

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242929

Luminaire Tested: S125RDRP-S610D935-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242929  
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  
Product Line: NEO-RAY  
Catalog Number: S125RDRP-S610D935-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

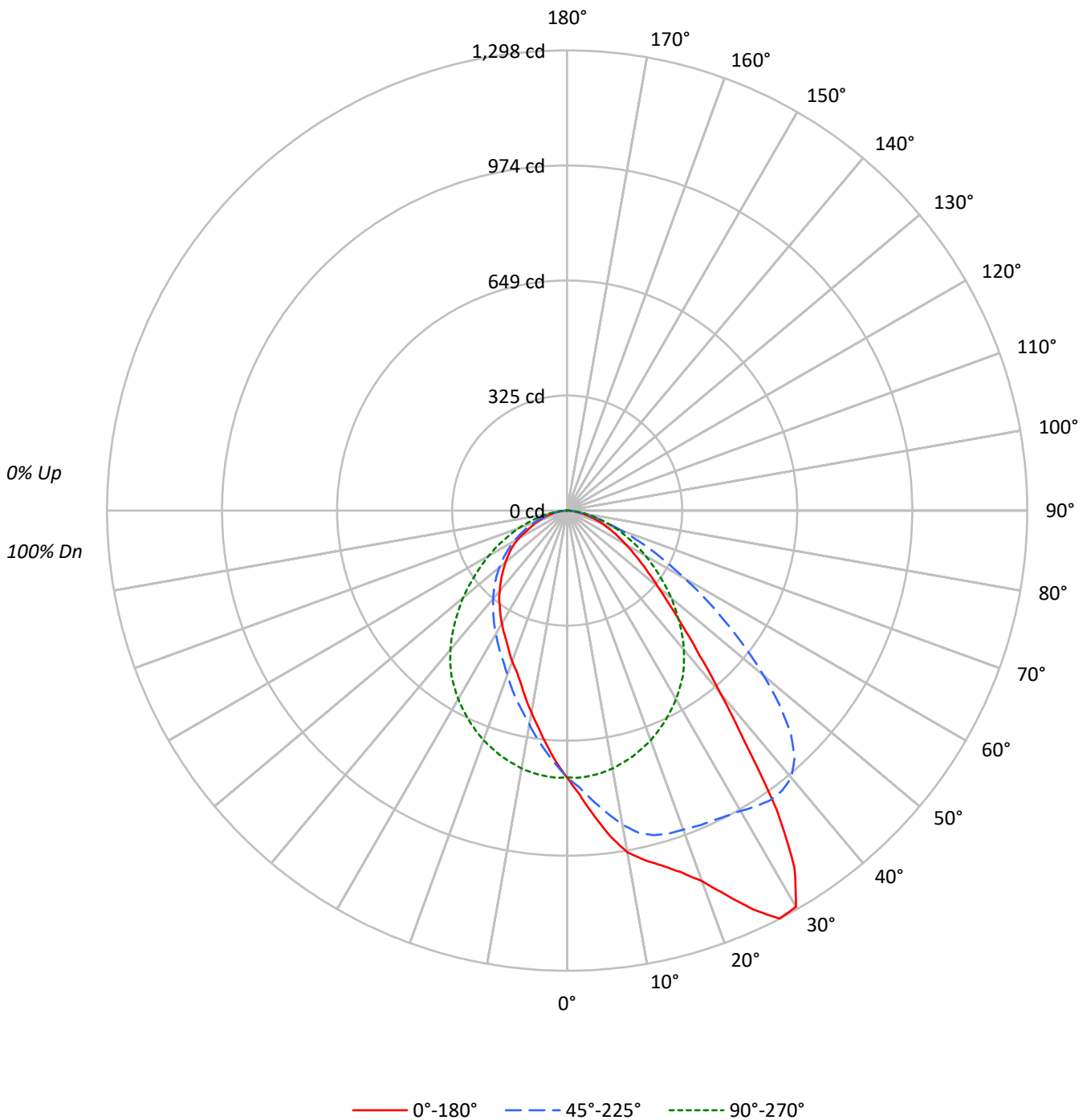
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1950.8 lumens  
Efficiency: N/A  
Efficacy: 103.8 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 (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: 24 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	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					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°	45°	90°	135°	180°
0°	5351	5351	5351	5351	5351
5°	6157	5852	5359	4869	4732
10°	7063	6492	5331	4425	4176
15°	7628	6975	5276	4064	3711
20°	8411	7243	5214	3731	3427
25°	9734	7575	5129	3488	3180
30°	10593	8031	5041	3295	3018
35°	8936	8657	4937	3143	2869
40°	6240	9125	4752	3011	2742
45°	4629	8979	4502	2886	2616
50°	3691	8001	4241	2751	2509
55°	3133	6717	3918	2612	2413
60°	2706	5444	3629	2452	2259
65°	2412	4346	3316	2272	1944
70°	2120	3333	3038	2061	1773
75°	1834	2488	2631	1834	1664
80°	1392	1785	2214	1633	1392
85°	1158	1264	1737	1386	1313

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8979 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	3.7
10°-20°	211.7	10.9
20°-30°	335.6	17.2
30°-40°	405.6	20.8
40°-50°	361.2	18.5
50°-60°	276.9	14.2
60°-70°	179.8	9.2
70°-80°	87.3	4.5
80°-90°	20.5	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°	619.5	31.8
0°-40°	1025.1	52.5
0°-60°	1663.2	85.3
0°-90°	1950.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1950.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	753	753	753	753	753	
5°	863	820	751	682	663	86
15°	1037	948	717	552	504	297
25°	1241	966	654	445	406	571
35°	1030	998	569	362	331	624
45°	460	893	448	287	260	365
55°	253	542	316	211	195	229
65°	143	258	197	135	116	142
75°	67	91	96	67	61	71
85°	14	16	21	17	16	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°	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9
2.5°	801.8	801.2	802.4	799.0	799.3	794.1	794.1	790.0	784.8	780.8	778.9
5°	863.0	863.6	862.4	857.7	854.6	850.0	844.7	835.5	827.7	820.3	814.5
7.5°	925.4	926.0	922.0	921.1	913.1	908.1	896.4	884.3	873.8	859.9	850.0
10°	978.6	978.3	973.9	970.5	963.7	955.1	943.7	928.8	914.9	899.5	884.6
