

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: P331389-830

Luminaire Tested: **S122DIP-S865D530U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331389-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S865D530U830-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

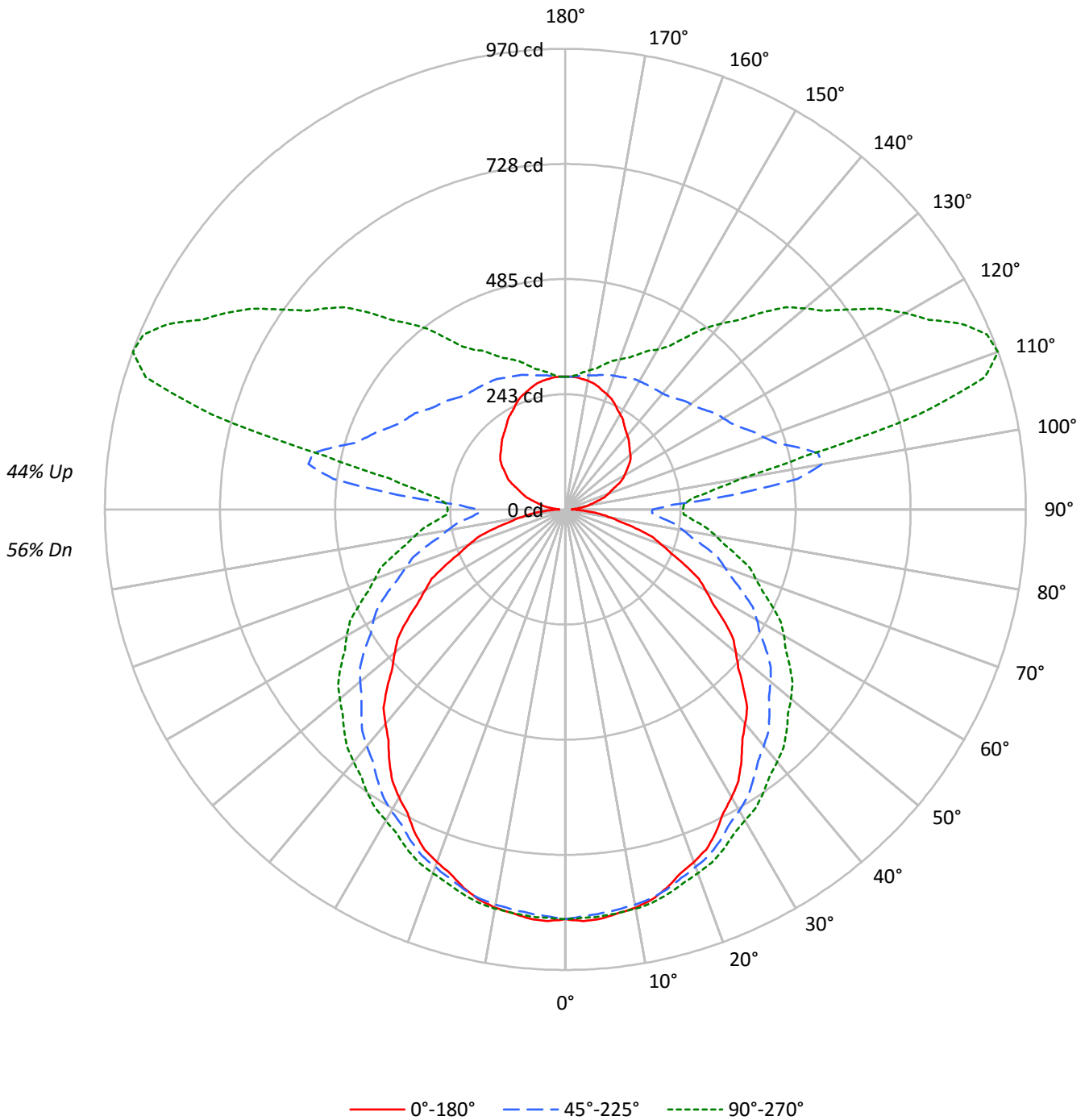
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5239.9 lumens  
Efficiency: N/A  
Efficacy: 107.4 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): 48.8  
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	97	92	88	84	90	86	82	78	73	70	68	62	60	58	52	50	49	44
2	88	80	73	67	81	74	68	63	63	59	55	54	50	47	45	42	40	35
3	80	69	61	55	74	65	57	52	55	50	45	47	43	39	39	36	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	62	51	43	37	44	37	33	37	32	28	31	27	24	21
6	61	49	40	34	57	45	38	32	39	33	28	33	28	25	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	22	19	16
8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	23	19	17	14
9	49	36	28	23	45	34	27	22	29	24	20	25	21	17	21	18	15	13
10	46	33	26	21	42	31	24	20	27	21	18	23	19	15	20	16	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.8	1.6
10°-20°	234.5	4.5
20°-30°	355.3	6.8
30°-40°	432.8	8.3
40°-50°	465.6	8.9
50°-60°	452.2	8.6
60°-70°	394.8	7.5
70°-80°	304.0	5.8
80°-90°	206.5	3.9
90°-100°	252.3	4.8
100°-110°	481.9	9.2
110°-120°	470.7	9.0
120°-130°	369.5	7.1
130°-140°	282.2	5.4
140°-150°	204.0	3.9
150°-160°	141.4	2.7
160°-170°	83.3	1.6
170°-180°	27.1	0.5
0°-30°	671.6	12.8
0°-40°	1104.4	21.1
0°-60°	2022.2	38.6
0°-90°	2927.5	55.9
90°-120°	1204.9	23.0
90°-150°	2060.6	39.3
90°-180°	2312.0	44.1
0°-180°	5239.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	13	93	183	231	248	9
95°	29	116	355	269	268	28
105°	72	143	506	862	771	77
115°	121	167	408	799	924	119
125°	164	196	363	632	734	146
135°	190	228	330	507	586	148
145°	216	248	315	398	442	136
155°	246	265	306	346	360	113
165°	268	276	293	311	316	75
175°	279	279	282	285	284	26
180°	280	280	280	280	280	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.6	41.5	58.5	75.3	92.1	109.5	127.9	146.5	164.9	182.8	194.0
90°	13.0	30.8	49.0	66.3	83.4	102.0	122.4	144.0	165.0	183.3	194.0
92.5°	18.1	36.0	54.9	72.2	90.9	112.0	141.3	175.5	207.8	225.9	226.0
95°	28.8	44.0	62.5	80.4	102.1	129.8	171.2	234.7	313.7	354.6	338.7
97.5°	39.4	53.9	71.3	90.2	111.7	140.1	187.2	268.3	388.0	492.8	520.7
100°	50.1	62.0	77.2	96.0	117.1	145.1	189.1	270.2	401.9	549.7	637.4
102.5°	59.0	69.7	83.9	101.8	122.4	149.7	191.1	264.6	387.2	544.9	676.7
105°	71.8	82.0	93.9	110.0	129.9	156.2	195.9	258.2	361.4	505.9	658.6
107.5°	87.1	95.2	105.4	119.2	137.3	162.7	201.0	256.6	343.7	465.1	600.8
