

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: P333403

Luminaire Tested: **S125DIW-S850D470U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333403  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S850D470U835-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4907.5 lumens  
Efficiency: N/A  
Efficacy: 130.2 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: Semi-Direct

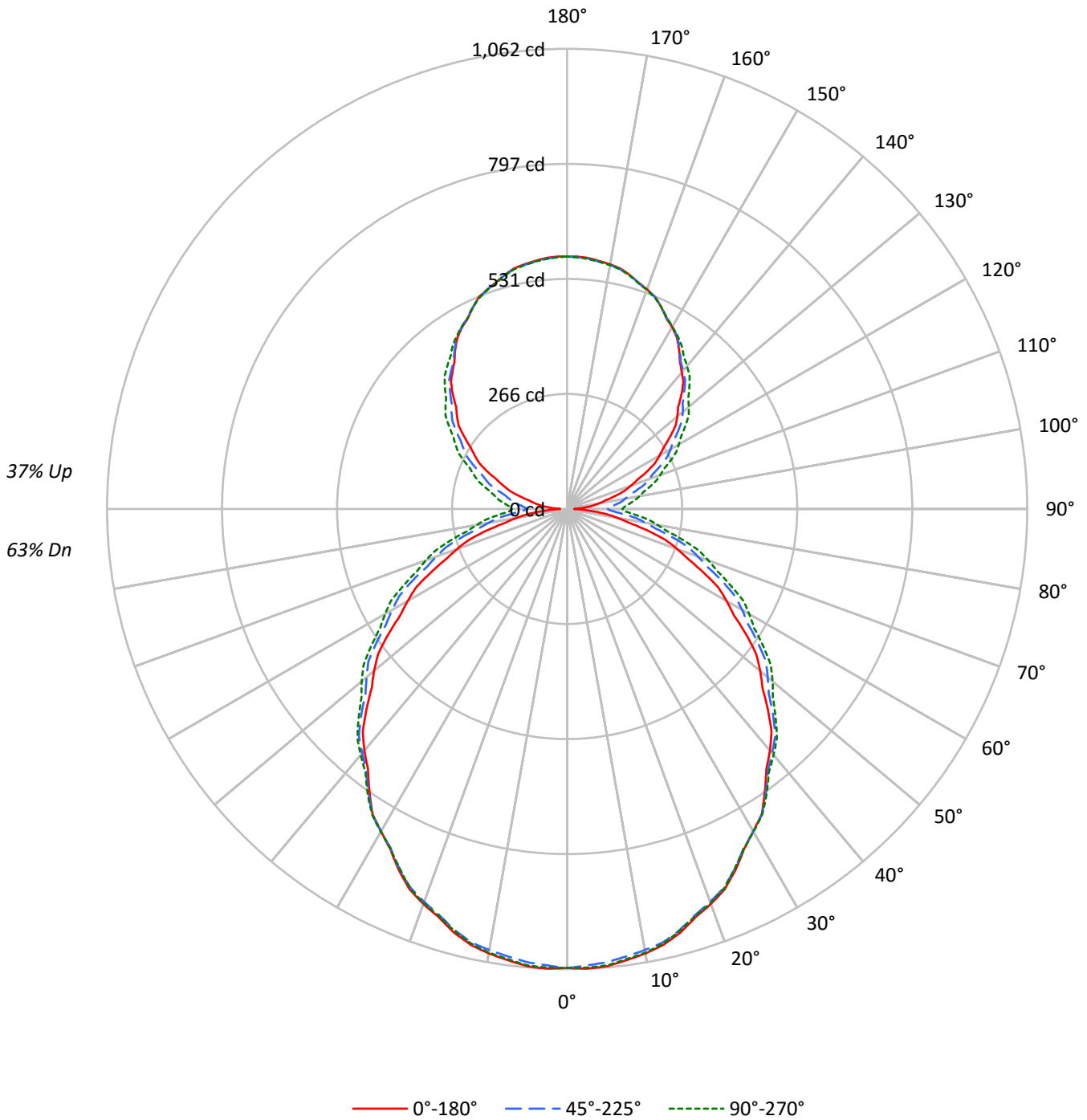
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68	63
1	100	95	91	87	93	89	85	82	78	75	72	68	66	64	59	57	55	51
2	90	82	76	70	84	77	71	66	68	63	59	59	56	53	51	48	46	42
3	82	72	64	58	77	68	61	55	60	54	49	52	48	44	45	42	39	35
4	75	64	55	49	70	60	52	47	53	47	42	46	41	38	40	36	33	30
5	69	57	48	42	64	53	46	40	47	41	36	41	36	32	36	32	29	26
6	64	51	42	36	59	48	40	35	42	36	31	37	32	28	33	28	25	23
7	59	46	38	32	55	43	36	30	39	32	28	34	29	25	30	26	22	20
8	55	42	34	28	51	39	32	27	35	29	25	31	26	22	27	23	20	18
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	25	21	18	16
10	48	35	28	23	45	33	26	22	30	24	20	26	22	18	23	19	16	14

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

	0°	45°	90°
0°	6841	6841	6841
5°	6855	6715	6737
10°	6806	6595	6585
15°	6726	6452	6393
20°	6616	6274	6201
25°	6486	6084	5964
30°	6329	5876	5749
35°	6182	5684	5552
40°	6032	5481	5353
45°	5863	5308	5178
50°	5702	5120	5022
55°	5508	4943	4839
60°	5296	4741	4653
65°	5075	4530	4443
70°	4822	4240	4228
75°	4425	3962	3962
80°	3905	3625	3673
85°	3417	3398	3583



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.2	2.0
10°-20°	284.4	5.8
20°-30°	422.9	8.6
30°-40°	500.9	10.2
40°-50°	517.9	10.6
50°-60°	477.1	9.7
60°-70°	385.7	7.9
70°-80°	258.3	5.3
80°-90°	135.2	2.8
90°-100°	114.2	2.3
100°-110°	170.6	3.5
110°-120°	232.3	4.7
120°-130°	277.9	5.7
130°-140°	296.9	6.1
140°-150°	283.9	5.8
150°-160°	236.9	4.8
160°-170°	157.4	3.2
170°-180°	55.1	1.1
0°-30°	807.4	16.5
0°-40°	1308.3	26.7
0°-60°	2303.3	46.9
0°-90°	3082.5	62.8
90°-120°	517.0	10.5
90°-150°	1375.7	28.0
90°-180°	1825.0	37.2
0°-180°	4907.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1059	1059	1059	1059	1059	
5°	1059	1057	1050	1058	1057	100
15°	1012	1012	1005	1011	1007	285
25°	919	922	916	920	915	423
35°	796	802	800	803	803	498
45°	655	666	672	679	680	506
55°	504	520	537	548	552	450
65°	347	371	396	411	415	344
75°	191	218	251	271	277	203
85°	57	92	128	150	159	61
90°	17	54	92	118	127	13
95°	43	72	111	136	145	42
