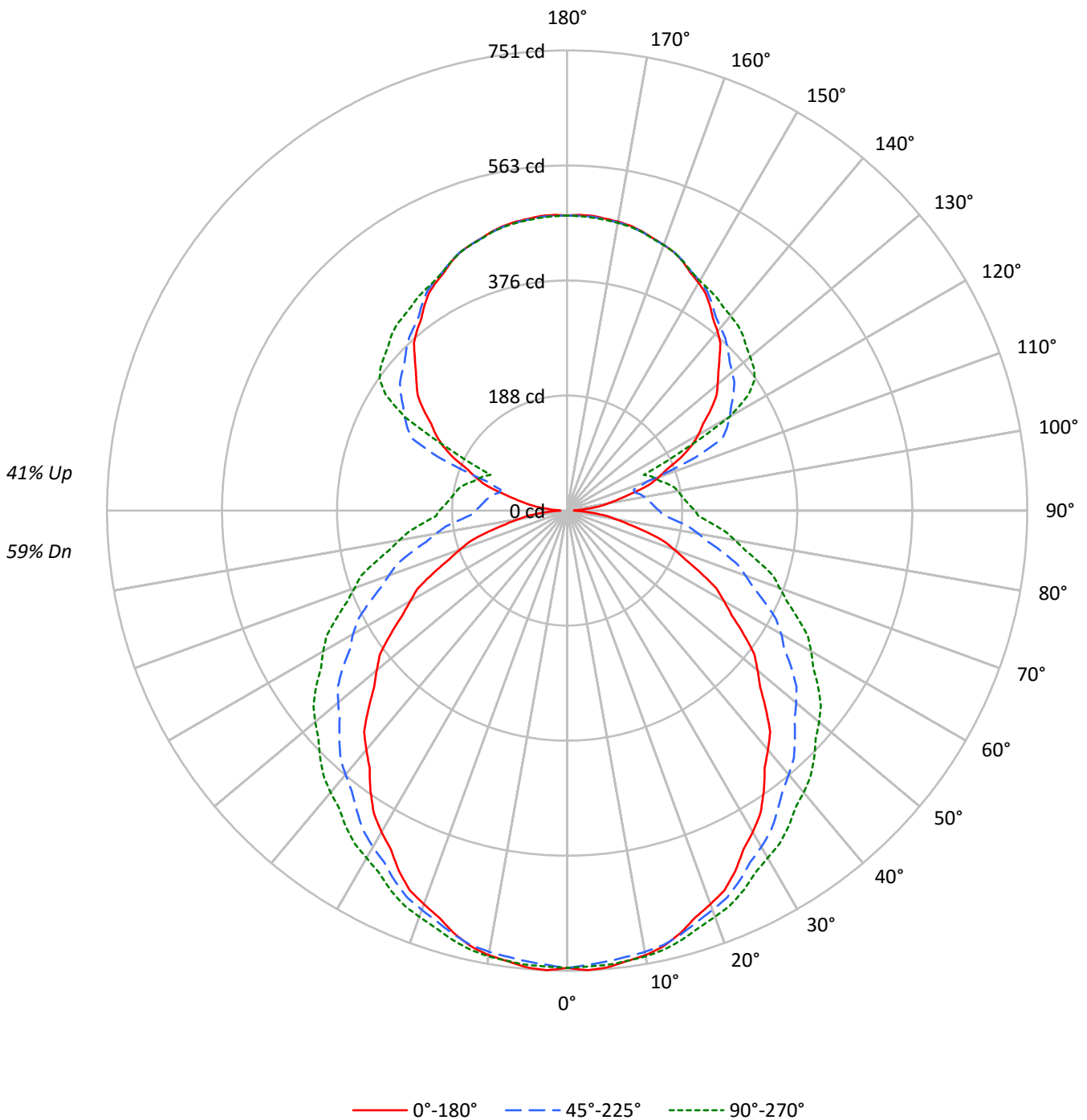
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331557-930

CATALOG NUMBER: S122DIW-S865D435U930-4F0-1E-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	102	102	102	102	89	89	89	76	76	76	65	65	65	59
1	98	93	88	84	91	87	83	79	75	72	69	64	62	60	54	53	51	46
2	89	80	73	67	82	75	69	63	65	60	56	55	52	49	47	44	42	37
3	80	70	62	55	75	65	58	52	57	51	46	48	44	40	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	36	33	29	26
5	67	55	46	39	62	51	43	37	44	38	33	38	33	29	32	29	25	22
6	62	49	40	34	57	46	38	32	40	34	29	34	29	25	29	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	20	17	15
9	49	36	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	13
10	46	33	26	21	43	31	25	20	28	22	18	24	19	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12053	12053	12053
5°	12111	11602	11558
10°	12036	11258	11133
15°	11869	10896	10685
20°	11659	10507	10254
25°	11452	10132	9863
30°	11160	9747	9469
35°	10866	9375	9193
40°	10556	9059	8916
45°	10260	8774	8678
50°	9944	8519	8446
55°	9611	8242	8208
60°	9207	7957	7957
65°	8784	7620	7658
70°	8310	7260	7336
75°	7704	6907	7041
80°	6744	6545	6739
85°	5835	6234	6508



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	1.7
10°-20°	202.8	4.8
20°-30°	307.4	7.2
30°-40°	374.4	8.8
40°-50°	402.8	9.5
50°-60°	391.1	9.2
60°-70°	341.5	8.0
70°-80°	262.9	6.2
80°-90°	177.6	4.2
90°-100°	137.6	3.2
100°-110°	147.7	3.5
110°-120°	216.1	5.1
120°-130°	292.7	6.9
130°-140°	290.2	6.8
140°-150°	259.3	6.1
150°-160°	206.6	4.8
160°-170°	133.1	3.1
170°-180°	45.8	1.1
0°-30°	580.9	13.6
0°-40°	955.3	22.4
0°-60°	1749.2	41.1
0°-90°	2531.3	59.4
90°-120°	501.4	11.8
90°-150°	1343.6	31.5
90°-180°	1729.0	40.6
0°-180°	4260.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	749	745	739	745	744	71
15°	714	716	716	725	725	201
25°	649	657	666	679	683	298
35°	559	578	598	621	630	349
45°	459	488	526	558	570	354
55°	352	392	447	484	500	314
65°	240	294	357	400	415	239
75°	133	194	263	308	324	141
85°	39	106	175	219	236	42
90°	11	78	150	193	208	8
95°	31	72	138	179	194	35
105°	111	149	114	154	169	119
115°	205	225	280	157	138	201
125°	285	292	331	362	374	255
135°	352	358	371	396	405	272
145°	407	407	412	421	425	255
155°	448	445	449	451	448	206
165°	472	470	471	473	471	133
175°	483	480	481	483	480	46
180°	482	482	482	482	482	



