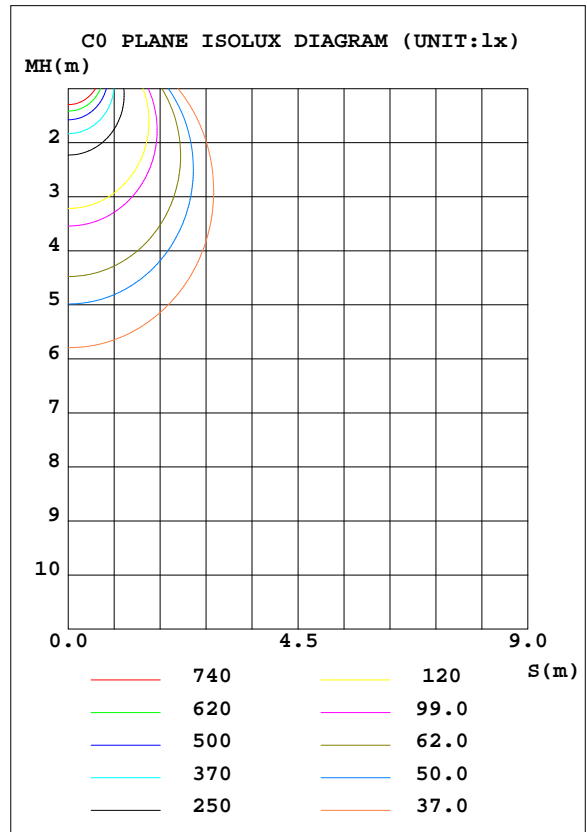
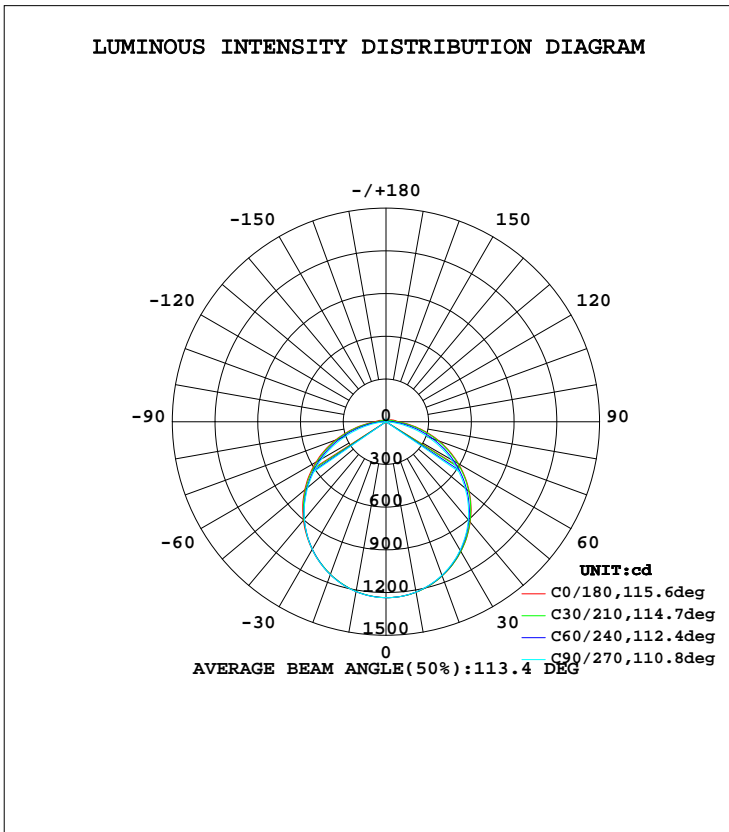


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 92.63 lm/W			
MODEL	L40W-B-4K	Imax(cd)	1236	S/MH(C0/180)	1.27
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	3742.1	η UP, DN(C0-180)	1.8, 48.5
NOMINAL FLUX(lm)	3742.14	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.7, 48.0
LAMPS INSIDE	1	η up(%)	3.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.1	η down(%)	96.5	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [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	1216	1215	1214	1212	1210	1210	1211	1214	0- 10	116.9	116.9	3.12,3.12
20	1152	1151	1147	1144	1142	1141	1143	1148	10- 20	334.3	451.2	12.1,12.1
30	1052	1048	1041	1038	1037	1034	1036	1044	20- 30	506.1	957.3	25.6,25.6
40	920.3	911.9	899.1	899.6	902.8	894.9	891.5	907.0	30- 40	610.6	1568	41.9,41.9
50	763.4	748.7	726.0	734.9	745.2	730.7	717.8	742.9	40- 50	635.6	2203	58.9,58.9
60	586.8	565.0	528.5	551.3	568.2	547.9	520.4	559.3	50- 60	579.7	2783	74.4,74.4
70	397.4	368.9	313.9	355.5	378.5	352.5	306.3	364.0	60- 70	451.3	3234	86.4,86.4
80	213.1	179.1	108.7	166.4	194.1	164.7	101.6	175.6	70- 80	273.0	3507	93.7,93.7
90	90.93	58.61	3.537	51.50	80.23	50.21	3.276	56.11	80- 90	105.4	3613	96.5,96.5
