

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: P331587-927

Luminaire Tested: **S122DIW-S1005D435U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331587-927
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-S1005D435U927-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 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: 4568.3 lumens
Efficiency: N/A
Efficacy: 87.2 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: Semi-Direct

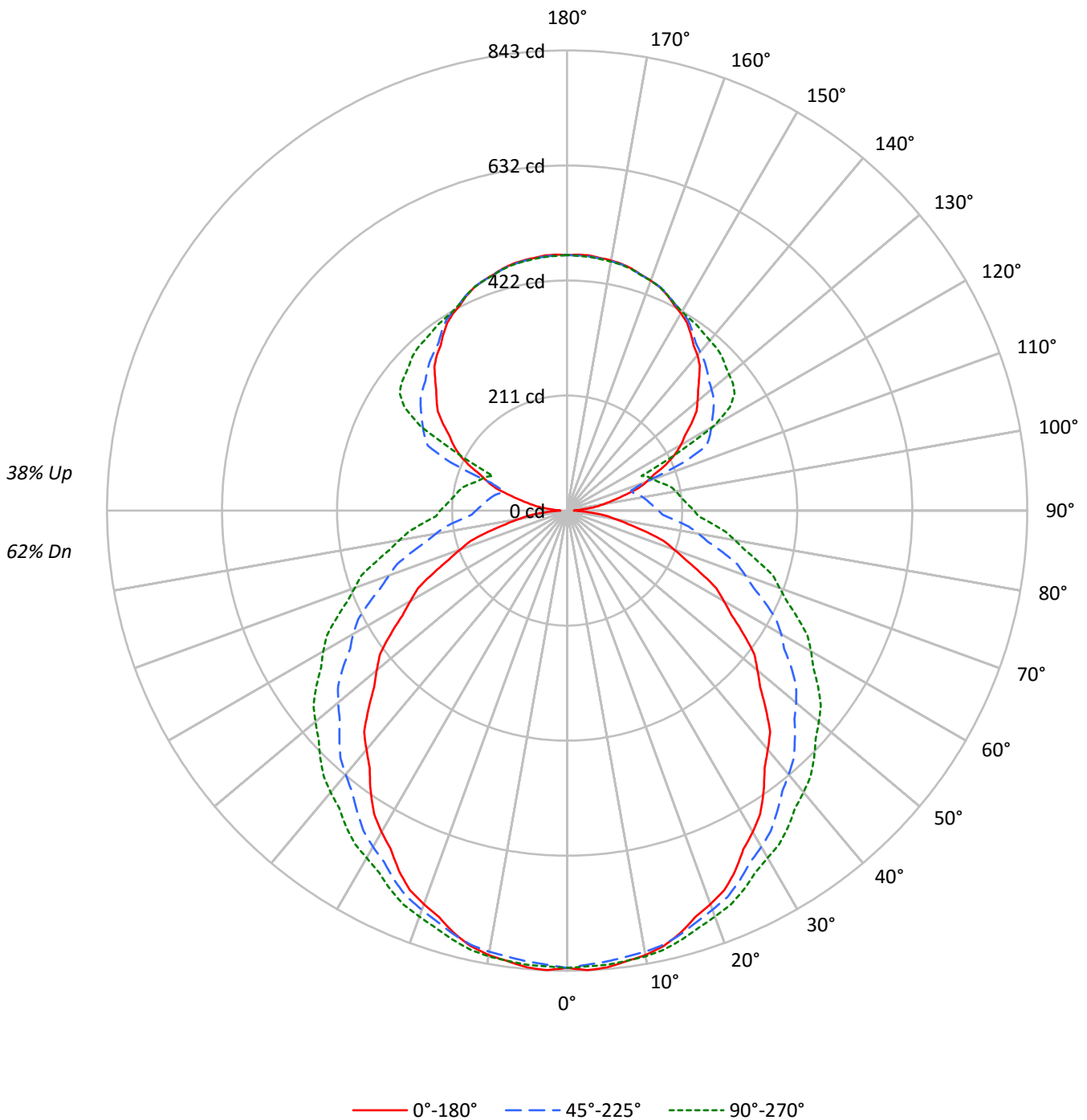
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331587-927

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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	103	103	103	103	90	90	90		78	78	78		67	67	67	62
1	99	93	89	85	92	87	83	80	76	73	70		66	64	61		57	55	53	49
2	89	81	74	68	83	75	69	64	66	61	57		57	53	50		49	46	43	39
3	81	70	62	55	75	66	58	53	57	52	47		50	45	41		43	39	36	32
4	74	62	53	46	68	58	50	44	51	44	39		44	39	35		38	34	31	27
5	68	55	46	40	63	52	44	38	45	39	34		39	34	30		34	30	26	23
6	62	49	40	34	58	46	38	32	41	34	29		35	30	26		31	26	23	20
7	57	44	36	30	53	42	34	28	37	30	26		32	27	23		28	24	20	18
8	53	40	32	26	50	38	30	25	33	27	23		29	24	20		25	21	18	16
9	50	37	29	23	46	35	27	22	31	25	20		27	22	18		23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18		25	20	16		22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13525	13525	13525
5°	13591	13020	12971
10°	13506	12635	12493
15°	13320	12228	11990
20°	13085	11791	11506
25°	12852	11370	11066
30°	12525	10939	10626
35°	12192	10521	10314
40°	11845	10165	10004
45°	11515	9846	9739
50°	11159	9559	9477
55°	10787	9249	9211
60°	10329	8927	8928
65°	9856	8551	8595
70°	9323	8147	8233
75°	8642	7750	7901
80°	7567	7345	7563
85°	6539	6995	7303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	1.7
10°-20°	227.6	5.0
20°-30°	344.9	7.6
30°-40°	420.1	9.2
40°-50°	452.0	9.9
50°-60°	438.9	9.6
60°-70°	383.2	8.4
70°-80°	295.0	6.5
80°-90°	199.2	4.4
90°-100°	152.0	3.3
100°-110°	156.9	3.4
110°-120°	218.8	4.8
120°-130°	289.3	6.3
130°-140°	284.0	6.2
140°-150°	252.3	5.5
150°-160°	200.7	4.4
160°-170°	129.3	2.8
170°-180°	44.5	1.0
0°-30°	651.9	14.3
0°-40°	1072.0	23.5
0°-60°	1962.9	43.0
0°-90°	2840.4	62.2
90°-120°	527.7	11.6
90°-150°	1353.3	29.6
90°-180°	1728.0	37.8
0°-180°	4568.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	840	836	829	836	835	80
15°	801	804	804	814	813	226
25°	728	737	748	762	766	335
35°	628	648	671	697	706	392
