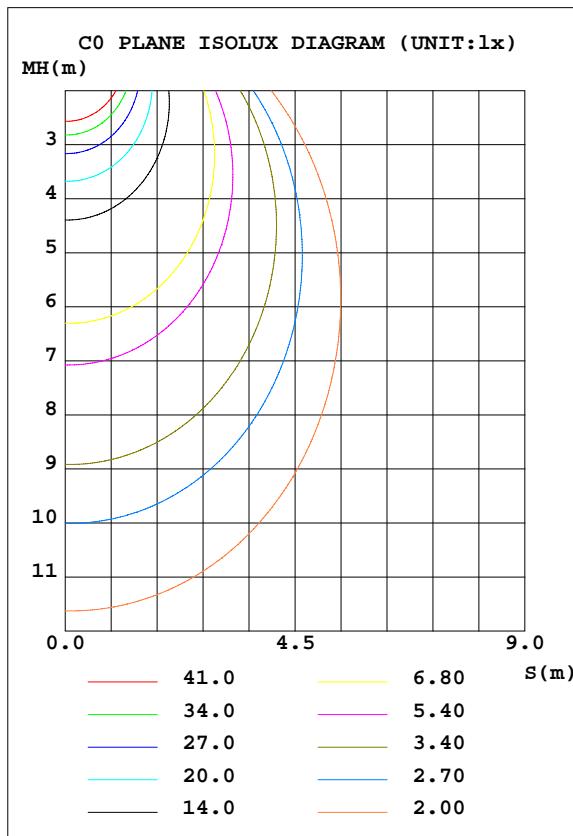
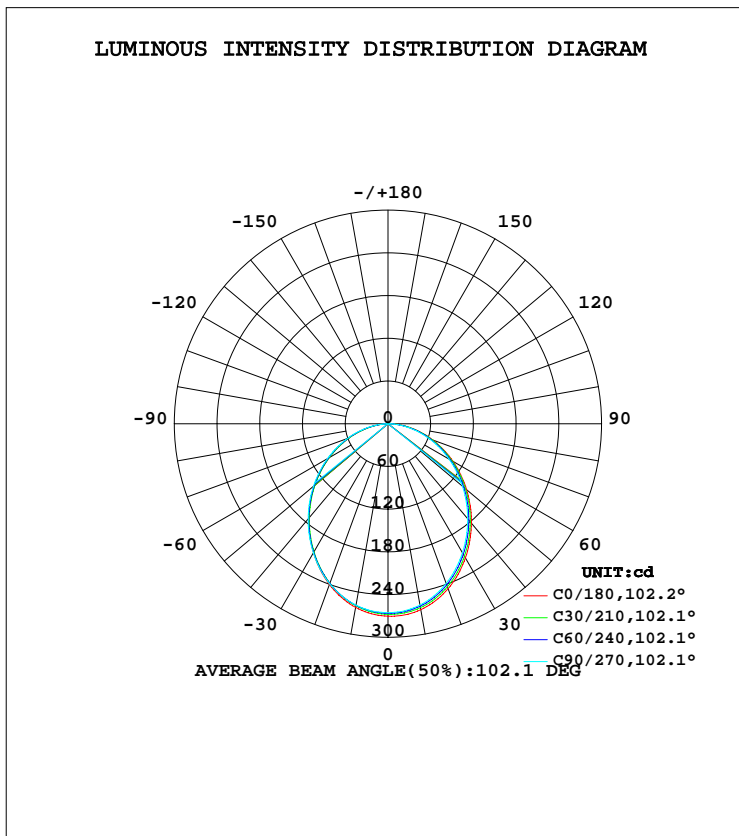


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD Avenue Lighting	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 39.18 lm/W
MODEL	ML1210-BLK	I _{max} (cd)	270.4	S/MH(C0/180)	1.20	
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	1.18	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	686.41	η UP, DN(C0-180)	0.1, 50.1	
NOMINAL FLUX(lm)	686.405	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.1, 49.6	
LAMPS INSIDE	1	η up(%)	0.3	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	99.7	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:tang
 Test Date:2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.262
 Humidity:65.0%
 Test Distance:7.100m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	265.2	261.2	258.6	257.0	261.9	259.2	258.8	259.0	0- 10	25.09	25.09	3.65,3.65
20	246.7	242.3	238.8	236.5	240.4	238.6	239.2	240.3	10- 20	70.73	95.82	14,14
30	217.5	213.2	209.2	206.5	209.4	208.2	209.7	211.3	20- 30	104.0	199.8	29.1,29.1
40	182.3	178.2	174.2	171.3	173.1	172.5	174.4	176.4	30- 40	120.6	320.4	46.7,46.7
50	144.1	140.6	136.7	133.8	134.6	134.5	136.6	138.9	40- 50	120.5	440.9	64.2,64.2
60	105.2	102.4	98.83	95.94	95.77	95.93	98.17	100.6	50- 60	105.5	546.4	79.6,79.6
70	67.05	64.99	61.89	59.11	58.08	58.53	60.69	63.19	60- 70	79.22	625.6	91.1,91.1
80	31.26	29.92	27.31	24.89	23.15	23.83	25.80	28.15	70- 80	46.26	671.9	97.9,97.9
90	0.8735	0.5019	0	0.0001	0	0	0.0024	0.0653	80- 90	12.63	684.5	99.7,99.7
100	0	0.0095	0.0330	0.0165	0.0520	0.0190	0	0.0142	90-100	0.0122	684.5	99.7,99.7
110	0.0802	0.1109	0.1463	0.1227	0.1652	0.1322	0.1037	0.1133	100-110	0.0676	684.6	99.7,99.7
120	0.2122	0.2383	0.2645	0.2524	0.2974	0.2619	0.2405	0.2408	110-120	0.1827	684.8	99.8,99.8
130	0.3444	0.3728	0.4154	0.3846	0.4390	0.4035	0.3727	0.3776	120-130	0.2847	685.1	99.8,99.8
140	0.4813	0.5144	0.5522	0.5214	0.5665	0.5379	0.5002	0.5168	130-140	0.3509	685.4	99.9,99.9
150	0.6133	0.6418	0.6797	0.6465	0.6985	0.6560	0.6322	0.6395	140-150	0.3670	685.8	99.9,99.9
160	0.7407	0.7574	0.8023	0.7504	0.8071	0.7668	0.7455	0.7598	150-160	0.3258	686.1	100,100
170	0.8540	0.8546	0.8637	0.8424	0.8857	0.8501	0.8258	0.8524	160-170	0.2286	686.3	100,100
180	0.9108	0.8825	0.8825	0.8730	0.8966	0.8801	0.8730	0.8778	170-180	0.0827	686.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

