

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: P242934

Luminaire Tested: **S125RDR-S610D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242934
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-S610D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2020.4 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

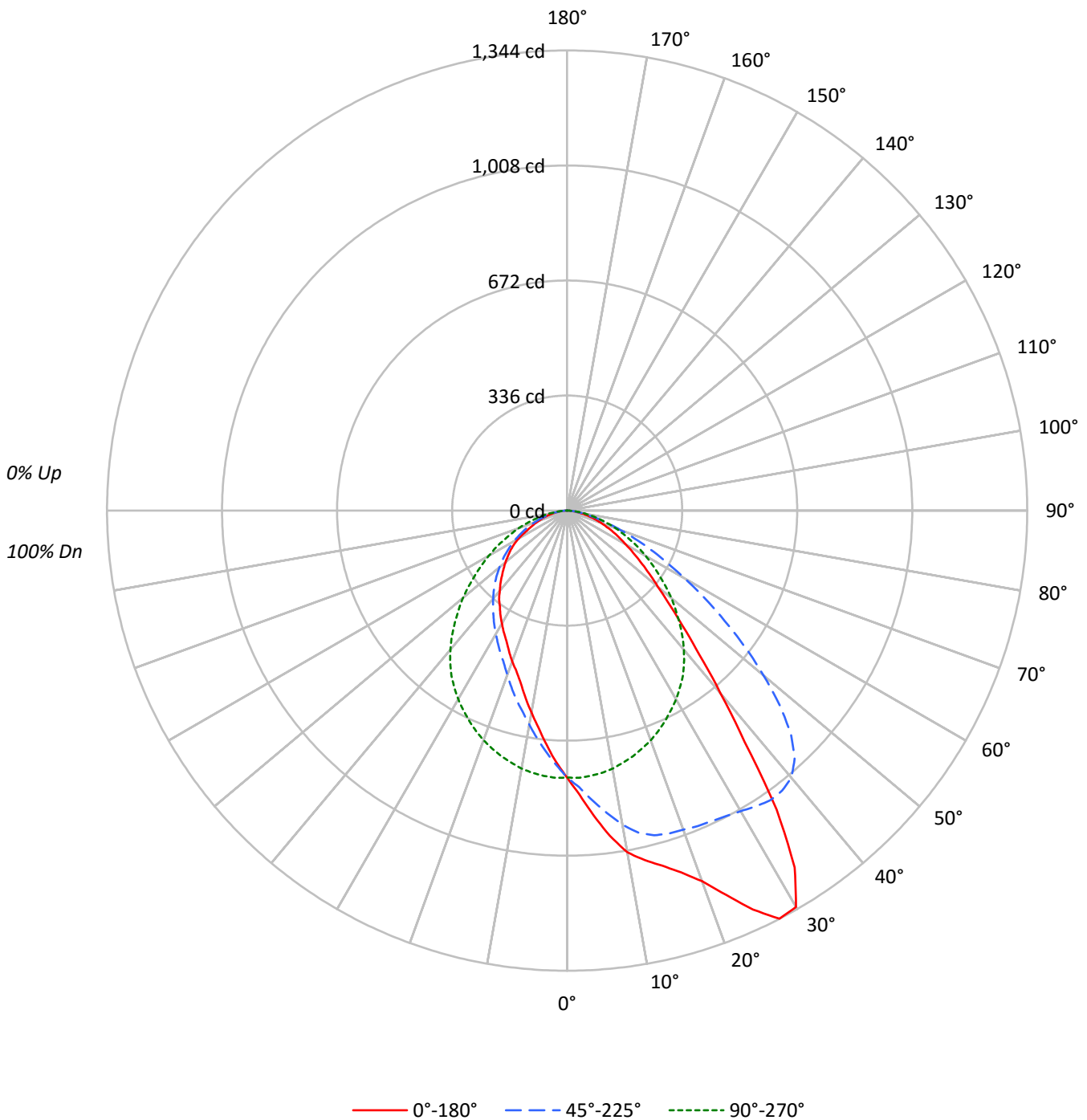
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5542	5542	5542
5°	6377	5550	4901
10°	7314	5522	4325
15°	7900	5465	3844
20°	8712	5400	3550
25°	10082	5312	3294
30°	10971	5220	3126
35°	9254	5113	2972
40°	6463	4921	2839
45°	4794	4662	2709
50°	3822	4393	2598
55°	3245	4058	2499
60°	2803	3758	2338
65°	2497	3434	2013
70°	2194	3146	1837
75°	1898	2724	1722
80°	1441	2292	1441
85°	1199	1802	1354



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	3.7
10°-20°	219.2	10.9
20°-30°	347.6	17.2
30°-40°	420.1	20.8
40°-50°	374.0	18.5
50°-60°	286.8	14.2
60°-70°	186.3	9.2
70°-80°	90.4	4.5
80°-90°	21.3	1.1
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°	641.6	31.8
0°-40°	1061.7	52.5
0°-60°	1722.5	85.3
0°-90°	2020.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2020.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	780	780	780	780	780	
5°	894	850	778	707	687	89
15°	1074	982	743	572	522	307
25°	1286	1000	677	461	420	592
35°	1067	1033	589	375	342	647
45°	477	925	464	297	270	378
55°	262	562	328	218	202	237
65°	148	268	204	140	120	148
75°	69	94	99	69	63	74
85°	15	16	22	18	17	17
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°	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8
2.5°	830.4	829.7	831.0	827.5	827.8	822.4	822.4	818.2	812.8	808.6	806.7
5°	893.8	894.4	893.1	888.3	885.1	880.3	874.9	865.3	857.3	849.6	843.5
7.5°	958.4	959.1	954.9	953.9	945.6	940.5	928.3	915.9	905.0	890.6	880.3
10°	1013.5	1013.2	1008.7	1005.2	998.1	989.2	977.3	962.0	947.5	931.5	916.2
12.5°	1045.5	1044.5	1043.9	1039.4	1033.0	1025.3	1015.7	1000.7	982.1	964.2	945.6
15°	1073.7	1071.4	1067.3	1061.8	1052.5	1043.3	1032.1	1018.6	1001.6	981.8	965.2
17.5°	1107.6	1107.9	1101.5	1095.8	1083.6	1068.2	1051.6	1031.1	1009.3	989.2	972.5
