

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: P332158-935

Luminaire Tested: **S123DIW-S775D755U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332158-935
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: S123DIW-S775D755U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5384.1 lumens
Efficiency: N/A
Efficacy: 119.6 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

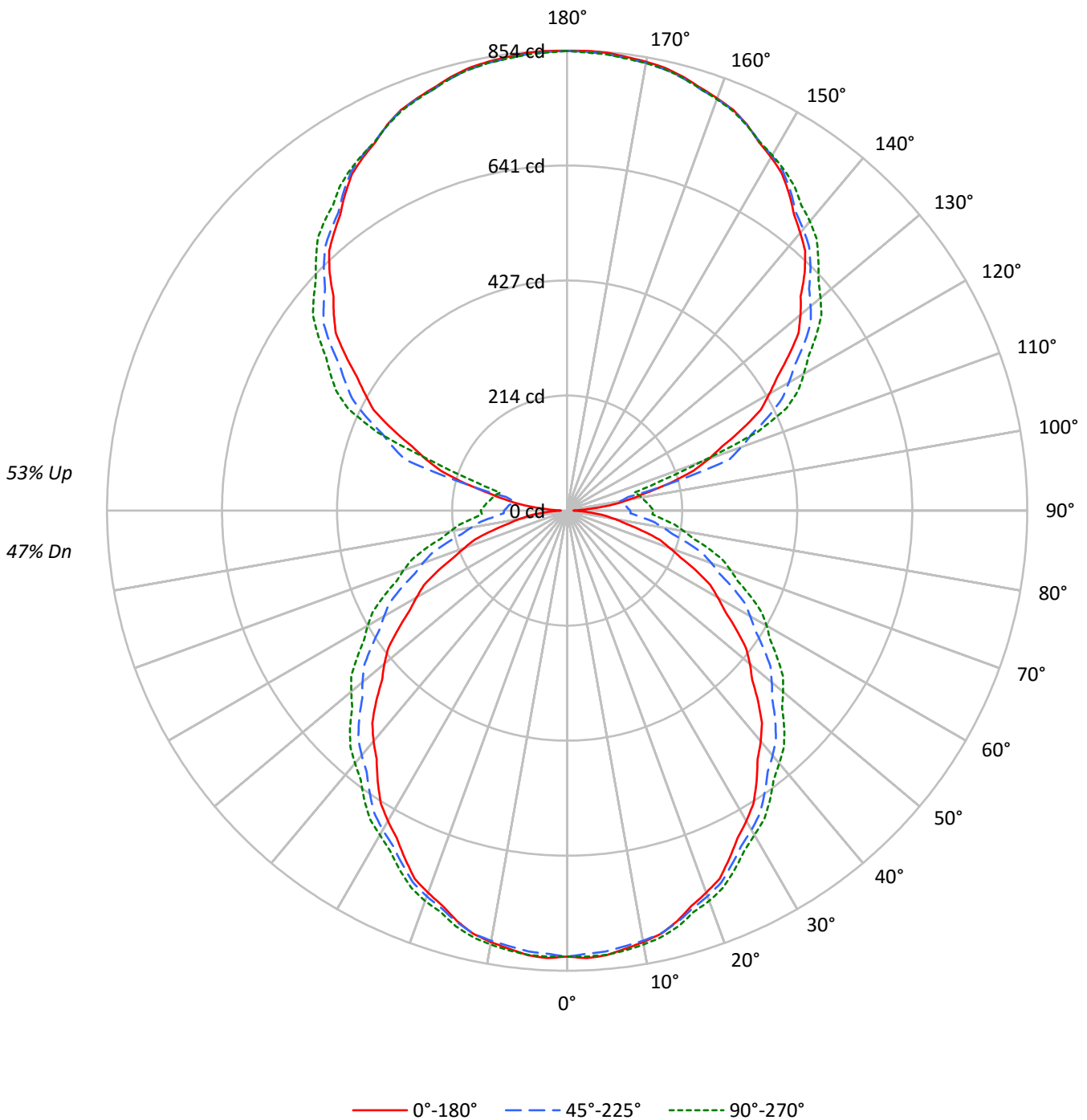
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	46	45	43	38
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	53	48	44	44	40	37	35	32	30	26
4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22
5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	31	27	24	25	22	19	16
7	56	44	36	30	52	41	33	28	34	29	24	28	24	21	23	20	17	14
8	52	40	32	26	48	37	30	25	31	26	22	26	22	18	21	18	15	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	16	19	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.5
10°-20°	223.7	4.2
20°-30°	334.5	6.2
30°-40°	399.5	7.4
40°-50°	418.0	7.8
50°-60°	392.2	7.3
60°-70°	327.6	6.1
70°-80°	234.4	4.4
80°-90°	142.2	2.6
90°-100°	118.7	2.2
100°-110°	212.2	3.9
110°-120°	398.0	7.4
120°-130°	476.6	8.9
130°-140°	494.0	9.2
140°-150°	454.0	8.4
150°-160°	364.3	6.8
160°-170°	235.1	4.4
170°-180°	81.0	1.5
0°-30°	636.6	11.8
0°-40°	1036.1	19.2
0°-60°	1846.2	34.3
0°-90°	2550.3	47.4
90°-120°	728.9	13.5
90°-150°	2153.4	40.0
90°-180°	2834.0	52.6
0°-180°	5384.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	12	63	117	149	161	10
95°	49	60	109	140	150	55
105°	196	222	206	125	129	207
115°	359	375	412	438	449	354
125°	502	508	536	555	564	448
135°	623	627	639	656	659	480
145°	718	722	723	731	735	449
155°	790	789	790	792	789	364
165°	833	831	831	835	831	235
175°	853	850	850	854	850	81
180°	853	853	853	853	853	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.1	34.4	44.6	54.8	65.2	75.6	86.2	96.7	107.3	117.9	124.8
90°	12.3	23.6	34.8	46.1	57.3	68.9	80.9	93.0	105.0	117.1	124.4
92.5°	22.8	31.3	39.7	48.1	56.7	66.6	78.0	89.5	100.9	112.4	119.9
95°	48.6	50.6	52.6	54.7	56.7	63.5	74.8	86.2	97.6	108.9	116.1
97.5°	86.5	91.0	95.4	99.9	104.4	106.2	105.5	104.7	103.9	103.1	110.3
100°	115.2	124.4	133.6	142.8	152.1	150.3	137.6	124.8	112.1	99.4	106.2
102.5°	147.9	155.8	163.5	171.3	179.1	175.6	160.6	145.7	130.7	115.8	118.0
105°	196.0	202.3	208.7	215.1	221.4	222.6	218.5	214.5	210.4	206.4	187.1
107.5°	245.9	251.2	256.5	261.8	267.2	274.9	285.1	295.2	305.5	315.6	302.7
110°	279.1	283.9	288.6	293.3	298.1	305.2	314.8	324.3	333.9	343.5	344.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	311.6	315.6	319.5	323.5	327.4	334.1	343.3	352.6	361.8	371.0	376.2