105°	113	132	165	188	198	120
115°	202	212	239	256	263	199
125°	289	292	312	327	333	259
135°	373	375	382	395	399	287
145°	450	451	452	457	460	281
155°	514	514	514	516	514	237
165°	559	558	558	560	558	158
175°	581	579	579	582	579	55
180°	582	582	582	582	582	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3
2.5°	1061.8	1061.5	1061.1	1060.7	1060.3	1059.5	1058.2	1056.9	1055.6	1054.3	1055.6
5°	1059.3	1058.9	1058.4	1057.9	1057.5	1056.4	1054.8	1053.2	1051.6	1050.0	1051.8
7.5°	1050.0	1049.8	1049.6	1049.4	1049.2	1048.3	1046.7	1045.0	1043.3	1041.7	1043.3
10°	1041.7	1041.7	1041.7	1041.7	1041.7	1040.8	1038.9	1037.1	1035.2	1033.4	1035.0
12.5°	1030.0	1030.2	1030.4	1030.6	1030.8	1030.1	1028.7	1027.2	1025.7	1024.2	1025.5
15°	1011.6	1011.8	1012.0	1012.2	1012.5	1011.8	1010.2	1008.6	1006.9	1005.3	1006.7
17.5°	987.5	987.9	988.4	988.8	989.3	988.7	987.1	985.5	983.9	982.3	983.3
20°	970.0	970.5	970.9	971.4	971.9	971.3	969.7	968.1	966.4	964.8	965.5
22.5°	950.1	950.9	951.7	952.6	953.4	952.9	951.1	949.3	947.5	945.7	946.6
25°	919.1	919.8	920.5	921.2	921.9	921.5	920.2	918.8	917.4	916.0	916.9
27.5°	884.6	885.7	886.7	887.7	888.7	888.4	886.9	885.3	883.7	882.2	882.8
30°	858.9	860.3	861.7	863.0	864.4	864.4	863.0	861.7	860.3	858.9	859.4
32.5°	835.6	836.8	838.0	839.2	840.4	840.5	839.5	838.5	837.5	836.5	836.9
35°	795.5	797.2	798.8	800.4	802.0	802.5	801.8	801.1	800.4	799.7	800.4
37.5°	755.4	756.9	758.4	759.9	761.4	762.0	761.7	761.5	761.3	761.1	762.0
40°	728.0	729.9	731.7	733.6	735.4	736.2	736.0	735.8	735.5	735.3	736.2
42.5°	698.1	700.5	702.9	705.3	707.7	709.2	709.7	710.2	710.7	711.2	712.3
45°	655.3	657.9	660.4	662.9	665.5	667.3	668.5	669.6	670.8	671.9	673.6
47.5°	611.5	613.9	616.2	618.6	620.9	623.1	625.1	627.1	629.0	631.0	633.4
50°	581.6	584.1	586.7	589.2	591.7	594.3	596.8	599.4	601.9	604.4	607.0
52.5°	550.0	553.1	556.2	559.3	562.4	565.5	568.6	571.7	574.8	577.9	580.6
55°	503.7	507.4	511.1	514.8	518.5	522.2	525.9	529.6	533.2	536.9	539.5
57.5°	456.3	460.8	465.2	469.6	474.1	478.4	482.7	486.9	491.1	495.4	498.3
60°	424.8	429.4	434.0	438.6	443.2	447.9	452.5	457.1	461.7	466.3	469.8
62.5°	394.0	398.6	403.3	407.9	412.5	417.3	422.3	427.3	432.2	437.2	441.1
65°	346.9	352.2	357.5	362.8	368.1	373.5	379.1	384.6	390.2	395.7	399.2
67.5°	302.4	307.6	312.7	317.8	322.9	328.3	333.9	339.6	345.2	350.8	355.0
70°	270.0	275.3	280.6	286.0	291.3	296.9	302.9	308.9	314.9	320.9	325.3
