

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: P331535-940

Luminaire Tested: **S122DIW-S675D710U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331535-940
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-S675D710U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4938.9 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

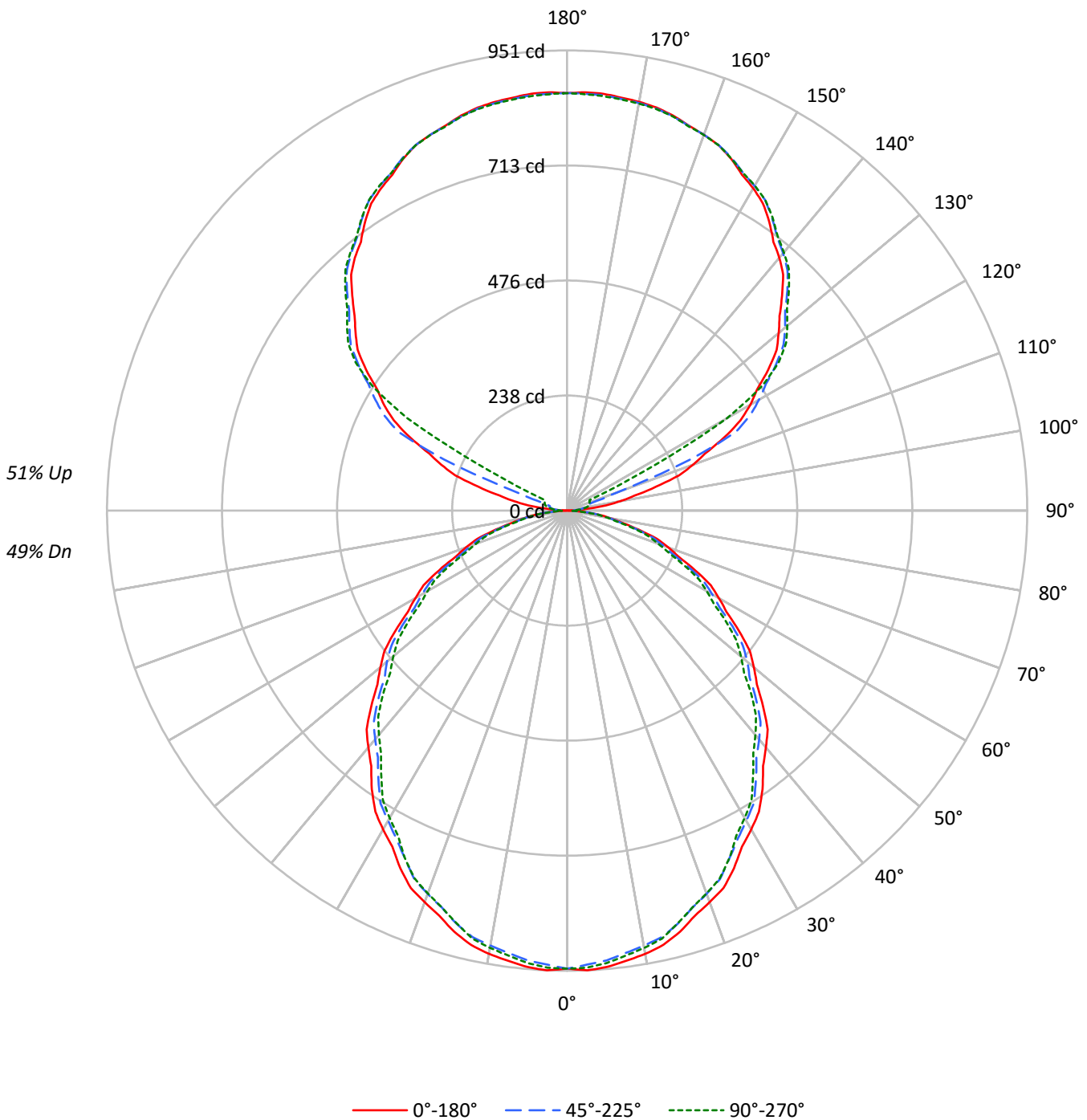
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	83	83	83	68	68	68	55	55	55	49
1	98	93	89	86	90	86	83	80	72	70	68	60	58	57	49	47	46	41
2	89	81	75	70	82	75	70	65	63	60	56	53	50	47	43	41	39	34
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	35	33	29
4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29	25
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	27	25	22
6	63	51	42	37	58	47	40	35	40	34	30	34	29	26	28	25	22	19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15285	15285	15285
5°	15344	15123	15211
10°	15252	14969	15044
15°	15064	14775	14760
20°	14795	14483	14467
25°	14530	14125	14125
30°	14188	13798	13679
35°	13868	13403	13204
40°	13468	13009	12760
45°	13075	12618	12305
50°	12645	12210	11776
55°	12197	11738	11299
60°	11699	11170	10756
65°	11163	10609	10120
70°	10485	9928	9456
75°	9538	9145	8914
80°	8461	8210	7782
85°	6928	6576	5891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	1.8
10°-20°	250.5	5.1
20°-30°	368.2	7.5
30°-40°	427.7	8.7
40°-50°	427.2	8.7
50°-60°	372.6	7.5
60°-70°	275.5	5.6
70°-80°	156.0	3.2
80°-90°	44.1	0.9
90°-100°	28.8	0.6
100°-110°	105.5	2.1
110°-120°	282.1	5.7
120°-130°	465.6	9.4
130°-140°	495.2	10.0
140°-150°	460.3	9.3
150°-160°	370.1	7.5
160°-170°	238.5	4.8
170°-180°	82.1	1.7
0°-30°	707.7	14.3
0°-40°	1135.4	23.0
0°-60°	1935.1	39.2
0°-90°	2410.7	48.8
90°-120°	416.4	8.4
90°-150°	1837.6	37.2
90°-180°	2528.0	51.2
0°-180°	4938.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	947	943	933	940	938	90
15°	901	895	884	887	883	254
25°	816	808	793	794	793	375
35°	704	694	680	675	670	439
45°	573	566	553	543	539	442
55°	433	428	417	406	401	387
65°	292	286	278	270	265	289
75°	153	151	147	142	143	163
85°	37	36	36	33	32	43
90°	1	7	12	16	17	4
95°	41	21	24	27	27	50
105°	190	198	38	45	47	203
115°	359	370	385	110	51	353
125°	508	516	527	532	534	452
135°	628	638	644	649	649	485
145°	728	728	738	742	740	455
155°	802	797	804	807	803	369