12.5°	1009.5	1008.6	1007.9	1003.6	997.4	990.0	980.7	966.2	948.3	931.0	913.1
15°	1036.7	1034.5	1030.5	1025.3	1016.3	1007.3	996.5	983.5	967.1	948.0	931.9
17.5°	1069.5	1069.8	1063.6	1058.0	1046.3	1031.4	1015.4	995.6	974.6	955.1	939.0
20°	1112.1	1111.2	1105.0	1090.8	1076.9	1057.1	1037.9	1012.3	985.1	957.6	936.2
22.5°	1173.3	1170.5	1164.0	1144.3	1120.8	1093.9	1062.0	1029.3	995.0	962.8	933.1
25°	1241.3	1239.5	1226.8	1205.1	1174.9	1135.6	1097.3	1054.3	1007.0	965.9	931.9
27.5°	1297.6	1293.9	1282.4	1262.0	1232.3	1190.0	1137.1	1081.5	1025.3	971.2	924.5
30°	1290.8	1295.4	1294.2	1285.8	1264.8	1227.7	1179.8	1115.2	1045.0	978.6	920.2
32.5°	1193.7	1197.7	1211.6	1234.2	1241.0	1231.7	1199.0	1140.5	1067.3	989.4	916.8
35°	1029.9	1035.5	1056.5	1089.5	1132.8	1169.0	1176.4	1144.3	1079.0	997.7	913.4
37.5°	821.6	857.7	871.9	905.6	973.6	1039.5	1096.7	1109.6	1074.4	995.9	909.3
40°	672.6	680.0	711.5	750.8	805.8	875.0	966.2	1032.1	1034.2	983.5	896.4
42.5°	551.4	561.3	580.5	609.8	655.0	724.2	819.1	911.2	961.0	949.5	879.4
45°	460.5	467.7	483.4	507.5	543.7	600.9	681.9	782.3	862.1	893.3	846.3
47.5°	389.5	393.2	407.7	427.2	455.0	498.3	564.1	655.0	749.9	813.2	800.9
50°	333.8	338.1	348.7	362.6	385.1	420.4	470.4	543.1	641.7	723.6	740.0
52.5°	290.5	293.9	299.5	312.5	330.1	355.1	393.2	457.1	543.4	631.8	675.1
55°	252.8	255.3	260.6	268.0	282.8	302.3	337.2	382.7	454.4	542.1	597.8
57.5°	220.7	221.9	225.0	232.4	243.3	257.8	284.4	325.8	377.7	460.2	521.4
60°	190.4	191.6	196.0	200.6	208.6	221.6	241.4	268.3	317.7	383.0	445.1
62.5°	166.3	166.9	168.1	172.8	179.6	188.9	203.4	224.1	260.9	316.2	374.0
65°	143.4	143.7	144.3	148.1	152.4	159.8	170.0	185.5	215.1	258.4	310.3
67.5°	120.5	121.2	123.3	124.6	129.8	133.5	140.0	152.4	175.3	206.2	248.2
70°	102.0	101.7	103.9	105.4	106.9	111.6	115.6	125.2	138.2	160.4	194.1
72.5°	84.7	83.8	84.4	84.7	86.9	89.6	93.7	98.6	107.9	121.5	145.3
75°	66.8	67.1	67.1	67.7	69.2	70.5	71.7	74.8	80.4	90.6	104.5
77.5°	50.1	49.5	51.0	51.0	52.2	53.8	54.7	55.9	58.1	62.7	71.1
80°	34.0	34.0	34.3	35.2	34.9	35.5	37.1	38.3	41.1	43.6	46.1
82.5°	24.1	23.8	24.1	24.1	24.1	24.7	25.0	25.0	25.7	26.6	28.1
85°	14.2	14.2	14.5	14.5	14.8	14.8	15.1	15.1	15.1	15.5	15.8
87.5°	6.8	6.5	6.2	6.2	6.5	7.1	6.8	6.5	6.5	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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9
2.5°	778.9	776.7	772.7	769.0	764.4	760.4	757.6	754.2	749.9	744.6	740.3
5°	808.0	801.2	792.2	784.5	774.6	766.9	758.8	751.1	743.4	733.5	724.8
