

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: P242801

Luminaire Tested: **S125DR-S610D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242801  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-S610D927-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1890.8 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct

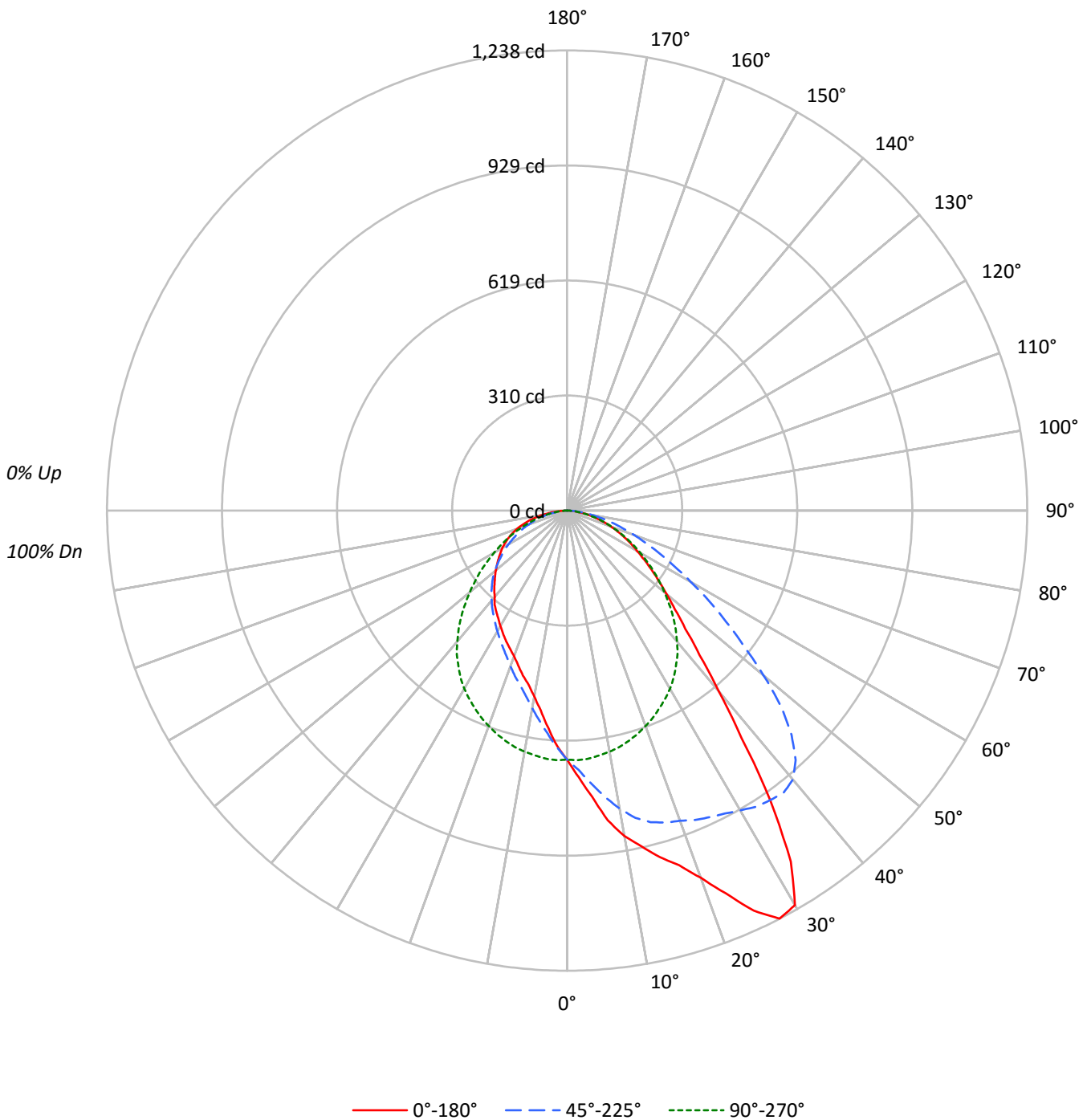
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93		95	92	90		91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78		84	80	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57		67	61	56		64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49		60	54	49		58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43		54	48	43		53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34		46	39	34		44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31		42	36	31		41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28		39	33	28		38	32	28	26

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

	0°	90°	180°
0°	4762	4762	4762
5°	5515	4778	4184
10°	6416	4753	3666
15°	7102	4719	3382
20°	7950	4664	3153
25°	9313	4601	3042
30°	10059	4539	2945
35°	8271	4424	2882
40°	5879	4264	2813
45°	4516	4048	2773
50°	3856	3779	2768
55°	3432	3517	2791
60°	3096	3230	2861
65°	2861	2941	2936
70°	2600	2641	2978
75°	2296	2326	2952
80°	1932	1899	2701
85°	1533	1370	2177



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.5	3.4
10°-20°	192.1	10.2
20°-30°	312.0	16.5
30°-40°	381.3	20.2
40°-50°	345.9	18.3
50°-60°	275.5	14.6
60°-70°	191.9	10.1
70°-80°	102.2	5.4
80°-90°	25.4	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	568.6	30.1
0°-40°	949.9	50.2
0°-60°	1571.3	83.1
0°-90°	1890.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1890.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	670	670	670	670	670	
5°	773	736	670	602	586	78
15°	965	868	641	486	460	276
25°	1188	910	587	408	388	544
35°	953	951	510	346	332	585
45°	449	854	403	286	276	358
55°	277	523	284	218	225	249
65°	170	277	175	147	175	169
75°	84	123	85	77	108	90
85°	19	25	17	18	27	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0
2.5°	718.4	717.2	716.1	713.8	715.5	710.7	708.4	704.4	699.6	697.9	695.9
