

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: P243592

Luminaire Tested: S124RDRP-H575D927-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243592
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-70)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H575D927-X4F0-XX-UDD-A-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

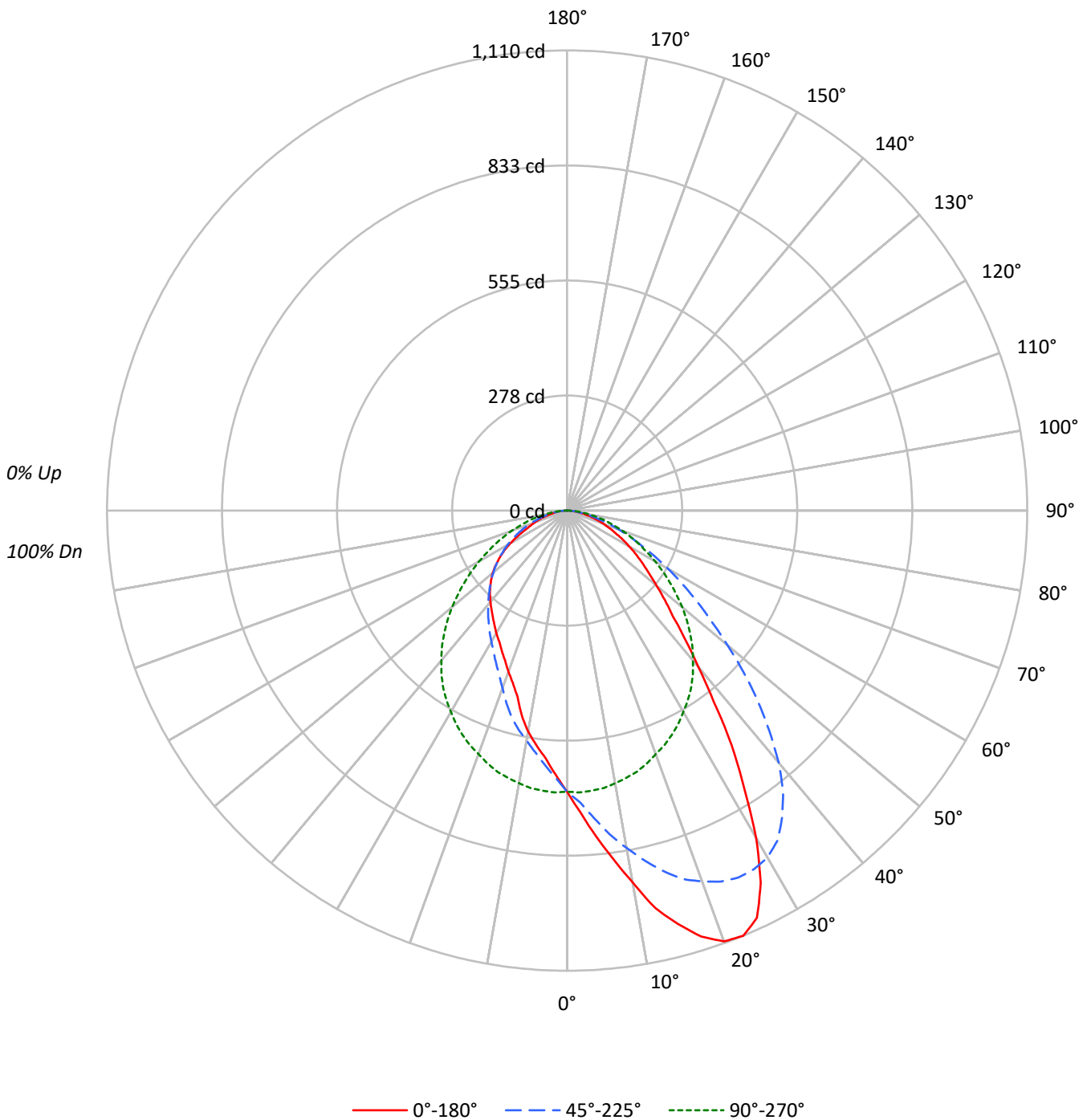
Lumens per Lamp: N/A
Luminaire Lumens: 1750.2 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.23 / 1.39
Luminous Opening: Rectangular (W 3.88' x L: 0.31' x H: 0')
CIE Type: Direct

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: 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	76	70	66	73	69	65	63				63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55				55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48				48
6	73	60	52	46	71	59	51	45	58	50	45	56	50	45	54	49	44	42				42
7	68	55	46	41	66	54	46	40	53	45	40	51	45	40	50	44	40	38				38
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36	34				34
9	59	46	38	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31				31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6028	6028	6028	6028	6028
5°	7021	6642	6053	5495	5344
10°	8223	7458	6028	5084	4886
15°	9502	8291	5997	4750	4267
20°	10461	9005	5912	4313	3911
25°	10629	9580	5858	3981	3657
30°	9357	9920	5754	3745	3507
35°	7508	9809	5657	3579	3393
40°	5711	9213	5476	3435	3340
45°	4534	8186	5275	3316	3300
50°	3893	6978	5014	3210	3243
55°	3437	5926	4689	3098	3086
60°	3079	5010	4352	2958	2827
65°	2711	4120	4022	2755	2377
70°	2417	3397	3652	2526	2142
75°	2105	2665	3318	2222	1906
80°	1787	2042	2851	1879	1756
85°	1560	1673	2448	1836	1775

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 55°
 Vertical Angle: 45°
 Luminance: 8810 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	3.8
10°-20°	199.5	11.4
20°-30°	311.4	17.8
30°-40°	347.3	19.8
40°-50°	312.2	17.8
50°-60°	246.7	14.1
60°-70°	163.8	9.4
70°-80°	82.1	4.7
80°-90°	21.4	1.2
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°	576.8	33.0
0°-40°	924.0	52.8
0°-60°	1482.8	84.7