165°	845	842	843	847	843	239
175°	865	860	862	865	860	82
180°	863	863	863	863	863	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	951.1	950.3	949.5	948.7	947.9	946.6	944.8	943.0	941.2	939.4	941.0
5°	946.7	945.9	945.1	944.3	943.5	942.0	939.8	937.5	935.3	933.1	934.7
7.5°	938.3	937.1	935.9	934.6	933.4	931.6	929.3	927.0	924.8	922.5	924.1
10°	930.3	928.9	927.5	926.0	924.7	922.7	920.3	917.9	915.4	913.0	914.6
12.5°	919.4	918.2	916.9	915.6	914.4	912.6	910.1	907.7	905.3	902.9	904.0
15°	901.2	900.0	898.8	897.6	896.3	894.4	891.8	889.1	886.5	883.9	884.8
17.5°	877.9	876.6	875.5	874.2	873.1	871.1	868.4	865.8	863.1	860.4	861.4
20°	861.1	860.0	858.7	857.5	856.3	854.3	851.4	848.6	845.8	842.9	843.6
22.5°	844.4	842.7	841.0	839.3	837.6	835.4	832.8	830.1	827.4	824.7	824.8
25°	815.6	814.0	812.4	810.7	809.1	806.6	803.2	799.8	796.3	792.9	793.3
27.5°	782.8	781.4	780.0	778.5	777.0	775.0	772.2	769.5	766.8	764.1	763.5
30°	761.0	759.4	757.8	756.2	754.6	752.2	749.2	746.2	743.2	740.1	739.5
32.5°	737.7	736.4	735.1	733.8	732.5	730.3	727.1	723.9	720.7	717.5	716.4
35°	703.6	701.7	699.6	697.6	695.5	692.9	689.7	686.4	683.2	680.0	678.8
37.5°	665.2	663.4	661.6	659.9	658.2	655.6	652.4	649.2	646.0	642.7	641.1
40°	639.0	637.4	635.8	634.2	632.6	630.2	626.9	623.7	620.5	617.2	615.4
42.5°	613.6	611.9	610.3	608.7	607.1	604.7	601.4	598.2	594.9	591.7	589.7
45°	572.6	571.1	569.7	568.4	566.9	564.7	561.7	558.7	555.6	552.6	550.4
47.5°	531.8	530.5	529.1	527.8	526.5	524.2	521.0	517.9	514.8	511.6	509.3
50°	503.4	502.4	501.4	500.3	499.4	497.4	494.6	491.8	488.9	486.1	483.3
52.5°	475.7	474.4	473.1	471.7	470.4	468.4	465.7	463.1	460.4	457.7	455.4
55°	433.3	432.1	430.9	429.6	428.5	426.6	424.2	421.8	419.4	417.0	414.5
57.5°	390.7	389.8	388.8	387.8	386.8	385.0	382.4	379.7	377.0	374.3	371.9
60°	362.3	361.5	360.7	359.9	359.1	357.2	354.5	351.6	348.7	345.9	343.7
62.5°	334.7	333.3	332.1	330.7	329.5	327.7	325.6	323.3	321.2	319.0	316.9
65°	292.2	291.0	289.8	288.6	287.3	285.7	283.7	281.7	279.6	277.7	275.8
67.5°	249.1	248.1	247.1	246.1	245.1	243.8	241.9	240.1	238.4	236.5	235.1
70°	222.1	221.3	220.5	219.7	218.9	217.6	215.7	213.9	212.1	210.3	208.8
72.5°	194.5	193.6	192.8	192.0	191.2	190.2	189.0	187.9	186.7	185.5	184.1
75°	152.9	152.5	152.1	151.7	151.3	150.6	149.6	148.6	147.6	146.6	145.3