72.5°	238.5	243.9	249.4	254.9	260.4	266.4	273.0	279.6	286.1	292.7	297.4
75°	191.1	197.1	203.1	209.1	215.1	221.8	229.2	236.6	243.9	251.3	255.9
77.5°	145.6	152.5	159.5	166.4	173.3	180.3	187.4	194.5	201.6	208.8	213.8
80°	117.4	124.3	131.2	138.1	145.1	152.4	160.3	168.1	176.0	183.8	188.9
82.5°	91.6	98.9	106.2	113.5	120.8	128.4	136.5	144.5	152.5	160.6	165.5
85°	57.1	64.7	72.4	80.0	87.6	95.4	103.5	111.6	119.7	127.7	132.8
87.5°	32.5	40.0	47.6	55.1	62.7	70.4	78.4	86.4	94.4	102.4	107.8
90°	17.1	25.3	33.5	41.6	49.8	58.2	66.8	75.3	83.9	92.4	98.2
92.5°	25.9	33.3	40.7	48.1	55.5	63.7	72.5	81.4	90.3	99.2	105.0
95°	43.0	49.2	55.4	61.6	67.8	75.3	84.2	93.0	101.9	110.7	116.5
97.5°	61.2	66.7	72.2	77.6	83.1	90.3	99.3	108.3	117.2	126.2	131.7
100°	74.9	79.7	84.6	89.4	94.3	101.0	109.7	118.4	127.1	135.8	141.6
102.5°	89.6	94.5	99.4	104.3	109.2	115.5	123.4	131.3	139.1	147.0	152.6
105°	112.7	116.9	121.1	125.3	129.5	135.3	142.9	150.4	157.9	165.4	170.7
107.5°	138.3	141.9	145.6	149.2	152.8	158.2	165.3	172.4	179.5	186.7	191.5
110°	155.9	159.2	162.5	165.8	169.0	174.0	180.8	187.6	194.3	201.1	205.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.8	177.3	179.7	182.2	184.7	189.3	195.9	202.6	209.2	215.9	220.2
115°	201.6	203.6	205.6	207.6	209.7	213.8	220.0	226.2	232.4	238.6	242.6
117.5°	228.5	229.7	230.9	232.2	233.4	237.0	242.8	248.7	254.6	260.4	264.4
120°	245.9	247.1	248.3	249.5	250.6	253.9	259.4	264.8	270.2	275.6	279.5
122.5°	263.9	264.4	264.9	265.4	265.9	268.8	274.2	279.6	285.0	290.4	294.0
125°	289.2	289.6	290.0	290.4	290.7	293.3	298.0	302.7	307.4	312.1	315.6
127.5°	315.4	315.5	315.6	315.7	315.8	317.9	321.8	325.7	329.6	333.5	336.8
130°	331.7	332.0	332.3	332.5	332.8	334.7	338.1	341.5	345.0	348.4	351.5
132.5°	347.2	348.0	348.8	349.5	350.3	351.9	354.4	356.8	359.3	361.7	364.9
135°	372.8	373.2	373.6	373.9	374.3	375.4	377.1	378.8	380.5	382.2	385.2
137.5°	396.9	397.3	397.7	398.1	398.5	399.2	400.2	401.2	402.2	403.2	406.1
140°	411.7	412.2	412.7	413.2	413.7	414.2	414.7	415.3	415.8	416.3	419.1
142.5°	427.3	427.5	427.7	428.0	428.2	428.6	429.0	429.4	429.8	430.3	432.6
145°	450.2	450.4	450.5	450.7	450.9	451.1	451.4	451.7	452.0	452.3	453.5
147.5°	470.4	470.6	470.8	471.0	471.3	471.5	471.7	472.0	472.2	472.5	473.1
150°	484.5	484.4	484.3	484.2	484.1	484.3	484.7	485.1	485.5	485.9	485.9
152.5°	496.1	496.3	496.4	496.5	496.7	496.8	497.0	497.2	497.3	497.5	497.7
155°	514.0	514.0	514.0	514.0	514.0	514.0	514.1	514.2	514.3	514.4	514.8