0°-90°	1750.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1750.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	678	678	678	678	678	
5°	787	744	678	616	599	79
15°	1032	901	652	516	464	293
25°	1084	977	597	406	373	485
35°	692	904	521	330	313	430
45°	361	651	420	264	262	286
55°	222	382	303	200	199	200
65°	129	196	191	131	113	129
75°	61	78	97	65	56	66
85°	15	16	24	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°	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1
2.5°	728.3	725.7	725.4	722.0	721.7	718.3	717.2	714.3	708.5	704.0	704.3
5°	786.9	784.8	784.5	781.1	780.1	775.8	769.2	761.3	752.1	744.4	739.4
7.5°	847.1	850.8	846.9	846.9	839.2	834.2	821.2	814.6	798.8	787.7	776.1
10°	911.0	914.5	912.9	909.7	899.7	889.4	875.9	863.0	843.7	826.3	814.6
12.5°	982.3	972.0	978.6	968.9	960.7	944.3	931.4	905.5	890.2	864.8	842.1
15°	1032.5	1028.5	1028.3	1021.7	1012.7	994.7	980.7	953.8	927.7	901.0	875.4
17.5°	1077.4	1077.9	1074.2	1063.7	1052.0	1034.6	1015.6	991.6	961.7	932.2	901.8
20°	1105.9	1106.2	1103.5	1098.0	1085.3	1069.5	1049.9	1018.5	984.7	952.0	921.6
22.5°	1110.1	1110.9	1110.1	1106.7	1098.0	1085.0	1067.1	1040.4	1006.4	968.9	932.7
25°	1083.7	1086.4	1086.6	1091.4	1086.9	1081.9	1068.7	1046.2	1014.8	976.8	937.4
27.5°	1011.4	1018.8	1025.6	1034.1	1041.7	1048.6	1049.7	1037.8	1010.8	975.5	938.0
30°	911.6	920.3	934.0	943.0	966.7	981.8	1002.1	1006.6	993.7	966.5	930.3
32.5°	795.4	804.6	809.9	839.5	873.5	898.1	931.9	952.0	957.0	944.0	914.5
35°	691.9	693.4	697.4	730.9	764.7	802.0	844.0	878.8	902.6	903.9	889.4
37.5°	580.9	582.8	598.4	624.0	653.3	694.2	742.6	792.2	835.8	855.8	851.6
40°	492.2	491.7	508.3	530.5	559.0	601.5	651.5	705.6	752.1	794.0	804.1
42.5°	420.4	422.2	436.5	449.4	476.9	506.7	560.1	616.3	676.0	722.0	752.6
45°	360.7	365.5	375.2	387.4	408.0	435.4	479.0	535.0	596.0	651.2	687.9
47.5°	319.5	320.8	325.9	340.9	354.6	376.8	414.1	461.6	515.7	577.5	625.8
50°	281.5	284.7	286.5	295.5	309.0	330.1	358.9	394.3	447.9	504.6	565.1
52.5°	248.8	250.6	254.0	262.2	272.8	287.6	310.3	341.4	386.1	438.6	495.7
55°	221.8	222.1	225.5	231.3	239.5	250.9	272.5	295.0	334.6	382.4	434.1