77.5°	115.8	115.1	114.4	113.7	113.1	112.5	112.1	111.6	111.3	110.8	110.3
80°	91.0	90.9	90.6	90.4	90.2	89.9	89.5	89.1	88.7	88.3	87.7
82.5°	67.8	67.7	67.7	67.6	67.6	67.4	67.1	67.0	66.7	66.4	65.7
85°	37.4	37.1	36.9	36.7	36.5	36.3	36.1	35.9	35.7	35.5	34.9
87.5°	13.2	13.2	13.2	13.2	13.2	13.1	13.0	12.9	12.8	12.7	12.3
90°	0.6	2.1	3.7	5.2	6.7	8.0	9.2	10.3	11.4	12.5	13.2
92.5°	12.6	12.5	12.3	12.2	12.0	12.3	12.8	13.4	13.9	14.4	14.8
95°	40.6	36.0	31.4	26.8	22.3	20.4	21.4	22.4	23.4	24.3	25.1
97.5°	80.5	67.6	54.8	41.8	28.9	23.6	25.9	28.1	30.3	32.5	33.2
100°	110.5	91.5	72.5	53.5	34.5	26.1	28.5	30.9	33.3	35.6	36.6
102.5°	143.5	139.5	135.4	131.3	127.3	115.5	95.8	76.1	56.3	36.6	38.0
105°	189.8	193.9	198.1	202.2	206.4	189.6	151.7	113.8	76.0	38.1	39.6
107.5°	242.5	245.9	249.3	252.6	256.0	235.0	189.6	144.2	98.7	53.3	51.7
110°	276.5	279.5	282.4	285.3	288.2	269.6	229.5	189.4	149.4	109.2	95.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	308.5	311.1	313.7	316.2	318.8	315.1	305.2	295.3	285.4	275.5	225.0
115°	358.9	361.3	363.6	366.0	368.4	371.3	374.8	378.3	381.7	385.1	320.9
117.5°	404.0	406.6	409.3	411.9	414.6	417.1	419.5	421.9	424.2	426.6	411.1
120°	436.9	439.1	441.1	443.2	445.3	447.5	450.0	452.5	455.0	457.5	459.2
122.5°	464.9	467.2	469.3	471.5	473.7	476.2	478.8	481.6	484.3	487.1	488.0
125°	507.5	509.3	511.1	512.9	514.7	516.9	519.6	522.2	524.9	527.4	528.4
127.5°	546.1	548.0	550.1	552.1	554.1	556.1	558.0	560.0	562.0	563.9	565.3
130°	570.5	572.7	575.0	577.2	579.4	581.3	582.8	584.3	585.9	587.5	589.0
132.5°	595.6	597.4	599.3	601.2	603.1	604.8	606.3	607.8	609.4	610.9	612.2
135°	628.0	630.2	632.4	634.6	636.9	638.6	639.9	641.1	642.4	643.6	645.0
137.5°	660.8	662.4	664.0	665.5	667.0	668.5	669.9	671.4	672.8	674.2	675.6
140°	682.3	683.4	684.5	685.6	686.7	688.0	689.6	691.1	692.6	694.2	695.4
142.5°	700.3	701.2	702.3	703.3	704.3	705.6	707.4	709.2	710.9	712.7	713.8
145°	728.5	728.3	728.3	728.1	727.9	729.1	731.4	733.8	736.1	738.5	739.5
147.5°	753.0	752.6	752.1	751.5	751.0	751.9	754.2	756.5	758.8	761.2	762.0
150°	769.1	768.1	767.1	766.2	765.2	765.8	768.0	770.3	772.5	774.7	775.5
152.5°	782.6	781.5	780.4	779.3	778.2	778.7	780.9	782.9	785.1	787.2	788.0
155°	802.2	800.9	799.7	798.4	797.2	797.4	799.1	800.7	802.4	804.1	804.9
157.5°	817.5	816.5	815.4	814.3	813.3	813.3	814.5	815.6	816.8	818.0	818.9