45°	515	548	590	626	640	397
55°	395	439	501	544	561	353
65°	270	330	401	449	466	268
75°	149	218	295	345	363	158
85°	44	119	197	246	265	47
90°	12	87	167	215	232	9
95°	32	79	153	199	215	35
105°	109	150	125	170	186	117
115°	200	221	282	168	150	196
125°	278	284	327	361	374	248
135°	342	348	362	390	400	264
145°	395	395	400	410	414	247
155°	435	432	436	438	436	200
165°	458	457	457	460	457	129
175°	469	467	467	469	466	45
180°	468	468	468	468	468	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	842.6	841.9	841.2	840.6	840.0	838.8	837.3	835.8	834.3	832.8	833.9
5°	840.1	839.3	838.5	837.7	836.9	835.7	834.1	832.4	830.8	829.2	830.8
7.5°	832.6	832.0	831.5	831.0	830.4	829.6	828.3	827.0	825.9	824.6	826.5
10°	826.8	826.2	825.7	825.1	824.6	823.9	823.2	822.3	821.5	820.7	822.8
12.5°	817.1	817.1	817.3	817.4	817.5	817.2	816.7	816.0	815.5	814.8	817.1
15°	801.3	801.8	802.3	802.9	803.4	803.7	803.7	803.7	803.7	803.7	806.1
17.5°	780.9	782.0	783.2	784.3	785.4	786.4	787.3	788.1	789.0	789.9	792.4
20°	767.3	768.7	770.0	771.3	772.7	773.9	775.0	776.0	777.1	778.2	781.2
22.5°	752.7	754.2	755.8	757.4	759.0	760.5	762.0	763.5	765.0	766.5	769.5
25°	728.4	730.3	732.2	734.1	736.0	738.2	740.5	743.0	745.4	747.8	751.1
27.5°	699.3	702.3	705.4	708.5	711.6	714.5	717.4	720.3	723.1	726.0	730.1
30°	679.9	683.3	686.9	690.4	693.9	697.4	700.9	704.4	707.9	711.5	715.7
32.5°	658.5	662.4	666.4	670.3	674.2	678.3	682.5	686.6	690.8	694.9	699.9
35°	627.6	632.2	636.8	641.4	646.0	650.9	656.0	661.1	666.2	671.4	677.3
37.5°	594.1	599.4	604.8	610.0	615.3	621.2	627.9	634.5	641.2	647.8	654.4
40°	571.8	577.7	583.7	589.6	595.6	602.1	609.4	616.7	624.0	631.3	638.3
42.5°	550.5	556.3	562.3	568.2	574.2	581.3	589.7	598.1	606.4	614.8	622.4
45°	514.8	522.0	529.3	536.6	543.9	552.2	561.7	571.2	580.6	590.0	598.4
47.5°	479.6	487.5	495.4	503.4	511.3	520.8	531.9	542.9	554.0	565.0	573.8
50°	455.3	463.7	472.0	480.4	488.7	499.0	511.1	523.2	535.4	547.6	556.7
52.5°	432.0	440.8	449.6	458.4	467.1	477.9	490.7	503.5	516.3	529.1	538.4
55°	394.6	404.3	414.0	423.7	433.4	445.3	459.3	473.3	487.4	501.4	511.1
57.5°	357.7	368.6	379.5	390.5	401.5	414.1	428.4	442.7	457.0	471.3	481.7
60°	331.4	343.0	354.7	366.2	377.9	391.3	406.7	422.1	437.4	452.8	463.1
62.5°	308.2	320.1	332.2	344.2	356.2	369.9	385.3	400.7	416.1	431.5	442.4
65°	269.5	282.7	296.0	309.2	322.4	337.0	352.9	368.8	384.7	400.6	411.7
67.5°	234.1	247.9	261.7	275.5	289.3	304.4	320.7	337.0	353.2	369.6	380.7