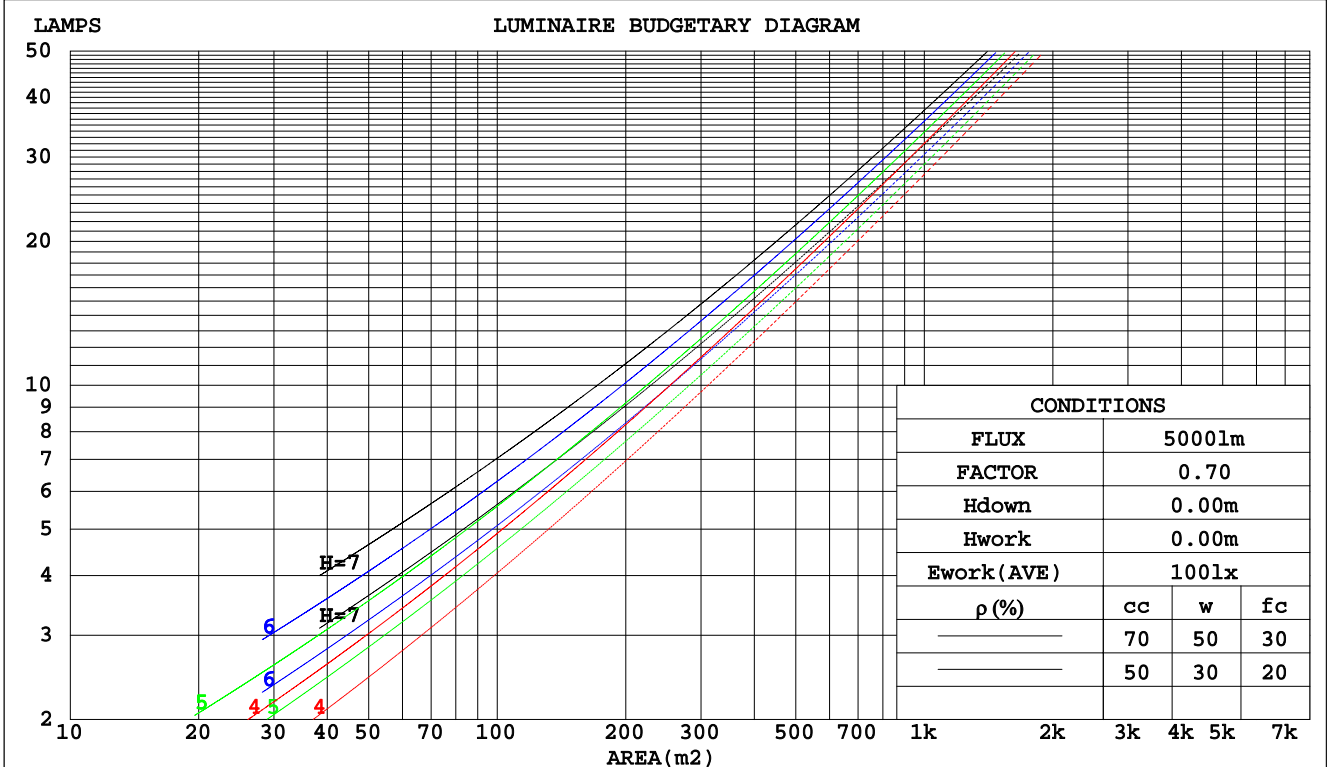
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.04	.00	.96	1.02	.98	.94	.98	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.79	.89	.83	.78	.85	.80	.76	.82	.78	.74	.79	.75	.72	.70
3.0	.80	.72	.66	.78	.71	.65	.75	.69	.64	.73	.67	.63	.70	.65	.62	.59
4.0	.71	.62	.56	.70	.62	.55	.67	.60	.55	.65	.59	.54	.63	.57	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.60	.53	.47	.58	.52	.47	.57	.51	.46	.44
6.0	.57	.49	.42	.56	.48	.42	.55	.47	.42	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.44	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.30	.28
10.0	.41	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.304	.173	.055	.297	.169	.054	.283	.163	.052	.271	.156	.050	.260	.151	.049	
2.0	.286	.157	.048	.280	.154	.047	.268	.149	.046	.257	.144	.045	.247	.140	.044	
3.0	.265	.141	.042	.259	.139	.042	.249	.135	.041	.239	.131	.040	.230	.128	.039	
4.0	.245	.127	.037	.240	.126	.037	.231	.122	.037	.222	.119	.036	.214	.116	.035	
5.0	.226	.115	.033	.222	.114	.033	.214	.111	.033	.206	.109	.032	.199	.106	.032	
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.192	.100	.029	.186	.098	.029	
7.0	.196	.097	.027	.192	.096	.027	.186	.094	.027	.180	.092	.027	.174	.090	.027	
8.0	.183	.089	.025	.180	.089	.025	.174	.087	.025	.169	.085	.025	.163	.084	.024	
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.154	.078	.023	
10.0	.162	.077	.022	.159	.077	.021	.154	.076	.021	.150	.074	.021	.146	.073	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.182	.158	.137	.156	.136	.118	.107	.093	.082	.061	.054	.047	.020	.017	.015	
2.0	.174	.134	.101	.149	.115	.087	.102	.080	.061	.059	.046	.036	.019	.015	.012	
3.0	.166	.116	.077	.142	.100	.067	.098	.070	.047	.056	.041	.028	.018	.013	.009	
4.0	.158	.103	.061	.136	.089	.053	.093	.062	.037	.054	.036	.022	.017	.012	.007	
5.0	.150	.093	.050	.129	.080	.043	.089	.056	.031	.052	.033	.018	.017	.011	.006	
6.0	.143	.084	.042	.123	.073	.036	.085	.051	.026	.049	.030	.015	.016	.010	.005	
7.0	.136	.077	.036	.117	.067	.031	.081	.047	.022	.047	.028	.013	.015	.009	.004	
8.0	.130	.071	.031	.112	.062	.027	.077	.044	.019	.045	.026	.012	.015	.008	.004	
9.0	.124	.067	.028	.107	.058	.024	.074	.041	.017	.043	.024	.010	.014	.008	.003	
10.0	.118	.062	.025	.102	.054	.022	.071	.038	.015	.041	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: tang
 Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
 Humidity: 65.0%
 Test Distance: 7.100m [K=1.0000]
 Remarks:

Uncorrected UGR Table

NAME: Halo-L16-S-3000k-RA90-18W					TYPE:					WEIGHT:				
DIM.:					SPEC.:					SERIAL No.:				
MFR.: VD					SUR.:					PROTECTION ANGLE:				
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3				
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3				
working 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	15.6	17.0	15.8	17.2	17.5	15.3	16.8	15.6	17.0	17.2				
3H	17.1	18.5	17.4	18.7	19.0	16.8	18.2	17.1	18.4	18.6				
4H	17.8	19.1	18.1	19.3	19.6	17.4	18.7	17.7	19.0	19.2				
6H	18.3	19.5	18.6	19.8	20.1	17.8	19.1	18.2	19.4	19.6				
8H	18.5	19.7	18.8	20.0	20.3	18.0	19.2	18.3	19.5	19.8				
12H	18.6	19.8	19.0	20.1	20.4	18.1	19.2	18.4	19.5	19.8				
4H 2H	16.1	17.4	16.4	17.7	18.0	15.9	17.2	16.3	17.5	17.8				
3H	17.9	19.0	18.2	19.3	19.6	17.6	18.8	18.0	19.1	19.4				
4H	18.7	19.7	19.1	20.1	20.4	18.4	19.4	18.7	19.7	20.1				
6H	19.3	20.3	19.8	20.6	21.0	18.9	19.9	19.4	20.2	20.6				
8H	19.6	20.5	20.0	20.8	21.2	19.2	20.0	19.6	20.4	20.8				
12H	19.8	20.6	20.2	21.0	21.4	19.3	20.1	19.7	20.5	20.9				
8H 4H	19.0	19.8	19.4	20.2	20.6	18.7	19.5	19.1	19.9	20.3				
6H	19.8	20.5	20.2	20.9	21.4	19.4	20.2	19.9	20.6	21.0				
8H	20.1	20.8	20.6	21.2	21.7	19.7	20.4	20.2	20.8	21.3				
12H	20.4	21.0	20.9	21.4	21.9	20.0	20.5	20.4	21.0	21.4				
12H 4H	19.0	19.8	19.4	20.2	20.6	18.7	19.5	19.1	19.9	20.3				
6H	19.9	20.5	20.3	20.9	21.4	19.5	20.2	20.0	20.6	21.0				
8H	20.3	20.8	20.7	21.3	21.7	19.9	20.4	20.3	20.9	21.3				
Variations with the observer position at spacings:														
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2								
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3								
2.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.3								

CIE Pub.117 Corrected 686.4 lm Total Lamp Luminous Flux. (8log(F/F0) = -1.3)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