100	60.36	34.62	4.483	28.71	51.65	28.47	4.965	32.89	90-100	42.85	3656	97.7,97.7
110	40.04	20.98	6.537	16.79	32.65	16.98	7.104	20.53	100-110	26.38	3682	98.4,98.4
120	25.02	13.76	8.664	11.73	19.77	12.13	9.255	14.00	110-120	16.29	3698	98.8,98.8
130	14.88	11.19	10.90	11.10	12.59	11.65	11.49	11.70	120-130	11.19	3710	99.1,99.1
140	12.91	13.06	13.14	13.09	13.62	13.61	13.66	13.62	130-140	9.598	3719	99.4,99.4
150	14.79	15.04	15.12	14.98	15.40	15.39	15.55	15.48	140-150	8.957	3728	99.6,99.6
160	16.56	16.64	16.72	16.56	16.96	16.81	17.00	16.96	150-160	7.395	3735	99.8,99.8
170	18.09	17.84	17.90	17.80	18.26	17.86	17.99	17.96	160-170	4.910	3740	100,100
180	18.79	18.35	18.43	18.37	18.84	18.36	18.42	18.38	170-180	1.734	3742	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

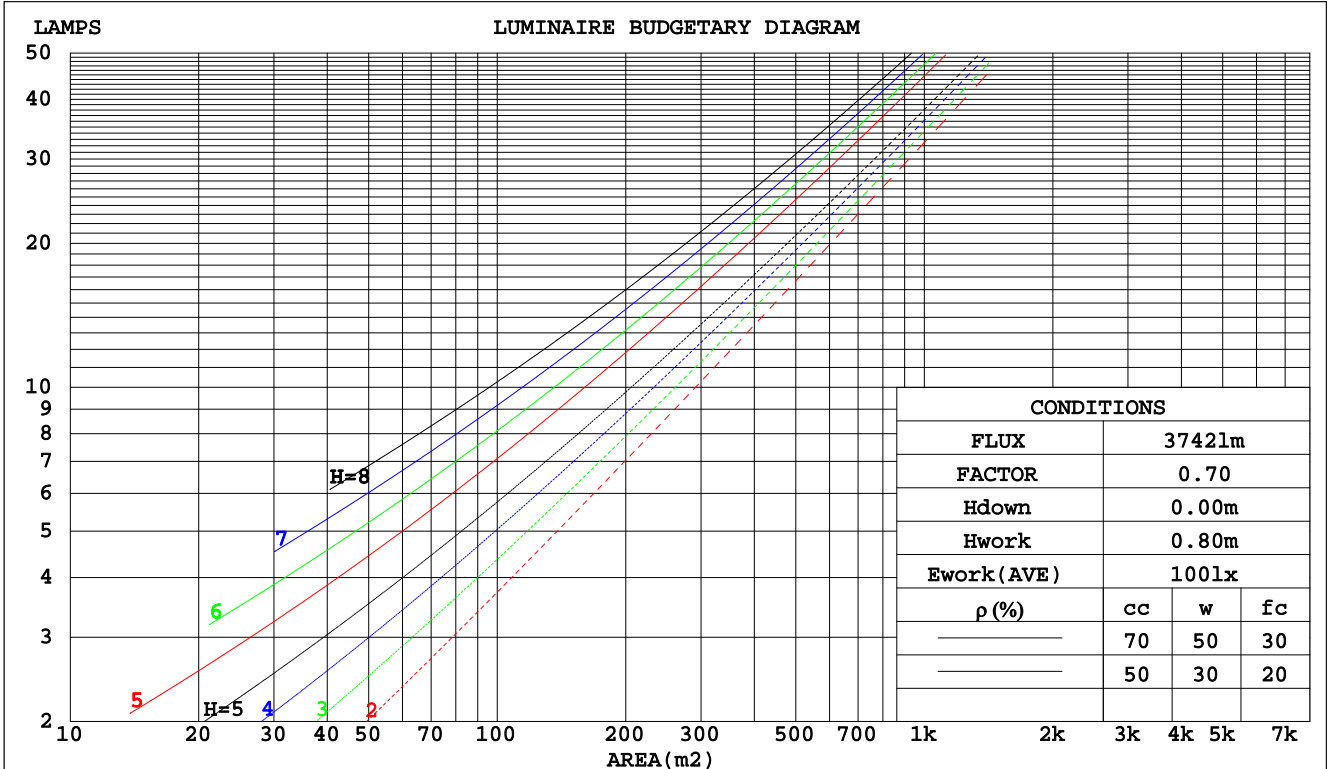
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	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																
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.02	.98	.94	.90	.96	.92	.95	.92	.89	.90	.88	.85	.86	.84	.82	.80
2.0	.89	.82	.76	.87	.80	.75	.83	.77	.73	.79	.74	.70	.75	.72	.68	.66
3.0	.78	.70	.63	.76	.68	.62	.73	.66	.61	.69	.64	.59	.66	.62	.58	.55
