

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: P243691

Luminaire Tested: S125DRP-H610D940-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243691
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
Product Line: NEO-RAY
Catalog Number: S125DRP-H610D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

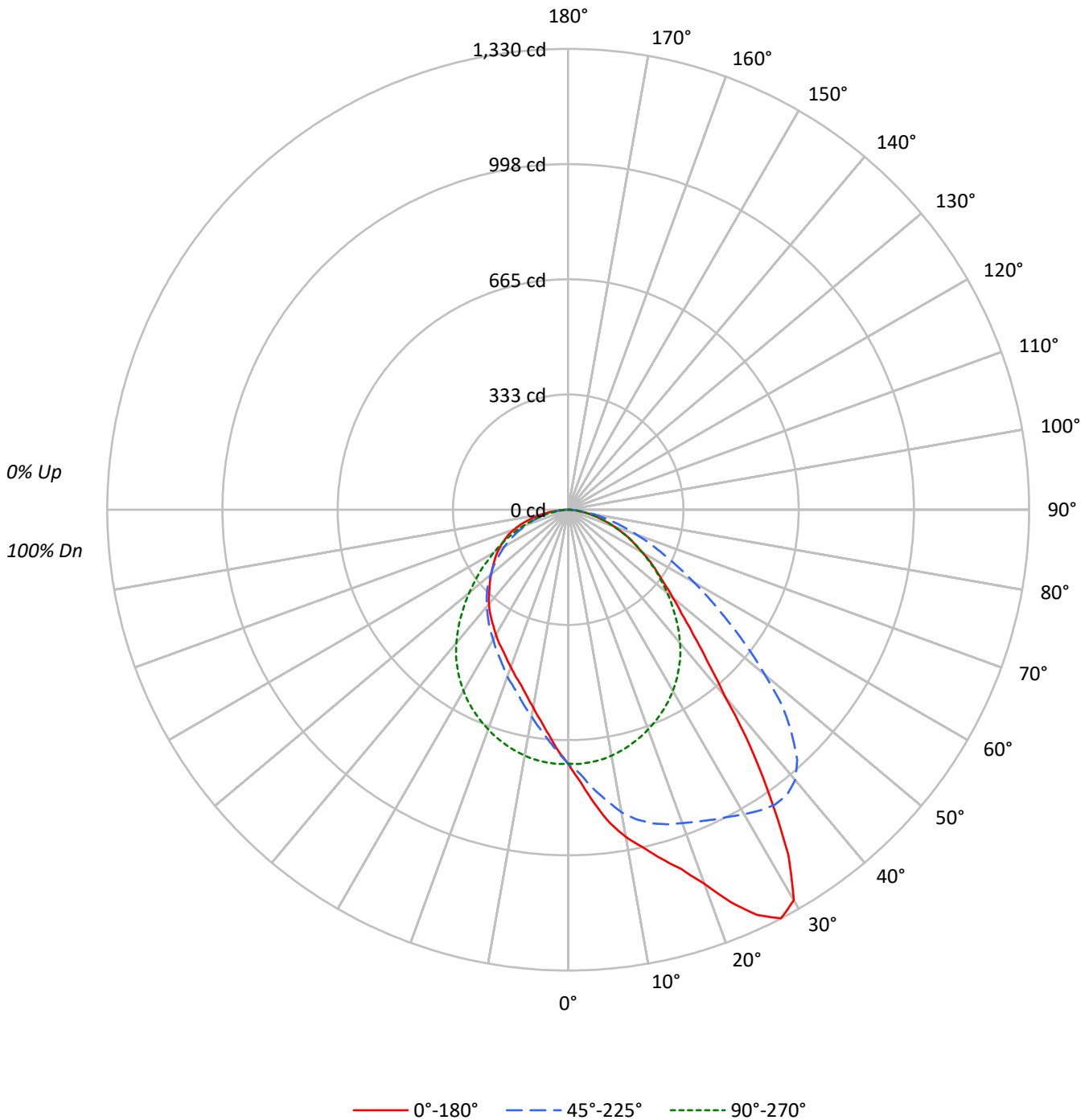
Lumens per Lamp: N/A
Luminaire Lumens: 2089.0 lumens
Efficiency: N/A
Efficacy: 121.5 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P243691

