

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: P333432-927

Luminaire Tested: **S125DIW-S1090D470U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333432-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S1090D470U927-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4864.2 lumens  
Efficiency: N/A  
Efficacy: 105.3 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

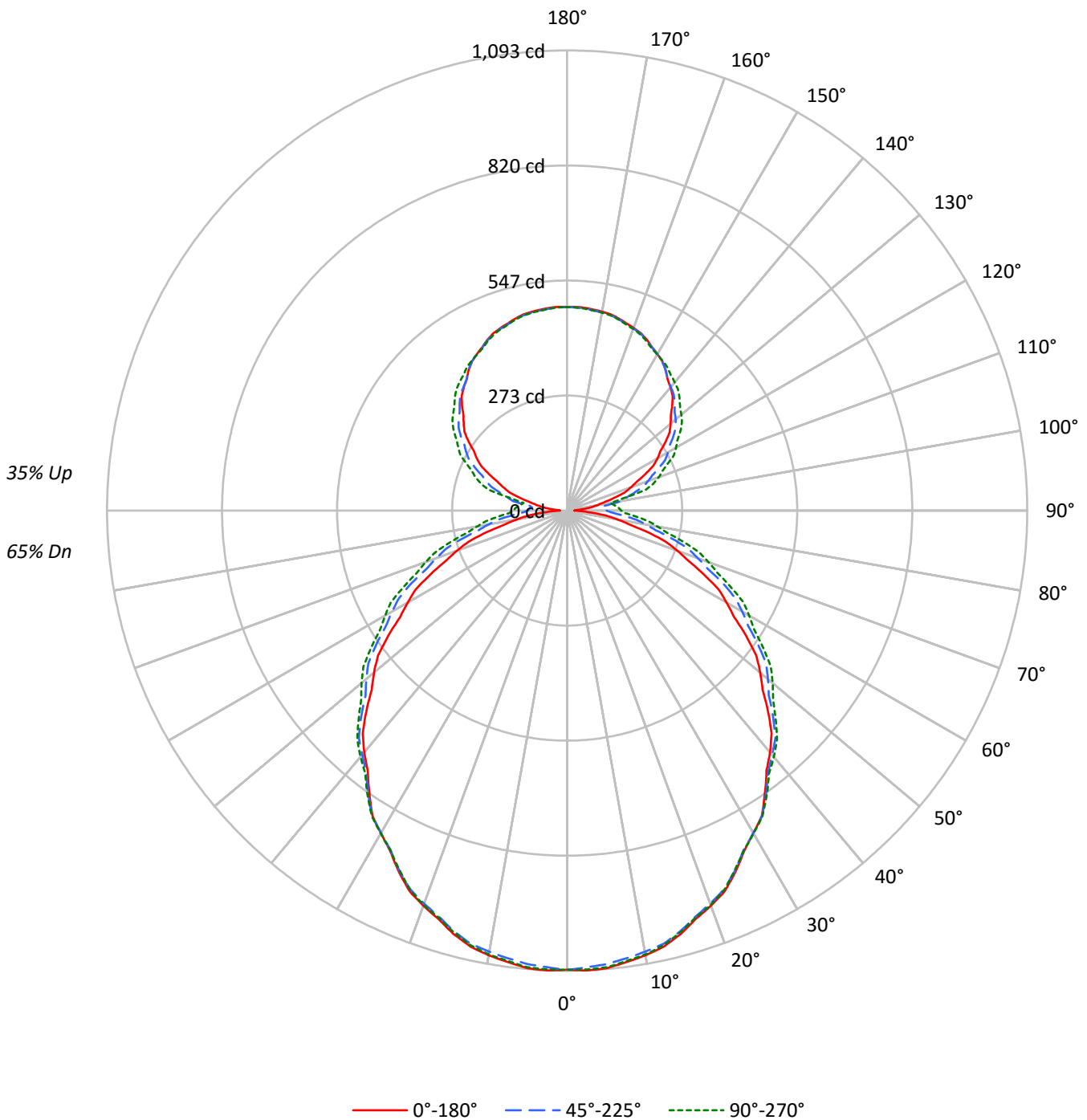
Input Watts (W): 46.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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CATALOG NUMBER: S125DIW-S1090D470U927-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P333432-927