20°	1151.8	1150.8	1144.4	1129.7	1115.3	1094.8	1075.0	1048.4	1020.2	991.7	969.6
22.5°	1215.2	1212.3	1205.6	1185.1	1160.7	1132.9	1099.9	1066.0	1030.5	997.2	966.4
25°	1285.6	1283.7	1270.5	1248.1	1216.8	1176.1	1136.4	1091.9	1042.9	1000.4	965.2
27.5°	1343.8	1340.0	1328.2	1307.0	1276.3	1232.4	1177.7	1120.1	1061.8	1005.8	957.5
30°	1336.8	1341.6	1340.3	1331.7	1309.9	1271.5	1221.9	1155.0	1082.3	1013.5	953.0
32.5°	1236.3	1240.5	1254.9	1278.2	1285.3	1275.7	1241.7	1181.2	1105.4	1024.7	949.5
35°	1066.6	1072.4	1094.2	1128.4	1173.2	1210.7	1218.4	1185.1	1117.5	1033.3	945.9
37.5°	850.9	888.3	903.0	937.9	1008.4	1076.6	1135.8	1149.2	1112.7	1031.4	941.8
40°	696.6	704.3	736.9	777.6	834.5	906.3	1000.7	1068.9	1071.1	1018.6	928.3
42.5°	571.1	581.3	601.2	631.6	678.3	750.0	848.3	943.7	995.2	983.4	910.7
45°	477.0	484.3	500.7	525.6	563.1	622.3	706.2	810.2	892.8	925.1	876.5
47.5°	403.3	407.2	422.2	442.4	471.2	516.0	584.2	678.3	776.6	842.2	829.4
50°	345.7	350.2	361.1	375.5	398.9	435.4	487.2	562.4	664.6	749.4	766.4
52.5°	300.9	304.4	310.2	323.6	341.9	367.8	407.2	473.5	562.8	654.3	699.1
55°	261.9	264.4	269.9	277.5	292.9	313.1	349.2	396.3	470.6	561.5	619.1
57.5°	228.6	229.8	233.0	240.7	251.9	267.0	294.5	337.4	391.2	476.7	540.0
60°	197.2	198.5	203.0	207.8	216.1	229.5	250.0	277.9	329.1	396.6	461.0
62.5°	172.2	172.9	174.1	178.9	186.0	195.6	210.6	232.1	270.2	327.5	387.3
65°	148.5	148.9	149.5	153.3	157.8	165.5	176.1	192.1	222.8	267.6	321.4
67.5°	124.8	125.5	127.7	129.0	134.4	138.3	145.0	157.8	181.5	213.5	257.1
70°	105.6	105.3	107.6	109.2	110.8	115.6	119.7	129.6	143.1	166.1	201.0
72.5°	87.7	86.8	87.4	87.7	90.0	92.8	97.0	102.1	111.7	125.8	150.5
75°	69.1	69.5	69.5	70.1	71.7	73.0	74.3	77.5	83.2	93.8	108.2
77.5°	51.9	51.2	52.8	52.8	54.1	55.7	56.7	57.9	60.2	65.0	73.6
80°	35.2	35.2	35.5	36.5	36.2	36.8	38.4	39.7	42.6	45.1	47.7
82.5°	25.0	24.6	25.0	25.0	25.0	25.6	25.9	25.9	26.6	27.5	29.1
85°	14.7	14.7	15.0	15.0	15.4	15.4	15.7	15.7	15.7	16.0	16.3
87.5°	7.0	6.7	6.4	6.4	6.7	7.4	7.0	6.7	6.7	6.7	7.0