CATALOG NUMBER: S125DRP-H610D940-X4F0-XX-UDD-A-W

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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61					61			
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53					53			
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	40					40			
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36					36			
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32					32			
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5210	5210	5210	5210	5210
5°	6052	5747	5221	4750	4640
10°	6925	6399	5204	4374	4187
15°	7677	6894	5157	4079	3858
20°	8691	7281	5105	3880	3660
25°	10121	7741	5039	3680	3505
30°	10685	8326	4957	3557	3420
35°	8835	9018	4835	3466	3347
40°	6535	9453	4660	3392	3298
45°	5138	9160	4406	3325	3226
50°	4351	8180	4121	3234	3214
55°	3875	7009	3838	3130	3227
60°	3515	5940	3524	3004	3295
65°	3259	5079	3229	2849	3389
70°	2928	4343	2891	2662	3410
75°	2499	3674	2537	2433	3364
80°	2042	2967	2079	2116	3139
85°	1403	2088	1476	1672	2667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9160 cd/sqm



TEST NUMBER: P243691

CATALOG NUMBER: S125DRP-H610D940-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	3.4
10°-20°	211.6	10.1
20°-30°	344.0	16.5
30°-40°	418.5	20.0
40°-50°	382.9	18.3
50°-60°	306.5	14.7
60°-70°	213.4	10.2
70°-80°	113.4	5.4
80°-90°	27.8	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°	626.4	30.0
0°-40°	1044.9	50.0
0°-60°	1734.3	83.0
0°-90°	2089.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2089.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	733	733	733	733	733	
5°	848	806	732	666	650	84
15°	1043	937	701	554	524	299
25°	1291	987	643	469	447	589
35°	1018	1039	557	400	386	631
45°	511	911	438	331	321	403
55°	313	566	310	253	260	282
65°	194	302	192	169	202	191
75°	91	134	92	89	122	98
85°	17	26	18	20	33	22
90°	0	0	0	0	0	