5°	773.0	774.4	775.8	769.8	770.4	766.4	757.3	749.9	744.0	736.3	730.9
7.5°	840.7	836.4	836.7	833.0	826.4	821.0	812.2	800.0	788.9	776.4	765.6
10°	889.0	889.3	886.7	882.2	875.1	870.0	857.4	845.5	831.0	813.9	801.7
12.5°	925.4	926.8	923.4	916.9	914.3	901.2	892.1	877.3	859.4	846.6	826.4
15°	965.2	962.1	959.8	952.1	946.2	934.2	918.6	903.8	885.0	867.7	850.3
17.5°	1000.5	1003.0	999.3	993.7	976.0	962.1	942.8	924.0	901.5	879.9	859.7
20°	1051.1	1053.4	1046.8	1034.6	1012.4	998.5	970.9	944.7	917.7	887.9	865.1
22.5°	1114.2	1111.4	1102.0	1081.8	1063.3	1034.6	1004.2	970.9	935.4	900.7	868.5
25°	1187.6	1175.7	1170.3	1147.2	1121.9	1084.1	1043.1	996.5	954.4	909.8	871.1
27.5°	1237.7	1232.8	1225.2	1206.4	1177.4	1134.4	1086.1	1030.3	973.8	919.1	870.5
30°	1225.7	1226.3	1226.9	1221.7	1204.7	1174.2	1126.2	1065.0	994.5	931.1	872.5
32.5°	1119.9	1132.7	1145.0	1160.9	1171.1	1171.4	1145.8	1092.1	1019.0	944.7	871.4
35°	953.3	956.4	988.5	1020.4	1063.6	1097.2	1119.6	1095.2	1034.0	951.3	870.5
37.5°	770.7	786.3	810.5	846.3	911.2	964.1	1033.5	1057.4	1028.6	956.7	870.2
40°	633.6	647.8	662.3	699.0	751.6	819.3	900.9	970.6	986.8	944.7	861.7
42.5°	527.8	538.4	554.8	580.2	622.0	680.0	757.0	853.5	919.4	910.0	843.8
45°	449.3	456.4	469.0	490.9	522.7	569.6	638.5	738.0	824.7	853.5	813.4
47.5°	393.6	393.9	404.1	419.8	443.9	487.2	538.6	620.5	714.1	780.4	771.0
50°	348.7	347.2	354.9	368.0	386.2	412.7	461.3	523.6	612.6	690.2	711.8
52.5°	310.0	310.6	314.5	323.4	337.9	359.5	392.7	447.3	520.2	600.3	645.9
55°	277.0	275.9	281.3	287.8	298.9	313.7	339.8	382.8	444.5	523.0	575.9
57.5°	245.1	248.3	250.5	255.1	264.8	275.0	298.3	331.3	382.2	451.9	507.9
60°	217.8	221.0	222.7	227.2	234.6	243.2	260.2	285.8	327.0	385.1	440.5
62.5°	193.4	195.7	195.9	199.9	205.6	213.9	226.4	246.9	277.3	326.2	380.2
65°	170.1	170.1	171.2	175.5	178.3	185.7	195.9	211.6	237.8	277.3	323.6
67.5°	147.3	148.7	148.5	150.4	153.0	159.3	166.9	180.0	200.8	230.6	269.0
70°	125.1	126.3	126.0	127.4	130.3	133.9	139.9	152.1	166.1	190.8	222.7
72.5°	105.2	105.5	104.7	106.6	108.1	111.2	118.0	123.1	135.9	155.8	180.6
75°	83.6	84.2	84.7	85.9	87.6	89.3	92.7	99.3	107.8	123.4	140.2
77.5°	66.5	65.1	66.8	66.5	67.4	68.8	72.0	75.6	83.0	93.6	107.5