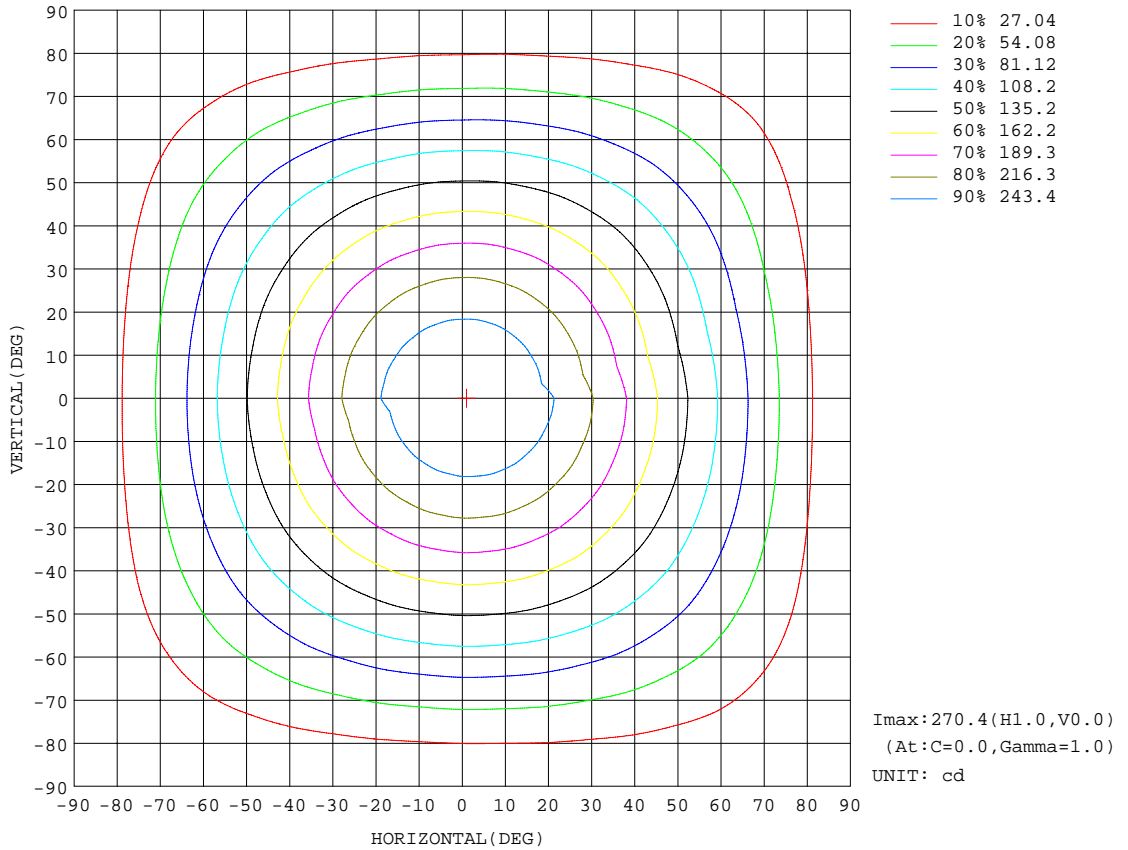
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	47	41	58	47	40	57	47	40	34
0.80	69	57	50	68	57	50	66	56	50	43
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	82	73	66	80	71	65	58
1.50	89	79	72	87	78	72	84	76	71	63
2.00	95	87	81	94	86	80	90	84	79	71
2.50	99	92	86	97	90	85	93	88	83	75
3.00	103	96	90	100	94	89	96	91	87	79
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	99	102	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Halo-L16-s-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

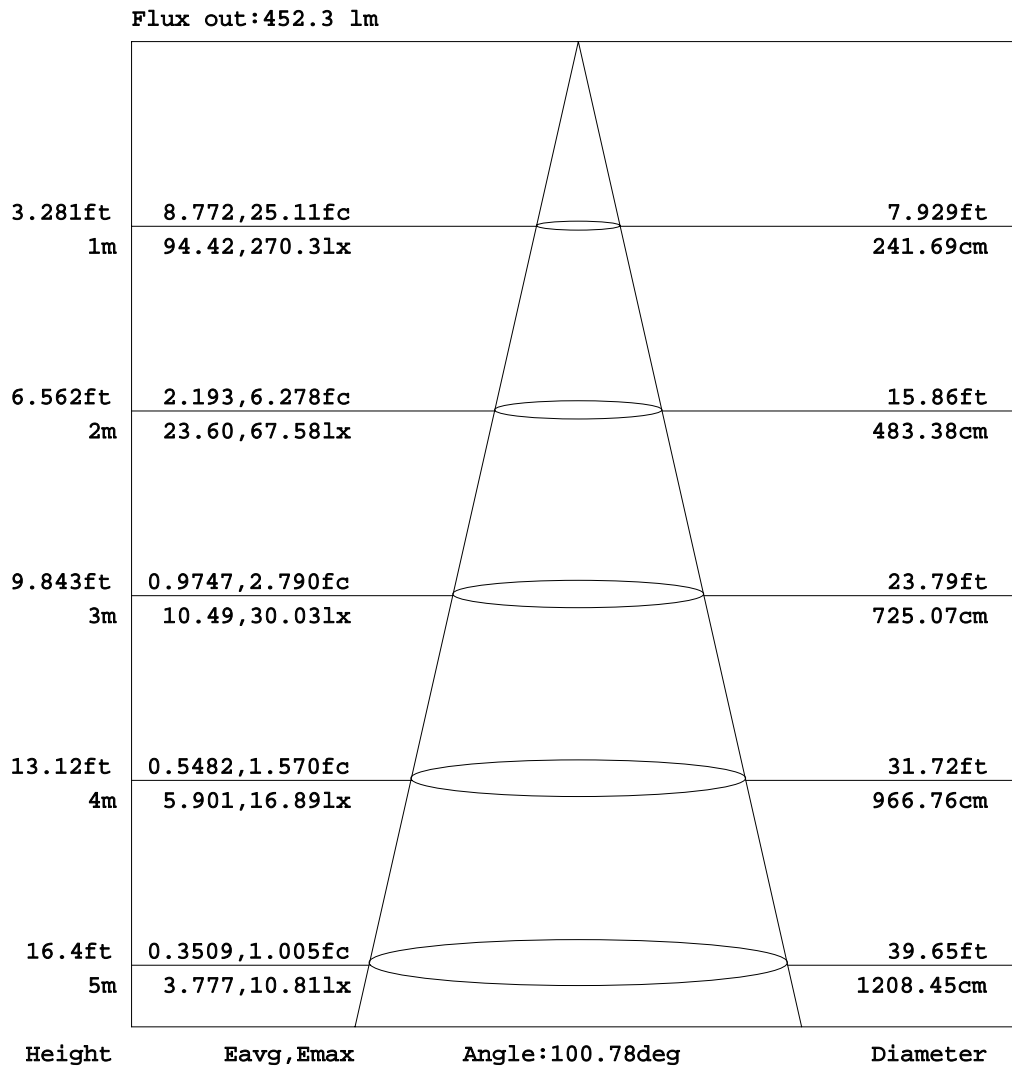


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: tang
 Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
 Humidity: 65.0%
 Test Distance: 7.100m [K=1.0000]
 Remarks:

AAI Figure

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:



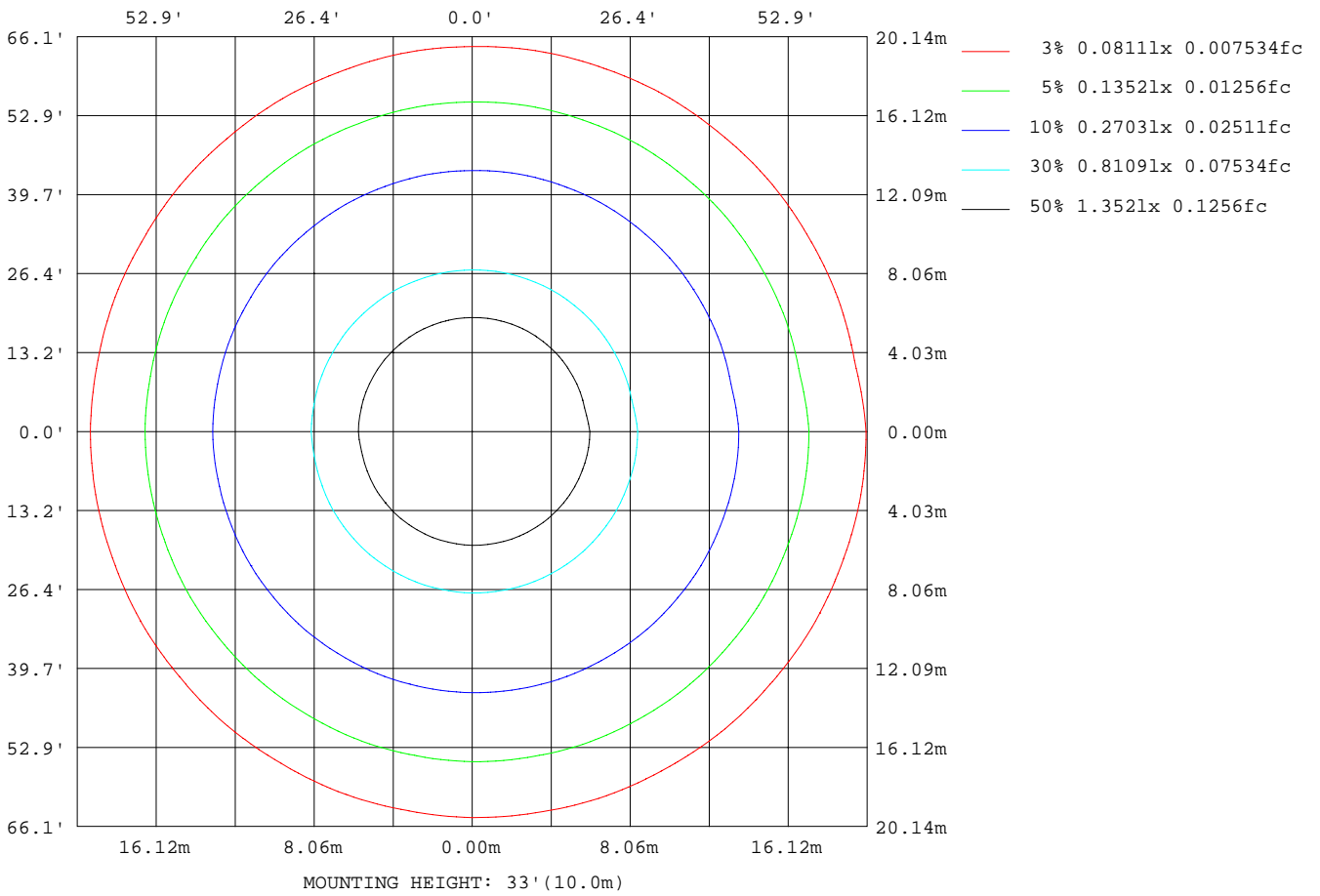
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: Halo-L16-s-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: tang
 Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
 Humidity: 65.0%
 Test Distance: 7.100m [K=1.0000]
 Remarks:

Average Luminance Table(CIBSE)

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	686.405	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.1	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	2174	2169	2149	2143	2122	2113	2092	2083	2061	2053	2034	2027	2011	2008	1996	1997	1989	1994	2007
60	2104	2101	2079	2074	2051	2043	2018	2009	1984	1977	1954	1948	1928	1927	1911	1914	1902	1910	1915
65	2034	2033	2009	2004	1978	1972	1942	1934	1904	1897	1869	1863	1839	1839	1819	1823	1810	1818	1815
70	1960	1963	1935	1934	1903	1897	1862	1853	1818	1810	1776	1771	1742	1740	1716	1722	1704	1716	1698
75	1882	1890	1857	1858	1820	1815	1772	1763	1718	1708	1665	1660	1622	1621	1590	1597	1575	1589	1552
80	1800	1810	1774	1775	1728	1718	1664	1647	1591	1573	1519	1505	1458	1453	1414	1419	1391	1408	1333
85	1708	1732	1675	1682	1601	1588	1494	1463	1364	1330	1235	1210	1127	1115	1048	1053	1005	1029	859

