

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: P333219-830

Luminaire Tested: **S125DIP-S850D590U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333219-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S850D590U830-4F0-1E-UDD-D4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5093.9 lumens  
Efficiency: N/A  
Efficacy: 126.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

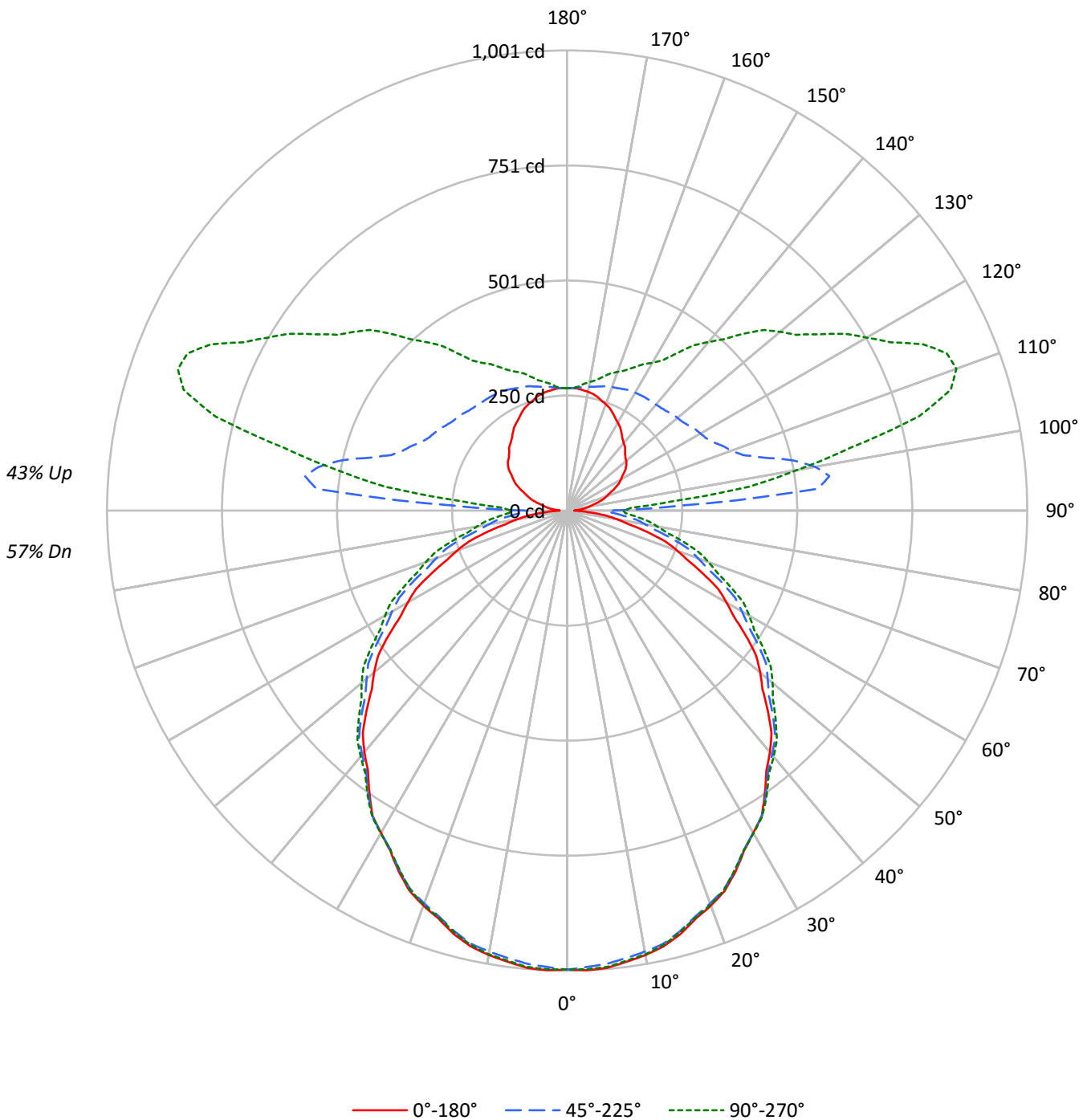
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	63	63	63	57
1	99	94	90	86	91	87	84	80	75	72	70	64	62	60	54	53	51	46
2	89	81	75	69	83	76	70	65	65	61	57	56	53	50	47	45	42	38
3	81	71	64	57	75	67	60	54	57	52	48	49	45	42	41	38	36	32
4	74	63	55	48	69	59	51	46	51	45	41	44	39	35	37	33	31	27
5	68	56	48	41	63	52	45	39	45	39	35	39	34	31	33	29	27	23
6	63	50	42	36	58	47	39	34	41	35	30	35	30	27	30	26	23	20
7	58	45	37	31	54	42	35	30	37	31	27	32	27	24	27	24	21	18
8	54	41	33	28	50	39	31	26	34	28	24	29	25	21	25	21	18	16
9	50	38	30	25	47	35	28	23	31	25	21	27	22	19	23	19	17	14
10	47	34	27	22	44	32	26	21	29	23	19	25	20	17	21	18	15	13

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

	0°	45°	90°
0°	6448	6448	6448
5°	6461	6330	6350
10°	6415	6216	6207
15°	6340	6081	6026
20°	6237	5914	5845
25°	6114	5735	5621
30°	5965	5538	5419
35°	5827	5357	5233
40°	5686	5166	5046
45°	5526	5003	4880
50°	5375	4826	4733
55°	5192	4659	4561
60°	4992	4468	4385
65°	4783	4270	4187
70°	4546	3997	3985
75°	4170	3735	3735
80°	3682	3416	3463
85°	3220	3204	3378



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	1.9
10°-20°	268.0	5.3
20°-30°	398.6	7.8
30°-40°	472.1	9.3
40°-50°	488.1	9.6
50°-60°	449.7	8.8
60°-70°	363.5	7.1
70°-80°	243.4	4.8
80°-90°	127.7	2.5
90°-100°	264.1	5.2
100°-110°	467.8	9.2
110°-120°	425.0	8.3
120°-130°	335.9	6.6
130°-140°	262.3	5.1
140°-150°	193.2	3.8
150°-160°	134.7	2.6
160°-170°	79.4	1.6
170°-180°	25.8	0.5
0°-30°	761.0	14.9
0°-40°	1233.2	24.2
0°-60°	2171.0	42.6
0°-90°	2905.7	57.0
90°-120°	1156.9	22.7
90°-150°	1948.3	38.2
90°-180°	2188.0	43.0
0°-180°	5093.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	998	996	990	997	997	95
15°	954	954	948	953	950	268
25°	866	869	863	867	862	399
35°	750	756	754	757	757	469
45°	618	628	633	640	641	477
55°	475	490	506	516	521	424
65°	327	349	373	387	392	324
75°	180	206	237	256	261	191
85°	54	86	120	141	150	57
90°	16	52	89	113	122	11
95°	30	91	548	308	226	29