CATALOG NUMBER: S125DIW-S1090D470U927-4F0-1E-UDD-D

**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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	65
1	100	95	91	87	94	90	86	82	79	76	74	69	67	65	60	59	57	53
2	91	83	76	70	85	78	72	67	69	64	60	60	57	54	53	50	48	44
3	83	72	65	58	77	68	61	56	60	55	50	53	49	45	46	43	40	36
4	76	64	56	49	71	60	53	47	54	47	43	47	42	38	41	37	34	31
5	69	57	48	42	65	54	46	40	48	41	37	42	37	33	37	33	30	27
6	64	51	43	36	60	48	41	35	43	37	32	38	33	29	34	29	26	23
7	59	46	38	32	55	44	36	31	39	33	28	35	30	26	31	26	23	21
8	55	42	34	28	51	40	32	27	36	29	25	32	27	23	28	24	21	18
9	51	38	31	25	48	36	29	24	33	27	22	29	24	21	26	22	19	17
10	48	35	28	23	45	34	27	22	30	24	20	27	22	19	24	20	17	15

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

	0°	45°	90°
0°	7045	7045	7045
5°	7059	6915	6937
10°	7008	6791	6781
15°	6926	6644	6583
20°	6814	6461	6385
25°	6679	6266	6141
30°	6517	6050	5920
35°	6366	5853	5717
40°	6211	5644	5513
45°	6037	5466	5331
50°	5872	5272	5172
55°	5671	5090	4983
60°	5453	4881	4791
65°	5225	4664	4575
70°	4967	4366	4353
75°	4557	4080	4079
80°	4018	3734	3783
85°	3519	3499	3689