80°	47.2	47.5	47.5	47.8	49.2	50.1	52.6	55.2	60.6	68.0	77.1
82.5°	31.3	32.1	31.6	32.1	33.3	33.8	35.0	37.0	39.5	44.9	50.9
85°	18.8	17.3	17.9	18.5	18.5	18.8	19.9	20.8	22.5	24.7	27.3
87.5°	6.8	7.4	7.7	7.7	8.0	8.0	9.1	9.1	10.0	10.8	11.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0
2.5°	694.2	692.2	689.9	685.9	681.1	678.6	674.6	672.0	666.9	662.6	658.1
5°	724.3	716.9	710.1	701.3	691.6	685.4	678.0	669.7	661.2	652.4	642.7
7.5°	754.5	742.3	728.9	715.0	701.3	688.5	676.6	664.3	653.2	639.3	627.6
10°	784.9	768.4	750.8	730.0	709.8	692.2	674.3	658.6	642.7	625.7	610.6
12.5°	815.3	792.0	765.3	742.0	716.7	694.5	672.6	651.5	630.5	611.2	593.0
15°	826.4	807.1	784.1	751.6	724.3	695.1	667.2	641.3	617.1	596.1	573.9
17.5°	837.2	812.5	788.0	756.8	721.2	689.6	658.1	629.9	603.2	576.7	556.6
20°	839.8	814.2	788.3	757.9	721.2	683.7	652.1	616.6	587.3	559.7	533.5
22.5°	839.0	809.1	780.4	748.8	713.3	679.4	639.6	603.2	570.8	543.8	516.2
25°	832.7	801.7	766.4	734.9	699.6	662.9	624.2	586.7	554.3	523.3	496.3
27.5°	829.0	789.8	751.1	714.7	680.8	647.0	609.4	570.8	535.2	503.7	478.6
30°	820.8	776.7	731.7	693.3	658.4	625.7	590.7	553.1	515.6	484.9	457.6
32.5°	813.4	760.2	712.1	669.5	631.9	600.3	568.8	533.5	496.8	465.5	438.2
35°	803.4	744.0	689.6	642.4	602.9	570.2	543.2	509.9	476.1	445.9	419.8
37.5°	791.7	722.9	665.5	616.3	573.3	539.2	513.6	487.7	453.9	424.3	401.0
40°	777.5	700.2	638.5	587.8	542.9	507.1	483.7	459.6	432.6	405.5	380.5
42.5°	759.6	679.7	611.2	555.7	511.3	476.6	451.9	432.3	409.2	384.5	361.7
45°	736.9	654.1	581.3	522.7	477.8	443.4	418.1	402.7	384.8	360.9	341.3
47.5°	706.7	625.1	550.0	489.4	443.1	411.2	387.1	372.0	358.9	340.1	321.6
50°	663.8	591.8	515.6	455.6	409.2	377.1	355.2	341.8	331.0	317.4	302.3
52.5°	615.7	550.0	481.8	422.6	376.8	345.2	323.9	312.5	304.0	295.2	280.4
55°	564.2	507.4	442.5	386.2	343.8	312.8	294.1	283.8	276.4	269.0	259.9
57.5°	508.8	462.7	403.3	350.7	311.4	282.4	264.8	254.2	248.3	244.3	238.6
60°	449.6	411.5	362.0	315.1	277.0	252.0	234.9	227.2	222.4	219.3	215.3
62.5°	394.7	365.2	320.2	278.4	246.3	223.0	208.2	200.8	196.2	195.1	192.0
65°	341.0	316.8	279.0	243.4	215.0	194.8	182.0	174.9	172.1	170.3	170.6