57.5°	197.5	195.9	199.1	202.5	210.5	220.2	234.2	257.2	288.1	328.8	375.5
60°	173.2	174.5	174.3	178.2	182.5	192.2	204.1	219.2	244.5	281.8	321.4
62.5°	150.5	150.3	152.9	155.3	158.2	166.1	175.9	188.3	208.1	235.5	273.8
65°	128.9	129.4	131.5	133.4	136.5	141.5	148.9	159.0	174.8	195.9	228.2
67.5°	109.3	111.2	112.2	112.8	115.7	119.4	125.7	133.9	144.7	161.6	188.5
70°	93.0	93.5	94.0	95.9	97.2	99.3	104.0	108.5	118.3	130.7	150.3
72.5°	77.6	77.1	78.7	79.2	79.7	81.9	84.8	87.1	93.5	104.0	116.2
75°	61.3	61.5	61.8	62.6	64.7	65.0	66.3	68.9	73.4	77.6	85.8
77.5°	45.9	46.7	46.5	47.3	48.1	48.9	49.4	51.8	54.9	58.4	62.3
80°	34.9	34.9	34.9	35.4	34.9	36.7	36.7	37.5	38.3	39.9	42.8
82.5°	23.8	24.3	24.6	24.8	25.1	25.1	25.4	25.9	26.9	27.5	28.3
85°	15.3	14.8	15.1	15.1	15.1	15.1	15.6	16.1	16.1	16.4	17.2
87.5°	6.9	6.9	6.9	6.9	6.6	6.9	7.1	7.1	7.4	7.4	7.9
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°	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1
2.5°	702.7	701.9	697.9	693.7	689.7	685.8	684.5	680.5	675.7	671.5	666.8
5°	734.1	727.8	719.1	710.1	700.8	692.4	685.8	678.4	669.9	659.9	652.0
7.5°	765.8	754.2	739.9	726.7	710.9	698.2	685.5	675.0	662.8	648.5	637.7
10°	796.7	777.4	760.0	739.1	719.1	701.6	685.5	667.8	651.7	636.4	621.3
12.5°	821.2	802.0	776.9	751.3	725.4	702.7	681.0	660.2	640.1	621.6	605.0
15°	849.2	821.5	790.6	762.4	727.0	699.0	674.2	651.7	628.7	606.3	588.1
17.5°	869.8	837.1	798.8	766.3	732.3	697.4	667.6	639.3	612.9	589.4	570.6
20°	885.7	846.9	808.6	767.4	726.7	691.1	657.5	625.0	598.4	572.8	553.0
22.5°	892.5	851.6	809.1	764.5	721.2	680.8	645.9	612.4	582.3	555.9	532.9
25°	895.4	850.6	806.5	755.8	711.9	670.7	631.9	597.3	566.4	536.6	513.9
27.5°	893.1	845.0	794.3	746.5	696.9	656.5	615.3	580.2	547.9	519.2	493.8
30°	886.7	832.3	781.9	728.3	680.5	638.0	597.8	560.6	528.1	498.8	473.7
32.5°	870.4	818.1	760.8	708.5	657.0	615.0	578.6	541.9	508.9	478.2	453.9
35°	850.0	798.8	738.9	684.2	633.2	590.7	554.0	521.3	488.8	456.3	431.5
37.5°	824.4	772.4	714.6	655.7	605.8	564.6	531.0	498.0	465.8	436.0	408.2
40°	789.8	742.3	684.2	625.0	574.9	535.3	502.3	471.9	443.4	414.1	384.2