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CATALOG NUMBER: S122DIW-S865D435U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	750.8	750.2	749.7	749.1	748.5	747.5	746.2	744.9	743.5	742.2	743.1
5°	748.6	748.0	747.2	746.5	745.8	744.7	743.2	741.8	740.4	738.9	740.4
7.5°	741.9	741.4	740.9	740.5	740.0	739.2	738.1	737.0	735.9	734.8	736.5
10°	736.8	736.3	735.8	735.3	734.8	734.3	733.5	732.8	732.1	731.3	733.3
12.5°	728.1	728.2	728.3	728.4	728.5	728.2	727.7	727.2	726.7	726.1	728.1
15°	714.0	714.5	715.0	715.5	715.9	716.2	716.2	716.2	716.2	716.2	718.4
17.5°	695.9	696.8	697.9	698.9	699.9	700.7	701.6	702.3	703.1	703.8	706.1
20°	683.7	684.9	686.2	687.4	688.5	689.7	690.6	691.5	692.5	693.5	696.1
22.5°	670.7	672.1	673.5	674.9	676.3	677.7	679.1	680.4	681.8	683.1	685.7
25°	649.1	650.8	652.5	654.2	655.8	657.8	659.9	662.1	664.2	666.4	669.3
27.5°	623.1	625.9	628.6	631.4	634.1	636.7	639.3	641.9	644.4	646.9	650.6
30°	605.8	608.9	612.1	615.2	618.3	621.5	624.6	627.7	630.9	634.0	637.8
32.5°	586.8	590.3	593.8	597.4	600.9	604.5	608.1	611.9	615.6	619.2	623.7
35°	559.3	563.4	567.5	571.6	575.7	580.0	584.6	589.1	593.7	598.3	603.6
37.5°	529.5	534.2	538.9	543.6	548.3	553.6	559.5	565.5	571.4	577.3	583.2
40°	509.6	514.9	520.2	525.5	530.7	536.6	543.1	549.6	556.1	562.6	568.8
42.5°	490.5	495.8	501.1	506.4	511.7	518.0	525.5	533.0	540.4	547.9	554.6
45°	458.7	465.2	471.7	478.2	484.7	492.1	500.5	509.0	517.4	525.8	533.2
47.5°	427.3	434.4	441.5	448.6	455.6	464.1	473.9	483.8	493.7	503.5	511.3
50°	405.7	413.1	420.6	428.0	435.5	444.7	455.4	466.3	477.1	488.0	496.1
52.5°	384.9	392.7	400.6	408.5	416.3	425.9	437.3	448.7	460.1	471.5	479.8
55°	351.6	360.3	368.9	377.6	386.2	396.8	409.3	421.8	434.3	446.8	455.4
57.5°	318.7	328.5	338.3	348.0	357.8	369.0	381.7	394.5	407.2	420.0	429.3
60°	295.4	305.7	316.0	326.4	336.7	348.7	362.4	376.1	389.8	403.6	412.7
62.5°	274.6	285.3	296.0	306.7	317.5	329.7	343.4	357.1	370.8	384.5	394.2
65°	240.2	251.9	263.7	275.5	287.3	300.3	314.5	328.6	342.8	357.0	366.9
67.5°	208.6	220.9	233.2	245.5	257.8	271.3	285.8	300.3	314.8	329.3	339.2
70°	186.1	198.6	211.1	223.6	236.1	249.8	264.7	279.6	294.5	309.4	319.8
72.5°	165.3	178.2	191.1	204.0	216.9	230.8	246.0	261.1	276.1	291.2	301.4
75°	133.1	146.5	160.0	173.5	186.9	201.4	216.7	232.1	247.5	262.9	273.2
77.5°	101.9	116.0	130.1	144.1	158.2	173.1	188.7	204.4	220.0	235.6	245.9