157.5°	529.9	529.7	529.5	529.3	529.0	529.0	529.1	529.2	529.3	529.4	529.8
160°	539.4	539.1	538.7	538.4	538.1	538.0	538.1	538.2	538.3	538.4	538.9
162.5°	547.7	547.5	547.3	547.0	546.8	546.7	546.7	546.7	546.8	546.8	547.3
165°	558.8	558.6	558.4	558.2	558.0	558.0	558.1	558.2	558.3	558.4	558.8
167.5°	568.3	567.9	567.5	567.1	566.7	566.5	566.5	566.5	566.5	566.5	567.1
170°	573.3	572.9	572.5	572.1	571.7	571.5	571.5	571.5	571.5	571.5	572.1
172.5°	577.0	576.6	576.2	575.8	575.4	575.2	575.2	575.2	575.2	575.2	575.8
175°	581.1	580.6	580.2	579.8	579.4	579.2	579.2	579.2	579.2	579.2	579.8
177.5°	583.1	582.8	582.5	582.2	581.8	581.6	581.6	581.5	581.4	581.3	581.8
180°	582.4	582.4	582.4	582.4	582.4	582.4	582.4	582.4	582.4	582.4	582.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3
2.5°	1056.9	1058.2	1059.5	1060.1	1059.9	1059.7	1059.5	1059.3
5°	1053.7	1055.5	1057.4	1058.2	1057.9	1057.7	1057.5	1057.3
7.5°	1044.9	1046.5	1048.1	1048.8	1048.6	1048.4	1048.1	1047.9
10°	1036.6	1038.2	1039.8	1040.5	1040.3	1040.1	1039.8	1039.6
12.5°	1026.7	1028.0	1029.2	1029.5	1028.9	1028.3	1027.7	1027.1
15°	1008.1	1009.5	1010.9	1011.1	1010.2	1009.2	1008.3	1007.4
17.5°	984.4	985.5	986.5	986.8	986.2	985.7	985.1	984.6
20°	966.2	966.9	967.6	967.9	967.9	967.9	967.9	967.9
22.5°	947.5	948.3	949.2	949.4	948.8	948.3	947.7	947.2
25°	917.9	918.8	919.7	919.6	918.4	917.3	916.1	915.0
27.5°	883.4	884.1	884.7	884.9	884.4	884.0	883.6	883.2
30°	859.8	860.3	860.7	860.9	860.6	860.4	860.2	859.9
32.5°	837.4	837.8	838.3	838.4	838.2	838.0	837.7	837.5
35°	801.1	801.8	802.5	802.8	802.8	802.8	802.8	802.8
37.5°	762.9	763.8	764.7	765.2	765.1	765.0	764.9	764.8
40°	737.1	738.1	739.0	739.7	740.1	740.6	741.1	741.5
42.5°	713.4	714.5	715.6	716.2	716.3	716.4	716.5	716.6
45°	675.2	676.8	678.4	679.3	679.6	679.8	680.0	680.3
47.5°	635.7	638.1	640.4	641.9	642.4	642.9	643.4	643.9
50°	609.5	612.1	614.6	616.2	616.9	617.6	618.3	619.0
52.5°	583.3	586.0	588.7	590.4	590.9	591.4	591.9	592.4
55°	542.0	544.6	547.1	548.8	549.7	550.7	551.6	552.5
57.5°	501.2	504.1	507.0	508.8	509.5	510.2	510.9	511.6
60°	473.2	476.7	480.2	482.2	482.9	483.6	484.3	485.0
62.5°	444.9	448.7	452.6	454.9	455.8	456.7	457.5	458.4
65°	402.6	406.1	409.5	411.7	412.7	413.6	414.5	415.4
67.5°	359.2	363.4	367.6	370.3	371.5	372.7	373.9	375.1
70°	329.7	334.1	338.5	341.3	342.7	344.1	345.5	346.9
72.5°	302.2	306.9	311.7	314.6	315.6	316.6	317.6	318.6
75°	260.6	265.2	269.8	272.7	273.8	275.0	276.1	277.3