105°	70	110	444	840	793	73
115°	114	145	351	730	855	113
125°	154	180	322	574	668	137
135°	178	214	306	470	545	138
145°	206	235	299	377	418	129
155°	234	252	291	329	344	108
165°	256	263	280	296	301	72
175°	266	266	268	272	270	25
180°	267	267	267	267	267	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4
2.5°	1000.8	1000.5	1000.1	999.8	999.4	998.6	997.4	996.2	994.9	993.7	994.9
5°	998.4	998.1	997.6	997.1	996.7	995.7	994.2	992.7	991.2	989.7	991.4
7.5°	989.7	989.5	989.3	989.1	988.9	988.1	986.6	985.0	983.4	981.8	983.4
10°	981.8	981.8	981.8	981.8	981.8	981.0	979.2	977.5	975.7	974.0	975.5
12.5°	970.8	971.0	971.2	971.4	971.6	970.9	969.6	968.2	966.8	965.4	966.6
15°	953.5	953.7	953.9	954.0	954.3	953.7	952.2	950.6	949.0	947.5	948.9
17.5°	930.8	931.1	931.6	932.0	932.5	931.9	930.4	928.9	927.4	925.9	926.8
20°	914.3	914.7	915.1	915.6	916.1	915.5	914.0	912.5	910.9	909.4	910.0
22.5°	895.5	896.3	897.0	897.9	898.6	898.1	896.5	894.8	893.1	891.4	892.2
25°	866.3	867.0	867.6	868.3	868.9	868.6	867.3	866.0	864.7	863.4	864.2
27.5°	833.8	834.8	835.8	836.7	837.6	837.4	835.9	834.4	832.9	831.5	832.1
30°	809.5	810.9	812.2	813.4	814.7	814.7	813.4	812.2	810.9	809.5	810.0
32.5°	787.6	788.7	789.9	791.0	792.1	792.2	791.3	790.3	789.4	788.4	788.8
35°	749.8	751.4	752.9	754.4	755.9	756.4	755.7	755.1	754.4	753.8	754.4
37.5°	712.0	713.4	714.8	716.2	717.7	718.2	717.9	717.7	717.6	717.4	718.2
40°	686.2	688.0	689.7	691.4	693.1	693.9	693.7	693.5	693.2	693.1	693.9
42.5°	658.0	660.3	662.5	664.8	667.0	668.5	668.9	669.4	669.9	670.3	671.4
45°	617.6	620.1	622.5	624.8	627.3	629.0	630.1	631.1	632.3	633.3	634.9
47.5°	576.4	578.6	580.8	583.1	585.2	587.3	589.2	591.1	592.9	594.7	597.0
50°	548.2	550.5	553.0	555.3	557.7	560.2	562.5	565.0	567.3	569.7	572.1
52.5°	518.4	521.3	524.2	527.2	530.1	533.0	535.9	538.9	541.8	544.7	547.2
55°	474.8	478.2	481.7	485.2	488.7	492.2	495.7	499.2	502.6	506.1	508.5
57.5°	430.1	434.3	438.5	442.6	446.9	450.9	455.0	458.9	462.9	466.9	469.7
60°	400.4	404.7	409.1	413.4	417.7	422.2	426.5	430.8	435.2	439.5	442.8
62.5°	371.4	375.7	380.1	384.5	388.8	393.3	398.0	402.7	407.4	412.1	415.8
65°	327.0	332.0	337.0	342.0	346.9	352.0	357.3	362.5	367.8	373.0	376.3
67.5°	285.0	289.9	294.7	299.5	304.3	309.4	314.7	320.1	325.4	330.6	334.6
70°	254.5	259.5	264.5	269.6	274.6	279.8	285.5	291.2	296.8	302.5	306.6
72.5°	224.8	229.9	235.1	240.3	245.4	251.1	257.3	263.5	269.7	275.9	280.3
