

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: P243686

Luminaire Tested: **S125DR-H610D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243686
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H610D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2017.1 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

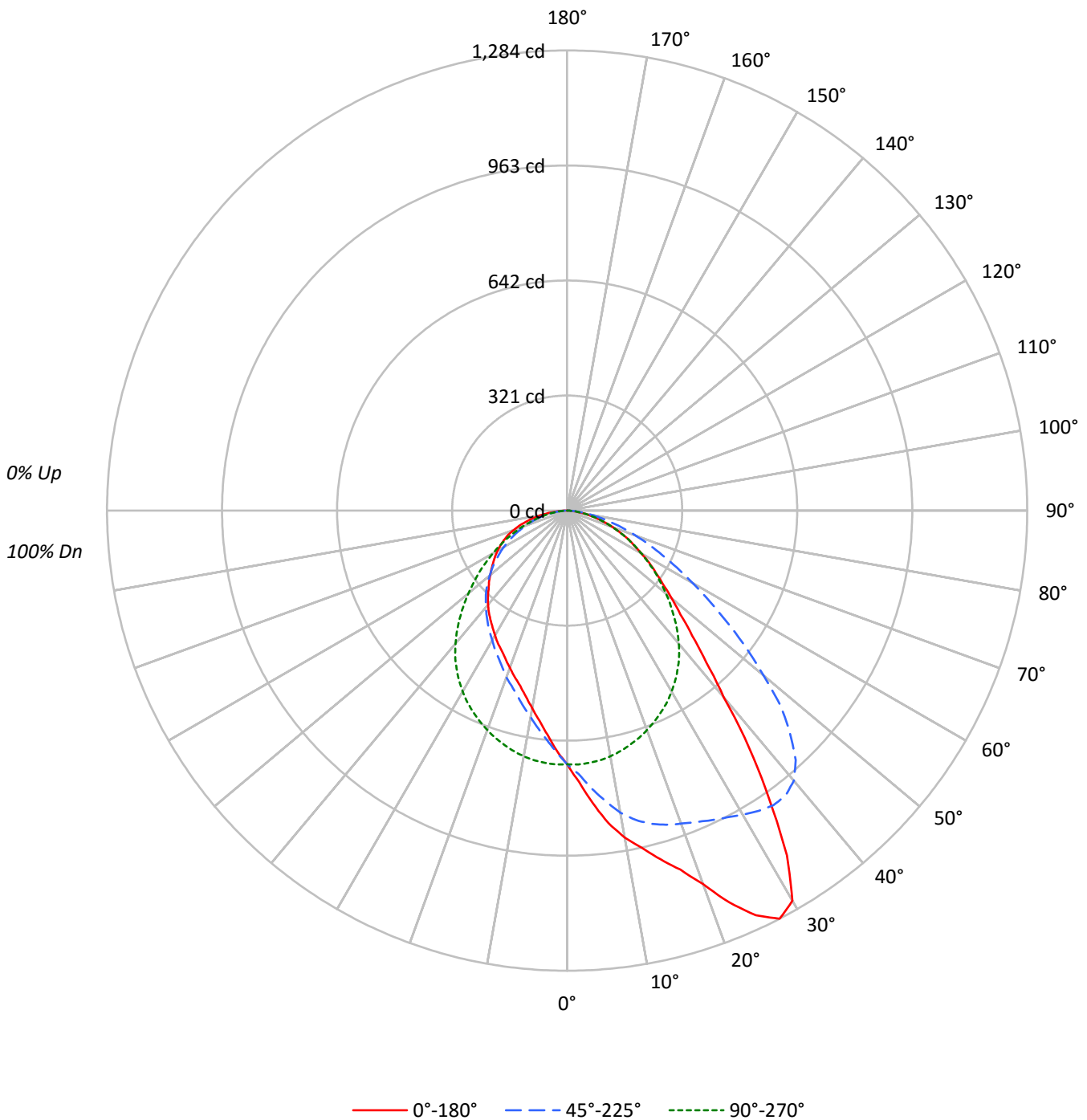
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53
5	78	65	56	50	75	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	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32
9	58	45	37	31	57	44	36	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°	5030	5030	5030
5°	5844	5041	4480
10°	6686	5024	4043
15°	7413	4979	3725
20°	8392	4930	3534
25°	9772	4866	3385
30°	10316	4786	3302
35°	8531	4669	3232
40°	6311	4500	3184
45°	4961	4255	3116
50°	4202	3979	3104
55°	3741	3705	3115
60°	3394	3403	3183
65°	3147	3118	3273
70°	2826	2791	3292
75°	2411	2452	3246
80°	1973	2010	3029
85°	1354	1427	2577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	3.4
10°-20°	204.3	10.1
20°-30°	332.1	16.5
30°-40°	404.1	20.0
40°-50°	369.8	18.3
50°-60°	295.9	14.7
60°-70°	206.1	10.2
70°-80°	109.5	5.4
80°-90°	26.9	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°	604.8	30.0
0°-40°	1008.9	50.0
0°-60°	1674.5	83.0
0°-90°	2017.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2017.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	708	708	708	708	708	
5°	819	778	707	643	628	82
15°	1007	905	677	535	506	289
25°	1246	953	620	453	432	569
35°	983	1004	538	386	372	610
45°	494	880	423	319	310	389
55°	302	546	299	244	251	272
65°	187	292	185	164	195	184
75°	88	129	89	86	118	95
85°	17	25	18	20	32	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°	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7
2.5°	757.7	754.5	753.6	753.9	752.2	750.8	747.3	742.7	739.6	735.6	734.4
5°	819.1	811.3	812.8	810.5	806.7	801.9	797.6	790.7	784.1	777.8	769.4
7.5°	879.4	877.9	873.9	873.3	867.3	859.0	850.4	840.9	826.8	817.1	805.9
10°	926.4	929.3	923.5	923.8	913.2	904.9	897.4	885.1	869.3	856.1	839.7
12.5°	964.3	965.5	964.6	960.9	954.0	939.9	932.7	919.8	902.6	884.5	871.9