42.5°	746.8	710.6	650.7	592.3	543.2	503.8	474.5	447.3	419.9	389.8	362.8
45°	700.8	669.9	615.5	556.7	509.9	471.6	443.6	419.6	393.7	367.1	338.8
47.5°	649.1	626.1	579.1	520.7	471.6	438.9	413.0	391.1	367.6	343.8	316.4
50°	590.7	576.7	536.6	483.5	436.8	403.5	382.1	362.6	342.5	318.7	295.2
52.5°	532.4	529.7	492.2	445.5	401.4	370.5	349.6	331.7	315.3	292.8	273.0
55°	471.1	479.0	447.9	404.8	365.5	335.6	317.1	302.6	288.4	269.3	250.3
57.5°	416.7	425.7	404.3	364.7	328.0	302.6	286.8	273.6	261.2	243.7	231.1
60°	356.5	372.9	361.5	325.3	292.8	270.1	255.4	244.8	234.5	219.4	208.3
62.5°	309.0	320.3	313.7	286.8	258.0	239.5	226.3	216.5	208.3	196.7	185.9
65°	258.0	272.3	268.8	251.1	225.8	208.9	198.8	191.2	182.7	173.5	164.5
67.5°	212.0	226.8	226.0	213.9	195.1	181.1	171.6	166.1	159.2	150.3	144.7
70°	170.6	184.3	184.8	178.8	165.6	152.4	145.5	140.5	135.2	128.6	124.6
72.5°	132.6	145.0	147.1	144.2	135.7	127.0	120.9	117.5	113.0	107.5	104.0
75°	99.0	108.0	113.0	111.7	108.3	102.5	99.0	96.6	92.2	88.2	85.3
77.5°	70.5	77.6	82.7	84.8	83.2	80.8	77.6	75.8	71.0	69.2	67.6
80°	47.3	53.6	58.1	59.4	60.2	59.7	56.8	55.7	53.3	52.5	51.0
82.5°	29.0	32.5	35.6	39.1	40.7	40.7	39.1	39.3	37.2	36.2	35.6
85°	17.7	18.5	19.0	21.7	23.8	24.6	23.8	24.0	23.2	22.4	21.7
87.5°	8.2	8.2	8.5	9.0	9.5	11.1	11.6	12.4	11.4	11.4	9.5
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°	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1	678.1
2.5°	663.9	660.4	657.8	653.6	650.1	644.6	642.7	642.7	643.8	642.5	643.8
5°	646.4	640.1	633.2	627.2	620.6	615.8	611.0	610.0	609.5	606.3	606.6
7.5°	629.0	620.6	611.8	603.9	595.7	588.3	583.3	581.2	579.4	577.2	574.9
10°	610.3	600.5	590.2	581.2	573.3	563.3	558.2	556.7	551.4	550.3	546.6
12.5°	590.5	580.4	570.1	558.5	550.8	541.1	533.7	530.2	525.2	521.5	516.0
15°	574.9	562.2	548.5	537.1	527.1	516.2	506.2	499.6	493.0	482.7	477.7
17.5°	555.6	541.1	529.2	517.0	502.5	486.7	474.8	465.0	457.9	449.4	444.4
20°	534.7	521.3	506.5	489.3	474.0	456.0	445.2	437.0	431.5	426.5	423.8
22.5°	516.2	500.7	480.3	464.0	442.6	428.3	419.6	414.3	409.0	403.8	401.1
25°	496.2	478.0	453.1	433.1	417.0	405.9	397.4	392.4	386.9	383.7	379.7