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum	specified	maximum	specified
		calculated	maximum	measured	maximum
Category 1	55 to 90	2174	200	---	500
Category 2	65 to 90	2034	200	---	500
Category 3	75 to 90	1890	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	686.405	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.1	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	2174	2169	2149	2143	2122	2113	2092	2083	2061	2053	2034	2027	2011	2008	1996	1997	1989	1994	2007
60	2104	2101	2079	2074	2051	2043	2018	2009	1984	1977	1954	1948	1928	1927	1911	1914	1902	1910	1915
65	2034	2033	2009	2004	1978	1972	1942	1934	1904	1897	1869	1863	1839	1839	1819	1823	1810	1818	1815
70	1960	1963	1935	1934	1903	1897	1862	1853	1818	1810	1776	1771	1742	1740	1716	1722	1704	1716	1698
75	1882	1890	1857	1858	1820	1815	1772	1763	1718	1708	1665	1660	1622	1621	1590	1597	1575	1589	1552
80	1800	1810	1774	1775	1728	1718	1664	1647	1591	1573	1519	1505	1458	1453	1414	1419	1391	1408	1333
85	1708	1732	1675	1682	1601	1588	1494	1463	1364	1330	1235	1210	1127	1115	1048	1053	1005	1029	859

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

range (deg)	Maximum measured	Average Luminance(cd/sq.m)			
		Maximum limit for screen type & software category used			
		Type I,II screen Some neg.s'ware	Type I,II screen Only pos.s'ware	Type III screen Some neg.s'ware	Type III screen Only pos.s'ware
55 to 90	2174	1000	1500	200	500
65 to 90	2034	1000	1500	200	500