80°	81.1	95.8	110.5	125.1	139.8	154.9	170.6	186.2	201.8	217.4	227.6
82.5°	63.8	78.3	92.8	107.2	121.7	136.9	152.7	168.5	184.3	200.2	210.3
85°	39.0	53.9	68.7	83.6	98.6	113.7	129.1	144.5	159.9	175.3	185.4
87.5°	21.3	35.8	50.3	64.7	79.2	94.2	109.8	125.3	140.8	156.3	166.2
90°	11.2	25.9	40.8	55.5	70.4	85.8	101.7	117.7	133.8	149.8	159.8
92.5°	17.0	29.9	42.8	55.7	68.6	82.6	97.8	112.8	128.0	143.1	152.7
95°	31.3	40.0	48.8	57.6	66.3	78.1	93.1	108.1	123.0	138.0	147.5
97.5°	52.5	55.4	58.2	61.1	63.9	72.9	88.0	103.1	118.2	133.3	142.5
100°	69.2	67.5	65.8	64.1	62.4	68.9	83.7	98.5	113.2	128.1	137.5
102.5°	86.7	92.7	98.6	104.4	110.3	114.3	116.3	118.4	120.5	122.5	132.1
105°	111.4	120.7	130.0	139.3	148.5	148.9	140.2	131.6	122.9	114.3	123.6
107.5°	140.6	148.1	155.5	163.0	170.4	167.5	154.1	140.7	127.3	113.9	121.2
110°	158.7	165.1	171.5	178.0	184.4	182.4	171.8	161.2	150.6	140.0	139.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	176.5	182.1	187.5	193.0	198.4	204.1	209.7	215.4	221.0	226.7	206.2
115°	204.7	208.6	212.6	216.5	220.5	228.9	241.7	254.4	267.2	279.9	251.3
117.5°	228.8	232.0	235.2	238.4	241.6	248.8	260.2	271.5	282.8	294.2	292.6
120°	247.2	249.3	251.4	253.6	255.7	262.2	273.2	284.3	295.3	306.3	314.0
122.5°	262.8	264.4	266.0	267.6	269.2	275.3	285.8	296.4	307.0	317.6	324.7
125°	285.4	286.5	287.5	288.5	289.5	294.6	303.8	312.9	322.0	331.3	338.3
127.5°	307.0	307.9	308.8	309.7	310.5	314.6	321.9	329.2	336.5	343.8	350.6
130°	320.7	321.6	322.7	323.7	324.7	328.1	334.0	339.9	345.8	351.7	358.3
132.5°	334.6	335.4	336.2	337.0	337.9	340.6	345.4	350.1	354.9	359.6	365.9
135°	351.6	352.9	354.1	355.4	356.6	358.7	361.9	365.0	368.1	371.2	377.0
137.5°	370.0	370.8	371.6	372.4	373.2	374.5	376.4	378.3	380.1	382.0	387.2
140°	382.0	382.4	382.7	383.1	383.5	384.3	385.6	387.0	388.3	389.6	394.2
142.5°	392.0	392.3	392.6	393.0	393.3	394.0	395.0	396.1	397.2	398.3	401.9
145°	406.7	406.6	406.5	406.4	406.3	407.0	408.3	409.6	410.9	412.2	414.3
147.5°	420.4	420.1	419.8	419.6	419.2	419.7	421.0	422.3	423.6	424.9	425.5
150°	429.3	428.8	428.2	427.7	427.1	427.5	428.8	430.0	431.2	432.4	432.9
152.5°	436.8	436.3	435.6	435.0	434.4	434.7	435.9	437.1	438.2	439.4	439.9
155°	447.8	447.1	446.4	445.7	445.0	445.2	446.1	446.9	447.9	448.8	449.3
157.5°	456.3	455.8	455.2	454.6	454.0	454.0	454.7	455.3	456.0	456.6	457.1
160°	461.4	460.9	460.5	460.0	459.5	459.5	460.0	460.5	460.9	461.4	461.9