4.0	.69	.60	.53	.67	.59	.53	.64	.57	.52	.62	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.46	.60	.52	.45	.58	.50	.44	.55	.49	.44	.53	.47	.43	.41
6.0	.55	.46	.40	.54	.46	.39	.52	.44	.39	.50	.43	.38	.48	.42	.38	.35
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.45	.39	.34	.44	.38	.33	.31
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.31	.42	.35	.30	.40	.34	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.34	.29	.24	.23



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	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	.322	.183	.058	.313	.179	.057	.298	.171	.055	.284	.164	.053	.271	.157	.051	
2.0	.298	.163	.050	.291	.160	.049	.277	.154	.048	.265	.148	.046	.253	.143	.045	
3.0	.274	.146	.044	.267	.143	.043	.255	.138	.042	.244	.134	.041	.234	.129	.040	
4.0	.252	.131	.038	.246	.129	.038	.235	.125	.037	.225	.121	.036	.216	.117	.036	
5.0	.232	.118	.034	.227	.116	.034	.217	.113	.033	.208	.110	.033	.200	.107	.032	
6.0	.215	.108	.031	.210	.106	.031	.201	.103	.030	.193	.100	.030	.186	.098	.029	
7.0	.199	.099	.028	.195	.097	.028	.188	.095	.027	.180	.092	.027	.173	.090	.026	
8.0	.186	.091	.026	.182	.090	.025	.175	.088	.025	.169	.085	.025	.163	.083	.024	
9.0	.174	.084	.024	.171	.083	.023	.165	.081	.023	.159	.079	.023	.153	.078	.022	