70°	208.8	222.8	236.9	250.9	264.9	280.3	297.1	313.8	330.5	347.2	358.8
72.5°	185.5	199.9	214.4	228.9	243.4	259.0	276.0	292.9	309.9	326.9	338.2
75°	149.3	164.5	179.5	194.6	209.8	225.9	243.2	260.5	277.7	295.0	306.6
77.5°	114.4	130.2	146.0	161.8	177.6	194.2	211.8	229.3	246.8	264.4	276.0
80°	91.0	107.5	124.0	140.5	156.9	173.9	191.4	209.0	226.5	244.0	255.3
82.5°	71.6	87.9	104.1	120.3	136.6	153.6	171.3	189.1	206.8	224.6	235.9
85°	43.7	60.4	77.2	93.9	110.6	127.6	144.9	162.2	179.4	196.7	208.0
87.5°	23.8	40.1	56.3	72.6	88.8	105.7	123.0	140.5	157.8	175.2	186.3
90°	12.5	29.0	45.4	61.9	78.3	95.5	113.4	131.3	149.2	167.0	178.2
92.5°	18.0	32.5	47.0	61.5	76.0	91.7	108.6	125.6	142.4	159.4	170.2
95°	31.7	41.9	52.1	62.3	72.5	86.0	102.7	119.4	136.1	152.8	163.4
97.5°	52.2	56.5	60.8	65.0	69.3	79.9	96.6	113.4	130.1	146.9	157.2
100°	68.4	68.1	67.8	67.4	67.1	75.2	91.6	107.9	124.3	140.7	151.3
102.5°	85.3	92.3	99.2	106.2	113.0	118.5	122.6	126.5	130.5	134.4	145.0
105°	109.0	119.1	129.1	139.3	149.3	151.1	144.6	138.1	131.6	125.1	135.3
107.5°	137.4	145.4	153.5	161.6	169.7	168.2	156.9	145.8	134.6	123.3	131.6
110°	154.9	161.8	168.8	175.8	182.8	182.0	173.5	164.9	156.4	147.9	149.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.2	178.1	184.0	190.0	195.9	202.5	209.7	216.9	224.1	231.3	212.5
115°	199.6	203.8	208.0	212.3	216.5	225.7	239.7	253.7	267.8	281.8	255.0
117.5°	222.8	226.2	229.5	232.9	236.2	244.2	256.7	269.3	281.8	294.3	293.8
120°	240.7	242.9	245.1	247.2	249.5	256.7	268.8	281.0	293.1	305.2	313.7
122.5°	255.8	257.5	259.0	260.7	262.3	268.9	280.5	292.2	303.8	315.4	323.3
125°	277.7	278.7	279.6	280.7	281.6	287.2	297.2	307.3	317.3	327.4	335.2
127.5°	298.7	299.4	300.2	301.1	301.9	306.3	314.3	322.3	330.4	338.4	345.9
130°	311.9	312.8	313.8	314.7	315.6	319.3	325.8	332.3	338.8	345.3	352.6
132.5°	325.4	326.2	326.9	327.7	328.4	331.4	336.6	341.8	347.1	352.2	359.2
135°	341.8	343.0	344.3	345.5	346.7	349.0	352.3	355.7	359.1	362.4	368.8
137.5°	359.7	360.4	361.2	362.0	362.8	364.2	366.1	368.0	370.0	372.0	377.7
140°	371.3	371.6	371.9	372.3	372.6	373.4	374.9	376.2	377.6	379.0	384.0
142.5°	381.0	381.4	381.6	381.8	382.1	382.8	383.9	384.9	386.0	387.1	391.1
145°	395.1	395.1	395.0	394.9	394.8	395.5	396.7	398.0	399.3	400.5	402.7
147.5°	408.4	408.2	407.9	407.7	407.3	407.8	409.1	410.4	411.6	412.9	413.5
150°	417.2	416.6	416.1	415.6	415.0	415.3	416.6	417.8	419.0	420.2	420.6
152.5°	424.5	423.9	423.3	422.7	422.1	422.4	423.5	424.7	425.8	427.0	427.4
