Equal 16 step grey scaling between L^*_N and L^*_W for three reflections of ambient light

No ambient reflection Y_N=0, L^*_N=0 — lightness difference ΔL^*=6,3

n0.	w*	w*r	L*it	Yit	YN
16	1.0	1.0	95.4	88.5	0.0
15	0.933	0.933	89.0	74.2	0.0
14	0.866	0.866	82.6	61.5	0.0
13	0.8	0.8	76.3	50.4	0.0
12	0.733	0.733	69.9	40.6	0.0
11	0.666	0.666	63.6	32.3	0.0
10	0.6	0.6	57.2	25.1	0.0
9	0.533	0.533	50.8	19.1	0.0
8	0.466	0.466	44.5	14.2	0.0
7	0.4	0.4	38.1	10.1	0.0
6	0.333	0.333	31.8	6.9	0.0
5	0.266	0.266	25.4	4.5	0.0
4	0.2	0.2	19.0	2.7	0.0
3	0.133	0.133	12.7	1.5	0.0
2	0.066	0.066	6.3	0.7	0.0
1	0.0	0.0	0.0	0.0	0.0

Ambient reflection Y_N=2,5, L^*_N=18 — lightness difference ΔL^*=5,1

n0.	w*	w*r	L*it	Yit	YN
16	1.0	1.0	95.4	88.5	2.5
15	0.945	0.933	90.2	76.8	2.5
14	0.891	0.866	85.0	66.1	2.5
13	0.837	0.799	79.9	56.5	2.5
12	0.783	0.733	74.7	47.9	2.5
11	0.729	0.666	69.6	40.1	2.5
10	0.675	0.599	64.4	33.3	2.5
9	0.621	0.533	59.2	27.3	2.5
8	0.567	0.466	54.1	22.0	2.5
7	0.513	0.4	48.9	17.5	2.5
6	0.459	0.333	43.8	13.7	2.5
5	0.405	0.266	38.6	10.4	2.5
4	0.351	0.199	33.4	7.7	2.5
3	0.296	0.133	28.3	5.5	2.5
2	0.242	0.066	23.1	3.8	2.5
1	0.188	0.0	18.0	2.5	2.5

Ambient reflection Y_N=40, L^*_N=70 — lightness difference ΔL^*=1,7

n0.	w*	w*r	L*it	Yit	YN
16	1.0	1.0	95.4	88.5	40.3
15	0.982	0.933	93.6	84.5	40.3
14	0.964	0.866	91.9	80.6	40.3
13	0.946	0.8	90.2	76.8	40.3
12	0.928	0.733	88.5	73.2	40.3
11	0.91	0.666	86.8	69.6	40.3
10	0.892	0.6	85.1	66.2	40.3
9	0.874	0.533	83.4	62.9	40.3
8	0.856	0.466	81.6	59.7	40.3
7	0.838	0.399	79.9	56.6	40.3
6	0.82	0.333	78.2	53.6	40.3
5	0.802	0.266	76.5	50.7	40.3
4	0.784	0.199	74.8	48.0	40.3
3	0.766	0.133	73.1	45.3	40.3
2	0.748	0.066	71.4	42.7	40.3
1	0.73	0.0	69.6	40.3	40.3

ISO/CIE 11664-4: L^*_{it} = intended CIELAB lightness of output
IEC 61966-2-1: w^*_{sRGB} is approximately proportional to L^*
$w^*_{sRGB} = L^*/95{,}4$; $w^*_r = [L^*\text{-}L^*_N] / [L^*_W\text{-}L^*_N]$
Y_{it} = intended tristimulus value with output linearization

1−003000−L0 AE810−3N

Equal 16 step grey scaling between L^*_N and L^*_W for three reflections of ambient light

No ambient reflection Y_N=0, L^*_N=0 — lightness difference ΔL^*=6,3

n0.	w*	w*r	L*re	Yre	YN
16	1.0	1.0	95.4	88.59	0.0
15	0.933	0.933	89.0	74.27	0.0
14	0.866	0.866	82.6	61.58	0.0
13	0.8	0.8	76.3	50.42	0.0
12	0.733	0.733	69.9	40.7	0.0
11	0.666	0.666	63.6	32.32	0.0
10	0.6	0.6	57.2	25.17	0.0
9	0.533	0.533	50.8	19.17	0.0
8	0.466	0.466	44.5	14.2	0.0
7	0.4	0.4	38.1	10.18	0.0
6	0.333	0.333	31.8	7.0	0.0
5	0.266	0.266	25.4	4.56	0.0
4	0.2	0.2	19.0	2.76	0.0
3	0.133	0.133	12.7	1.51	0.0
2	0.066	0.066	6.3	0.7	0.0
1	0.0	0.0	0.0	0.0	0.0