27.5°	476.4	452.9	428.1	409.8	397.2	384.2	377.1	373.1	368.9	364.4	361.2
30°	452.3	425.7	405.1	388.4	375.8	364.9	359.7	353.8	350.2	347.5	345.7
32.5°	427.3	401.6	382.9	368.6	356.2	348.0	341.4	337.7	334.6	331.7	329.6
35°	403.8	378.9	363.1	349.4	339.1	329.8	324.8	321.4	318.7	316.4	315.3
37.5°	380.5	359.4	342.2	331.4	320.6	313.2	308.4	305.3	303.7	301.3	301.6
40°	357.5	338.5	324.8	312.4	302.4	296.0	292.3	291.0	288.6	287.8	288.6
42.5°	336.9	319.5	306.3	294.7	286.0	279.9	277.0	275.2	274.4	274.1	274.4
45°	316.9	300.5	287.8	278.3	269.3	263.8	261.4	260.1	259.3	260.6	260.9
47.5°	296.8	282.0	270.7	259.6	252.2	248.2	245.8	244.8	245.6	246.1	248.0
50°	277.0	263.3	251.4	241.6	235.8	232.1	231.3	229.5	230.8	231.6	232.9
52.5°	256.9	244.5	234.0	224.7	218.6	216.3	214.4	213.6	215.5	215.5	216.8
55°	236.6	225.8	216.0	207.6	202.8	199.9	198.6	197.5	198.6	198.8	198.6
57.5°	217.6	207.3	197.0	189.9	185.9	182.7	181.4	180.9	180.6	181.7	181.4
60°	197.5	187.8	179.6	172.2	168.2	166.4	163.5	164.0	164.0	164.0	161.3
62.5°	177.5	167.7	160.6	155.5	150.8	147.6	147.1	146.3	144.7	144.4	141.0
65°	156.9	149.5	143.4	138.4	133.6	131.0	130.2	127.8	126.0	122.5	120.2
67.5°	137.8	132.6	125.4	121.2	117.2	114.1	111.2	109.3	105.6	102.2	100.1
70°	118.8	113.3	108.5	104.0	100.1	97.2	93.7	90.3	87.9	85.8	84.2
72.5°	99.8	95.1	91.1	86.9	82.7	79.7	77.1	74.5	73.4	72.4	71.6
75°	82.1	77.6	73.9	70.5	68.1	64.7	63.4	62.3	61.3	59.9	58.4
77.5°	65.0	61.5	58.6	55.7	53.6	51.8	50.7	47.5	44.9	44.4	43.8
80°	48.3	45.7	43.8	41.7	39.3	36.7	35.9	34.9	34.3	34.3	34.6
82.5°	33.8	32.2	30.1	28.3	27.5	26.4	26.4	26.1	25.9	26.1	26.1
85°	20.6	18.5	18.0	17.7	18.0	18.0	18.0	18.0	17.7	18.0	17.4
87.5°	9.0	9.8	10.0	9.2	9.5	9.0	9.2	9.2	9.2	9.5	9.2
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: P243592

CATALOG NUMBER: S124RDRP-H575D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	678.1	678.1	678.1	678.1
2.5°	642.2	642.2	639.6	637.5
5°	606.0	602.6	602.1	598.9
7.5°	572.2	571.7	570.4	570.4
10°	545.3	543.4	541.6	541.3
12.5°	507.3	509.9	506.7	506.0
15°	474.0	471.9	469.2	463.7
17.5°	443.1	439.1	438.1	435.7
20°	418.8	415.9	414.8	413.5
22.5°	395.8	395.3	392.1	391.3