155°	435.1	434.4	433.7	433.1	432.4	432.5	433.4	434.3	435.2	436.1	436.6
157.5°	443.4	442.8	442.3	441.7	441.2	441.2	441.8	442.4	443.1	443.7	444.2
160°	448.3	447.8	447.4	446.9	446.5	446.5	446.9	447.4	447.8	448.3	448.8
162.5°	452.7	452.2	451.7	451.3	450.8	450.8	451.1	451.5	451.9	452.3	452.9
165°	458.4	458.0	457.6	457.1	456.6	456.5	456.8	457.0	457.2	457.4	458.0
167.5°	462.8	462.3	461.9	461.4	461.0	460.9	461.1	461.3	461.5	461.7	462.2
170°	465.2	464.8	464.3	463.9	463.4	463.3	463.4	463.6	463.7	463.9	464.4
172.5°	466.8	466.4	466.0	465.5	465.0	464.9	465.0	465.2	465.3	465.5	466.0
175°	469.0	468.4	467.9	467.4	466.8	466.7	466.8	467.0	467.1	467.2	467.8
177.5°	469.3	468.9	468.4	468.0	467.6	467.4	467.5	467.5	467.6	467.6	468.1
180°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	835.0	836.1	837.2	837.5	837.0	836.6	836.1	835.8
5°	832.4	834.1	835.7	836.3	836.1	835.8	835.5	835.3
7.5°	828.5	830.4	832.3	833.2	832.9	832.7	832.3	832.1
10°	825.0	827.2	829.3	830.3	830.0	829.7	829.5	829.2
12.5°	819.2	821.3	823.5	824.4	824.2	823.9	823.6	823.4
15°	808.6	811.0	813.4	814.5	814.2	814.0	813.7	813.4
17.5°	795.0	797.5	800.0	801.3	801.3	801.3	801.3	801.3
20°	784.1	787.1	790.0	791.5	791.5	791.5	791.5	791.5
22.5°	772.5	775.5	778.4	780.1	780.5	781.0	781.4	781.9
25°	754.3	757.6	760.8	762.8	763.7	764.5	765.2	766.0
27.5°	734.2	738.3	742.4	744.7	745.4	745.9	746.6	747.1
30°	720.1	724.4	728.7	731.3	732.1	732.8	733.7	734.5
32.5°	704.9	709.8	714.8	718.0	719.5	720.9	722.4	723.8
35°	683.3	689.2	695.1	699.0	700.9	702.8	704.7	706.5
37.5°	661.0	667.6	674.1	678.4	680.4	682.5	684.4	686.4
40°	645.3	652.4	659.3	664.1	666.5	668.9	671.4	673.8
42.5°	630.1	637.8	645.5	650.5	652.9	655.4	657.7	660.2
45°	606.7	615.1	623.4	629.0	631.7	634.4	637.1	639.8
47.5°	582.5	591.2	600.0	605.9	608.8	611.8	614.7	617.7
50°	565.9	575.0	584.2	590.3	593.3	596.2	599.2	602.1
52.5°	547.9	557.2	566.6	572.9	576.1	579.3	582.5	585.7
55°	520.9	530.5	540.3	546.8	550.3	553.9	557.4	560.9
57.5°	492.3	502.7	513.2	520.1	523.7	527.3	530.8	534.4
60°	473.3	483.6	493.8	500.9	504.6	508.4	512.2	515.9
62.5°	453.3	464.1	475.1	482.3	485.8	489.4	493.0	496.5
65°	422.8	433.8	444.9	452.2	455.7	459.1	462.7	466.2
67.5°	391.9	403.1	414.2	421.7	425.3	429.0	432.7	436.3
70°	370.4	382.0	393.6	401.0	404.3	407.5	410.7	414.0
72.5°	349.6	361.0	372.3	380.0	383.9	387.8	391.7	395.5
75°	318.2	329.8	341.4	349.0	352.4	356.0	359.5	363.0
77.5°	287.5	299.0	310.6	318.3	322.0	325.8	329.6	333.4
