

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: P331563-930

Luminaire Tested: **S122DIW-S865D710U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331563-930
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-S865D710U930-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5161.4 lumens
Efficiency: N/A
Efficacy: 96.3 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

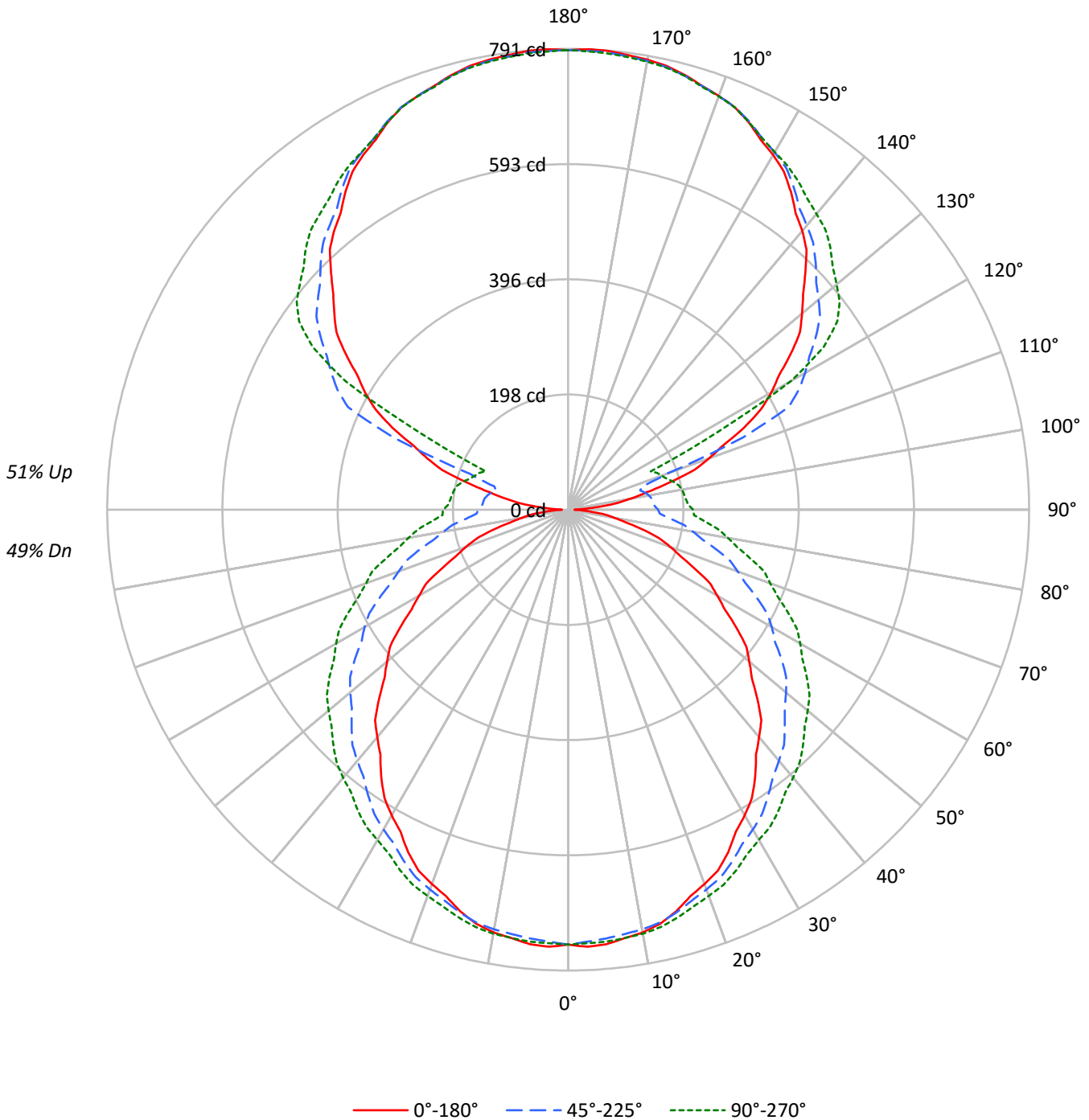
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	47	45	44	38
2	87	79	72	66	80	73	67	62	61	56	53	50	47	44	40	38	36	31
3	79	69	61	55	72	63	56	51	53	48	44	44	40	37	35	32	30	25
4	72	60	52	46	66	56	48	43	47	41	37	39	34	31	31	28	25	21
5	66	54	45	39	60	50	42	36	42	36	31	35	30	26	28	24	22	18
6	61	48	40	33	55	44	37	31	38	32	27	31	26	23	25	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	19	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	15	12	10