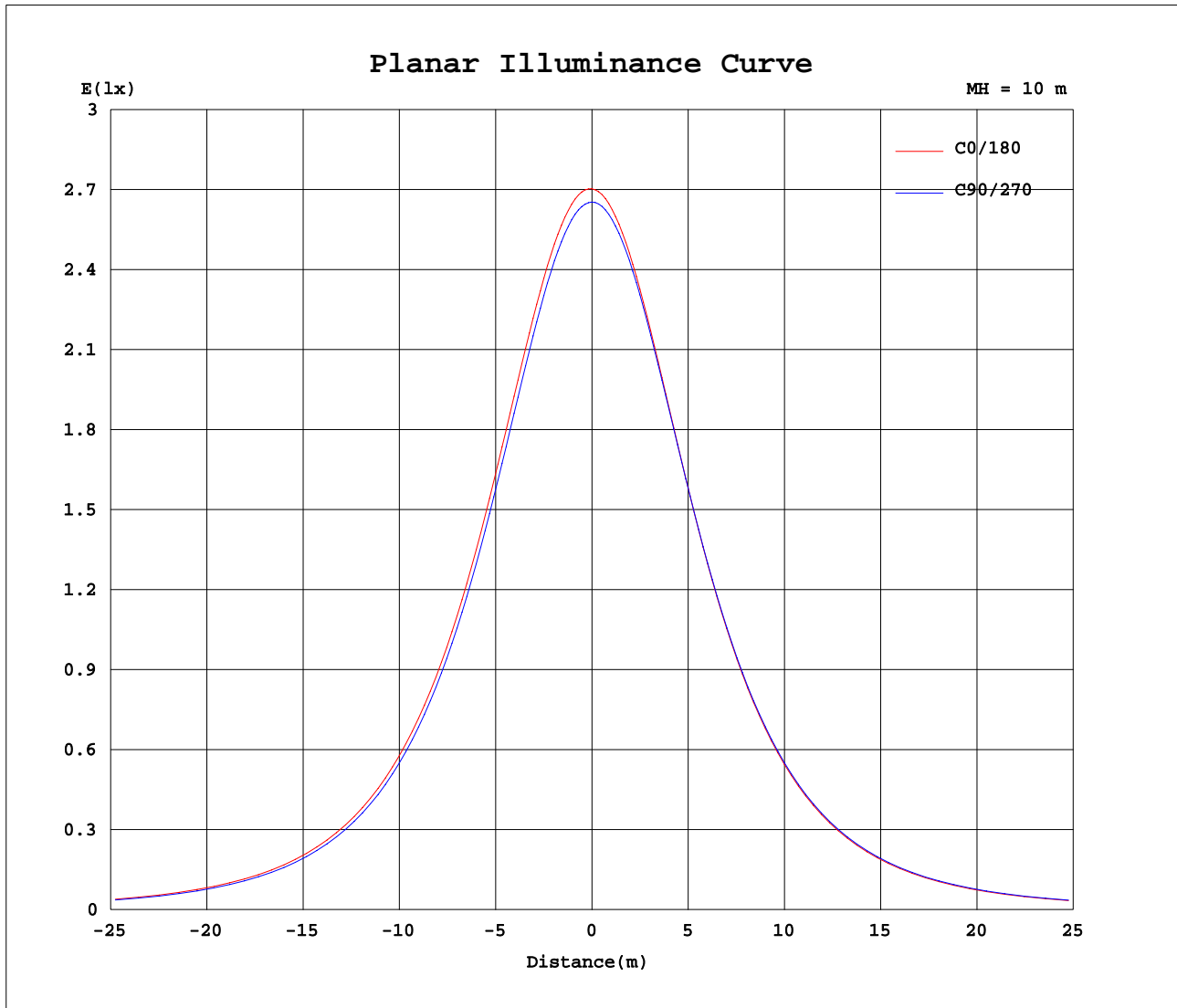
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: tang
 Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
 Humidity: 65.0%
 Test Distance: 7.100m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	270	269	268	268	267	267	266	266	266	265	265	265	265	265	265	265	265	264	270
5	269	268	268	267	266	265	265	264	264	264	263	263	263	263	262	262	262	262	268
10	265	264	263	262	262	261	260	260	259	259	258	258	257	257	257	257	257	257	262
15	257	257	255	255	254	253	252	252	251	250	250	249	249	248	248	248	248	248	253
20	247	246	244	244	243	242	241	240	239	239	238	238	237	237	236	236	236	236	240
25	233	232	231	230	229	228	227	227	225	225	224	224	223	223	222	222	222	222	226
30	218	217	215	215	213	213	212	211	210	209	208	208	207	207	206	206	206	206	209
35	200	200	198	198	196	196	195	194	193	192	191	191	190	190	189	189	189	189	192
40	182	182	180	180	179	178	177	176	175	174	173	173	172	172	171	171	171	171	173
45	163	163	162	161	160	159	158	157	156	156	154	154	153	153	152	152	152	152	154
50	144	144	143	142	141	140	139	139	137	137	136	135	134	134	133	134	133	133	135
55	125	124	123	123	122	121	120	119	118	118	117	116	115	115	114	115	114	114	115
60	105	105	104	104	103	102	101	100	99.2	98.8	97.7	97.4	96.4	96.3	95.5	95.7	95.1	95.5	95.8
65	85.9	85.9	84.9	84.7	83.6	83.3	82.1	81.7	80.5	80.2	79.0	78.8	77.7	77.7	76.9	77.1	76.5	76.9	76.7
70	67.1	67.1	66.2	66.1	65.1	64.9	63.7	63.4	62.2	61.9	60.7	60.6	59.6	59.5	58.7	58.9	58.3	58.7	58.1
75	48.7	48.9	48.1	48.1	47.1	47.0	45.9	45.6	44.5	44.2	43.1	43.0	42.0	41.9	41.2	41.3	40.8	41.1	40.2
80	31.3	31.4	30.8	30.8	30.0	29.8	28.9	28.6	27.6	27.3	26.4	26.1	25.3	25.2	24.6	24.6	24.2	24.4	23.2
85	14.9	15.1	14.6	14.7	14.0	13.8	13.0	12.8	11.9	11.6	10.8	10.5	9.82	9.72	9.13	9.17	8.76	8.97	7.49
90	0.87	1.07	0.77	0.87	0.52	0.49	0.21	0.15	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.04	0.05
105	0.02	0.08	0.03	0.07	0.03	0.08	0.03	0.08	0.04	0.09	0.04	0.09	0.04	0.09	0.04	0.09	0.04	0.09	0.10
110	0.08	0.13	0.08	0.13	0.09	0.13	0.09	0.14	0.09	0.15	0.10	0.14	0.10	0.15	0.10	0.15	0.10	0.14	0.17
115	0.15	0.19	0.15	0.19	0.14	0.19	0.15	0.19	0.16	0.21	0.16	0.21	0.16	0.21	0.17	0.21	0.16	0.21	0.24
120	0.21	0.26	0.21	0.25	0.21	0.26	0.22	0.27	0.23	0.26	0.22	0.27	0.23	0.27	0.23	0.26	0.23	0.28	0.30
125	0.28	0.33	0.28	0.33	0.28	0.33	0.29	0.34	0.29	0.34	0.29	0.34	0.30	0.34	0.30	0.34	0.29	0.34	0.36
130	0.34	0.40	0.36	0.39	0.35	0.40	0.36	0.41	0.36	0.42	0.36	0.42	0.36	0.41	0.36	0.41	0.36	0.40	0.44
135	0.42	0.46	0.42	0.47	0.42	0.47	0.42	0.48	0.43	0.48	0.44	0.48	0.43	0.48	0.43	0.48	0.43	0.47	0.51
140	0.48	0.54	0.49	0.53	0.49	0.54	0.50	0.54	0.51	0.55	0.51	0.54	0.50	0.54	0.50	0.55	0.50	0.54	0.57
145	0.55	0.60	0.56	0.61	0.56	0.61	0.56	0.60	0.57	0.62	0.58	0.61	0.56	0.61	0.57	0.60	0.56	0.60	0.63
150	0.61	0.67	0.62	0.67	0.62	0.67	0.63	0.67	0.63	0.68	0.64	0.68	0.62	0.67	0.62	0.67	0.62	0.67	0.70
155	0.68	0.73	0.68	0.72	0.67	0.73	0.68	0.73	0.69	0.74	0.70	0.74	0.69	0.73	0.68	0.73	0.68	0.71	0.76
160	0.74	0.78	0.74	0.79	0.73	0.78	0.74	0.79	0.75	0.80	0.75	0.78	0.73	0.77	0.73	0.77	0.73	0.78	0.81
165	0.79	0.84	0.79	0.84	0.79	0.84	0.79	0.85	0.80	0.83	0.78	0.83	0.78	0.82	0.78	0.83	0.78	0.82	0.85
170	0.85	0.89	0.84	0.88	0.84	0.87	0.84	0.87	0.82	0.86	0.82	0.86	0.83	0.86	0.82	0.87	0.81	0.86	0.89
175	0.90	0.91	0.89	0.90	0.88	0.88	0.85	0.88	0.84	0.88	0.85	0.88	0.84	0.88	0.85	0.88	0.84	0.88	0.89
180	0.91	0.91	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	0.86	0.88	0.86	0.88	0.87	0.88	0.87	0.88	0.90