Ambient reflection Y_N=2,5, L^*_N=18 — lightness difference ΔL^*=5,1

n0.	w*	w*r	L*re	Yre	YN
16	1.0	1.0	95.4	88.59	2.52
15	0.945	0.933	89.2	74.67	2.52
14	0.891	0.866	83.0	62.34	2.52
13	0.837	0.799	76.9	51.51	2.52
12	0.783	0.733	70.9	42.06	2.52
11	0.729	0.666	64.9	33.92	2.52
10	0.675	0.599	58.9	26.98	2.52
9	0.621	0.533	53.1	21.14	2.52
8	0.567	0.466	47.3	16.32	2.52
7	0.513	0.4	41.8	12.41	2.52
6	0.459	0.333	36.5	9.32	2.52
5	0.405	0.266	31.6	6.95	2.52
4	0.351	0.199	27.3	5.2	2.52
3	0.296	0.133	23.6	3.99	2.52
2	0.242	0.066	20.8	3.2	2.52
1	0.188	0.0	18.0	2.52	2.52

Ambient reflection Y_N=40, L^*_N=70 — lightness difference ΔL^*=1,7

n0.	w*	w*r	L*re	Yre	YN
16	1.0	1.0	95.4	88.59	40.32
15	0.982	0.933	92.0	80.78	40.32
14	0.964	0.866	88.8	73.87	40.32
13	0.946	0.8	85.9	67.79	40.32
12	0.928	0.733	83.1	62.49	40.32
11	0.91	0.666	80.7	57.93	40.32
10	0.892	0.6	78.4	54.03	40.32
9	0.874	0.533	76.5	50.76	40.32
8	0.856	0.466	74.8	48.06	40.32
7	0.838	0.399	73.4	45.86	40.32
6	0.82	0.333	72.3	44.13	40.32
5	0.802	0.266	71.4	42.8	40.32
4	0.784	0.199	70.7	41.82	40.32
3	0.766	0.133	70.2	41.14	40.32
2	0.748	0.066	69.9	40.7	40.32
1	0.73	0.0	69.6	40.32	40.32

ISO/CIE 11664-4: L^*_{it} = intended CIELAB lightness of output
IEC 61966-2-1: w^*_{sRGB} is approximately proportional to L^*
$w^*_{sRGB} = L^*/95{,}4$; $w^*_r = [L^*\text{-}L^*_N] / [L^*_W\text{-}L^*_N]$
Y_{re} = real tristimulus value without output linearization

1−003000−L0 AE810−7N

Equal 16 step grey scaling between L^*_N and L^*_W for three reflections of ambient light

No ambient reflection Y_N=0, L^*_N=0 — lightness difference ΔL^*=6,3

n0.	w*	w*r	L*re	ΔL*re
16	1.0	1.0	95.4	95.4
15	0.933	0.933	89.0	89.0
14	0.866	0.866	82.6	82.6
13	0.8	0.8	76.3	76.3
12	0.733	0.733	69.9	69.9
11	0.666	0.666	63.6	63.6
10	0.6	0.6	57.2	57.2
9	0.533	0.533	50.8	50.8
8	0.466	0.466	44.5	44.5
7	0.4	0.4	38.1	38.1
6	0.333	0.333	31.8	31.8
5	0.266	0.266	25.4	25.4
4	0.2	0.2	19.0	19.0
3	0.133	0.133	12.7	12.7
2	0.066	0.066	6.3	6.3
1	0.0	0.0	0.0	0.0

Ambient reflection Y_N=2,5, L^*_N=18 — lightness difference ΔL^*=5,1

n0.	w*	w*r	L*re	ΔL*re
16	1.0	1.0	95.4	6.16
15	0.945	0.933	89.2	6.14
14	0.891	0.866	83.0	6.11
13	0.837	0.799	76.9	6.06
12	0.783	0.733	70.9	6.01
11	0.729	0.666	64.9	5.94
10	0.675	0.599	58.9	5.84
9	0.621	0.533	53.1	5.71
8	0.567	0.466	47.3	5.53
7	0.513	0.4	41.8	5.26
6	0.459	0.333	36.5	4.89
5	0.405	0.266	31.6	4.37
4	0.351	0.199	27.3	3.66
3	0.296	0.133	23.6	2.81
2	0.242	0.066	20.8	2.83
1	0.188	0.0	18.0	