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	1.4
10°-20°	202.8	3.9
20°-30°	307.4	6.0
30°-40°	374.4	7.3
40°-50°	402.8	7.8
50°-60°	391.1	7.6
60°-70°	341.5	6.6
70°-80°	262.9	5.1
80°-90°	178.4	3.5
90°-100°	147.9	2.9
100°-110°	185.3	3.6
110°-120°	316.6	6.1
120°-130°	458.5	8.9
130°-140°	466.5	9.0
140°-150°	423.2	8.2
150°-160°	338.4	6.6
160°-170°	218.0	4.2
170°-180°	75.1	1.5
0°-30°	580.9	11.3
0°-40°	955.3	18.5
0°-60°	1749.2	33.9
0°-90°	2532.0	49.1
90°-120°	649.7	12.6
90°-150°	1997.9	38.7
90°-180°	2629.0	50.9
0°-180°	5161.4	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	81	154	199	214	9
95°	46	80	147	189	203	52
105°	179	219	128	170	186	192
115°	332	356	417	197	156	327
125°	466	476	519	551	564	416
135°	575	585	600	628	636	444
145°	666	666	675	685	688	417
155°	733	729	735	738	734	338
165°	773	770	771	775	771	218
175°	790	787	788	791	786	75
180°	789	789	789	789	789	



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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	36.0	50.5	65.1	79.7	94.8	110.5	126.0	141.6	157.2	167.1
90°	11.4	26.7	42.1	57.4	72.7	88.6	105.0	121.4	137.8	154.3	164.4
92.5°	21.4	34.3	47.2	60.1	72.9	87.0	102.3	117.6	133.0	148.2	158.0
95°	45.7	52.8	60.0	67.1	74.2	85.4	100.8	116.0	131.3	146.7	156.5
97.5°	81.2	79.5	77.7	76.0	74.2	81.3	97.2	113.1	129.0	144.9	154.3
100°	108.6	100.1	91.6	83.2	74.7	78.3	93.8	109.5	125.1	140.7	150.7
102.5°	137.9	142.4	146.8	151.2	155.6	155.4	150.4	145.4	140.6	135.6	145.6
105°	179.0	189.7	200.5	211.2	222.0	216.4	194.2	172.1	150.0	127.8	137.7
107.5°	227.0	235.6	244.3	252.9	261.5	251.1	221.6	192.0	162.5	132.9	139.6
110°	257.1	264.6	272.1	279.6	287.1	278.3	253.5	228.6	203.7	178.9	173.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	286.4	292.8	299.2	305.6	312.0	316.3	318.4	320.6	322.7	324.8	286.3
115°	332.5	337.3	342.1	346.9	351.7	361.1	375.1	389.1	403.1	417.0	365.6
117.5°	372.7	376.7	380.9	385.1	389.2	397.4	409.5	421.8	433.9	446.1	439.0
120°	402.8	405.6	408.5	411.4	414.3	421.6	433.5	445.4	457.3	469.2	477.4
122.5°	428.4	430.7	433.1	435.5	437.9	444.8	456.4	467.9	479.4	491.0	498.4
125°	466.2	467.8	469.4	471.2	472.8	478.7	488.8	498.9	509.0	519.1	526.4
127.5°	501.5	503.0	504.7	506.2	507.8	512.6	520.6	528.6	536.6	544.6	551.9
130°	523.8	525.6	527.4	529.2	531.0	535.1	541.5	548.0	554.4	560.8	568.0
132.5°	546.7	548.1	549.6	551.1	552.6	556.0	561.3	566.6	571.9	577.2	583.9
135°	575.3	577.3	579.4	581.3	583.3	586.2	589.7	593.3	596.8	600.4	606.7
137.5°	605.3	606.7	608.1	609.4	610.7	612.6	615.0	617.3	619.7	622.1	627.7
140°	624.9	625.7	626.5	627.2	628.0	629.3	631.2	633.1	635.0	636.8	641.8
142.5°	641.3	642.0	642.7	643.4	644.0	645.2	646.9	648.7	650.3	652.0	656.2
145°	666.1	665.9	665.9	665.7	665.5	666.6	668.7	670.9	673.0	675.2	677.5
147.5°	688.5	688.1	687.6	687.1	686.6	687.5	689.6	691.7	693.8	695.9	696.8
150°	703.2	702.3	701.4	700.5	699.6	700.2	702.2	704.3	706.3	708.3	709.1
152.5°	715.5	714.5	713.5	712.5	711.5	712.0	714.0	715.8	717.8	719.7	720.5
155°	733.4	732.3	731.2	730.0	728.9	729.0	730.6	732.1	733.6	735.2	735.9
157.5°	747.5	746.5	745.5	744.5	743.6	743.6	744.7	745.8	746.8	747.9	748.8
160°	755.7	754.9	754.2	753.4	752.6	752.6	753.4	754.2	754.9	755.7	756.4
162.5°	763.0	762.2	761.5	760.7	759.9	759.9	760.5	761.2	761.9	762.5	763.4
165°	772.8	772.0	771.3	770.5	769.7	769.6	770.0	770.3	770.7	771.1	772.0
167.5°	780.1	779.3	778.6	777.8	777.1	776.9	777.2	777.6	778.0	778.3	779.2
170°	784.2	783.4	782.7	782.0	781.1	780.9	781.1	781.5	781.7	782.0	782.9
172.5°	786.9	786.2	785.5	784.6	783.9	783.7	783.9	784.2	784.4	784.6	785.5
175°	790.5	789.6	788.7	787.8	786.9	786.6	786.8	787.2	787.4	787.7	788.6
177.5°	791.1	790.4	789.6	789.0	788.2	787.9	788.0	788.1	788.2	788.3	789.0
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8