TEST NUMBER: P243691

CATALOG NUMBER: S125DRP-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0
2.5°	784.7	781.4	780.5	780.8	779.0	777.6	774.0	769.2	766.0	761.8	760.6
5°	848.3	840.3	841.8	839.4	835.5	830.5	826.0	818.9	812.0	805.5	796.9
7.5°	910.7	909.2	905.1	904.5	898.2	889.6	880.7	870.9	856.3	846.2	834.6
10°	959.5	962.4	956.5	956.8	945.8	937.2	929.4	916.7	900.3	886.6	869.7
12.5°	998.7	999.9	999.0	995.1	988.0	973.4	966.0	952.6	934.8	916.1	903.0
15°	1043.3	1040.0	1035.0	1030.2	1019.8	1009.4	993.9	978.2	955.6	936.9	917.9
17.5°	1087.9	1087.3	1081.0	1070.9	1057.8	1044.2	1021.0	1000.8	976.7	952.0	928.3
20°	1149.1	1145.8	1136.6	1125.0	1100.9	1081.6	1052.8	1025.2	993.6	962.7	935.1
22.5°	1225.8	1215.1	1205.9	1188.0	1160.4	1126.8	1094.4	1054.3	1010.3	974.0	939.5
25°	1290.6	1285.8	1276.0	1256.1	1224.6	1184.2	1136.0	1090.5	1035.3	987.1	942.2
27.5°	1329.8	1327.7	1321.8	1303.1	1276.9	1236.8	1185.4	1127.4	1064.7	999.6	945.8
30°	1301.9	1302.2	1305.4	1303.4	1291.8	1265.9	1220.1	1161.9	1089.4	1014.5	946.7
32.5°	1181.8	1189.8	1215.4	1227.6	1243.9	1249.3	1228.8	1180.3	1110.2	1029.3	949.7
35°	1018.3	1037.9	1055.2	1090.8	1133.3	1168.1	1188.3	1172.6	1118.8	1039.4	951.1
37.5°	864.3	862.9	889.6	928.3	973.4	1032.6	1089.9	1121.5	1103.9	1037.3	948.5
40°	704.4	718.1	734.8	768.9	821.8	894.7	963.0	1030.5	1054.9	1018.9	938.1
42.5°	595.1	601.3	617.9	644.7	682.7	757.0	824.5	911.3	973.7	977.9	915.2
45°	511.2	518.1	522.8	549.3	584.7	634.6	703.8	791.2	875.0	911.3	878.0
47.5°	444.1	447.9	458.3	474.4	497.6	541.9	597.1	676.5	767.7	838.2	826.9
50°	393.5	396.5	404.8	413.7	432.8	465.5	510.0	575.1	662.8	739.8	765.1
52.5°	348.9	352.8	357.0	365.6	383.1	405.1	441.4	492.2	573.7	652.4	692.5
55°	312.7	314.2	318.6	325.2	338.5	355.2	384.0	430.1	487.2	565.6	620.9
57.5°	281.2	279.7	284.5	288.9	297.8	311.8	332.6	366.8	421.2	488.1	545.7
60°	247.3	248.8	252.3	255.9	262.2	274.3	290.7	318.0	357.9	417.9	476.8
62.5°	218.2	219.4	220.2	225.3	230.9	239.6	252.9	275.2	308.2	357.9	410.5
65°	193.8	191.7	192.9	196.5	200.9	208.1	220.5	236.9	261.6	302.0	345.7
67.5°	165.3	165.9	166.2	168.2	172.1	178.9	187.9	201.2	221.4	253.2	291.6
70°	140.9	141.2	141.5	143.3	146.5	150.4	156.6	167.0	184.3	209.0	239.0
72.5°	115.9	117.1	117.1	118.6	121.0	123.1	129.0	137.6	150.7	170.3	195.6
75°	91.0	93.0	93.6	95.4	97.5	98.1	102.5	109.4	117.7	133.8	153.7
77.5°	70.7	70.7	71.9	74.0	74.0	75.8	80.5	83.5	90.1	101.1	116.2
80°	49.9	50.8	50.8	51.4	52.6	54.1	56.2	58.9	64.5	72.5	80.5
82.5°	32.7	33.0	33.3	34.8	34.2	35.7	36.6	39.8	42.5	46.4	51.4
85°	17.2	17.2	17.5	18.4	19.3	19.6	20.2	21.7	23.8	25.6	28.5
87.5°	7.1	6.8	6.8	7.4	7.4	7.7	8.0	8.6	9.8	9.8	11.0
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: P243691