15°	1007.4	1004.2	999.3	994.7	984.7	974.6	959.7	944.5	922.7	904.6	886.2
17.5°	1050.4	1049.8	1043.8	1034.0	1021.4	1008.2	985.8	966.3	943.1	919.2	896.3
20°	1109.5	1106.4	1097.5	1086.3	1063.0	1044.4	1016.5	989.8	959.4	929.6	902.9
22.5°	1183.6	1173.2	1164.3	1147.1	1120.4	1088.0	1056.7	1018.0	975.5	940.5	907.2
25°	1246.1	1241.5	1232.1	1212.8	1182.4	1143.4	1096.9	1053.0	999.6	953.1	909.8
27.5°	1284.0	1282.0	1276.3	1258.2	1232.9	1194.2	1144.5	1088.6	1028.0	965.2	913.2
30°	1257.0	1257.3	1260.5	1258.5	1247.3	1222.3	1178.1	1121.9	1051.8	979.5	914.1
32.5°	1141.1	1148.8	1173.5	1185.3	1201.1	1206.2	1186.4	1139.7	1071.9	993.9	916.9
35°	983.2	1002.2	1018.8	1053.3	1094.3	1127.9	1147.4	1132.2	1080.2	1003.6	918.4
37.5°	834.6	833.1	859.0	896.3	939.9	997.0	1052.4	1082.8	1065.9	1001.6	915.8
40°	680.2	693.4	709.5	742.5	793.5	863.9	929.9	995.0	1018.5	983.8	905.8
42.5°	574.6	580.6	596.7	622.5	659.2	731.0	796.1	879.9	940.2	944.2	883.7
45°	493.6	500.2	504.8	530.4	564.5	612.7	679.6	764.0	844.9	879.9	847.8
47.5°	428.8	432.5	442.5	458.0	480.4	523.2	576.6	653.2	741.3	809.3	798.4
50°	380.0	382.9	390.9	399.5	417.9	449.4	492.5	555.3	640.0	714.3	738.7
52.5°	336.9	340.7	344.7	353.0	369.9	391.2	426.2	475.3	553.9	630.0	668.7
55°	301.9	303.4	307.7	314.0	326.9	343.0	370.8	415.3	470.4	546.2	599.5
57.5°	271.5	270.1	274.7	279.0	287.6	301.1	321.1	354.2	406.7	471.2	526.9
60°	238.8	240.2	243.7	247.1	253.1	264.9	280.7	307.1	345.5	403.5	460.3
62.5°	210.7	211.8	212.7	217.5	223.0	231.3	244.2	265.8	297.6	345.5	396.3
65°	187.1	185.1	186.3	189.7	194.0	200.9	213.0	228.7	252.6	291.6	333.8
67.5°	159.6	160.1	160.4	162.4	166.2	172.8	181.4	194.3	213.8	244.5	281.5
70°	136.0	136.3	136.6	138.3	141.5	145.2	151.2	161.3	177.9	201.8	230.7
72.5°	111.9	113.1	113.1	114.5	116.8	118.8	124.6	132.9	145.5	164.4	188.8
75°	87.8	89.8	90.4	92.1	94.1	94.7	99.0	105.6	113.6	129.1	148.4
77.5°	68.3	68.3	69.5	71.5	71.5	73.2	77.8	80.6	87.0	97.6	112.2
80°	48.2	49.1	49.1	49.7	50.8	52.2	54.2	56.8	62.3	70.0	77.8
82.5°	31.6	31.9	32.1	33.6	33.0	34.4	35.3	38.5	41.0	44.8	49.7
85°	16.6	16.6	16.9	17.8	18.7	18.9	19.5	21.0	23.0	24.7	27.6