67.5°	286.9	271.3	239.7	208.5	185.1	167.2	156.7	151.3	149.9	147.3	147.3
70°	238.3	227.2	201.6	175.2	155.0	141.9	132.8	127.1	125.7	124.6	124.3
72.5°	195.4	186.0	164.7	144.8	127.1	116.0	108.9	106.1	103.5	102.9	102.9
75°	153.3	147.9	130.3	113.5	101.0	93.0	87.9	84.7	83.0	82.8	83.0
77.5°	115.7	110.6	98.4	85.9	77.6	71.4	66.5	65.7	63.4	63.7	63.1
80°	81.9	78.8	71.7	62.3	55.7	50.6	48.3	46.4	45.8	44.9	45.8
82.5°	53.7	50.3	46.1	41.0	35.8	33.3	31.0	30.7	30.4	30.1	30.1
85°	29.3	29.6	26.7	22.2	19.9	18.2	16.8	16.8	16.5	16.2	16.5
87.5°	12.5	11.9	10.8	10.0	8.5	7.7	7.4	7.7	6.8	6.5	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0
2.5°	655.5	652.4	649.8	644.1	641.0	636.8	633.3	637.0	633.1	634.8	632.2
5°	637.9	629.9	624.2	616.0	608.9	602.3	597.5	596.7	594.4	593.2	589.8
7.5°	616.8	607.7	598.4	588.1	579.6	570.5	565.1	560.0	556.8	552.9	549.7
10°	598.6	585.3	573.9	560.8	549.4	539.5	531.5	527.5	523.8	518.4	516.5
12.5°	576.2	562.2	547.7	533.5	522.7	511.3	504.8	498.3	496.0	489.7	489.4
15°	559.1	538.4	524.7	510.5	495.4	486.3	480.6	474.1	471.2	467.0	463.8
17.5°	538.1	519.3	502.2	487.7	474.1	466.7	459.3	454.7	449.9	446.8	441.7
20°	514.7	497.1	480.1	464.4	454.5	445.6	440.0	435.7	430.6	429.1	424.0
22.5°	495.1	475.2	459.0	446.5	435.4	425.2	418.9	416.3	413.2	408.1	408.1
25°	473.5	453.3	439.4	426.3	416.6	407.5	403.3	399.6	396.2	393.0	391.9
27.5°	455.3	437.4	420.3	408.4	400.1	391.6	387.9	383.1	380.5	378.0	374.5
30°	436.0	417.5	403.0	391.6	382.5	375.1	371.1	368.0	365.7	363.5	361.7
32.5°	416.1	399.3	385.3	374.3	365.2	360.0	356.6	354.6	352.1	349.2	347.0
35°	399.0	380.2	366.6	356.9	349.8	345.5	341.6	339.6	336.7	336.7	334.4
37.5°	378.8	362.3	350.1	341.3	335.0	331.0	326.5	325.3	323.4	322.2	321.4
40°	361.2	346.1	334.7	325.9	319.1	316.0	312.5	310.3	309.1	307.7	307.1
42.5°	343.0	328.8	317.9	310.0	304.3	301.7	298.6	297.2	294.6	292.6	292.4
45°	324.5	310.6	300.6	294.1	288.9	285.8	283.8	280.4	279.3	277.0	276.7
47.5°	307.4	293.8	283.8	278.4	273.9	271.6	268.5	264.8	263.3	261.9	261.6
50°	287.8	275.6	266.5	261.4	257.1	253.4	250.3	248.0	247.1	247.1	247.7
52.5°	267.9	257.9	250.5	244.0	240.0	236.0	233.2	232.1	230.6	232.3	233.5
55°	248.6	238.0	232.3	226.4	222.4	217.8	216.4	215.9	215.0	217.3	218.4