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Halo-L16-S-3000k-RA90-18W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	269	268	268	267	267	266	266	266	265	265	265	265	265	265	265	265	264		
5	267	266	265	265	265	264	264	264	264	264	264	264	263	264	263	263	263		
10	261	260	260	259	259	259	259	259	259	259	259	259	259	259	259	259	259		
15	252	251	251	251	250	250	250	251	251	251	251	251	251	251	251	251	251		
20	239	239	239	239	238	239	239	239	239	240	240	240	240	240	240	240	240		
25	225	225	224	224	224	225	225	225	225	226	226	227	227	227	227	227	227		
30	208	208	208	208	208	209	209	210	210	210	211	211	211	212	211	212	211		
35	191	191	190	191	191	191	192	192	193	193	193	194	194	195	195	195	194		
40	172	172	172	173	172	173	173	174	174	175	175	176	176	177	177	177	177		
45	153	153	153	154	154	154	155	155	156	157	157	157	158	158	158	158	158		
50	134	134	134	134	134	135	135	136	137	138	138	138	139	139	139	140	139		
55	114	115	114	115	115	116	116	117	117	118	118	119	119	120	120	120	120		
60	95.1	95.6	95.2	95.9	95.9	96.8	97.0	98.0	98.2	99.1	99.3	100	100	101	101	101	101		
65	76.1	76.6	76.3	77.0	77.0	77.9	78.1	79.0	79.2	80.2	80.4	81.3	81.3	82.1	82.0	82.5	82.2		
70	57.6	58.1	57.8	58.6	58.5	59.4	59.6	60.5	60.7	61.7	61.8	62.7	62.8	63.6	63.5	64.1	63.7		
75	39.7	40.2	40.0	40.7	40.7	41.6	41.7	42.7	42.8	43.8	43.9	44.8	44.9	45.7	45.6	46.2	45.9		
80	22.8	23.3	23.2	23.8	23.8	24.6	24.8	25.6	25.8	26.7	26.9	27.7	27.8	28.5	28.5	29.1	28.8		
85	7.23	7.70	7.56	8.21	8.23	8.97	9.09	9.92	10.1	10.9	11.0	11.8	11.9	12.6	12.5	13.1	12.9		
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.12	0.09	0.25	0.17		
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
100	0.00	0.06	0.00	0.04	0.00	0.04	0.00	0.03	0.00	0.03	0.00	0.04	0.00	0.03	0.00	0.02	0.00		
105	0.06	0.10	0.06	0.09	0.05	0.09	0.04	0.09	0.04	0.09	0.04	0.09	0.04	0.08	0.03	0.08	0.04		
110	0.12	0.16	0.12	0.16	0.10	0.15	0.11	0.15	0.10	0.15	0.10	0.14	0.09	0.13	0.09	0.14	0.09		
115	0.18	0.23	0.18	0.22	0.17	0.22	0.17	0.21	0.17	0.21	0.17	0.20	0.16	0.20	0.16	0.20	0.16		
120	0.25	0.29	0.25	0.28	0.24	0.29	0.24	0.28	0.24	0.27	0.24	0.26	0.22	0.26	0.21	0.26	0.21		
125	0.31	0.36	0.31	0.36	0.31	0.35	0.31	0.35	0.30	0.34	0.30	0.34	0.29	0.33	0.28	0.33	0.28		
130	0.38	0.42	0.38	0.43	0.38	0.42	0.37	0.42	0.37	0.42	0.36	0.41	0.36	0.40	0.35	0.40	0.35		
135	0.45	0.49	0.45	0.50	0.44	0.49	0.44	0.49	0.43	0.48	0.43	0.48	0.42	0.47	0.42	0.46	0.42		
140	0.51	0.56	0.51	0.56	0.51	0.56	0.50	0.55	0.50	0.54	0.50	0.54	0.49	0.54	0.49	0.53	0.49		
145	0.58	0.63	0.59	0.62	0.57	0.62	0.57	0.61	0.58	0.61	0.57	0.61	0.56	0.60	0.56	0.60	0.55		
150	0.64	0.68	0.64	0.68	0.63	0.68	0.64	0.68	0.63	0.68	0.63	0.67	0.61	0.67	0.62	0.66	0.61		
155	0.69	0.75	0.69	0.74	0.69	0.74	0.70	0.74	0.68	0.73	0.68	0.73	0.68	0.73	0.67	0.71	0.67		
160	0.75	0.79	0.75	0.79	0.75	0.78	0.74	0.79	0.75	0.80	0.75	0.78	0.74	0.78	0.73	0.77	0.73		
165	0.80	0.84	0.79	0.84	0.78	0.83	0.78	0.83	0.78	0.84	0.79	0.84	0.80	0.83	0.79	0.82	0.78		
170	0.84	0.88	0.83	0.87	0.83	0.87	0.83	0.86	0.83	0.86	0.90	0.86	0.84	0.87	0.83	0.87	0.83		
175	0.87	0.90	0.86	0.88	0.86	0.88	0.85	0.88	0.86	0.87	0.87	0.87	0.86	0.88	0.87	0.89	0.87		
180	0.89	0.90	0.88	0.88	0.88	0.88	0.87	0.88	0.87	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.89		

C Range: 0 - 360DEG
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