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.1	2.1
10°-20°	292.8	6.0
20°-30°	435.5	9.0
30°-40°	515.8	10.6
40°-50°	533.3	11.0
50°-60°	491.3	10.1
60°-70°	397.1	8.2
70°-80°	265.9	5.5
80°-90°	138.9	2.9
90°-100°	95.0	2.0
100°-110°	165.4	3.4
110°-120°	234.6	4.8
120°-130°	273.7	5.6
130°-140°	280.6	5.8
140°-150°	256.4	5.3
150°-160°	205.8	4.2
160°-170°	133.1	2.7
170°-180°	45.9	0.9
0°-30°	831.4	17.1
0°-40°	1347.2	27.7
0°-60°	2371.8	48.8
0°-90°	3173.7	65.2
90°-120°	494.9	10.2
90°-150°	1305.6	26.8
90°-180°	1690.0	34.7
0°-180°	4864.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1091	1091	1091	1091	1091	
5°	1091	1088	1081	1089	1089	103
15°	1042	1042	1035	1041	1037	293
25°	946	949	943	947	942	435
35°	819	826	824	826	827	512
45°	675	686	692	699	700	521
55°	519	536	553	564	569	463
65°	357	382	407	423	428	354
75°	197	225	259	279	286	209
85°	59	94	132	154	164	63
90°	18	55	93	119	128	12
95°	34	61	84	108	117	37
105°	115	134	166	186	194	122
115°	204	215	242	259	264	202
125°	286	288	308	323	328	255
135°	353	354	361	374	377	272
145°	408	408	408	413	415	255
155°	448	446	447	447	445	206
165°	473	471	471	473	470	133
175°	484	481	482	484	481	46
180°	484	484	484	484	484	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8
2.5°	1093.4	1093.0	1092.6	1092.3	1091.9	1091.0	1089.6	1088.3	1087.0	1085.7	1087.0
5°	1090.8	1090.4	1089.9	1089.4	1088.9	1087.8	1086.2	1084.5	1082.8	1081.2	1083.1
7.5°	1081.2	1081.0	1080.8	1080.6	1080.5	1079.5	1077.8	1076.0	1074.4	1072.6	1074.3
10°	1072.6	1072.6	1072.6	1072.6	1072.6	1071.7	1069.8	1067.9	1066.0	1064.1	1065.7
12.5°	1060.7	1060.8	1061.0	1061.2	1061.4	1060.7	1059.2	1057.7	1056.2	1054.6	1056.0
15°	1041.6	1041.9	1042.1	1042.4	1042.6	1041.9	1040.2	1038.6	1036.9	1035.2	1036.6
17.5°	1016.8	1017.2	1017.7	1018.2	1018.7	1018.1	1016.4	1014.8	1013.1	1011.5	1012.6
20°	998.9	999.3	999.8	1000.3	1000.8	1000.1	998.5	996.8	995.1	993.5	994.2
22.5°	978.3	979.1	980.0	980.9	981.8	981.2	979.4	977.6	975.7	973.8	974.7
25°	946.4	947.1	947.8	948.6	949.3	949.0	947.5	946.1	944.7	943.3	944.2
27.5°	910.9	912.0	913.0	914.1	915.1	914.8	913.2	911.6	910.0	908.4	909.0
30°	884.4	885.8	887.2	888.7	890.1	890.1	888.7	887.2	885.8	884.4	884.9
32.5°	860.5	861.7	862.9	864.2	865.4	865.5	864.4	863.4	862.4	861.3	861.8
35°	819.2	820.9	822.5	824.2	825.9	826.3	825.6	824.9	824.2	823.5	824.2
37.5°	777.9	779.4	780.9	782.4	783.9	784.7	784.4	784.2	783.9	783.7	784.7
40°	749.6	751.5	753.4	755.3	757.2	758.1	757.9	757.6	757.4	757.2	758.1
42.5°	718.8	721.4	723.8	726.3	728.7	730.2	730.8	731.3	731.8	732.4	733.5
45°	674.8	677.4	680.0	682.6	685.2	687.1	688.3	689.5	690.7	691.9	693.6
47.5°	629.7	632.1	634.5	636.9	639.4	641.6	643.6	645.7	647.8	649.7	652.2
50°	598.9	601.5	604.1	606.7	609.3	612.0	614.6	617.2	619.8	622.4	625.0
52.5°	566.3	569.6	572.7	575.9	579.1	582.3	585.5	588.7	591.8	595.0	597.9
55°	518.6	522.4	526.2	530.0	533.9	537.7	541.5	545.3	549.1	552.9	555.5
57.5°	469.9	474.4	479.0	483.6	488.1	492.7	497.0	501.4	505.7	510.1	513.1
60°	437.4	442.1	446.9	451.6	456.4	461.1	465.9	470.6	475.4	480.1	483.7
62.5°	405.8	410.5	415.3	420.0	424.8	429.7	434.8	440.0	445.1	450.2	454.2
65°	357.2	362.7	368.1	373.6	379.1	384.6	390.3	396.0	401.7	407.4	411.0
67.5°	311.4	316.7	321.9	327.3	332.5	338.0	343.9	349.7	355.5	361.2	365.6
70°	278.1	283.5	289.0	294.5	299.9	305.7	311.9	318.1	324.2	330.4	334.9
72.5°	245.6	251.2	256.8	262.5	268.2	274.3	281.1	287.9	294.6	301.3	306.3
75°	196.8	203.0	209.1	215.3	221.5	228.4	236.0	243.6	251.2	258.8	263.6
77.5°	150.0	157.1	164.2	171.3	178.5	185.7	193.0	200.3	207.6	214.9	220.1
80°	120.8	127.9	135.1	142.2	149.3	156.9	165.0	173.1	181.2	189.3	194.5
82.5°	94.3	101.8	109.3	116.8	124.4	132.2	140.5	148.8	157.1	165.3	170.4
85°	58.8	66.6	74.5	82.3	90.2	98.2	106.5	114.9	123.2	131.5	136.7
87.5°	33.4	41.2	48.9	56.6	64.4	72.3	80.5	88.7	96.9	105.1	110.7
90°	17.5	25.7	34.0	42.2	50.5	58.9	67.5	76.1	84.8	93.4	99.3
92.5°	20.9	27.5	34.1	40.7	47.3	55.0	63.7	72.5	81.3	90.0	95.7
95°	34.3	40.2	46.2	52.1	58.1	63.6	68.6	73.7	78.7	83.8	89.4
97.5°	55.3	61.2	67.3	73.3	79.2	83.1	84.9	86.7	88.6	90.4	93.1
100°	71.6	76.8	82.1	87.3	92.5	99.1	107.0	114.9	122.9	130.8	123.9
102.5°	88.2	93.2	98.1	103.0	107.9	114.2	121.8	129.4	137.0	144.6	147.1
105°	115.0	119.1	123.3	127.4	131.5	137.1	144.3	151.4	158.5	165.6	170.4
107.5°	142.8	146.0	149.2	152.5	155.7	160.8	167.9	174.8	181.9	188.9	193.6
110°	160.9	163.7	166.6	169.4	172.3	177.1	183.9	190.8	197.6	204.4	208.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.6	181.1	183.6	186.1	188.5	193.1	199.6	206.2	212.7	219.3	223.3