115°	358.7	362.0	365.2	368.4	371.7	377.5	386.0	394.5	402.9	411.5	417.7
117.5°	405.0	407.5	410.0	412.6	415.1	420.1	427.5	434.9	442.3	449.8	455.6
120°	433.2	435.4	437.7	440.0	442.2	446.9	453.9	461.0	468.0	475.0	480.8
122.5°	462.5	464.2	465.7	467.3	468.8	473.0	479.8	486.6	493.5	500.3	505.6
125°	502.0	503.1	504.2	505.3	506.4	510.2	516.6	523.0	529.3	535.7	540.2
127.5°	541.0	541.9	542.9	543.8	544.7	547.9	553.4	558.9	564.4	569.8	574.3
130°	565.3	566.3	567.1	568.1	569.0	571.8	576.4	580.9	585.5	590.0	594.4
132.5°	587.9	589.0	590.1	591.2	592.3	594.6	598.3	601.9	605.6	609.2	613.5
135°	623.4	624.0	624.7	625.3	625.9	627.6	630.4	633.2	635.9	638.7	642.7
137.5°	653.6	654.4	655.4	656.3	657.2	658.4	660.0	661.5	663.1	664.7	668.5
140°	673.1	674.0	674.9	675.6	676.5	677.4	678.5	679.5	680.5	681.6	685.1
142.5°	691.9	692.6	693.3	694.0	694.7	695.3	695.8	696.3	696.9	697.4	700.5
145°	718.1	718.9	719.7	720.5	721.3	721.8	722.0	722.4	722.6	722.9	724.8
147.5°	741.9	742.5	743.2	743.8	744.5	744.9	745.3	745.5	745.8	746.1	746.8
150°	757.2	757.5	757.9	758.4	758.8	759.1	759.5	759.7	760.0	760.3	760.6
152.5°	770.8	771.0	771.2	771.4	771.6	771.8	772.0	772.1	772.3	772.5	772.9
155°	790.1	789.8	789.5	789.2	788.9	788.8	789.0	789.2	789.3	789.5	790.1
157.5°	805.0	805.0	804.9	804.9	804.9	804.9	804.7	804.5	804.4	804.3	805.1
160°	814.2	814.0	813.9	813.7	813.6	813.5	813.3	813.1	813.0	812.9	813.7
162.5°	822.8	822.4	822.0	821.7	821.3	821.0	820.9	820.8	820.6	820.4	821.5
165°	833.2	832.8	832.3	831.9	831.5	831.2	831.0	830.9	830.8	830.6	831.7
167.5°	841.3	840.7	840.2	839.6	839.0	838.7	838.7	838.7	838.7	838.7	839.8
170°	845.8	845.2	844.7	844.1	843.6	843.3	843.3	843.3	843.3	843.3	844.4
172.5°	848.9	848.2	847.5	846.9	846.2	845.8	846.0	846.1	846.2	846.4	847.5
175°	852.8	852.0	851.4	850.7	850.0	849.7	849.8	850.0	850.2	850.2	851.3
177.5°	853.8	853.3	852.6	852.1	851.5	851.4	851.4	851.5	851.7	851.8	852.6
180°	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	131.7	138.7	145.6	150.1	152.1	154.2	156.3	158.3
90°	131.8	139.2	146.5	151.4	153.7	156.0	158.3	160.6
92.5°	127.4	135.0	142.5	147.3	149.3	151.4	153.3	155.3
95°	123.3	130.4	137.7	142.2	144.3	146.3	148.3	150.3
97.5°	117.4	124.4	131.6	136.2	138.3	140.4	142.6	144.7
100°	113.2	120.1	127.1	131.6	133.8	136.0	138.0	140.2
102.5°	120.1	122.3	124.4	126.7	128.9	131.1	133.4	135.7
105°	167.7	148.4	129.2	120.5	122.6	124.7	126.7	128.9
107.5°	289.8	276.9	264.0	249.0	232.0	215.0	197.9	181.0
110°	344.6	345.1	345.7	336.7	318.1	299.6	281.1	262.6