160°	826.5	825.6	824.8	824.0	823.1	823.1	824.0	824.8	825.6	826.5	827.3
162.5°	834.5	833.7	832.9	832.0	831.2	831.1	831.8	832.6	833.3	834.0	834.9
165°	845.3	844.4	843.6	842.8	841.9	841.7	842.1	842.5	842.9	843.4	844.4
167.5°	853.2	852.4	851.6	850.7	849.9	849.7	850.1	850.4	850.9	851.2	852.2
170°	857.7	856.8	856.0	855.2	854.3	854.1	854.3	854.7	855.0	855.2	856.2
172.5°	860.7	859.9	859.1	858.2	857.4	857.1	857.4	857.6	857.9	858.2	859.2
175°	864.6	863.6	862.6	861.7	860.7	860.3	860.6	860.9	861.2	861.5	862.5
177.5°	865.2	864.4	863.6	862.9	862.1	861.7	861.8	862.0	862.1	862.2	863.0
180°	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	942.6	944.3	945.9	946.6	946.2	945.9	945.6	945.3
5°	936.3	937.9	939.5	940.1	939.8	939.3	939.0	938.5
7.5°	925.8	927.4	929.0	929.5	929.1	928.7	928.3	927.8
10°	916.2	917.9	919.5	920.0	919.4	918.8	918.2	917.6
12.5°	905.1	906.2	907.4	907.7	907.2	906.9	906.4	906.0
15°	885.6	886.4	887.2	887.1	886.0	885.0	884.0	883.0
17.5°	862.3	863.2	864.2	864.2	863.2	862.2	861.2	860.2
20°	844.2	844.8	845.3	845.3	844.5	843.6	842.8	842.0
22.5°	825.0	825.1	825.2	825.0	824.6	824.0	823.6	823.1
25°	793.7	794.1	794.5	794.5	794.1	793.7	793.3	792.9
27.5°	762.9	762.3	761.7	760.9	759.9	758.9	758.0	757.0
30°	738.9	738.2	737.6	736.9	736.1	735.3	734.5	733.7
32.5°	715.3	714.3	713.1	712.2	711.4	710.6	709.7	708.9
35°	677.6	676.4	675.1	674.0	673.1	672.0	671.0	669.9
37.5°	639.7	638.2	636.7	635.4	634.5	633.5	632.6	631.6
40°	613.6	611.7	609.9	608.6	607.8	607.0	606.2	605.4
42.5°	587.7	585.8	583.8	582.2	581.0	580.0	578.8	577.7
45°	548.1	545.9	543.7	542.2	541.4	540.6	539.8	538.9
47.5°	506.9	504.5	502.2	500.4	499.3	498.1	497.0	495.8
50°	480.5	477.6	474.7	472.9	471.8	470.8	469.8	468.8
52.5°	453.0	450.7	448.4	446.5	445.1	443.8	442.5	441.1
55°	412.1	409.7	407.2	405.5	404.5	403.5	402.4	401.4
57.5°	369.5	367.1	364.8	363.2	362.4	361.7	360.9	360.1
60°	341.4	339.2	337.0	335.6	335.0	334.4	333.8	333.1
62.5°	314.9	312.8	310.8	309.3	308.5	307.7	307.0	306.2
65°	274.0	272.2	270.4	268.9	268.0	266.9	265.9	264.9
67.5°	233.6	232.3	230.9	229.7	228.9	228.1	227.3	226.5
70°	207.4	206.1	204.6	203.5	202.7	201.9	201.1	200.3
72.5°	182.7	181.3	179.9	178.8	178.2	177.5	176.9	176.2
75°	144.1	142.9	141.7	141.3	141.7	142.1	142.5	142.9
77.5°	109.7	109.1	108.4	107.9	107.3	106.7	106.2	105.6