162.5°	465.9	465.4	464.9	464.5	464.0	464.0	464.3	464.7	465.1	465.5	466.1
165°	471.8	471.4	470.9	470.4	469.9	469.9	470.1	470.3	470.6	470.8	471.3
167.5°	476.3	475.8	475.4	474.9	474.4	474.3	474.5	474.7	475.0	475.2	475.7
170°	478.8	478.3	477.8	477.4	477.0	476.8	477.0	477.1	477.3	477.4	477.9
172.5°	480.5	480.0	479.6	479.1	478.6	478.5	478.6	478.7	478.9	479.1	479.6
175°	482.7	482.1	481.5	481.0	480.5	480.3	480.5	480.6	480.7	480.9	481.4
177.5°	483.0	482.6	482.1	481.7	481.3	481.0	481.1	481.2	481.3	481.3	481.8
180°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	744.0	745.0	746.0	746.3	745.9	745.5	745.1	744.8
5°	741.8	743.2	744.7	745.3	745.0	744.8	744.5	744.3
7.5°	738.3	740.0	741.8	742.5	742.2	742.0	741.8	741.5
10°	735.2	737.1	739.1	739.9	739.6	739.4	739.2	738.9
12.5°	730.0	731.9	733.9	734.7	734.4	734.2	733.9	733.7
15°	720.5	722.7	724.9	725.8	725.5	725.3	725.0	724.9
17.5°	708.4	710.6	712.9	714.0	714.0	714.0	714.0	714.0
20°	698.8	701.4	704.0	705.4	705.4	705.4	705.4	705.4
22.5°	688.4	691.0	693.7	695.2	695.5	695.9	696.3	696.8
25°	672.2	675.1	678.0	679.8	680.4	681.2	681.9	682.7
27.5°	654.3	657.9	661.5	663.7	664.2	664.7	665.3	665.8
30°	641.6	645.5	649.4	651.7	652.3	653.1	653.8	654.5
32.5°	628.1	632.5	636.9	639.8	641.1	642.4	643.7	645.0
35°	608.9	614.2	619.5	622.9	624.6	626.3	627.9	629.7
37.5°	589.0	594.8	600.7	604.5	606.3	608.1	609.9	611.7
40°	575.0	581.3	587.6	591.7	593.9	596.1	598.3	600.5
42.5°	561.5	568.3	575.2	579.7	581.8	584.0	586.1	588.3
45°	540.7	548.1	555.6	560.5	563.0	565.3	567.8	570.1
47.5°	519.1	526.8	534.7	539.9	542.5	545.2	547.8	550.5
50°	504.3	512.4	520.7	526.0	528.6	531.3	533.9	536.6
52.5°	488.2	496.6	504.9	510.5	513.4	516.2	519.0	521.9
55°	464.1	472.8	481.4	487.3	490.4	493.6	496.7	499.8
57.5°	438.6	447.9	457.3	463.6	466.7	469.9	473.0	476.2
60°	421.8	431.0	440.1	446.3	449.7	453.1	456.4	459.8
62.5°	403.9	413.6	423.3	429.8	432.9	436.1	439.3	442.5
65°	376.7	386.6	396.5	402.9	406.0	409.2	412.3	415.4
67.5°	349.2	359.1	369.2	375.8	379.0	382.3	385.6	388.8
70°	330.1	340.4	350.7	357.3	360.3	363.1	366.1	368.9
72.5°	311.5	321.6	331.8	338.6	342.1	345.5	349.0	352.5
75°	283.6	293.9	304.3	311.0	314.1	317.2	320.3	323.5
77.5°	256.2	266.5	276.8	283.6	287.0	290.3	293.8	297.1
80°	237.7	247.8	257.9	264.6	267.9	271.3	274.7	278.0
82.5°	220.4	230.4	240.5	247.2	250.4	253.5	256.7	259.8