115°	204.2	206.3	208.3	210.4	212.5	216.7	222.9	229.2	235.4	241.7	245.7
117.5°	230.8	231.9	232.9	234.0	235.0	238.7	244.9	251.0	257.1	263.3	266.9
120°	248.0	248.6	249.2	249.9	250.5	253.7	259.4	265.1	270.8	276.5	280.4
122.5°	262.3	262.9	263.6	264.2	264.8	267.8	273.2	278.6	284.0	289.4	293.1
125°	285.6	285.9	286.2	286.5	286.8	289.4	294.1	298.9	303.6	308.4	311.9
127.5°	307.0	307.1	307.3	307.4	307.6	309.6	313.5	317.3	321.2	325.0	328.4
130°	320.8	320.9	321.1	321.2	321.4	323.1	326.5	329.9	333.4	336.8	339.8
132.5°	333.7	334.1	334.5	334.9	335.3	336.7	339.1	341.5	343.9	346.3	349.5
135°	353.0	353.2	353.5	353.7	353.9	354.8	356.3	357.8	359.3	360.8	363.8
137.5°	370.7	371.0	371.2	371.5	371.7	372.1	372.8	373.4	374.1	374.8	377.6
140°	381.7	381.8	382.0	382.1	382.3	382.5	382.6	382.8	382.9	383.1	385.9
142.5°	392.3	392.2	392.1	392.0	391.9	391.9	392.1	392.2	392.4	392.5	394.8
145°	407.8	407.7	407.7	407.6	407.5	407.5	407.5	407.5	407.5	407.5	408.8
147.5°	420.4	420.3	420.3	420.3	420.3	420.3	420.4	420.5	420.6	420.6	421.1
150°	429.0	428.8	428.6	428.5	428.3	428.3	428.5	428.6	428.8	429.0	429.1
152.5°	437.3	437.0	436.6	436.3	435.9	435.8	435.9	436.1	436.3	436.4	436.6
155°	448.0	447.5	447.0	446.6	446.1	445.9	446.1	446.2	446.4	446.6	446.8
157.5°	456.2	455.9	455.7	455.3	455.0	455.0	455.0	455.0	455.0	455.0	455.3
160°	461.9	461.4	461.0	460.5	460.0	459.9	459.9	460.0	460.1	460.2	460.5
162.5°	466.5	466.0	465.6	465.1	464.6	464.5	464.5	464.6	464.7	464.8	465.2
165°	472.7	472.2	471.7	471.3	470.8	470.6	470.6	470.7	470.8	470.9	471.3
167.5°	477.3	476.8	476.3	475.8	475.3	475.1	475.2	475.2	475.3	475.4	476.0
170°	479.9	479.3	478.7	478.2	477.6	477.4	477.4	477.5	477.6	477.7	478.3
172.5°	481.6	481.0	480.5	479.9	479.3	479.2	479.3	479.4	479.6	479.7	480.3
175°	483.5	483.0	482.5	482.0	481.6	481.3	481.4	481.5	481.6	481.6	482.3
177.5°	484.3	483.9	483.5	483.2	482.8	482.6	482.7	482.8	482.8	482.9	483.3
180°	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8	1090.8
2.5°	1088.3	1089.6	1091.0	1091.5	1091.4	1091.2	1091.0	1090.8
5°	1085.0	1086.9	1088.8	1089.6	1089.4	1089.2	1088.9	1088.7
7.5°	1075.9	1077.6	1079.3	1080.0	1079.7	1079.5	1079.3	1079.0
10°	1067.4	1069.1	1070.7	1071.4	1071.2	1071.0	1070.7	1070.5
12.5°	1057.2	1058.5	1059.8	1060.1	1059.5	1058.9	1058.3	1057.6
15°	1038.1	1039.5	1040.9	1041.2	1040.2	1039.3	1038.3	1037.4
17.5°	1013.7	1014.7	1015.8	1016.1	1015.5	1014.9	1014.4	1013.8
20°	994.9	995.6	996.3	996.7	996.7	996.7	996.7	996.7
22.5°	975.7	976.5	977.4	977.6	977.0	976.4	975.9	975.3
25°	945.2	946.1	947.1	946.9	945.7	944.5	943.3	942.1
27.5°	909.7	910.4	911.0	911.2	910.7	910.3	909.8	909.4
30°	885.3	885.8	886.3	886.5	886.2	886.0	885.7	885.5
32.5°	862.3	862.8	863.2	863.3	863.1	862.8	862.6	862.4
35°	824.9	825.6	826.3	826.6	826.6	826.6	826.6	826.6
37.5°	785.6	786.6	787.5	787.9	787.8	787.7	787.6	787.5
40°	759.1	760.0	761.0	761.7	762.2	762.6	763.1	763.6
42.5°	734.6	735.8	736.9	737.5	737.6	737.7	737.8	737.9
45°	695.2	696.9	698.5	699.5	699.7	700.0	700.2	700.4
47.5°	654.7	657.0	659.5	660.9	661.5	662.0	662.5	663.1
50°	627.6	630.3	632.9	634.5	635.3	636.0	636.7	637.4
52.5°	600.6	603.4	606.3	607.9	608.4	609.0	609.5	610.0
55°	558.1	560.7	563.3	565.1	566.1	567.0	568.0	568.9
57.5°	516.1	519.1	522.1	523.9	524.7	525.4	526.1	526.8
60°	487.3	490.8	494.4	496.5	497.3	498.0	498.7	499.4
62.5°	458.1	462.1	466.0	468.4	469.4	470.2	471.1	472.1
65°	414.5	418.1	421.7	424.0	424.9	425.9	426.8	427.8
67.5°	369.9	374.2	378.6	381.4	382.5	383.8	385.0	386.3
70°	339.5	344.0	348.5	351.5	352.9	354.3	355.8	357.2
72.5°	311.2	316.1	320.9	323.9	325.0	326.0	327.0	328.1
75°	268.3	273.1	277.8	280.7	281.9	283.1	284.3	285.5
77.5°	225.4	230.6	235.8	238.9	239.9	240.8	241.8	242.7
80°	199.7	204.9	210.2	213.3	214.2	215.2	216.1	217.1
82.5°	175.4	180.5	185.4	188.9	190.6	192.3	194.0	195.7
85°	142.0	147.2	152.4	156.0	157.9	159.8	161.7	163.6
87.5°	116.2	121.8	127.3	130.9	132.6	134.4	136.0	137.8
90°	105.1	111.0	116.8	120.7	122.6	124.6	126.5	128.4
92.5°	101.3	107.0	112.7	116.5	118.2	119.9	121.8	123.5
95°	95.1	100.7	106.3	110.0	111.6	113.3	114.9	116.6
97.5°	95.9	98.5	101.3	103.5	105.1	106.7	108.4	110.0
100°	117.1	110.2	103.3	100.4	101.6	102.7	103.7	104.8
102.5°	149.7	152.3	154.8	154.1	150.1	146.1	142.1	138.2
105°	175.2	179.9	184.7	187.8	189.4	191.0	192.6	194.2
107.5°	198.3	203.0	207.8	210.7	212.0	213.2	214.4	215.6
110°	212.9	217.2	221.5	224.5	226.2	228.0	229.7	231.5