87.5°	6.9	6.6	6.6	7.2	7.2	7.5	7.7	8.3	9.5	9.5	10.6
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°	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7
2.5°	733.6	731.3	727.2	723.8	719.5	716.3	713.2	709.2	705.1	700.8	696.2
5°	762.8	755.9	748.2	740.4	731.3	723.8	715.8	706.6	698.8	690.2	681.0
7.5°	796.4	784.4	770.9	755.7	741.3	728.4	715.2	702.6	691.1	678.2	665.5
10°	828.8	807.9	791.0	770.3	749.9	731.0	712.9	696.2	679.6	663.5	648.0
12.5°	850.9	827.1	805.9	782.1	758.2	734.4	710.6	687.6	667.8	648.3	632.0
15°	866.2	849.5	821.4	792.7	761.4	730.4	703.4	676.7	653.2	630.5	611.0
17.5°	875.6	854.1	826.5	796.4	762.0	729.5	697.1	665.3	638.3	613.9	591.8
20°	878.2	852.9	824.2	793.0	758.5	722.9	686.5	651.8	622.5	594.7	572.3
22.5°	875.6	846.3	815.6	785.2	749.1	712.9	674.7	636.8	603.3	574.6	551.0
25°	871.3	836.0	803.9	768.0	734.4	700.0	660.7	620.5	585.5	555.6	529.2
27.5°	865.9	825.4	785.8	750.5	714.0	680.2	644.0	603.0	566.5	533.8	509.1
30°	859.5	811.3	767.4	725.5	691.1	657.2	621.9	583.2	546.4	515.2	488.5
32.5°	852.4	796.4	744.8	699.7	663.0	631.7	598.7	561.6	525.5	491.9	468.7
35°	842.3	776.0	720.4	671.6	633.4	599.5	570.5	538.1	502.2	471.0	446.9
37.5°	830.6	758.0	695.7	642.9	601.3	566.5	539.8	513.4	479.9	449.7	426.5
40°	814.8	736.1	669.6	612.4	568.0	533.8	507.7	485.0	457.2	426.8	405.8
42.5°	794.1	712.0	640.0	579.2	536.1	499.7	475.3	454.6	430.8	404.4	383.7
45°	770.6	684.5	607.0	547.3	500.5	465.8	442.0	423.3	405.2	381.7	362.5
47.5°	733.8	652.1	577.1	511.1	465.2	431.6	409.3	391.5	378.0	359.3	340.4
50°	690.2	615.3	541.8	475.6	429.1	396.6	375.4	359.9	348.4	334.1	319.7
52.5°	642.3	574.0	503.1	441.1	394.6	363.9	341.5	327.7	320.3	308.8	297.6
55°	586.3	527.5	461.5	404.9	359.3	328.0	308.8	299.0	290.7	285.0	274.9
57.5°	530.1	480.4	421.6	365.6	323.7	295.9	278.7	267.8	261.7	257.7	250.5
60°	468.7	429.6	375.7	327.2	289.9	263.5	248.3	239.4	233.9	231.6	226.7
62.5°	410.1	380.3	331.2	290.7	257.4	234.2	219.0	211.8	208.4	205.8	202.9
65°	352.4	328.9	290.2	252.3	224.1	203.2	191.1	185.4	182.8	179.9	179.7
67.5°	300.5	279.0	248.0	217.0	193.4	175.6	165.0	159.3	156.4	156.7	155.3