75°	180.1	185.8	191.4	197.1	202.7	209.1	216.0	223.0	229.9	236.9	241.2
77.5°	137.2	143.7	150.3	156.8	163.3	169.9	176.6	183.3	190.0	196.8	201.5
80°	110.7	117.2	123.7	130.2	136.8	143.6	151.1	158.4	165.9	173.2	178.0
82.5°	86.3	93.2	100.1	107.0	113.9	121.0	128.7	136.2	143.7	151.4	156.0
85°	53.8	61.0	68.2	75.4	82.6	89.9	97.6	105.2	112.8	120.4	125.2
87.5°	30.6	37.7	44.9	52.0	59.3	66.6	74.2	81.7	89.3	96.9	102.0
90°	16.2	23.7	31.8	39.8	47.8	56.1	64.0	72.5	80.4	88.9	94.4
92.5°	20.6	28.5	39.5	52.6	68.2	91.0	127.9	184.6	245.7	250.4	222.3
95°	30.4	36.7	46.7	58.2	75.7	106.4	171.4	297.0	452.8	547.8	542.4
97.5°	41.0	46.8	54.9	65.9	81.6	105.1	150.3	244.1	406.5	575.3	660.9
100°	48.4	54.0	60.8	71.3	86.1	107.9	146.1	222.9	365.3	548.2	687.1
102.5°	56.6	61.5	67.5	78.0	91.6	112.8	147.3	212.8	334.0	504.2	665.7
105°	69.6	73.0	79.2	88.0	100.2	120.2	150.4	204.8	301.0	443.7	602.3
107.5°	82.2	86.1	91.7	99.1	110.9	129.1	158.3	205.6	285.0	401.2	538.7
110°	91.2	94.9	99.7	107.2	117.8	136.2	164.3	207.5	278.6	380.4	501.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	101.1	104.3	108.1	115.1	125.2	142.8	169.8	210.8	275.7	366.9	473.5
115°	114.5	117.1	120.2	126.6	136.2	153.2	178.7	215.6	272.9	351.1	441.6
117.5°	126.4	129.0	131.8	137.6	147.7	163.9	188.0	221.8	272.0	340.9	420.4
120°	135.0	137.2	140.1	145.5	155.3	171.6	195.5	226.3	272.7	335.2	408.2
122.5°	143.3	144.8	146.8	151.9	162.2	178.2	201.9	231.2	272.7	329.9	397.2
125°	154.5	155.3	157.8	162.4	172.4	188.4	210.6	238.0	273.5	322.5	381.9
127.5°	162.4	163.8	167.0	173.0	183.6	199.3	219.9	244.8	275.5	316.7	367.5
130°	168.0	169.4	173.5	180.2	191.3	206.7	226.4	249.9	277.1	313.5	358.5
132.5°	171.5	173.5	178.6	186.4	198.1	213.2	232.2	253.7	278.6	310.4	350.2
135°	178.3	180.2	186.4	194.8	205.9	221.1	239.3	258.5	279.9	305.7	339.1
137.5°	186.9	188.4	194.3	202.6	213.6	228.8	244.7	262.4	282.1	302.8	329.9
140°	191.3	192.9	199.3	208.0	218.2	232.8	248.6	264.9	282.4	300.9	324.8
142.5°	197.4	198.3	204.2	212.6	222.3	235.8	250.6	265.9	282.3	299.7	320.7
145°	206.3	207.3	212.4	219.7	229.1	241.4	255.4	268.8	283.3	299.0	316.1
147.5°	214.8	215.5	220.1	227.1	235.4	246.4	258.6	270.8	283.9	297.6	312.1
150°	220.5	221.5	225.3	232.2	239.8	248.9	260.8	272.0	283.9	296.2	309.2
152.5°	226.5	227.1	230.5	236.6	243.6	251.9	262.9	272.9	283.4	294.5	306.1
155°	234.4	234.4	237.6	243.0	248.4	255.9	265.0	273.6	282.3	291.4	301.0