CATALOG NUMBER: S125DRP-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0
2.5°	759.7	757.3	753.2	749.6	745.2	741.9	738.6	734.5	730.3	725.8	721.1
5°	790.0	782.9	774.9	766.9	757.3	749.6	741.3	731.8	723.8	714.8	705.3
7.5°	824.8	812.3	798.4	782.6	767.7	754.4	740.7	727.6	715.7	702.4	689.3
10°	858.4	836.7	819.2	797.8	776.7	757.0	738.3	721.1	703.8	687.2	671.1
12.5°	881.3	856.6	834.6	810.0	785.3	760.6	735.9	712.2	691.7	671.4	654.5
15°	897.0	879.8	850.7	821.0	788.6	756.5	728.5	700.9	676.5	653.0	632.8
17.5°	906.9	884.6	856.0	824.8	789.1	755.6	722.0	689.0	661.0	635.8	612.9
20°	909.5	883.4	853.6	821.3	785.6	748.7	711.0	675.0	644.7	615.9	592.7
22.5°	906.9	876.5	844.7	813.2	775.8	738.3	698.8	659.6	624.8	595.1	570.7
25°	902.4	865.8	832.5	795.4	760.6	724.9	684.2	642.6	606.4	575.4	548.1
27.5°	896.7	854.8	813.8	777.3	739.5	704.4	667.0	624.5	586.7	552.9	527.3
30°	890.2	840.3	794.8	751.4	715.7	680.7	644.1	604.0	565.9	533.5	505.9
32.5°	882.8	824.8	771.3	724.7	686.6	654.2	620.0	581.7	544.2	509.5	485.4
35°	872.4	803.7	746.1	695.5	656.0	620.9	590.9	557.3	520.2	487.8	462.8
37.5°	860.2	785.0	720.5	665.8	622.7	586.7	559.1	531.7	497.0	465.8	441.7
40°	843.8	762.4	693.4	634.3	588.2	552.9	525.8	502.3	473.5	442.0	420.3
42.5°	822.4	737.4	662.8	599.8	555.2	517.5	492.2	470.8	446.1	418.8	397.4
45°	798.1	708.9	628.6	566.8	518.4	482.4	457.7	438.4	419.7	395.3	375.4
47.5°	760.0	675.3	597.7	529.4	481.8	447.0	423.9	405.4	391.5	372.1	352.5
50°	714.8	637.3	561.2	492.5	444.4	410.8	388.8	372.7	360.8	346.0	331.1
52.5°	665.2	594.5	521.0	456.8	408.7	376.9	353.7	339.4	331.7	319.8	308.2
55°	607.2	546.3	477.9	419.4	372.1	339.7	319.8	309.7	301.1	295.2	284.7
57.5°	549.0	497.6	436.6	378.7	335.3	306.4	288.6	277.3	271.1	266.9	259.5
60°	485.4	445.0	389.1	338.8	300.2	272.9	257.1	247.9	242.2	239.9	234.8
62.5°	424.7	393.8	343.0	301.1	266.6	242.5	226.8	219.4	215.8	213.1	210.1
65°	365.0	340.6	300.5	261.3	232.1	210.4	198.0	192.0	189.3	186.4	186.1
67.5°	311.2	288.9	256.8	224.7	200.3	181.9	170.9	165.0	162.0	162.3	160.8
70°	258.3	241.1	214.9	188.7	167.9	153.4	143.0	139.1	137.9	137.6	136.4
72.5°	209.0	199.1	176.3	154.3	137.9	126.6	118.3	115.0	113.5	112.9	112.9
75°	165.6	158.4	138.8	122.2	109.7	100.5	94.8	92.4	90.4	91.5	90.7
77.5°	124.2	118.3	104.9	93.0	83.5	75.8	73.1	71.0	69.8	69.6	70.7
80°	87.4	83.8	75.5	66.0	58.9	54.4	52.6	50.8	49.9	49.3	49.9
82.5°	56.2	54.1	48.2	42.5	38.3	36.0	34.2	33.3	31.8	32.1	32.7
85°	30.6	30.0	26.2	24.4	20.5	20.2	19.0	18.1	18.4	17.8	18.7
87.5°	12.5	11.9	11.0	10.1	8.9	8.0	7.4	8.0	7.1	8.0	7.7
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: P243691