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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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8
2.5°	806.7	804.5	800.3	796.5	791.6	787.5	784.6	781.1	776.6	771.2	766.7
5°	836.8	829.7	820.5	812.5	802.2	794.2	785.9	777.9	769.9	759.6	750.7
7.5°	870.1	856.3	843.5	826.9	811.8	798.7	785.9	772.8	760.3	746.2	733.1
10°	900.2	882.6	863.0	840.6	820.1	800.6	782.7	765.1	746.5	730.2	712.6
12.5°	928.3	904.3	881.3	851.5	825.9	800.9	776.9	753.9	733.7	711.3	692.1
15°	943.1	920.7	895.7	861.1	826.9	798.1	771.2	742.7	718.0	694.3	673.2
17.5°	951.7	928.0	899.2	865.6	828.8	792.9	759.0	728.6	700.4	673.2	649.8
20°	947.9	925.1	895.4	863.7	823.7	785.9	748.4	713.9	681.5	652.4	627.1
22.5°	938.6	914.9	886.4	852.5	815.0	774.4	733.7	696.3	662.0	631.6	603.4
25°	929.3	897.3	867.8	835.2	799.0	759.3	718.0	677.4	641.2	610.5	580.4
27.5°	920.3	881.6	845.1	813.7	775.0	739.1	698.8	656.9	619.1	588.1	557.3
30°	907.2	862.4	821.1	784.3	748.1	714.5	676.7	636.1	597.0	564.7	533.3
32.5°	890.9	842.5	796.1	752.3	717.7	684.4	651.1	612.7	574.9	541.3	509.3
35°	877.8	816.9	767.6	722.5	683.8	651.4	620.7	589.3	551.2	516.7	485.6
37.5°	859.5	792.6	736.9	687.6	647.3	615.3	590.6	560.8	525.3	491.7	462.9
40°	843.2	765.7	703.3	654.6	611.7	577.5	554.8	530.4	498.7	467.7	438.9
42.5°	821.4	741.1	669.4	618.1	574.9	542.3	519.2	498.7	473.5	444.6	413.3
45°	791.6	707.8	634.5	580.1	536.5	504.2	482.7	463.8	443.7	416.8	389.9
47.5°	756.1	676.1	598.9	539.1	497.1	466.7	445.6	429.9	415.2	391.8	364.6
50°	711.6	635.1	560.2	502.6	457.1	428.6	409.1	397.3	384.1	363.3	341.6
52.5°	659.1	592.9	519.9	460.6	418.4	392.1	373.6	361.7	351.5	335.5	315.0
55°	603.4	543.6	476.3	422.9	383.5	356.6	338.7	327.5	321.1	306.7	290.3
57.5°	540.4	494.3	433.4	381.3	345.7	318.8	305.4	295.5	288.1	277.5	265.4
60°	473.8	443.7	390.5	341.6	309.6	284.3	272.4	264.4	257.7	249.1	240.1
62.5°	406.2	386.4	341.9	301.5	272.7	252.6	241.7	234.6	226.6	221.5	212.9
65°	347.3	327.8	295.8	262.8	235.6	218.6	210.6	204.2	199.4	193.0	186.9
67.5°	282.0	273.1	249.4	224.7	204.9	188.5	181.5	176.4	170.9	167.1	162.6
70°	222.8	219.0	203.3	188.2	170.0	159.7	153.3	151.4	144.4	140.5	137.7
72.5°	170.3	169.0	161.7	152.4	140.9	132.2	126.4	124.2	120.4	117.5	115.9
75°	123.9	124.5	122.9	116.2	111.4	105.6	100.5	99.2	96.0	93.5	91.9
77.5°	84.5	87.7	87.1	86.8	84.5	80.3	78.1	77.1	73.6	72.7	72.3
80°	53.8	57.3	60.5	60.2	59.5	58.6	57.0	56.0	54.4	53.5	52.8
82.5°	31.4	34.6	37.1	39.4	39.4	38.4	37.5	37.1	37.1	36.5	36.5
85°	17.0	17.6	18.6	20.8	22.4	22.7	22.4	22.1	21.1	21.4	21.8
87.5°	7.4	7.4	7.7	7.7	7.4	9.0	9.9	10.2	9.6	9.0	8.3
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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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8
2.5°	763.5	759.0	755.8	749.4	744.9	743.0	739.5	738.5	742.0	739.5	739.1
5°	744.0	734.7	727.3	719.9	711.9	706.8	699.1	697.9	695.9	693.1	692.4
7.5°	721.2	709.7	701.1	688.9	679.0	671.0	661.4	657.5	655.6	652.1	646.3
10°	698.2	683.8	671.0	658.8	645.7	635.1	625.5	618.1	613.3	608.9	606.9
12.5°	675.4	660.7	643.4	628.1	613.0	600.9	590.0	585.8	580.4	574.9	569.8
15°	651.8	632.2	614.3	597.3	584.9	572.0	561.8	554.8	546.8	544.5	535.9
17.5°	626.5	608.2	587.1	568.8	554.8	541.3	530.1	521.8	515.7	507.1	502.9
20°	603.1	580.4	559.9	543.6	527.6	510.9	499.4	492.7	486.9	480.2	477.0
22.5°	578.1	556.0	534.9	515.1	498.7	482.4	475.1	468.0	461.3	455.2	450.7
25°	553.8	531.4	509.3	489.5	472.5	460.6	451.0	443.0	439.5	433.4	429.0
27.5°	529.5	505.8	483.4	462.6	449.4	437.6	429.9	423.5	416.8	411.3	407.2
30°	506.1	481.8	456.8	441.1	427.0	415.8	407.2	401.1	396.3	391.5	388.6
32.5°	482.7	457.4	436.0	418.7	405.6	396.3	387.3	381.6	376.5	371.0	367.5
35°	457.4	431.8	413.9	397.3	384.1	375.2	369.1	360.8	356.6	352.8	349.2
37.5°	434.7	410.4	390.5	376.1	364.0	355.3	347.3	343.2	337.7	334.5	331.6
40°	409.1	387.3	369.7	354.4	346.0	336.1	328.8	323.0	319.2	314.7	311.5
42.5°	386.1	366.2	349.2	335.8	324.9	316.9	309.9	304.1	299.0	296.1	293.5
45°	364.6	344.4	327.8	315.0	305.4	297.4	290.0	287.1	280.7	276.9	275.6
47.5°	342.2	324.0	307.6	295.8	285.9	278.5	271.5	265.1	261.9	258.0	256.1
50°	319.5	302.2	287.1	275.6	266.0	257.7	251.3	247.5	242.6	239.1	236.6
52.5°	296.7	281.1	266.0	255.1	247.1	238.8	231.4	227.6	223.1	221.2	219.6
55°	275.3	258.3	245.5	234.6	226.0	218.3	211.6	207.8	204.9	202.6	202.0
57.5°	250.7	236.9	224.7	215.1	205.8	198.5	192.4	188.9	186.3	186.0	183.7
60°	226.6	214.5	203.6	193.0	185.3	178.6	173.5	169.3	166.8	166.5	165.8
62.5°	202.6	191.1	181.2	172.2	165.5	159.1	154.3	149.5	148.2	146.3	144.7
65°	178.9	168.4	160.1	152.7	145.3	139.9	135.1	132.2	128.7	126.8	123.2
67.5°	155.6	146.9	138.9	132.8	126.8	121.3	117.2	113.0	110.4	108.8	106.0
70°	132.5	126.1	118.1	111.4	106.9	102.8	99.6	94.8	93.2	91.9	90.6
72.5°	110.8	105.3	98.9	93.8	89.3	85.5	81.6	80.0	78.4	77.1	76.5
75°	90.6	85.2	79.4	75.5	72.3	69.1	67.2	65.6	65.0	64.7	63.4
77.5°	70.4	67.2	62.4	58.9	56.7	55.4	53.5	52.8	53.1	51.5	51.2
80°	50.9	49.3	45.5	44.2	42.6	41.3	40.3	38.7	37.1	36.5	35.5
82.5°	34.6	33.0	32.0	29.8	28.5	27.9	26.9	26.6	27.2	26.2	25.9
85°	20.2	18.6	17.9	17.6	17.0	17.6	17.3	17.0	16.6	16.3	16.6
87.5°	8.0	8.0	7.7	8.3	7.4	7.7	7.7	7.4	7.4	7.4	7.0
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: S125RDR-S610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	779.8	779.8	779.8	779.8
2.5°	738.8	735.3	734.3	735.6
5°	689.2	686.0	687.6	687.0
7.5°	647.3	643.1	638.3	639.6
10°	602.8	599.6	597.7	599.3
12.5°	565.3	563.7	562.1	560.8
15°	532.0	528.2	526.6	522.4
17.5°	500.0	498.7	494.6	491.7
20°	472.2	470.9	466.7	469.3
22.5°	449.1	445.9	445.3	443.7
25°	427.7	423.5	421.9	420.0
27.5°	405.9	403.7	401.4	400.8
30°	384.8	382.5	380.9	380.9
32.5°	365.9	364.3	362.7	362.4
35°	347.6	345.1	344.4	342.5
37.5°	328.4	326.2	326.2	326.5
40°	310.2	308.6	308.3	306.0
42.5°	290.7	290.0	288.7	288.1
45°	273.4	271.1	271.1	269.5
47.5°	255.1	253.2	253.5	251.6
50°	236.9	235.9	235.6	235.0
52.5°	218.6	218.3	219.9	218.3
55°	202.6	201.7	203.6	201.7
57.5°	183.7	183.1	185.0	183.7
60°	165.2	163.3	164.2	164.5
62.5°	143.1	142.1	142.8	140.9
65°	122.6	121.6	120.4	119.7
67.5°	106.6	103.7	103.7	104.4
70°	88.7	88.7	88.4	88.4
72.5°	76.2	75.9	75.2	74.9
75°	63.4	63.7	63.1	62.7
77.5°	49.6	48.0	48.7	48.0
80°	35.5	35.2	36.2	35.2
82.5°	26.2	25.9	26.2	25.6
85°	17.0	16.6	16.3	16.6
87.5°	7.4	7.0	7.0	7.0
90°	0.0	0.0	0.0	0.0

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