Ambient reflection Y_N=40, L^*_N=70 — lightness difference ΔL^*=1,7

n0.	w*	w*r	L*re	ΔL*re
16	1.0	1.0	95.4	3.37
15	0.982	0.933	92.0	3.17
14	0.964	0.866	88.8	2.95
13	0.946	0.8	85.9	2.72
12	0.928	0.733	83.1	2.47
11	0.91	0.666	80.7	2.21
10	0.892	0.6	78.4	1.94
9	0.874	0.533	76.5	1.67
8	0.856	0.466	74.8	1.4
7	0.838	0.399	73.4	1.14
6	0.82	0.333	72.3	0.89
5	0.802	0.266	71.4	0.67
4	0.784	0.199	70.7	0.47
3	0.766	0.133	70.2	0.31
2	0.748	0.066	69.9	0.27
1	0.73	0.0	69.6	

ISO/CIE 11664-4: L^*_{it} = intended CIELAB lightness of output
IEC 61966-2-1: w^*_{sRGB} is approximately proportional to L^*
$w^*_{sRGB} = L^*/95{,}4$; $w^*_r = [L^*\text{-}L^*_N] / [L^*_W\text{-}L^*_N]$
L^*_{re} = real lightness of output without output linearization

1−003000−L0 AE811−3N

Equal 16 step grey scaling between L^*_N and L^*_W for three reflections of ambient light

No ambient reflection Y_N=0, L^*_N=0 — lightness difference ΔL^*=6,3

n0.	w*	w*r	L*re	Yre
16	1.0	1.0	95.4	88.59
15	0.933	0.933	89.0	74.27
14	0.866	0.866	82.6	61.58
13	0.8	0.8	76.3	50.42
12	0.733	0.733	69.9	40.7
11	0.666	0.666	63.6	32.32
10	0.6	0.6	57.2	25.17
9	0.533	0.533	50.8	19.17
8	0.466	0.466	44.5	14.2
7	0.4	0.4	38.1	10.18
6	0.333	0.333	31.8	7.0
5	0.266	0.266	25.4	4.56
4	0.2	0.2	19.0	2.76
3	0.133	0.133	12.7	1.51
2	0.066	0.066	6.3	0.7
1	0.0	0.0	0.0	0.0

Ambient reflection Y_N=2,5, L^*_N=18 — lightness difference ΔL^*=5,1

n0.	w*	w*r	L*re	Yre
16	1.0	1.0	95.4	88.59
15	0.945	0.933	89.2	74.67
14	0.891	0.866	83.0	62.34
13	0.837	0.799	76.9	51.51
12	0.783	0.733	70.9	42.06
11	0.729	0.666	64.9	33.92
10	0.675	0.599	58.9	26.98
9	0.621	0.533	53.1	21.14
8	0.567	0.466	47.3	16.32
7	0.513	0.4	41.8	12.41
6	0.459	0.333	36.5	9.32
5	0.405	0.266	31.6	6.95
4	0.351	0.199	27.3	5.2
3	0.296	0.133	23.6	3.99
2	0.242	0.066	20.8	3.2
1	0.188	0.0	18.0	2.52

Ambient reflection Y_N=40, L^*_N=70 — lightness difference ΔL^*=1,7

n0.	w*	w*r	L*re	Yre
16	1.0	1.0	95.4	88.59
15	0.982	0.933	93.6	92.0
14	0.964	0.866	91.9	88.8
13	0.946	0.8	90.2	85.9
12	0.928	0.733	88.5	83.1
11	0.91	0.666	86.8	80.7
10	0.892	0.6	85.1	78.4
9	0.874	0.533	83.4	76.5
8	0.856	0.466	81.6	74.8
7	0.838	0.399	79.9	73.4
6	0.82	0.333	78.2	72.3
5	0.802	0.266	76.5	71.4
4	0.784	0.199	74.8	70.7
3	0.766	0.133	73.1	70.2
2	0.748	0.066	71.4	69.9
1	0.73	0.0	69.6	69.6

ISO/CIE 11664-4: L^*_{it} = intended CIELAB lightness of output
IEC 61966-2-1: w^*_{sRGB} is approximately proportional to L^*
$w^*_{sRGB} = L^*/95{,}4$; $w^*_r = [L^*\text{-}L^*_N] / [L^*_W\text{-}L^*_N]$
L^*_{re} = real lightness of output without output linearization

1−003000−L0 AE811−7N

Test chart AE81; Equal 16 step grey scaling between L^*_N and L^*_W for three reflections of ambient light

input: *rgb/cmy0/000n/w set...*
output: *->rgb$_{dd}$ setrgbcolor*