CATALOG NUMBER: S125DRP-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0	733.0
2.5°	718.7	715.4	711.6	708.0	702.7	699.1	697.3	697.9	695.8	695.2	694.9
5°	699.7	692.3	685.1	679.2	672.9	665.8	660.7	659.3	658.7	657.2	653.9
7.5°	680.1	670.6	661.3	652.7	643.8	635.5	630.4	626.3	623.9	619.7	618.8
10°	659.3	647.7	637.9	625.4	614.7	606.1	599.5	595.9	593.9	590.0	586.7
12.5°	639.3	627.2	612.0	600.7	589.4	580.5	573.1	567.1	565.6	560.6	557.9
15°	617.9	603.1	589.4	576.3	565.6	554.3	549.9	544.5	539.2	534.7	533.8
17.5°	597.4	579.6	566.2	553.4	540.4	532.0	526.1	522.5	518.4	516.0	511.8
20°	572.8	558.2	543.3	531.4	520.2	513.0	505.0	501.7	498.8	493.1	491.3
22.5°	552.0	534.4	521.9	510.0	499.9	489.8	484.2	480.9	476.5	473.5	471.1
25°	530.3	515.7	499.9	488.1	479.4	469.3	465.5	461.3	457.4	454.8	452.4
27.5°	509.2	493.1	480.3	468.4	459.5	452.4	447.0	442.6	439.9	437.8	436.3
30°	487.2	472.3	460.4	449.4	439.3	433.4	428.3	426.5	423.6	422.1	419.7
32.5°	467.2	452.1	440.8	431.3	422.4	416.4	413.4	410.8	407.8	405.1	404.8
35°	444.7	431.6	421.2	410.8	404.2	399.5	396.2	393.5	391.2	389.1	387.9
37.5°	424.7	412.3	400.7	393.2	386.1	381.9	378.4	377.5	375.1	375.4	373.6
40°	403.3	392.0	382.2	374.8	370.1	365.6	363.2	360.2	358.8	359.1	357.6
42.5°	382.5	372.1	363.2	356.4	351.3	348.1	346.0	343.6	341.8	340.6	340.3
45°	361.4	352.2	344.8	338.0	333.8	330.8	328.1	325.2	323.7	323.1	322.8
47.5°	340.6	332.3	324.3	319.5	315.7	313.0	310.3	307.9	306.7	305.9	304.4
50°	319.2	310.9	305.3	299.3	296.0	292.5	289.5	288.3	286.8	286.5	288.0
52.5°	296.9	290.4	285.3	280.6	276.7	272.9	269.9	268.4	269.3	269.3	271.1
55°	275.8	269.0	264.2	260.4	256.2	252.6	249.7	249.7	249.7	251.5	253.8
57.5°	252.3	246.4	242.8	238.4	234.5	232.1	230.1	229.8	230.9	233.9	236.6
60°	228.6	224.4	220.5	217.0	213.1	211.3	211.0	210.4	212.2	215.2	220.8
62.5°	205.1	202.4	197.7	195.9	192.6	190.5	190.5	191.1	193.8	198.6	203.6
65°	182.5	178.6	175.1	173.3	171.2	169.4	169.4	171.8	175.7	180.1	186.4
67.5°	159.3	156.0	153.7	151.9	149.5	148.6	149.5	152.2	156.9	161.4	167.9
70°	134.3	133.8	131.7	129.3	128.1	128.1	129.0	132.0	135.5	142.4	148.0
72.5°	111.5	111.5	110.3	108.8	107.9	108.8	109.4	112.4	116.8	122.8	129.0
75°	90.7	89.8	88.9	88.3	88.0	88.6	89.5	91.8	97.2	102.8	107.9
77.5°	70.1	69.6	68.7	69.3	69.3	69.6	72.2	74.9	77.9	82.3	87.7
80°	50.5	50.8	49.9	49.6	51.1	51.7	53.8	55.9	58.0	63.0	66.9
82.5°	33.3	33.9	33.6	34.2	34.8	34.8	37.2	39.2	41.0	44.6	47.6
85°	19.0	19.3	19.3	20.2	20.8	20.5	22.6	23.8	24.7	27.3	29.1
87.5°	8.3	8.6	8.9	8.9	8.9	10.1	10.4	11.0	11.3	11.9	12.8
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: P243691