70°	249.4	232.8	207.5	182.2	162.2	148.1	138.0	134.3	133.2	132.9	131.7
72.5°	201.8	192.3	170.2	149.0	133.2	122.3	114.2	111.1	109.6	109.1	109.1
75°	159.9	153.0	134.0	118.0	105.9	97.0	91.6	89.3	87.2	88.4	87.5
77.5°	120.0	114.2	101.3	89.8	80.6	73.2	70.6	68.6	67.4	67.2	68.3
80°	84.4	80.9	72.9	63.7	56.8	52.5	50.8	49.1	48.2	47.6	48.2
82.5°	54.2	52.2	46.5	41.0	37.0	34.7	33.0	32.1	30.7	31.0	31.6
85°	29.6	29.0	25.3	23.5	19.8	19.5	18.4	17.5	17.8	17.2	18.1
87.5°	12.1	11.5	10.6	9.8	8.6	7.7	7.2	7.7	6.9	7.7	7.5
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°	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7
2.5°	694.0	690.8	687.1	683.6	678.5	675.0	673.3	673.9	671.9	671.3	671.0
5°	675.6	668.4	661.5	655.8	649.8	642.9	638.0	636.6	636.0	634.5	631.4
7.5°	656.6	647.5	638.6	630.2	621.6	613.6	608.7	604.7	602.4	598.4	597.5
10°	636.6	625.4	615.9	603.8	593.5	585.2	578.9	575.4	573.4	569.7	566.5
12.5°	617.3	605.6	590.9	580.0	569.1	560.5	553.3	547.6	546.2	541.3	538.7
15°	596.7	582.3	569.1	556.5	546.2	535.2	530.9	525.8	520.6	516.3	515.4
17.5°	576.9	559.6	546.7	534.4	521.8	513.7	508.0	504.5	500.5	498.2	494.2
20°	553.0	539.0	524.6	513.1	502.2	495.4	487.6	484.4	481.6	476.1	474.4
22.5°	532.9	516.0	504.0	492.5	482.7	473.0	467.5	464.4	460.1	457.2	454.9
25°	512.0	497.9	482.7	471.2	462.9	453.2	449.4	445.4	441.7	439.1	436.8
27.5°	491.6	476.1	463.8	452.3	443.7	436.8	431.6	427.3	424.8	422.7	421.3
30°	470.4	456.0	444.6	433.9	424.2	418.4	413.6	411.8	409.0	407.5	405.2
32.5°	451.2	436.5	425.6	416.4	407.8	402.1	399.2	396.6	393.8	391.2	390.9
35°	429.3	416.7	406.7	396.6	390.3	385.7	382.6	380.0	377.7	375.7	374.5
37.5°	410.1	398.1	386.9	379.7	372.8	368.8	365.3	364.5	362.2	362.5	360.8
40°	389.5	378.5	369.1	361.9	357.3	353.0	350.7	347.8	346.4	346.7	345.3
42.5°	369.4	359.3	350.7	344.1	339.2	336.1	334.1	331.8	330.0	328.9	328.6
45°	349.0	340.1	332.9	326.3	322.3	319.4	316.8	314.0	312.5	312.0	311.7
47.5°	328.9	320.9	313.1	308.5	304.8	302.2	299.6	297.3	296.2	295.3	293.9
50°	308.2	300.2	294.7	289.0	285.8	282.4	279.5	278.4	276.9	276.7	278.1
52.5°	286.7	280.4	275.5	270.9	267.2	263.5	260.6	259.2	260.0	260.0	261.7