25°	378.9	376.3	374.2	372.9
27.5°	360.5	358.6	357.5	355.4
30°	343.6	343.0	341.7	341.7
32.5°	328.2	326.7	326.7	326.4
35°	314.2	314.8	313.2	312.7
37.5°	301.0	300.2	300.5	300.0
40°	288.1	287.6	287.6	287.8
42.5°	274.9	275.2	275.7	275.7
45°	261.7	262.0	262.5	262.5
47.5°	249.3	248.8	249.3	248.8
50°	233.4	235.0	234.8	234.5
52.5°	217.3	216.8	217.9	217.6
55°	199.9	199.1	200.2	199.1
57.5°	180.4	180.6	180.6	180.1
60°	160.8	160.0	159.0	159.0
62.5°	138.1	135.7	134.1	135.2
65°	116.2	114.3	113.8	113.0
67.5°	98.8	96.6	95.9	95.6
70°	83.7	82.7	82.4	82.4
72.5°	71.0	71.0	70.2	69.7
75°	57.8	56.8	55.5	55.5
77.5°	43.3	43.0	42.8	42.8
80°	33.8	33.8	34.1	34.3
82.5°	25.4	25.6	25.9	25.9
85°	17.2	17.2	17.4	17.4
87.5°	9.2	9.2	9.2	9.0
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243592
 CATALOG NUMBER: S124RDRP-H575D927-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	15.58	17.12	15.95	17.43	17.74	17.28	18.81	17.64	19.13	19.44
	3H	16.82	18.19	17.19	18.52	18.88	18.76	20.14	19.14	20.47	20.83
	4H	17.25	18.54	17.65	18.89	19.27	19.30	20.59	19.70	20.94	21.32
	6H	17.53	18.72	17.94	19.09	19.48	19.69	20.88	20.10	21.25	21.64
	8H	17.61	18.75	18.04	19.14	19.54	19.81	20.95	20.23	21.33	21.74
	12H	17.67	18.75	18.10	19.14	19.57	19.89	20.97	20.32	21.36	21.79
4H	2H	16.79	18.08	17.19	18.43	18.81	17.81	19.10	18.21	19.45	19.83
	3H	18.06	19.13	18.47	19.53	19.93	19.58	20.65	19.99	21.05	21.46
	4H	18.53	19.50	18.96	19.91	20.35	20.24	21.21	20.67	21.62	22.06
	6H	18.86	19.70	19.32	20.14	20.60	20.74	21.58	21.19	22.02	22.48
	8H	18.97	19.75	19.43	20.19	20.66	20.89	21.68	21.36	22.12	22.59
	12H	19.04	19.74	19.52	20.22	20.69	21.01	21.71	21.49	22.19	22.66
8H	4H	18.94	19.73	19.40	20.17	20.64	20.37	21.15	20.83	21.60	22.06
	6H	19.34	19.99	19.84	20.48	20.96	20.96	21.61	21.46	22.10	22.58
	8H	19.48	20.07	20.00	20.58	21.06	21.18	21.77	21.70	22.28	22.76
	12H	19.61	20.12	20.12	20.61	21.18	21.36	21.88	21.87	22.37	22.93
12H	4H	18.98	19.69	19.47	20.16	20.63	20.36	21.06	20.84	21.54	22.01
	6H	19.39	19.98	19.91	20.49	20.98	20.96	21.54	21.47	22.05	22.54
	8H	19.59	20.10	20.10	20.59	21.16	21.22	21.73	21.73	22.23	22.79