CATALOG NUMBER: S125DRP-H610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	733.0	733.0	733.0	733.0
2.5°	692.3	692.0	693.4	694.3
5°	651.8	650.9	649.7	650.3
7.5°	615.9	613.5	612.9	612.9
10°	584.1	581.7	581.1	580.2
12.5°	557.0	553.4	552.0	550.5
15°	531.4	530.9	527.6	524.3
17.5°	508.0	508.9	505.6	504.1
20°	488.4	485.7	484.5	483.9
22.5°	468.4	466.4	466.4	464.3
25°	450.6	448.8	449.1	447.0
27.5°	434.0	433.7	433.4	432.8
30°	418.5	417.3	416.1	416.7
32.5°	403.6	401.9	401.0	400.7
35°	388.2	387.6	386.4	385.8
37.5°	373.0	373.3	371.8	371.5
40°	356.7	356.4	356.1	355.5
42.5°	339.4	338.5	339.1	338.8
45°	322.2	321.3	321.9	321.0
47.5°	305.3	305.9	305.9	306.1
50°	288.6	289.8	289.8	290.7
52.5°	273.2	275.5	275.5	275.2
55°	256.5	259.2	260.1	260.4
57.5°	240.8	243.4	246.1	246.7
60°	223.8	228.6	231.2	231.8
62.5°	208.7	213.1	216.7	217.0
65°	191.7	197.1	200.3	201.5
67.5°	174.5	178.6	183.1	184.9
70°	154.9	159.9	162.9	164.1
72.5°	134.3	140.0	143.9	144.5
75°	114.7	118.9	121.9	122.5
77.5°	92.4	96.6	99.3	99.9
80°	70.1	73.7	75.5	76.7
82.5°	49.6	52.0	52.9	54.1
85°	30.6	32.4	32.7	32.7
87.5°	13.4	13.7	13.7	14.3
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P243691

CATALOG NUMBER: S125DRP-H610D940-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	16.57	18.14	16.93	18.45	18.77	16.31	17.88	16.68	18.20	18.51
	3H	17.92	19.34	18.30	19.66	20.03	17.74	19.15	18.11	19.48	19.84
	4H	18.40	19.73	18.80	20.08	20.46	18.22	19.55	18.62	19.90	20.28
	6H	18.71	19.94	19.12	20.30	20.70	18.54	19.77	18.95	20.13	20.52
	8H	18.79	19.96	19.21	20.35	20.75	18.62	19.79	19.04	20.18	20.58
	12H	18.82	19.94	19.25	20.32	20.75	18.66	19.78	19.09	20.16	20.59
4H	2H	17.96	19.28	18.36	19.63	20.01	17.37	18.70	17.77	19.05	19.43
	3H	19.32	20.42	19.73	20.82	21.22	19.03	20.14	19.44	20.54	20.94
	4H	19.82	20.82	20.25	21.23	21.67	19.59	20.59	20.02	21.00	21.44
	6H	20.17	21.04	20.63	21.48	21.94	19.97	20.84	20.42	21.28	21.74
	8H	20.26	21.08	20.73	21.52	21.98	20.06	20.88	20.53	21.32	21.79
	12H	20.31	21.04	20.79	21.52	21.99	20.12	20.85	20.60	21.32	21.79
8H	4H	20.28	21.09	20.74	21.53	22.00	19.94	20.76	20.41	21.20	21.67
	6H	20.70	21.38	21.20	21.87	22.34	20.45	21.12	20.94	21.61	22.08
	8H	20.83	21.44	21.34	21.94	22.43	20.59	21.20	21.10	21.70	22.19
	12H	20.92	21.45	21.43	21.94	22.51	20.69	21.22	21.20	21.72	22.28
12H	4H	20.32	21.04	20.80	21.52	21.99	19.96	20.69	20.45	21.17	21.64
	6H	20.77	21.38	21.29	21.89	22.37	20.49	21.10	21.01	21.61	22.09
	8H	20.95	21.48	21.46	21.98	22.54	20.70	21.23	21.21	21.72	22.29