55°	266.3	259.7	255.1	251.4	247.4	243.9	241.1	241.1	241.1	242.8	245.1
57.5°	243.7	237.9	234.5	230.2	226.4	224.1	222.1	221.8	223.0	225.9	228.4
60°	220.7	216.7	213.0	209.5	205.8	204.1	203.8	203.2	204.9	207.8	213.2
62.5°	198.0	195.4	190.9	189.1	186.0	184.0	184.0	184.5	187.1	191.7	196.6
65°	176.2	172.5	169.0	167.3	165.3	163.6	163.6	165.9	169.6	173.9	179.9
67.5°	153.8	150.7	148.4	146.7	144.4	143.5	144.4	146.9	151.5	155.8	162.2
70°	129.7	129.1	127.1	124.8	123.7	123.7	124.6	127.4	130.9	137.5	142.9
72.5°	107.6	107.6	106.5	105.0	104.2	105.0	105.6	108.5	112.8	118.5	124.6
75°	87.5	86.7	85.8	85.2	85.0	85.5	86.4	88.7	93.8	99.3	104.2
77.5°	67.7	67.2	66.3	66.9	66.9	67.2	69.7	72.3	75.2	79.5	84.7
80°	48.8	49.1	48.2	47.9	49.4	49.9	51.9	54.0	56.0	60.8	64.6
82.5°	32.1	32.7	32.4	33.0	33.6	33.6	35.9	37.9	39.6	43.0	45.9
85°	18.4	18.7	18.7	19.5	20.1	19.8	21.8	23.0	23.8	26.4	28.1
87.5°	8.0	8.3	8.6	8.6	8.6	9.8	10.0	10.6	10.9	11.5	12.3
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-H610D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	707.7	707.7	707.7	707.7
2.5°	668.4	668.1	669.6	670.4
5°	629.4	628.5	627.4	627.9
7.5°	594.7	592.4	591.8	591.8
10°	563.9	561.6	561.1	560.2
12.5°	537.8	534.4	532.9	531.5
15°	513.1	512.6	509.4	506.3
17.5°	490.5	491.3	488.2	486.7
20°	471.5	468.9	467.8	467.2
22.5°	452.3	450.3	450.3	448.3
25°	435.1	433.4	433.6	431.6
27.5°	419.0	418.7	418.4	417.9
30°	404.1	402.9	401.8	402.4
32.5°	389.7	388.0	387.2	386.9
35°	374.8	374.2	373.1	372.5
37.5°	360.2	360.5	359.0	358.7
40°	344.4	344.1	343.8	343.2
42.5°	327.7	326.9	327.5	327.2
45°	311.1	310.2	310.8	310.0
47.5°	294.7	295.3	295.3	295.6
50°	278.7	279.8	279.8	280.7
52.5°	263.7	266.0	266.0	265.8
55°	247.7	250.3	251.1	251.4
57.5°	232.5	235.0	237.6	238.2
60°	216.1	220.7	223.3	223.9
62.5°	201.5	205.8	209.2	209.5
65°	185.1	190.3	193.4	194.6
67.5°	168.5	172.5	176.8	178.5
70°	149.5	154.4	157.3	158.4
72.5°	129.7	135.2	138.9	139.5
75°	110.8	114.8	117.7	118.2
77.5°	89.3	93.3	95.9	96.4
80°	67.7	71.2	72.9	74.0
82.5°	47.9	50.2	51.1	52.2
85°	29.6	31.3	31.6	31.6
87.5°	12.9	13.2	13.2	13.8
90°	0.0	0.0	0.0	0.0

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