85°	195.4	205.5	215.6	222.4	225.8	229.1	232.4	235.9
87.5°	176.1	186.0	195.8	202.4	205.5	208.6	211.7	214.8
90°	169.7	179.8	189.8	196.3	199.3	202.4	205.5	208.5
92.5°	162.3	171.9	181.6	187.9	190.9	193.9	196.8	199.8
95°	157.0	166.6	176.1	182.3	185.1	187.8	190.7	193.5
97.5°	151.7	160.9	170.2	176.2	179.1	182.1	185.0	187.9
100°	147.1	156.6	166.1	172.3	175.0	177.9	180.7	183.4
102.5°	141.5	151.1	160.6	166.7	169.7	172.5	175.4	178.2
105°	132.8	142.1	151.4	157.4	160.5	163.4	166.3	169.3
107.5°	128.3	135.6	142.8	147.8	150.8	153.8	156.7	159.6
110°	139.8	139.8	139.7	141.2	144.1	147.1	150.1	153.0



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CATALOG NUMBER: S122DIW-S865D435U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	185.6	165.1	144.5	135.7	138.6	141.5	144.4	147.2
115°	222.7	194.0	165.3	149.5	146.7	143.7	140.8	137.9
117.5°	291.1	289.5	288.0	279.2	263.3	247.5	231.6	215.7
120°	321.6	329.3	336.9	336.9	329.1	321.2	313.4	305.6
122.5°	331.7	338.8	345.9	349.6	349.8	350.0	350.3	350.5
125°	345.3	352.4	359.4	364.1	366.5	368.8	371.3	373.7
127.5°	357.3	364.0	370.8	375.3	377.4	379.6	381.7	383.9
130°	364.9	371.6	378.2	382.5	384.3	386.1	388.0	389.8
132.5°	372.3	378.5	384.8	388.9	390.8	392.6	394.4	396.3
135°	382.8	388.7	394.4	398.3	400.1	401.8	403.6	405.4
137.5°	392.3	397.5	402.7	406.0	407.3	408.7	410.1	411.5
140°	398.8	403.3	407.8	410.7	411.7	412.8	413.8	414.8
142.5°	405.7	409.4	413.1	415.4	416.2	417.1	418.0	418.8
145°	416.2	418.2	420.2	421.6	422.4	423.2	424.0	424.9
147.5°	426.2	426.7	427.3	427.7	428.0	428.2	428.5	428.8
150°	433.4	433.8	434.3	434.4	434.0	433.6	433.2	432.8
152.5°	440.3	440.8	441.3	441.2	440.8	440.3	439.7	439.2
155°	449.8	450.2	450.7	450.6	450.0	449.4	448.7	448.2
157.5°	457.7	458.2	458.8	458.7	458.1	457.5	456.9	456.3
160°	462.3	462.8	463.3	463.2	462.7	462.1	461.5	461.1
162.5°	466.6	467.2	467.7	467.6	466.9	466.3	465.6	465.0
165°	471.9	472.4	473.0	473.0	472.4	471.9	471.3	470.8
167.5°	476.3	476.8	477.4	477.3	476.5	475.9	475.2	474.5
170°	478.5	479.1	479.6	479.5	478.8	478.1	477.4	476.7
172.5°	480.1	480.7	481.3	481.2	480.5	479.8	479.1	478.4
175°	482.0	482.5	483.1	483.0	482.2	481.4	480.6	479.9
177.5°	482.2	482.6	483.1	483.0	482.4	481.8	481.3	480.8
180°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6

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