80°	266.6	278.1	289.4	296.9	300.7	304.4	308.2	312.0
82.5°	247.2	258.6	269.9	277.3	280.9	284.5	288.0	291.6
85°	219.4	230.7	242.0	249.5	253.3	257.1	260.9	264.7
87.5°	197.3	208.4	219.5	226.8	230.3	233.8	237.3	240.7
90°	189.3	200.5	211.7	219.0	222.4	225.8	229.1	232.5
92.5°	180.9	191.7	202.5	209.5	212.9	216.2	219.5	222.8
95°	174.0	184.7	195.4	202.2	205.4	208.6	211.8	214.8
97.5°	167.4	177.7	188.0	194.8	198.0	201.3	204.6	207.9
100°	161.8	172.5	183.1	189.9	193.0	196.1	199.2	202.4
102.5°	155.6	166.1	176.7	183.5	186.7	189.9	193.1	196.2
105°	145.6	155.9	166.1	172.9	176.2	179.4	182.8	186.0
107.5°	139.8	148.1	156.2	162.0	165.2	168.6	171.8	175.1
110°	150.1	151.2	152.3	154.5	157.8	161.1	164.3	167.5



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CATALOG NUMBER: S122DIW-S1005D435U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	193.7	174.8	156.0	148.2	151.4	154.6	157.8	161.1
115°	228.2	201.5	174.8	160.2	157.7	155.3	152.8	150.4
117.5°	293.4	292.9	292.6	284.8	269.7	254.7	239.6	224.6
120°	322.2	330.7	339.1	339.7	332.6	325.3	318.1	310.9
122.5°	331.1	339.1	346.9	351.2	351.7	352.3	352.8	353.4
125°	343.0	350.9	358.6	363.8	366.5	369.2	371.9	374.5
127.5°	353.3	360.8	368.3	373.2	375.6	378.0	380.5	382.9
130°	360.0	367.3	374.5	379.2	381.3	383.4	385.5	387.5
132.5°	366.1	373.1	380.1	384.6	386.7	388.8	390.9	392.9
135°	375.3	381.7	388.1	392.3	394.3	396.3	398.4	400.4
137.5°	383.4	389.1	394.8	398.5	400.1	401.6	403.1	404.7
140°	389.0	394.0	398.9	402.0	403.3	404.5	405.8	407.0
142.5°	395.1	399.3	403.3	405.8	406.9	407.9	408.9	410.0
145°	404.8	407.0	409.2	410.7	411.7	412.6	413.6	414.5
147.5°	414.1	414.7	415.3	415.7	416.1	416.5	416.8	417.1
150°	421.1	421.5	422.0	422.1	421.7	421.3	420.9	420.6
152.5°	427.9	428.3	428.8	428.7	428.3	427.8	427.2	426.7
155°	437.0	437.4	437.9	437.8	437.2	436.7	436.0	435.5
157.5°	444.7	445.2	445.8	445.7	445.1	444.5	443.9	443.4
160°	449.2	449.6	450.1	450.0	449.6	449.0	448.5	448.0
162.5°	453.4	453.9	454.4	454.3	453.7	453.0	452.4	451.8
165°	458.5	459.0	459.5	459.5	459.0	458.5	458.0	457.4
167.5°	462.8	463.3	463.8	463.7	463.0	462.4	461.7	461.1
170°	464.9	465.5	466.0	465.9	465.2	464.5	463.9	463.2
172.5°	466.5	467.1	467.6	467.5	466.8	466.2	465.5	464.9
175°	468.3	468.8	469.4	469.3	468.5	467.8	467.0	466.3
177.5°	468.5	468.9	469.4	469.3	468.7	468.2	467.6	467.1
180°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9

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