80°	87.1	86.5	85.9	85.3	85.0	84.5	84.2	83.7
82.5°	64.9	64.1	63.4	63.0	62.9	62.8	62.7	62.6
85°	34.3	33.7	33.1	32.6	32.5	32.3	32.1	31.8
87.5°	12.0	11.7	11.3	11.1	11.0	10.9	10.8	10.6
90°	13.9	14.5	15.2	15.8	16.1	16.3	16.6	16.9
92.5°	15.2	15.6	16.0	16.2	16.3	16.5	16.7	16.9
95°	25.8	26.4	27.1	27.4	27.3	27.1	27.0	26.8
97.5°	33.7	34.2	34.8	35.1	35.3	35.5	35.7	35.8
100°	37.8	38.9	40.0	40.8	41.0	41.3	41.6	41.8
102.5°	39.5	40.9	42.4	43.2	43.7	44.1	44.4	44.9
105°	41.1	42.6	44.1	45.2	45.7	46.4	46.9	47.4
107.5°	50.2	48.7	47.1	46.6	47.2	47.7	48.2	48.8
110°	81.5	67.6	53.8	47.1	47.6	48.2	48.8	49.3



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CATALOG NUMBER: S122DIW-S675D710U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	174.3	123.8	73.1	48.1	48.5	49.0	49.4	49.8
115°	256.7	192.4	128.2	91.1	81.1	71.2	61.2	51.2
117.5°	395.6	380.0	364.4	340.3	307.5	274.6	241.8	209.0
120°	460.9	462.5	464.2	455.7	436.9	418.2	399.5	380.8
122.5°	489.0	490.0	491.1	489.7	486.1	482.4	478.8	475.2
125°	529.4	530.4	531.4	532.1	532.4	532.9	533.3	533.7
127.5°	566.8	568.2	569.6	570.3	570.4	570.5	570.6	570.7
130°	590.5	592.0	593.5	594.2	594.1	594.0	593.8	593.7
132.5°	613.5	614.8	616.1	616.7	616.5	616.4	616.3	616.2
135°	646.4	647.7	649.2	649.7	649.4	649.2	648.9	648.6
137.5°	676.9	678.2	679.7	680.1	679.6	679.1	678.7	678.1
140°	696.7	697.9	699.2	699.5	698.7	698.0	697.3	696.7
142.5°	714.9	716.0	717.2	717.4	716.8	716.0	715.3	714.6
145°	740.4	741.4	742.3	742.5	741.8	741.1	740.4	739.8
147.5°	762.7	763.4	764.1	764.2	763.6	763.0	762.4	761.8
150°	776.3	777.2	778.0	778.1	777.4	776.7	776.0	775.3
152.5°	788.8	789.7	790.5	790.5	789.5	788.6	787.7	786.8
155°	805.7	806.6	807.4	807.2	806.1	805.0	803.9	802.8
157.5°	819.9	820.8	821.8	821.7	820.6	819.6	818.5	817.3
160°	828.1	829.0	829.8	829.7	828.8	827.8	826.9	825.9
162.5°	835.9	836.8	837.8	837.7	836.4	835.3	834.0	832.9
165°	845.3	846.2	847.2	847.2	846.2	845.3	844.4	843.4
167.5°	853.2	854.2	855.1	855.0	853.7	852.5	851.2	850.0
170°	857.2	858.1	859.1	859.0	857.7	856.5	855.2	854.0
172.5°	860.1	861.1	862.1	861.9	860.7	859.4	858.2	856.9
175°	863.4	864.3	865.3	865.1	863.7	862.4	860.9	859.6
177.5°	863.8	864.5	865.3	865.2	864.2	863.2	862.2	861.2
180°	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7

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