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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°	177.1	187.0	197.0	203.5	206.6	209.8	212.9	216.0
90°	174.7	185.0	195.2	201.9	205.0	208.2	211.3	214.5
92.5°	167.8	177.5	187.3	193.6	196.7	199.7	202.8	205.8
95°	166.2	176.0	185.7	192.0	194.8	197.5	200.3	203.0
97.5°	163.7	173.1	182.5	188.7	191.7	194.7	197.7	200.6
100°	160.5	170.5	180.3	186.8	189.6	192.6	195.4	198.4
102.5°	155.6	165.7	175.7	182.1	185.2	188.2	191.2	194.2
105°	147.5	157.3	167.1	173.6	176.8	179.9	183.0	186.2
107.5°	146.3	152.9	159.6	164.4	167.6	170.7	173.9	177.1
110°	168.8	163.9	158.9	158.0	161.1	164.3	167.5	170.6



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CATALOG NUMBER: S122DIW-S865D710U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	247.7	209.1	170.6	152.8	155.8	158.9	161.9	165.0
115°	314.1	262.5	211.0	182.1	175.5	169.0	162.6	156.0
117.5°	431.9	424.9	417.8	400.4	372.8	345.3	317.7	290.2
120°	485.8	494.0	502.2	499.1	484.6	470.2	455.7	441.2
122.5°	505.9	513.3	520.7	524.0	522.9	521.9	520.7	519.7
125°	533.9	541.2	548.6	553.5	556.1	558.6	561.2	563.7
127.5°	559.1	566.4	573.6	578.4	580.6	582.8	584.9	587.1
130°	575.2	582.4	589.5	594.0	595.8	597.6	599.4	601.2
132.5°	590.7	597.5	604.2	608.5	610.3	612.1	613.9	615.7
135°	612.9	619.3	625.6	629.6	631.3	632.9	634.6	636.3
137.5°	633.4	639.0	644.7	648.2	649.3	650.5	651.8	653.0
140°	646.8	651.8	656.8	659.7	660.5	661.3	662.1	662.9
142.5°	660.2	664.4	668.5	670.8	671.5	672.1	672.7	673.3
145°	679.9	682.2	684.5	686.0	686.6	687.1	687.7	688.3
147.5°	697.7	698.5	699.4	699.9	699.9	699.9	699.9	700.0
150°	709.8	710.6	711.3	711.4	710.8	710.1	709.5	708.9
152.5°	721.2	722.0	722.8	722.8	721.9	721.1	720.2	719.3
155°	736.6	737.4	738.2	738.0	737.0	736.1	735.0	734.0
157.5°	749.7	750.5	751.4	751.3	750.3	749.3	748.4	747.3
160°	757.2	758.0	758.7	758.6	757.7	756.8	756.0	755.1
162.5°	764.3	765.1	766.0	765.9	764.8	763.7	762.5	761.5
165°	772.9	773.7	774.6	774.6	773.7	772.9	772.0	771.1
167.5°	780.1	781.0	781.8	781.7	780.6	779.4	778.3	777.1
170°	783.7	784.6	785.5	785.4	784.2	783.1	782.0	780.8
172.5°	786.4	787.3	788.2	788.1	786.9	785.8	784.6	783.5
175°	789.5	790.3	791.2	791.0	789.7	788.5	787.2	785.9
177.5°	789.8	790.4	791.2	791.1	790.2	789.2	788.3	787.4
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8

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