10.0	.164	.078	.022	.161	.078	.022	.155	.076	.021	.149	.074	.021	.144	.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	.217	.217	.217	.185	.185	.185	.126	.126	.126	.073	.073	.073	.023	.023	.023	
1.0	.208	.183	.160	.178	.157	.138	.122	.108	.095	.070	.062	.055	.022	.020	.018	
2.0	.200	.159	.124	.171	.137	.107	.117	.094	.075	.068	.055	.044	.022	.018	.014	
3.0	.192	.141	.101	.165	.122	.087	.113	.085	.061	.065	.049	.036	.021	.016	.012	
4.0	.184	.128	.085	.158	.111	.074	.109	.077	.052	.063	.045	.031	.020	.015	.010	
5.0	.177	.118	.074	.152	.102	.064	.105	.071	.045	.061	.042	.027	.020	.014	.009	
6.0	.170	.109	.066	.146	.095	.058	.101	.066	.041	.058	.039	.024	.019	.013	.008	
7.0	.163	.103	.060	.140	.089	.053	.097	.062	.037	.056	.037	.022	.018	.012	.007	
8.0	.156	.097	.056	.135	.084	.049	.093	.059	.035	.054	.035	.021	.018	.011	.007	
9.0	.150	.092	.052	.129	.080	.046	.090	.056	.033	.052	.033	.019	.017	.011	.006	
10.0	.145	.088	.050	.125	.076	.043	.086	.054	.031	.050	.032	.018	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm										
NAME: L40W-B-4K					TYPE:40W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:1.120X0.085			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	21.6	23.1	21.9	23.3	23.6	21.2	22.7	21.5	22.9	23.2