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CATALOG NUMBER: S125DIW-S1090D470U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	227.4	231.4	235.4	238.2	239.7	241.3	242.8	244.4
115°	249.6	253.6	257.5	260.0	260.9	261.9	262.8	263.8
117.5°	270.5	274.2	277.8	280.3	281.7	283.1	284.6	286.0
120°	284.2	288.1	292.0	294.5	295.5	296.5	297.5	298.6
122.5°	296.8	300.5	304.2	306.5	307.4	308.4	309.4	310.4
125°	315.4	318.9	322.3	324.6	325.5	326.5	327.4	328.4
127.5°	331.7	335.0	338.4	340.5	341.3	342.1	342.8	343.6
130°	342.9	346.0	349.1	351.1	351.9	352.7	353.5	354.3
132.5°	352.8	356.1	359.4	361.3	361.9	362.5	363.1	363.7
135°	366.7	369.6	372.6	374.4	375.1	375.8	376.5	377.2
137.5°	380.4	383.3	386.1	387.8	388.3	388.9	389.4	389.9
140°	388.6	391.4	394.2	395.8	396.2	396.7	397.2	397.7
142.5°	397.1	399.3	401.6	403.0	403.5	403.9	404.4	404.9
145°	410.0	411.3	412.6	413.4	413.9	414.4	414.9	415.3
147.5°	421.6	422.1	422.6	422.7	422.6	422.5	422.3	422.2
150°	429.3	429.4	429.6	429.5	429.1	428.7	428.3	427.9
152.5°	436.7	436.9	437.0	436.9	436.3	435.9	435.3	434.7
155°	447.0	447.3	447.5	447.3	446.6	446.0	445.4	444.7
157.5°	455.5	455.7	456.0	455.8	455.2	454.6	453.9	453.3
160°	460.8	461.1	461.4	461.3	460.7	460.0	459.4	458.8
162.5°	465.6	466.1	466.5	466.4	465.7	465.0	464.3	463.6
165°	471.9	472.4	472.9	472.8	472.1	471.4	470.8	470.2
167.5°	476.6	477.1	477.7	477.7	476.9	476.2	475.5	474.8
170°	479.0	479.7	480.3	480.2	479.5	478.8	478.1	477.4
172.5°	480.9	481.4	482.0	482.0	481.3	480.5	479.8	479.1
175°	482.9	483.5	484.2	484.2	483.5	482.8	482.0	481.3
177.5°	483.8	484.2	484.7	484.7	484.1	483.6	483.1	482.6
180°	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5

(END OF REPORT)