7.5°	840.1	826.8	814.5	798.4	783.9	771.2	758.8	746.1	734.1	720.5	707.8
10°	869.2	852.2	833.3	811.7	791.9	773.0	755.7	738.7	720.8	705.0	688.0
12.5°	896.4	873.2	850.9	822.2	797.5	773.3	750.2	727.9	708.4	686.8	668.3
15°	910.6	888.9	864.8	831.5	798.4	770.6	744.6	717.1	693.3	670.4	650.0
17.5°	918.9	896.1	868.2	835.8	800.2	765.6	732.9	703.5	676.3	650.0	627.5
20°	915.2	893.3	864.5	833.9	795.3	758.8	722.7	689.3	658.1	629.9	605.5
22.5°	906.3	883.4	855.9	823.1	786.9	747.7	708.4	672.3	639.2	609.8	582.6
25°	897.3	866.4	837.9	806.4	771.5	733.2	693.3	654.0	619.1	589.4	560.4
27.5°	888.6	851.2	816.0	785.7	748.3	713.7	674.7	634.3	597.8	567.8	538.1
30°	876.0	832.7	792.8	757.3	722.3	689.9	653.4	614.2	576.5	545.2	514.9
32.5°	860.2	813.5	768.7	726.4	693.0	660.8	628.7	591.6	555.1	522.7	491.8
35°	847.5	788.8	741.2	697.6	660.2	629.0	599.3	569.0	532.3	498.9	468.9
37.5°	829.9	765.3	711.5	663.9	625.0	594.1	570.3	541.5	507.2	474.8	446.9
40°	814.1	739.3	679.1	632.1	590.7	557.6	535.7	512.2	481.6	451.6	423.8
42.5°	793.1	715.5	646.3	596.9	555.1	523.6	501.3	481.6	457.1	429.3	399.0
45°	764.4	683.4	612.6	560.1	518.0	486.8	466.1	447.9	428.4	402.4	376.5
47.5°	730.1	652.8	578.3	520.5	480.0	450.7	430.3	415.1	400.9	378.3	352.1
50°	687.1	613.2	540.9	485.3	441.4	413.9	395.0	383.6	370.9	350.8	329.8
52.5°	636.4	572.4	502.0	444.8	404.0	378.6	360.7	349.3	339.4	323.9	304.1
55°	582.6	524.8	459.9	408.3	370.3	344.3	327.0	316.2	310.0	296.1	280.3
57.5°	521.7	477.2	418.5	368.1	333.8	307.9	294.9	285.3	278.2	268.0	256.2
60°	457.5	428.4	377.1	329.8	298.9	274.5	263.0	255.3	248.8	240.5	231.8
62.5°	392.2	373.1	330.1	291.2	263.3	243.9	233.4	226.6	218.8	213.9	205.5
65°	335.4	316.5	285.6	253.8	227.5	211.1	203.4	197.2	192.6	186.4	180.5
67.5°	272.3	263.7	240.8	217.0	197.8	182.1	175.3	170.3	165.1	161.3	157.0
70°	215.1	211.4	196.3	181.7	164.1	154.2	148.1	146.2	139.4	135.7	132.9
72.5°	164.4	163.2	156.1	147.1	136.0	127.7	122.1	119.9	116.2	113.4	111.9
75°	119.6	120.2	118.7	112.2	107.6	102.0	97.1	95.8	92.7	90.3	88.7
77.5°	81.6	84.7	84.1	83.8	81.6	77.6	75.4	74.5	71.1	70.2	69.9
80°	51.9	55.3	58.4	58.1	57.5	56.6	55.0	54.1	52.5	51.6	51.0
82.5°	30.3	33.4	35.9	38.0	38.0	37.1	36.2	35.9	35.9	35.2	35.2
85°	16.4	17.0	17.9	20.1	21.6	21.9	21.6	21.3	20.4	20.7	21.0
87.5°	7.1	7.1	7.4	7.4	7.1	8.7	9.6	9.9	9.3	8.7	8.0
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9	752.9
2.5°	737.2	732.9	729.8	723.6	719.3	717.4	714.0	713.1	716.5	714.0	713.7