3H	23.3	24.7	23.7	25.0	25.3	22.6	24.0	23.0	24.3	24.6
4H	24.1	25.4	24.5	25.7	26.0	23.1	24.4	23.5	24.7	25.1
6H	24.8	26.0	25.2	26.3	26.7	23.4	24.7	23.8	25.0	25.4
8H	25.1	26.3	25.5	26.6	27.0	23.5	24.7	23.9	25.0	25.4
12H	25.4	26.5	25.8	26.9	27.3	23.5	24.6	23.9	25.0	25.4
4H 2H	22.2	23.5	22.5	23.8	24.1	21.9	23.2	22.2	23.5	23.8
3H	24.1	25.3	24.5	25.6	26.0	23.5	24.6	23.9	25.0	25.4
4H	25.0	26.1	25.5	26.5	26.9	24.1	25.2	24.6	25.6	26.0
6H	25.9	26.8	26.3	27.2	27.7	24.6	25.5	25.0	25.9	26.4
8H	26.2	27.1	26.7	27.5	28.0	24.7	25.6	25.2	26.0	26.5
12H	26.6	27.4	27.1	27.9	28.4	24.7	25.5	25.2	26.0	26.5
8H 4H	25.3	26.2	25.8	26.6	27.1	24.5	25.4	25.0	25.8	26.3
6H	26.3	27.1	26.8	27.5	28.0	25.2	25.9	25.6	26.3	26.8
8H	26.8	27.5	27.4	28.0	28.5	25.4	26.0	25.9	26.5	27.0
12H	27.4	27.9	27.9	28.4	29.0	25.5	26.0	26.0	26.5	27.1
12H 4H	25.3	26.1	25.8	26.5	27.0	24.6	25.4	25.1	25.8	26.3
6H	26.4	27.0	26.9	27.5	28.0	25.3	25.9	25.8	26.4	26.9
8H	27.0	27.5	27.5	28.0	28.6	25.6	26.1	26.1	26.6	27.2
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	+ 0.1 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 3742 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.6)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	PROTECTION ANGLE:

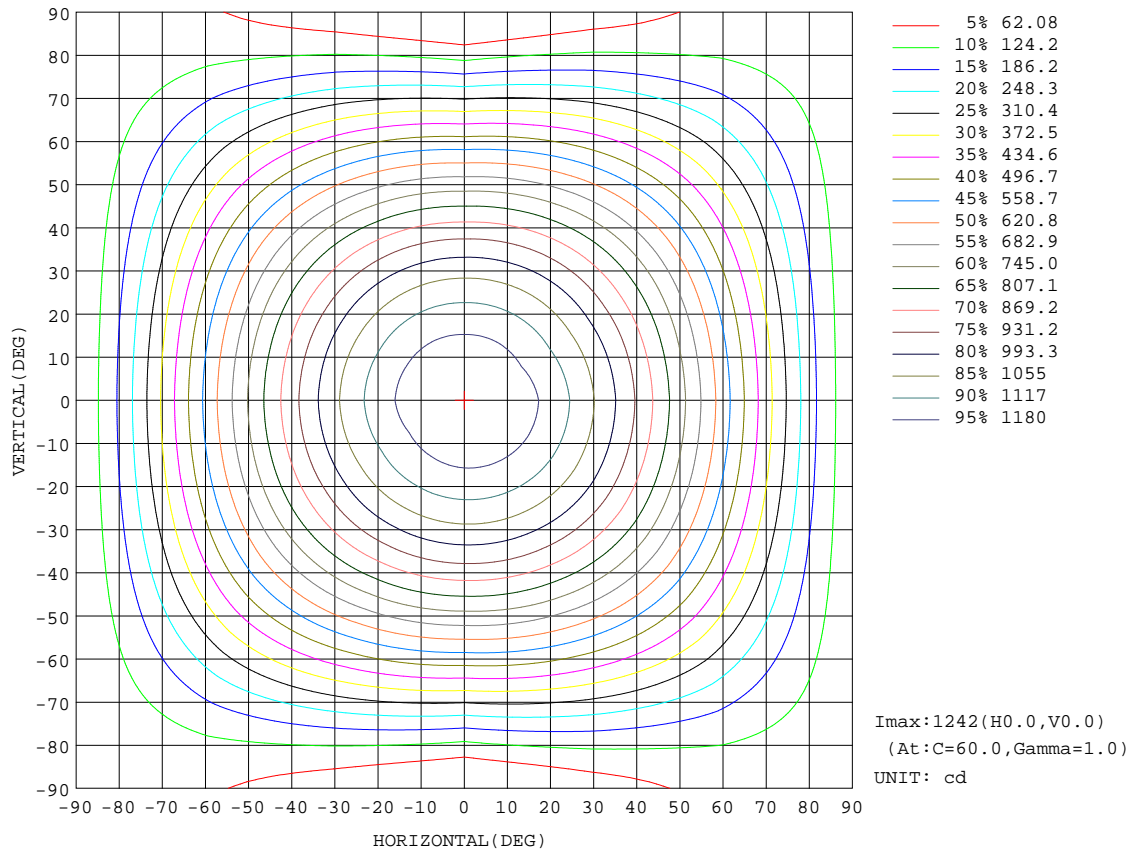
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	65	53	46	63	52	46	39
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	79	69	62	76	68	61	54
1.50	86	76	69	84	75	68	81	73	67	59
2.00	93	84	77	91	83	76	87	80	75	66
2.50	97	89	82	95	87	81	90	84	79	70
3.00	100	93	87	98	91	86	93	88	84	74
4.00	105	98	93	102	96	92	97	93	89	79
5.00	107	102	98	104	100	96	99	96	92	82
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	PROTECTION ANGLE:

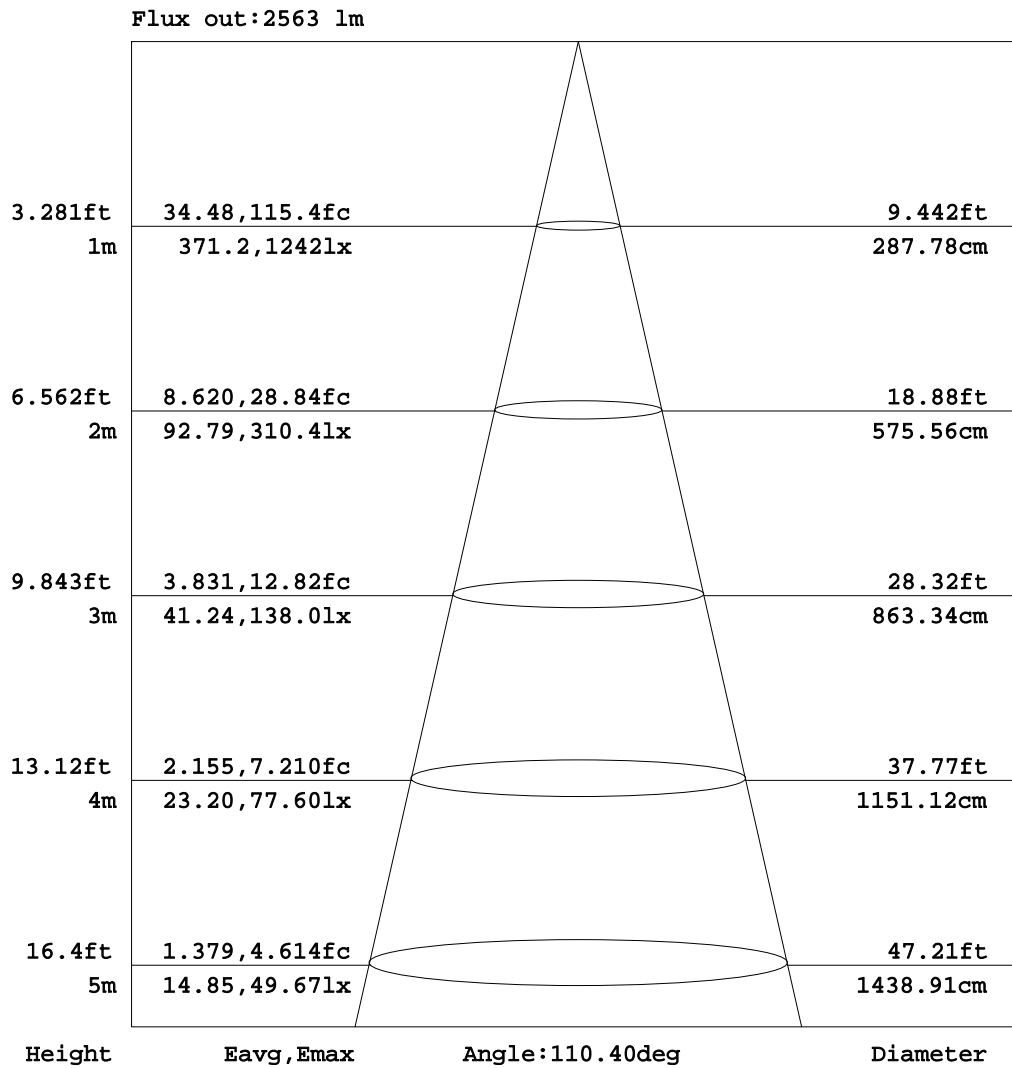


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

AAI Figure

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	PROTECTION ANGLE:



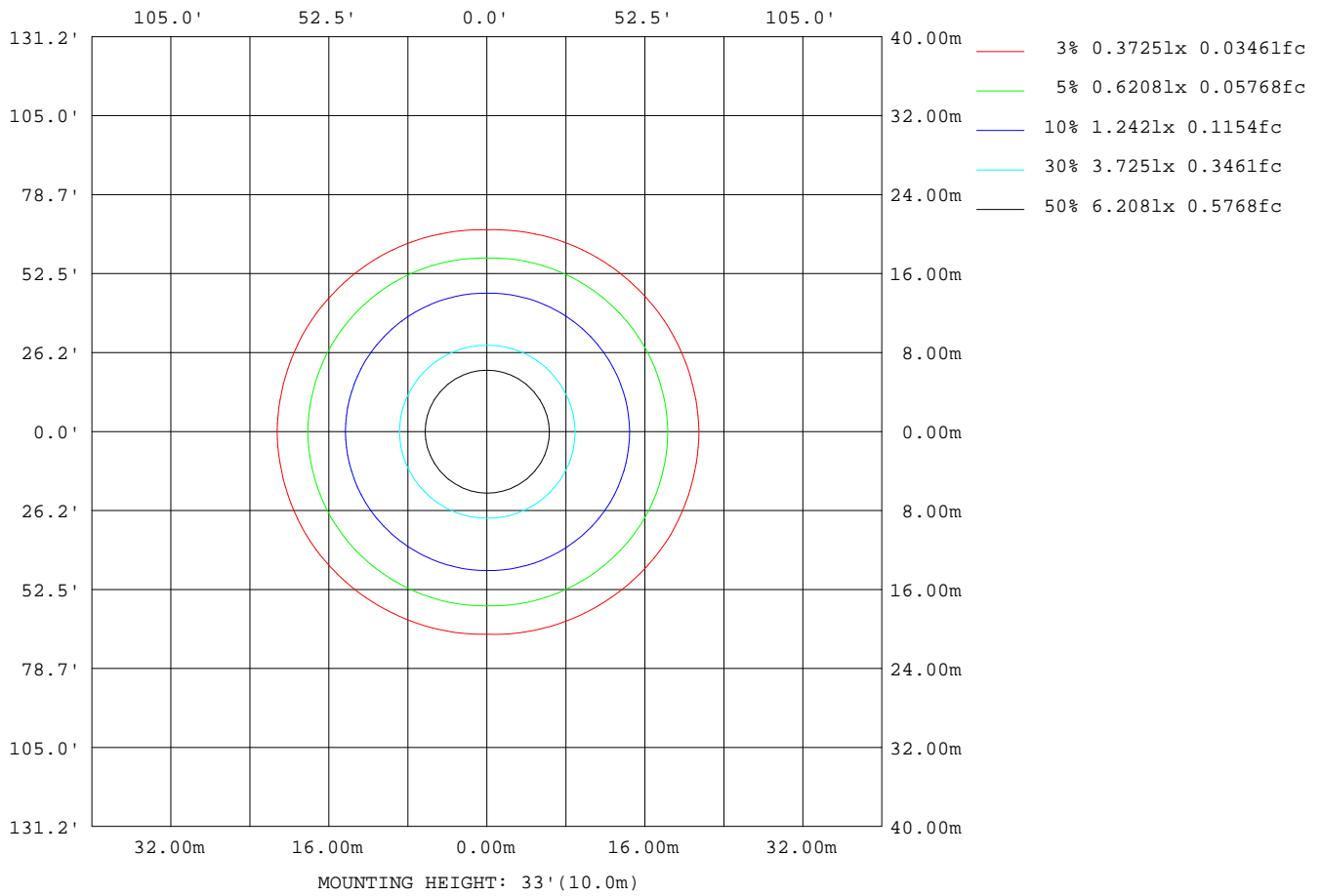
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

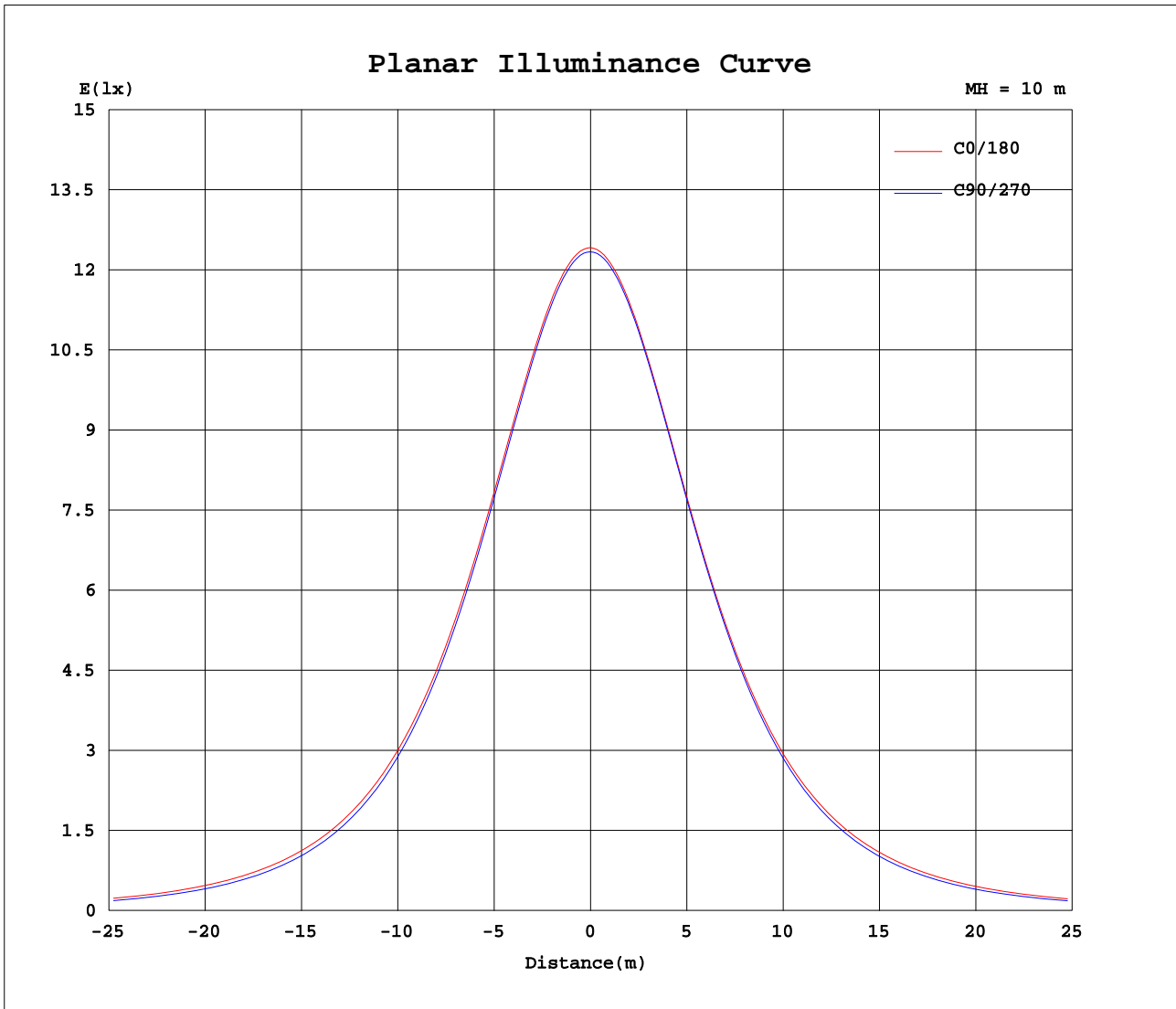
Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.443m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.1V I:0.1750A P:40.40W PF:0.9590 Lamp Flux:3742.14x1 lm		
NAME: L40W-B-4K	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:1.120X0.085	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1236	1236	1236	1236	1236	1236	1236	1236	1236	1236	1236	1236							
5	1231	1231	1231	1231	1230	1229	1228	1228	1229	1229	1230	1231							