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CATALOG NUMBER: S123DIW-S775D755U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	381.3	386.4	391.6	392.9	390.4	387.9	385.5	383.0
115°	423.9	430.1	436.4	440.5	442.6	444.9	447.0	449.2
117.5°	461.5	467.4	473.3	477.1	478.8	480.4	482.2	483.8
120°	486.5	492.2	498.0	501.5	502.9	504.4	505.8	507.1
122.5°	510.8	516.0	521.2	524.6	526.2	527.7	529.2	530.7
125°	544.7	549.1	553.6	556.7	558.4	560.1	561.8	563.5
127.5°	578.7	583.1	587.5	590.2	591.3	592.5	593.5	594.6
130°	598.8	603.1	607.5	610.2	611.1	612.0	612.9	613.9
132.5°	617.7	621.9	626.1	628.7	629.6	630.6	631.5	632.6
135°	646.8	650.7	654.8	657.1	657.7	658.2	658.8	659.4
137.5°	672.4	676.1	680.0	682.3	683.0	683.7	684.5	685.2
140°	688.6	692.2	695.8	697.9	698.7	699.4	700.1	700.9
142.5°	703.7	706.8	710.0	711.8	712.4	713.0	713.6	714.2
145°	726.7	728.6	730.5	731.8	732.6	733.4	734.2	735.0
147.5°	747.6	748.4	749.2	749.6	749.7	749.7	749.8	749.8
150°	760.9	761.1	761.4	761.6	761.6	761.5	761.5	761.5
152.5°	773.4	774.0	774.5	774.5	773.9	773.4	772.7	772.1
155°	790.8	791.5	792.3	792.2	791.3	790.5	789.6	788.8
157.5°	806.0	806.8	807.6	807.5	806.4	805.3	804.3	803.1
160°	814.6	815.5	816.2	816.2	815.2	814.2	813.2	812.3
162.5°	822.4	823.4	824.3	824.3	823.5	822.6	821.7	820.9
165°	832.8	834.0	835.1	835.2	834.2	833.2	832.2	831.2
167.5°	840.9	842.1	843.3	843.3	842.1	840.9	839.8	838.7
170°	845.5	846.7	847.8	847.8	846.7	845.5	844.4	843.3
172.5°	848.6	849.7	850.8	850.8	849.5	848.3	847.1	845.8
175°	852.2	853.3	854.2	854.1	853.0	851.9	850.8	849.6
177.5°	853.6	854.5	855.4	855.2	854.1	853.0	851.9	850.8
180°	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8

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