77.5°	218.9	224.0	229.1	232.1	233.0	233.9	234.8	235.8
80°	194.0	199.1	204.1	207.1	208.1	209.0	209.9	210.8
82.5°	170.3	175.2	180.1	183.4	185.1	186.7	188.4	190.1
85°	137.9	143.0	148.1	151.5	153.4	155.2	157.1	158.9
87.5°	113.2	118.6	124.0	127.6	129.3	130.9	132.6	134.3
90°	104.0	109.8	115.7	119.5	121.4	123.4	125.3	127.2
92.5°	110.8	116.6	122.4	126.2	128.0	129.9	131.7	133.6
95°	122.3	128.1	133.8	137.6	139.5	141.3	143.1	144.9
97.5°	137.2	142.7	148.2	151.8	153.5	155.2	156.9	158.6
100°	147.3	153.1	158.8	162.5	164.1	165.7	167.3	168.8
102.5°	158.3	163.9	169.6	173.2	174.9	176.6	178.2	179.9
105°	175.9	181.1	186.3	189.9	191.8	193.7	195.6	197.6
107.5°	196.4	201.3	206.1	209.3	210.7	212.1	213.5	214.9
110°	210.5	215.2	219.8	223.0	224.5	226.0	227.5	229.0





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CATALOG NUMBER: S125DIW-S850D470U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	224.6	228.9	233.3	236.2	237.6	239.0	240.5	241.9
115°	246.7	250.7	254.8	257.5	258.7	260.0	261.3	262.6
117.5°	268.4	272.4	276.4	279.0	280.2	281.4	282.5	283.7
120°	283.4	287.4	291.3	293.7	294.7	295.7	296.7	297.7
122.5°	297.7	301.4	305.0	307.4	308.4	309.5	310.6	311.6
125°	319.1	322.6	326.1	328.4	329.4	330.5	331.5	332.6
127.5°	340.1	343.4	346.7	349.0	350.1	351.2	352.4	353.5
130°	354.6	357.8	360.9	363.0	363.9	364.9	365.8	366.8
132.5°	368.0	371.1	374.3	376.2	376.9	377.5	378.2	378.9
135°	388.2	391.2	394.2	396.1	396.9	397.6	398.4	399.1
137.5°	408.9	411.8	414.6	416.2	416.7	417.1	417.5	417.9
140°	421.8	424.6	427.3	428.9	429.3	429.7	430.1	430.6
142.5°	434.8	437.1	439.4	440.8	441.2	441.6	442.0	442.5
145°	454.6	455.8	456.9	457.8	458.5	459.1	459.7	460.3
147.5°	473.7	474.3	474.9	475.1	474.8	474.5	474.3	474.0
150°	485.9	485.9	485.9	485.9	485.9	485.9	486.0	486.0
152.5°	498.0	498.2	498.4	498.4	498.1	497.8	497.5	497.1
155°	515.2	515.6	516.0	516.0	515.5	515.0	514.5	514.0
157.5°	530.2	530.6	531.0	530.9	530.2	529.5	528.9	528.2
160°	539.3	539.7	540.1	540.0	539.5	539.0	538.5	538.0
162.5°	547.8	548.2	548.7	548.7	548.1	547.5	546.9	546.3
165°	559.2	559.6	560.0	559.9	559.3	558.7	558.1	557.5
167.5°	567.7	568.3	568.9	568.9	568.2	567.6	567.0	566.4
170°	572.7	573.3	574.0	573.9	573.2	572.5	571.8	571.1
172.5°	576.4	577.0	577.6	577.6	576.9	576.3	575.7	575.1
175°	580.4	581.1	581.7	581.6	580.9	580.2	579.5	578.8
177.5°	582.3	582.8	583.3	583.2	582.7	582.1	581.5	581.0
180°	582.4	582.4	582.4	582.4	582.4	582.4	582.4	582.4

(END OF REPORT)