10	1216	1216	1214	1214	1212	1212	1210	1209	1211	1211	1213	1214							
15	1189	1189	1187	1186	1183	1183	1181	1180	1182	1183	1186	1187							
20	1152	1153	1149	1147	1144	1144	1142	1140	1142	1143	1147	1149							
25	1106	1106	1102	1099	1095	1096	1094	1091	1092	1094	1099	1103							
30	1052	1051	1045	1041	1037	1039	1037	1034	1034	1036	1041	1047							
35	990	988	979	975	971	974	973	969	968	968	976	983							
40	920	918	906	899	897	903	903	897	893	892	902	912							
45	845	841	826	816	815	825	827	819	811	808	820	835							
50	763	759	739	726	728	742	745	737	725	718	733	753							
55	678	671	647	630	636	655	659	649	634	622	641	665							
60	587	579	551	528	540	563	568	557	538	520	546	573							
65	493	484	452	423	441	467	474	462	440	415	447	477							
70	397	387	351	314	340	371	379	366	339	306	347	381							
75	303	290	251	207	241	273	283	270	241	200	248	285							
80	213	200	159	109	149	184	194	180	149	102	156	195							
85	137	123	82.2	31.4	74.3	110	122	107	73.8	27.3	80.9	120							
90	90.9	77.6	39.6	3.54	34.9	68.2	80.2	66.6	33.8	3.28	37.1	75.1							
95	72.7	60.8	27.6	3.69	23.4	52.4	63.5	51.5	22.8	3.98	23.1	57.0							
100	60.4	49.2	20.0	4.48	16.1	41.3	51.7	40.8	16.1	4.97	19.1	46.7							