5°	718.3	709.4	702.3	695.1	687.4	682.5	675.1	673.8	672.0	669.2	668.6
7.5°	696.4	685.3	676.9	665.2	655.6	647.9	638.6	634.9	633.0	629.6	624.1
10°	674.1	660.2	647.9	636.1	623.4	613.2	604.0	596.9	592.2	587.9	586.0
12.5°	652.2	638.0	621.3	606.4	591.9	580.2	569.7	565.6	560.4	555.1	550.2
15°	629.3	610.5	593.1	576.8	564.7	552.3	542.5	535.7	527.9	525.8	517.4
17.5°	604.9	587.3	566.9	549.3	535.7	522.7	511.9	503.8	497.9	489.6	485.6
20°	582.3	560.4	540.6	524.8	509.4	493.3	482.2	475.7	470.1	463.6	460.5
22.5°	558.2	536.9	516.5	497.3	481.6	465.8	458.7	451.9	445.4	439.5	435.2
25°	534.7	513.1	491.8	472.6	456.2	444.8	435.5	427.8	424.4	418.5	414.2
27.5°	511.2	488.4	466.7	446.6	434.0	422.5	415.1	408.9	402.4	397.2	393.2
30°	488.7	465.2	441.1	425.9	412.3	401.5	393.2	387.3	382.7	378.0	375.2
32.5°	466.1	441.7	421.0	404.3	391.6	382.7	374.0	368.4	363.5	358.2	354.8
35°	441.7	417.0	399.7	383.6	370.9	362.3	356.4	348.3	344.3	340.6	337.2
37.5°	419.7	396.3	377.1	363.2	351.4	343.1	335.4	331.3	326.1	323.0	320.2
40°	395.0	374.0	357.0	342.2	334.1	324.5	317.4	311.9	308.2	303.8	300.7
42.5°	372.8	353.6	337.2	324.2	313.7	306.0	299.2	293.6	288.7	285.9	283.4
45°	352.1	332.6	316.5	304.1	294.9	287.1	280.0	277.3	271.1	267.4	266.1
47.5°	330.4	312.8	297.0	285.6	276.0	268.9	262.1	255.9	252.8	249.1	247.3
50°	308.5	291.8	277.3	266.1	256.9	248.8	242.6	238.9	234.3	230.9	228.4
52.5°	286.5	271.4	256.9	246.3	238.6	230.6	223.5	219.8	215.4	213.6	212.0
55°	265.8	249.4	237.1	226.6	218.2	210.8	204.3	200.6	197.8	195.7	195.0
57.5°	242.0	228.7	217.0	207.7	198.7	191.6	185.8	182.4	179.9	179.6	177.4
60°	218.8	207.1	196.6	186.4	179.0	172.5	167.5	163.5	161.0	160.7	160.1
62.5°	195.7	184.5	174.9	166.3	159.8	153.6	149.0	144.3	143.1	141.3	139.7
65°	172.8	162.6	154.5	147.4	140.3	135.1	130.4	127.7	124.3	122.4	119.0
67.5°	150.2	141.9	134.1	128.3	122.4	117.1	113.1	109.1	106.6	105.1	102.3
70°	128.0	121.8	114.1	107.6	103.2	99.2	96.1	91.5	89.9	88.7	87.5
72.5°	106.9	101.7	95.5	90.6	86.2	82.5	78.8	77.3	75.7	74.5	73.9
75°	87.5	82.2	76.7	72.9	69.9	66.8	64.9	63.4	62.7	62.4	61.2
77.5°	68.0	64.9	60.3	56.9	54.7	53.5	51.6	51.0	51.3	49.8	49.5
80°	49.1	47.6	43.9	42.7	41.1	39.9	38.9	37.4	35.9	35.2	34.3
82.5°	33.4	31.8	30.9	28.7	27.5	26.9	26.0	25.7	26.3	25.3	25.0
85°	19.5	17.9	17.3	17.0	16.4	17.0	16.7	16.4	16.1	15.8	16.1
87.5°	7.7	7.7	7.4	8.0	7.1	7.4	7.4	7.1	7.1	7.1	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



TEST NUMBER: P242929

CATALOG NUMBER: S125RDRP-S610D935-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	752.9	752.9	752.9	752.9
2.5°	713.4	710.0	709.1	710.3
5°	665.5	662.4	663.9	663.3
7.5°	625.0	621.0	616.3	617.6
10°	582.0	578.9	577.1	578.6
12.5°	545.9	544.3	542.8	541.5
15°	513.7	510.0	508.5	504.4
17.5°	482.8	481.6	477.5	474.8
20°	455.9	454.7	450.7	453.1
22.5°	433.7	430.6	429.9	428.4
25°	412.9	408.9	407.4	405.5
27.5°	391.9	389.8	387.6	387.0
30°	371.5	369.4	367.8	367.8
32.5°	353.3	351.7	350.2	349.9
35°	335.7	333.2	332.6	330.7
37.5°	317.1	315.0	315.0	315.3
40°	299.5	298.0	297.7	295.5
42.5°	280.7	280.0	278.8	278.2
45°	264.0	261.8	261.8	260.3
47.5°	246.3	244.5	244.8	242.9
50°	228.7	227.8	227.5	226.9
52.5°	211.1	210.8	212.3	210.8
55°	195.7	194.7	196.6	194.7
57.5°	177.4	176.8	178.7	177.4
60°	159.5	157.6	158.6	158.9
62.5°	138.2	137.2	137.9	136.0
65°	118.4	117.5	116.2	115.6
67.5°	102.9	100.1	100.1	100.8
70°	85.6	85.6	85.3	85.3
72.5°	73.6	73.3	72.6	72.3
75°	61.2	61.5	60.9	60.6
77.5°	47.9	46.4	47.0	46.4
80°	34.3	34.0	34.9	34.0
82.5°	25.3	25.0	25.3	24.7
85°	16.4	16.1	15.8	16.1
87.5°	7.1	6.8	6.8	6.8
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P242929  
 CATALOG NUMBER: S125RDRP-S610D935-X4F0-XX-UDD-A-W

**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.45	16.99	15.82	17.30	17.61	16.43	17.97	16.80	18.28	18.59
	3H	16.58	17.96	16.96	18.28	18.65	17.91	19.29	18.29	19.61	19.97
	4H	16.97	18.26	17.36	18.60	18.98	18.42	19.71	18.82	20.06	20.44
	6H	17.20	18.39	17.61	18.75	19.15	18.77	19.96	19.18	20.33	20.72
	8H	17.25	18.39	17.68	18.78	19.18	18.87	20.00	19.29	20.39	20.79
	12H	17.29	18.37	17.72	18.75	19.18	18.92	20.01	19.35	20.39	20.82
4H	2H	17.04	18.33	17.44	18.68	19.06	17.28	18.57	17.68	18.92	19.30
	3H	18.11	19.18	18.52	19.58	19.98	18.94	20.01	19.35	20.41	20.81
	4H	18.49	19.45	18.92	19.87	20.31	19.53	20.49	19.96	20.90	21.34
	6H	18.75	19.58	19.20	20.03	20.49	19.95	20.79	20.41	21.23	21.69
	8H	18.81	19.59	19.27	20.03	20.50	20.08	20.86	20.54	21.30	21.77
	12H	18.85	19.55	19.34	20.03	20.50	20.16	20.86	20.64	21.34	21.81
8H	4H	18.87	19.65	19.33	20.09	20.56	19.67	20.46	20.14	20.90	21.37
	6H	19.17	19.82	19.67	20.31	20.78	20.19	20.84	20.69	21.33	21.80
	8H	19.26	19.84	19.78	20.35	20.84	20.37	20.95	20.88	21.46	21.94
	12H	19.34	19.86	19.85	20.35	20.91	20.50	21.01	21.01	21.51	22.07
12H	4H	18.89	19.59	19.37	20.07	20.54	19.66	20.36	20.15	20.84	21.31
	6H	19.20	19.78	19.72	20.29	20.78	20.18	20.76	20.70	21.27	21.76
	8H	19.34	19.85	19.85	20.34	20.90	20.40	20.91	20.91	21.40	21.97