157.5°	241.5	241.4	244.0	248.6	253.4	259.0	266.9	274.2	280.9	288.1	296.3
160°	246.3	245.7	247.9	251.7	255.9	260.8	267.8	274.2	279.6	286.1	292.5
162.5°	250.2	249.6	251.8	255.1	258.5	262.5	268.6	273.8	278.3	283.4	289.1
165°	255.9	254.9	256.5	259.1	261.3	264.6	268.8	273.1	276.4	279.6	283.9
167.5°	259.8	259.3	260.2	261.7	263.3	265.2	268.8	271.8	273.3	275.8	278.8
170°	262.4	261.8	262.4	263.4	264.6	266.2	268.8	271.0	272.0	273.6	275.8
172.5°	264.1	263.2	263.6	264.8	265.4	266.2	268.4	270.1	270.3	271.1	272.8
175°	266.2	265.0	265.6	266.2	266.2	266.2	267.8	268.8	268.2	268.2	268.8
177.5°	267.1	266.3	266.3	266.6	266.3	266.3	267.1	267.5	266.6	266.6	267.1
180°	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4
2.5°	996.2	997.4	998.6	999.2	999.0	998.8	998.6	998.4
5°	993.2	994.9	996.6	997.4	997.1	996.9	996.7	996.6
7.5°	984.9	986.4	987.9	988.5	988.4	988.2	987.9	987.7
10°	977.0	978.5	980.1	980.7	980.5	980.3	980.1	979.9
12.5°	967.7	968.9	970.1	970.3	969.8	969.2	968.7	968.1
15°	950.2	951.5	952.8	953.0	952.2	951.2	950.4	949.5
17.5°	927.8	928.9	929.8	930.1	929.5	929.1	928.5	928.0
20°	910.7	911.3	912.0	912.3	912.3	912.3	912.3	912.3
22.5°	893.1	893.8	894.7	894.8	894.3	893.8	893.2	892.8
25°	865.2	866.0	866.9	866.8	865.6	864.6	863.5	862.4
27.5°	832.6	833.3	833.9	834.1	833.6	833.2	832.8	832.5
30°	810.4	810.9	811.2	811.4	811.2	811.0	810.8	810.5
32.5°	789.3	789.7	790.1	790.2	790.0	789.9	789.6	789.4
35°	755.1	755.7	756.4	756.7	756.7	756.7	756.7	756.7
37.5°	719.1	719.9	720.8	721.2	721.1	721.0	721.0	720.9
40°	694.7	695.7	696.5	697.2	697.6	698.0	698.5	698.9
42.5°	672.4	673.4	674.5	675.0	675.1	675.2	675.3	675.4
45°	636.4	637.9	639.4	640.3	640.6	640.7	640.9	641.2
47.5°	599.2	601.4	603.6	605.0	605.5	606.0	606.4	606.9
50°	574.5	576.9	579.3	580.8	581.5	582.1	582.8	583.4
52.5°	549.8	552.3	554.9	556.5	556.9	557.4	557.9	558.4
55°	510.9	513.3	515.7	517.3	518.1	519.1	519.9	520.8
57.5°	472.4	475.1	477.9	479.6	480.2	480.9	481.5	482.2
60°	446.0	449.3	452.6	454.5	455.2	455.8	456.5	457.1
62.5°	419.3	422.9	426.6	428.8	429.6	430.5	431.2	432.1
65°	379.5	382.8	386.0	388.0	389.0	389.8	390.7	391.5
67.5°	338.6	342.5	346.5	349.0	350.2	351.3	352.4	353.5
70°	310.8	314.9	319.1	321.7	323.0	324.3	325.6	327.0
72.5°	284.8	289.3	293.8	296.5	297.5	298.4	299.4	300.3
75°	245.6	250.0	254.3	257.0	258.1	259.2	260.2	261.4
77.5°	206.3	211.1	215.9	218.8	219.6	220.5	221.3	222.3
80°	182.9	187.7	192.4	195.2	196.1	197.0	197.8	198.7