57.5°	227.8	220.7	213.9	207.6	204.2	201.3	199.1	198.8	200.5	201.1	204.5
60°	208.2	199.6	193.7	189.1	184.9	183.1	182.6	182.0	183.1	186.3	191.1
62.5°	186.6	180.0	173.5	170.3	167.5	164.4	164.4	164.9	167.5	171.2	176.0
65°	165.5	159.5	155.3	151.3	148.7	147.0	147.6	148.7	151.3	156.1	161.5
67.5°	143.9	139.9	135.9	132.2	129.7	130.0	130.3	131.7	134.8	140.5	145.6
70°	123.1	118.6	115.5	114.0	112.0	110.9	112.6	115.5	118.0	123.1	127.4
72.5°	102.4	98.7	96.4	95.6	95.0	94.1	94.4	97.5	101.2	106.4	111.5
75°	81.9	80.5	78.8	77.6	76.8	77.4	77.9	80.8	83.6	89.0	94.7
77.5°	63.4	61.7	60.6	60.3	59.7	60.0	61.4	63.7	66.5	70.5	75.1
80°	45.2	44.6	44.1	43.8	43.8	44.1	46.4	47.8	50.3	54.0	57.4
82.5°	29.9	29.6	29.6	29.6	29.9	29.9	31.0	33.0	35.0	37.5	40.4
85°	17.3	16.8	17.6	17.9	17.3	18.2	18.8	19.9	20.8	22.2	23.6
87.5°	7.1	7.7	7.4	7.7	7.7	8.2	8.0	9.1	9.7	10.2	10.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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CATALOG NUMBER: S125DR-S610D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	670.0	670.0	670.0	670.0
2.5°	630.5	632.5	630.8	633.1
5°	588.4	585.8	587.6	586.4
7.5°	549.4	547.2	543.8	542.6
10°	513.3	510.2	509.9	507.9
12.5°	486.9	484.0	480.1	479.5
15°	462.1	459.9	457.9	459.6
17.5°	441.1	439.1	438.5	436.8
20°	421.5	420.0	420.6	416.9
22.5°	405.8	402.7	402.1	402.1
25°	389.3	387.9	386.5	387.9
27.5°	374.8	373.4	372.8	373.1
30°	361.7	358.9	359.2	358.9
32.5°	347.5	345.8	345.2	344.7
35°	333.6	333.6	332.2	332.2
37.5°	320.8	320.5	319.7	320.2
40°	306.0	305.7	304.9	303.2
42.5°	291.8	290.6	290.4	290.1
45°	276.7	276.7	276.1	275.9
47.5°	261.9	262.5	263.6	263.3
50°	248.8	249.1	250.0	250.3
52.5°	234.3	236.3	237.5	237.2
55°	221.0	223.0	225.0	225.2
57.5°	207.6	210.2	212.2	212.7
60°	194.0	197.7	200.2	201.3
62.5°	180.9	185.1	187.7	187.7
65°	166.4	170.6	172.9	174.6
67.5°	151.3	155.6	157.8	159.3
70°	134.5	138.8	142.2	143.3
72.5°	118.0	121.7	124.3	125.7
75°	98.4	103.5	106.1	107.5
77.5°	79.6	84.7	86.2	87.0
80°	60.9	63.7	65.7	66.0
82.5°	43.2	45.5	45.8	46.6
85°	25.6	26.7	27.0	26.7
87.5°	10.5	10.2	10.2	10.8
90°	0.0	0.0	0.0	0.0

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