110°	96.4	104.1	112.9	125.5	142.2	167.5	204.7	257.0	336.2	444.4	564.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	105.8	112.6	121.0	132.2	147.7	172.6	208.3	257.8	330.4	428.0	537.0
115°	120.6	126.3	132.6	142.1	155.9	178.2	213.9	259.1	323.8	408.3	501.5
117.5°	134.6	138.7	143.9	151.7	164.0	185.8	218.8	261.1	318.3	393.0	475.0
120°	144.0	147.3	151.7	157.6	169.5	190.6	222.7	262.9	315.4	384.0	460.1
122.5°	153.1	155.2	158.9	164.7	175.8	196.7	226.9	264.2	313.0	376.3	446.5
125°	163.7	165.4	168.6	175.0	185.8	205.3	233.6	266.6	308.9	362.9	425.7
127.5°	173.2	175.1	179.4	186.2	196.1	215.1	241.1	269.9	306.1	352.0	406.4
130°	178.8	180.7	185.8	193.0	203.5	221.3	246.0	272.2	304.9	345.2	393.8
132.5°	184.0	186.2	191.8	199.4	210.4	227.5	250.0	274.5	303.7	338.7	382.4
135°	190.5	192.6	199.1	207.1	219.5	235.9	255.9	277.5	301.8	330.4	366.8
137.5°	197.7	200.3	206.7	215.3	227.4	242.0	260.2	279.0	299.7	323.0	353.8
140°	203.4	205.2	211.4	219.7	231.3	245.3	262.0	279.3	298.1	318.6	346.1
142.5°	209.0	210.4	216.1	224.4	235.5	248.6	264.4	280.8	297.8	316.6	340.3
145°	216.1	218.2	223.6	231.7	242.4	254.2	268.7	283.8	298.9	315.0	333.8
147.5°	225.1	226.7	231.9	239.3	248.3	258.7	272.4	285.7	299.3	313.0	328.3
150°	231.1	232.7	237.0	244.0	252.1	261.7	274.1	286.5	298.9	311.8	324.7
152.5°	237.1	237.9	242.2	248.4	256.0	264.8	275.9	286.9	298.0	309.6	321.7
155°	245.6	246.2	249.4	255.3	261.3	269.3	278.4	287.6	296.7	305.9	316.0
157.5°	252.7	253.3	255.9	261.0	265.8	272.5	280.2	287.6	294.3	302.0	310.8
160°	257.5	258.0	260.1	264.5	268.7	274.7	281.2	287.6	292.9	299.4	306.9
162.5°	262.2	261.8	264.0	267.5	271.4	276.0	281.5	287.1	291.6	297.3	303.5
165°	267.7	267.1	268.2	271.5	274.1	277.4	282.2	286.0	289.2	292.9	297.7
167.5°	272.2	271.5	272.5	274.6	276.5	278.5	282.1	285.2	286.7	289.2	292.2
170°	275.2	274.1	274.7	276.3	277.4	279.0	281.6	284.4	285.4	287.0	289.2
172.5°	276.9	276.3	276.0	277.6	278.2	279.4	281.3	283.0	283.7	284.5	286.2
175°	279.0	278.4	277.9	279.0	279.0	279.5	280.6	281.6	281.2	281.6	282.2
177.5°	279.9	279.1	278.6	279.5	279.5	279.5	279.9	280.8	279.9	279.5	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	205.2	216.3	227.9	235.4	239.0	242.6	246.1	249.7
90°	204.5	214.6	226.8	234.5	237.9	241.2	244.5	247.9
92.5°	224.8	228.9	235.4	239.1	242.0	243.6	247.4	249.9
95°	305.8	283.5	271.5	266.6	263.0	262.0	263.8	267.7
97.5°	482.3	432.8	384.9	352.9	330.5	320.6	315.9	314.7
100°	636.4	580.0	516.7	458.3	416.7	396.7	384.2	377.6
102.5°	735.2	730.2	686.4	624.1	578.6	542.2	525.8	515.8
105°	780.1	850.6	867.3	855.9	825.7	795.4	775.3	770.9
107.5°	728.7	829.4	894.8	926.9	934.2	935.4	933.9	926.9
110°	686.9	792.0	869.7	919.8	945.9	959.2	967.1	969.6





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CATALOG NUMBER: S122DIP-S865D530U830-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	648.1	749.3	831.8	888.3	923.5	943.6	955.8	961.8
115°	598.6	689.8	768.5	829.5	870.7	898.5	915.6	923.5
117.5°	558.6	639.6	711.6	769.1	810.9	839.8	857.3	864.3
120°	537.2	611.6	676.4	730.7	771.4	799.7	818.3	826.8
122.5°	519.1	587.7	649.2	698.5	734.9	762.3	778.8	785.9
125°	491.8	554.7	609.5	654.9	688.5	711.4	727.4	734.1
127.5°	465.0	522.0	573.4	615.3	645.0	666.6	680.6	686.5
130°	447.8	500.7	549.8	589.7	618.3	638.8	651.8	658.3
132.5°	431.0	480.2	525.7	563.4	591.4	612.0	624.2	630.2
135°	407.6	448.9	490.2	524.3	549.7	569.7	581.5	586.0
137.5°	387.4	422.2	455.4	485.2	508.1	525.3	535.7	540.8
140°	374.8	405.0	434.1	460.9	479.8	495.4	505.1	510.0
142.5°	365.0	390.4	415.3	437.5	455.3	469.5	478.2	480.2
145°	352.2	371.6	389.9	407.1	421.3	431.9	438.7	441.6
147.5°	342.7	356.9	370.1	382.0	393.3	401.3	405.6	407.3
150°	337.5	349.4	360.7	370.3	378.4	384.8	388.0	388.6
152.5°	332.8	343.8	353.4	361.7	368.1	373.7	376.1	376.2
155°	326.3	334.9	342.9	348.8	354.8	358.5	360.7	359.6
157.5°	318.7	325.8	332.6	337.2	341.4	344.6	345.5	345.5
160°	313.9	319.8	325.7	329.5	333.3	335.9	336.5	336.5
162.5°	309.2	314.2	319.3	322.2	325.9	327.8	328.3	327.9
165°	302.1	305.9	309.6	311.8	313.9	316.0	316.0	315.6
167.5°	295.3	298.2	300.8	302.7	303.7	304.9	304.8	304.2
170°	291.9	293.5	295.7	296.7	297.3	298.9	298.3	297.3
172.5°	288.0	289.2	290.9	291.5	292.1	292.8	292.3	291.6
175°	283.8	284.4	284.9	285.4	285.4	286.0	285.4	284.4
177.5°	280.8	280.8	281.3	281.3	281.3	281.3	280.8	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5

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