82.5°	160.5	165.1	169.8	172.9	174.5	176.0	177.6	179.2
85°	130.0	134.8	139.6	142.8	144.6	146.3	148.1	149.8
87.5°	107.1	112.2	117.3	120.8	122.3	123.9	125.5	127.0
90°	99.9	105.5	111.0	115.4	116.9	118.4	120.5	122.0
92.5°	182.1	160.8	148.5	143.7	138.4	138.6	139.4	140.1
95°	467.6	390.7	329.3	287.3	250.6	236.0	233.3	226.2
97.5°	651.4	598.7	538.9	479.1	447.3	418.7	404.5	399.2
100°	733.1	711.3	660.5	607.6	571.7	534.3	515.8	508.4
102.5°	758.5	779.1	756.9	721.9	683.5	657.3	637.0	631.9
105°	735.7	813.7	841.7	838.7	823.0	806.8	797.6	792.7
107.5°	670.2	772.9	837.9	868.8	878.8	880.1	877.9	875.0
110°	622.1	728.3	808.2	856.8	882.5	894.3	899.6	901.1





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CATALOG NUMBER: S125DIP-S850D590U830-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	583.2	684.2	764.9	821.5	858.4	877.4	888.3	893.7
115°	534.2	621.4	699.0	760.3	803.5	830.6	847.0	855.3
117.5°	500.5	576.0	643.1	699.5	742.9	771.0	787.5	793.2
120°	481.8	550.1	612.9	662.7	703.8	730.9	746.8	752.3
122.5°	466.7	530.1	586.3	633.0	669.8	694.7	710.6	715.8
125°	445.1	503.4	553.6	594.7	625.8	648.9	661.9	668.4
127.5°	422.8	477.2	524.1	562.6	591.2	611.9	624.3	628.0
130°	409.4	459.8	504.7	541.8	569.8	588.5	600.4	604.7
132.5°	395.5	442.9	484.0	519.6	547.4	566.1	576.8	581.5
135°	376.4	416.3	453.6	486.2	511.0	529.7	540.5	544.8
137.5°	360.5	393.1	424.2	452.0	474.1	491.1	500.9	505.3
140°	351.4	379.0	406.1	430.4	451.1	466.0	474.9	478.5
142.5°	343.6	366.9	390.3	411.3	429.0	441.8	450.3	453.5
145°	333.9	351.7	369.4	384.9	398.7	408.7	415.5	418.5
147.5°	325.6	339.4	352.6	363.9	374.6	382.2	386.1	387.4
150°	320.9	332.8	343.0	352.8	361.1	367.8	370.1	370.9
152.5°	316.7	327.3	336.6	344.1	350.9	356.2	358.4	358.9
155°	310.2	318.9	326.3	332.2	337.6	341.4	343.0	343.6
157.5°	303.8	310.9	316.7	321.3	325.5	328.6	330.1	330.0
160°	299.4	304.8	310.2	314.0	317.7	320.5	321.5	320.9
162.5°	294.7	299.7	304.2	307.6	310.5	312.7	312.9	312.8
165°	288.1	291.9	295.2	297.8	300.0	301.0	301.0	301.0
167.5°	281.9	284.5	286.9	288.8	289.9	290.9	290.4	290.3
170°	278.5	280.1	281.7	282.8	283.9	284.5	284.5	283.9
172.5°	274.7	276.3	277.4	278.1	278.3	279.3	278.4	277.9
175°	270.4	270.4	271.5	271.5	271.5	272.0	271.0	270.4
177.5°	267.5	268.0	268.0	268.0	267.5	268.0	266.6	266.6
180°	266.6	266.6	266.6	266.6	266.6	266.6	266.6	266.6

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