105	49.5	39.5	14.6	5.48	11.5	32.1	41.4	31.9	11.8	6.02	11.9	37.8							
110	40.0	31.3	10.6	6.54	8.92	24.7	32.7	24.6	9.29	7.10	10.6	30.5							
115	31.9	24.5	8.26	7.60	8.18	18.9	25.5	19.0	8.56	8.17	8.71	24.3							
120	25.0	18.8	8.69	8.66	8.93	14.5	19.8	14.8	9.43	9.25	9.24	18.8							
125	19.5	13.9	9.74	9.78	9.87	11.7	15.4	12.1	10.4	10.4	10.3	14.2							
130	14.9	11.5	10.9	10.9	10.9	11.3	12.6	11.8	11.5	11.5	11.4	12.0							
135	12.3	12.0	12.0	12.0	12.0	12.2	12.8	12.7	12.5	12.6	12.5	12.6							
140	12.9	13.0	13.1	13.1	13.1	13.1	13.6	13.6	13.6	13.7	13.6	13.6							
145	13.8	14.1	14.1	14.2	14.1	14.1	14.5	14.5	14.5	14.6	14.6	14.6							
150	14.8	15.0	15.0	15.1	15.0	14.9	15.4	15.3	15.4	15.5	15.4	15.5							
155	15.7	15.9	15.9	16.0	15.9	15.7	16.2	16.1	16.2	16.3	16.3	16.3							
160	16.6	16.7	16.6	16.7	16.6	16.5	17.0	16.7	16.9	17.0	16.9	17.0							
165	17.4	17.3	17.3	17.4	17.3	17.2	17.7	17.3	17.5	17.5	17.5	17.5							
170	18.1	17.9	17.8	17.9	17.9	17.7	18.3	17.8	17.9	18.0	18.0	18.0							
175	18.5	18.2	18.1	18.2	18.2	18.1	18.7	18.2	18.2	18.3	18.3	18.2							
180	18.8	18.4	18.4	18.4	18.4	18.3	18.8	18.3	18.4	18.4	18.4	18.3							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-02-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks: