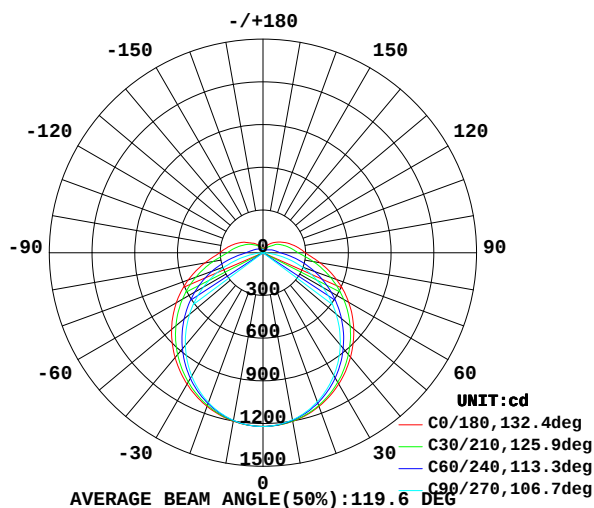


LUMINAIRE PHOTOMETRIC TEST REPORT

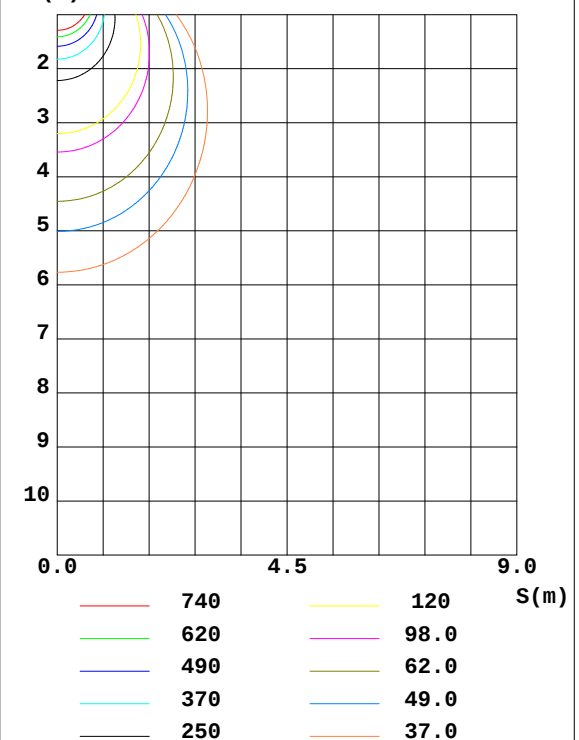
Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm		
NAME: E-B40W-CC	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.066*1.168	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 119.98 lm/W			
MODEL	E-B40W-CC	I _{max} (cd)	1221	S/MH(C0/180)	1.30
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	4487.4	η UP, DN(C0-180)	6.1, 43.8
NOMINAL FLUX(lm)	4487.39	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	6.2, 44.0
LAMPS INSIDE	1	η up(%)	12.3	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.6	η down(%)	87.7	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_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	%lum, lamp
10	1202	1198	1192	1195	1202	1198	1195	1201	0- 10	115.4	115.4	2.57, 2.57
20	1149	1133	1114	1128	1148	1134	1119	1140	10- 20	330.4	445.7	9.93, 9.93
30	1065	1032	995.2	1026	1066	1034	1001	1041	20- 30	501.1	946.8	21.1, 21.1
40	956.5	905.0	844.0	899.1	960.2	906.9	848.3	913.4	30- 40	608.2	1555	34.7, 34.7
50	831.7	759.2	670.8	754.2	838.3	761.1	673.6	767.1	40- 50	643.4	2198	49, 49
60	694.8	603.8	484.5	599.5	703.2	603.9	482.8	609.5	50- 60	608.5	2807	62.6, 62.6
70	549.8	445.5	291.1	441.1	558.5	442.2	282.4	447.3	60- 70	513.4	3320	74, 74
80	406.5	295.6	110.4	291.7	414.6	289.3	96.00	293.5	70- 80	376.9	3697	82.4, 82.4
90	298.0	184.6	4.728	184.7	304.5	186.6	3.936	186.8	80- 90	240.2	3937	87.7, 87.7
100	241.7	140.7	5.630	140.3	245.9	141.7	5.866	143.8	90-100	168.6	4106	91.5, 91.5
110	192.8	107.2	7.857	108.3	194.8	109.3	7.839	111.4	100-110	128.0	4234	94.4, 94.4
120	150.1	81.25	10.11	84.41	148.5	85.73	10.16	84.56	110-120	93.60	4328	96.4, 96.4
130	115.0	54.15	12.41	66.34	106.8	65.52	12.52	60.78	120-130	64.50	4392	97.9, 97.9
140	85.89	39.94	15.40	51.85	82.85	52.30	14.69	44.94	130-140	42.43	4435	98.8, 98.8
150	62.03	32.80	17.73	40.73	60.49	41.62	17.24	35.06	140-150	27.16	4462	99.4, 99.4
160	42.67	26.53	19.62	31.88	41.73	32.09	19.23	28.32	150-160	15.85	4478	99.8, 99.8
170	27.68	23.38	20.94	24.68	26.57	24.76	20.71	24.08	160-170	7.715	4485	100, 100
180	19.34	20.87	21.38	20.88	19.39	20.83	21.47	21.22	170-180	2.168	4487	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

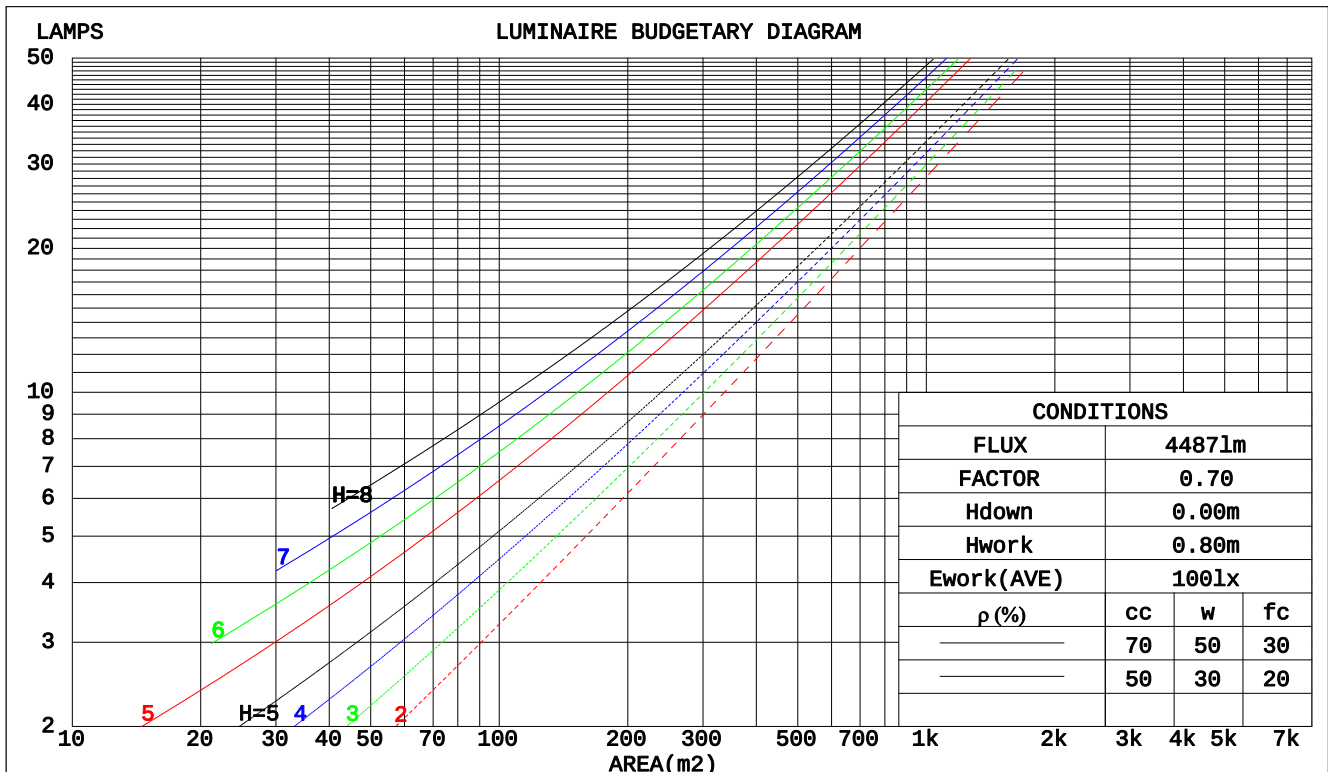
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm		
NAME: E-B40W-CC	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.066*1.168	PROTECTION ANGLE:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.16	1.16	1.16	1.12	1.12	1.12	1.04	1.04	1.04	.97	.97	.97	.91	.91	.91	.88
1.0	.99	.94	.89	.95	.91	.87	.89	.85	.82	.82	.80	.77	.77	.75	.72	.69
2.0	.85	.78	.71	.82	.75	.69	.76	.71	.66	.71	.67	.63	.66	.63	.59	.57
3.0	.74	.65	.58	.72	.64	.57	.67	.60	.55	.62	.57	.52	.58	.54	.50	.47
4.0	.65	.56	.49	.63	.55	.48	.59	.52	.46	.55	.49	.44	.52	.47	.42	.40
5.0	.58	.49	.42	.56	.48	.41	.53	.45	.40	.49	.43	.38	.46	.41	.37	.34
6.0	.52	.43	.36	.51	.42	.36	.47	.40	.34	.45	.38	.33	.42	.36	.32	.30
7.0	.47	.38	.32	.46	.37	.31	.43	.36	.30	.41	.34	.29	.38	.33	.28	.26
8.0	.43	.34	.28	.42	.34	.28	.39	.32	.27	.37	.31	.26	.35	.29	.25	.23
9.0	.39	.31	.25	.38	.30	.25	.36	.29	.24	.34	.28	.23	.32	.27	.23	.21
10.0	.36	.28	.23	.35	.28	.23	.33	.27	.22	.32	.26	.21	.30	.25	.21	.19



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMAN
 Test Date: 2020-05-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.443m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm									
NAME: E-B40W-CC					TYPE:40W			WEIGHT:	
DIM.:					SPEC.:4000K			SERIAL No.:1	
MFR.:					SUR.:0.066*1.168			PROTECTION ANGLE:	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.355	.202	.064	.344	.196	.062	.324	.186	.059	.305	.176	.056	.288	.167	.054	
2.0	.316	.173	.053	.306	.169	.052	.288	.160	.050	.271	.152	.048	.255	.144	.046	
3.0	.285	.152	.045	.276	.148	.044	.259	.141	.043	.244	.134	.041	.230	.127	.039	
4.0	.259	.134	.040	.251	.131	.039	.236	.125	.037	.222	.119	.036	.209	.114	.035	
5.0	.237	.121	.035	.229	.118	.034	.216	.112	.033	.203	.107	.032	.192	.102	.031	
6.0	.218	.109	.031	.211	.107	.031	.199	.102	.030	.188	.098	.029	.177	.093	.028	
7.0	.202	.100	.028	.196	.097	.028	.185	.093	.027	.174	.089	.026	.164	.085	.025	
8.0	.187	.092	.026	.182	.090	.025	.172	.086	.025	.162	.082	.024	.153	.079	.023	
9.0	.175	.085	.024	.170	.083	.023	.161	.080	.023	.152	.076	.022	.144	.073	.021	
10.0	.164	.079	.022	.160	.077	.022	.151	.074	.021	.143	.071	.020	.135	.068	.020	

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	.284	.284	.284	.243	.243	.243	.166	.166	.166	.095	.095	.095	.030	.030	.030	
1.0	.278	.250	.225	.238	.214	.194	.162	.148	.134	.094	.085	.078	.030	.027	.025	
2.0	.270	.227	.190	.231	.195	.164	.159	.135	.114	.091	.078	.067	.029	.025	.022	
3.0	.263	.210	.168	.225	.181	.145	.155	.126	.102	.089	.073	.060	.029	.024	.020	
4.0	.255	.197	.153	.219	.170	.133	.150	.119	.093	.087	.069	.055	.028	.023	.018	
5.0	.247	.187	.142	.212	.162	.124	.146	.113	.087	.085	.066	.052	.027	.022	.017	
6.0	.240	.179	.135	.206	.155	.117	.142	.108	.083	.083	.064	.049	.027	.021	.016	
7.0	.233	.172	.129	.200	.149	.113	.138	.105	.080	.080	.062	.048	.026	.020	.016	
8.0	.226	.166	.125	.195	.144	.109	.135	.101	.077	.078	.060	.046	.025	.020	.015	
9.0	.220	.162	.122	.190	.140	.106	.131	.099	.076	.077	.058	.045	.025	.019	.015	
10.0	.215	.157	.119	.185	.137	.104	.128	.096	.074	.075	.057	.044	.024	.019	.015	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm											
NAME: E-B40W-CC						TYPE:40W			WEIGHT:		
DIM.:						SPEC.:4000K			SERIAL No.:1		
MFR.:						SUR.:0.066*1.168			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	22.3	23.7	22.7	24.1	24.6	20.9	22.3	21.3	22.7	23.1	
	3H	24.5	25.8	25.0	26.3	26.8	22.3	23.6	22.8	24.1	24.6
	4H	25.7	27.0	26.2	27.4	27.9	22.9	24.1	23.4	24.6	25.1
	6H	27.0	28.1	27.5	28.6	29.2	23.3	24.4	23.8	24.9	25.4
	8H	27.7	28.8	28.2	29.3	29.8	23.4	24.5	23.9	25.0	25.5
	12H	28.4	29.5	29.0	30.0	30.6	23.4	24.5	23.9	25.0	25.5
4H	2H	22.8	24.1	23.3	24.5	25.0	21.8	23.0	22.2	23.5	24.0
	3H	25.3	26.4	25.8	26.9	27.5	23.5	24.5	24.0	25.0	25.6
	4H	26.7	27.7	27.2	28.2	28.8	24.2	25.2	24.7	25.7	26.3
	6H	28.1	29.0	28.7	29.6	30.2	24.7	25.6	25.3	26.2	26.8
	8H	28.9	29.8	29.5	30.3	31.0	24.9	25.8	25.5	26.3	27.0
	12H	29.9	30.6	30.5	31.2	31.9	25.0	25.8	25.6	26.4	27.0
8H	4H	27.0	27.8	27.6	28.4	29.0	24.9	25.7	25.5	26.3	27.0
	6H	28.7	29.4	29.3	30.0	30.7	25.8	26.5	26.4	27.1	27.8
	8H	29.7	30.3	30.4	31.0	31.7	26.1	26.7	26.8	27.4	28.1
	12H	30.9	31.4	31.5	32.1	32.8	26.4	26.9	27.0	27.6	28.3
12H	4H	27.0	27.8	27.6	28.3	29.0	25.1	25.9	25.7	26.5	27.1
	6H	28.8	29.4	29.5	30.1	30.8	26.1	26.8	26.8	27.4	28.1
	8H	29.9	30.4	30.6	31.1	31.8	26.6	27.2	27.3	27.8	28.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117 Corrected 4487 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.2)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm		
NAME: E-B40W-CC	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.066*1.168	PROTECTION ANGLE:

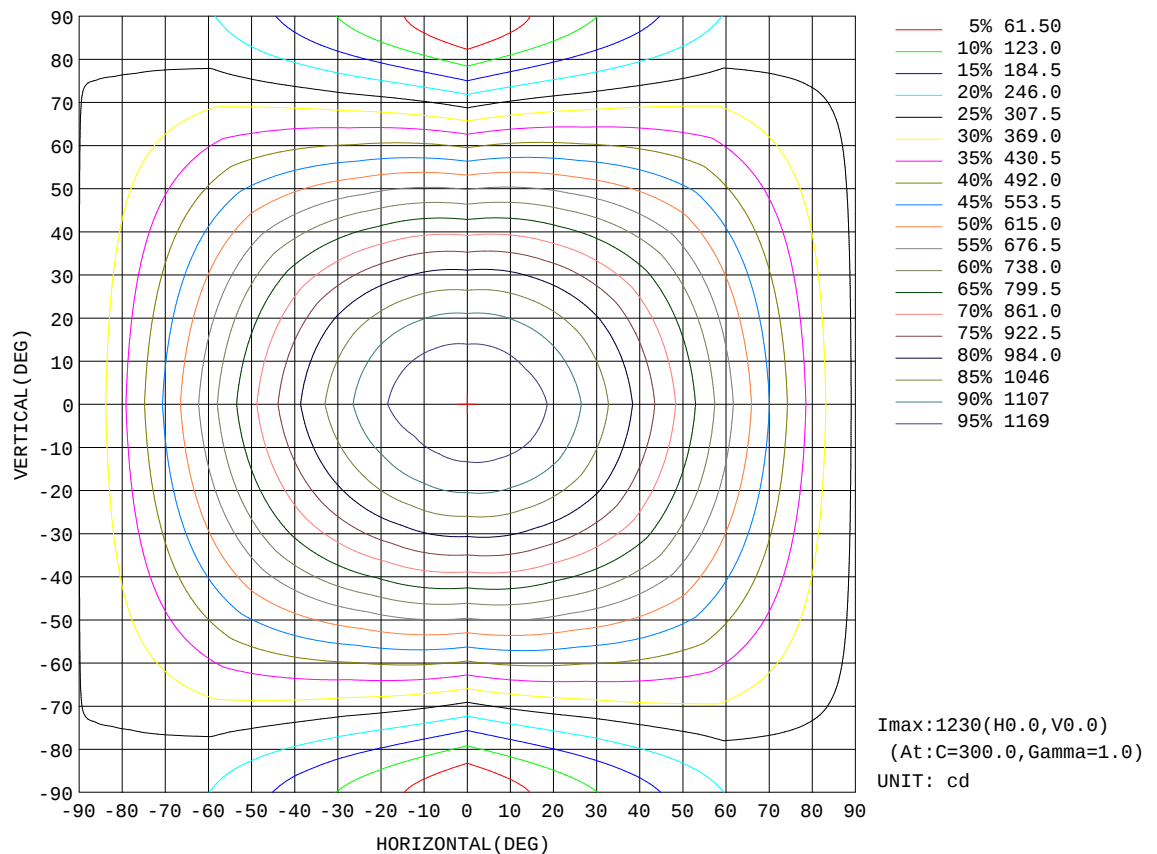
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	39	32	50	39	32	49	38	32	25
0.80	61	48	41	59	48	40	57	47	40	32
1.00	69	57	49	67	56	48	64	56	47	39
1.25	76	64	56	74	63	55	70	61	54	45
1.50	81	69	61	78	68	61	74	65	59	49
2.00	88	78	70	85	76	69	80	73	66	56
2.50	92	83	76	89	81	74	84	77	71	60
3.00	96	87	81	93	85	79	87	81	75	64
4.00	100	93	87	97	90	85	91	85	81	68
5.00	103	97	92	99	94	89	93	88	85	71
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:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm		
NAME: E-B40W-CC	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.066*1.168	PROTECTION ANGLE:

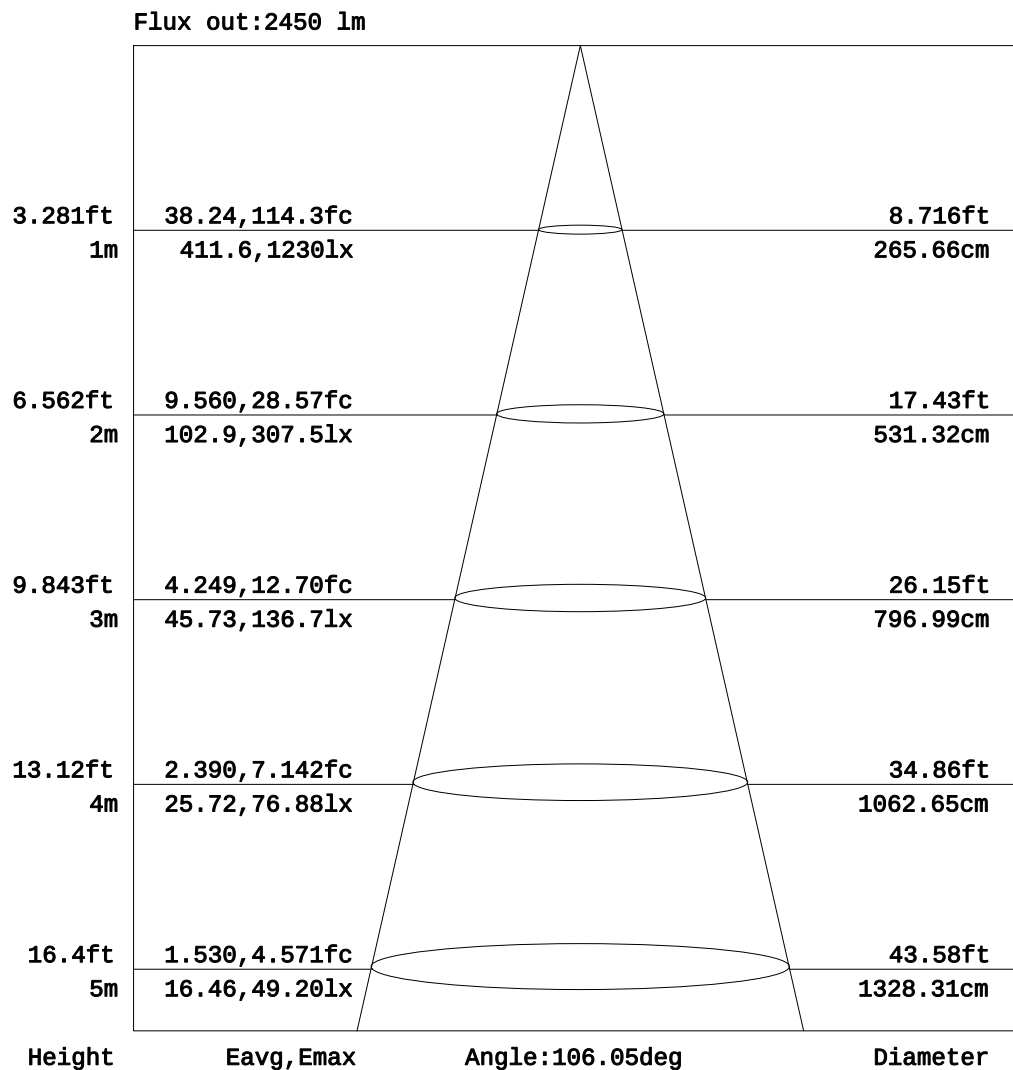


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm		
NAME: E-B40W-CC	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.066*1.168	PROTECTION ANGLE:



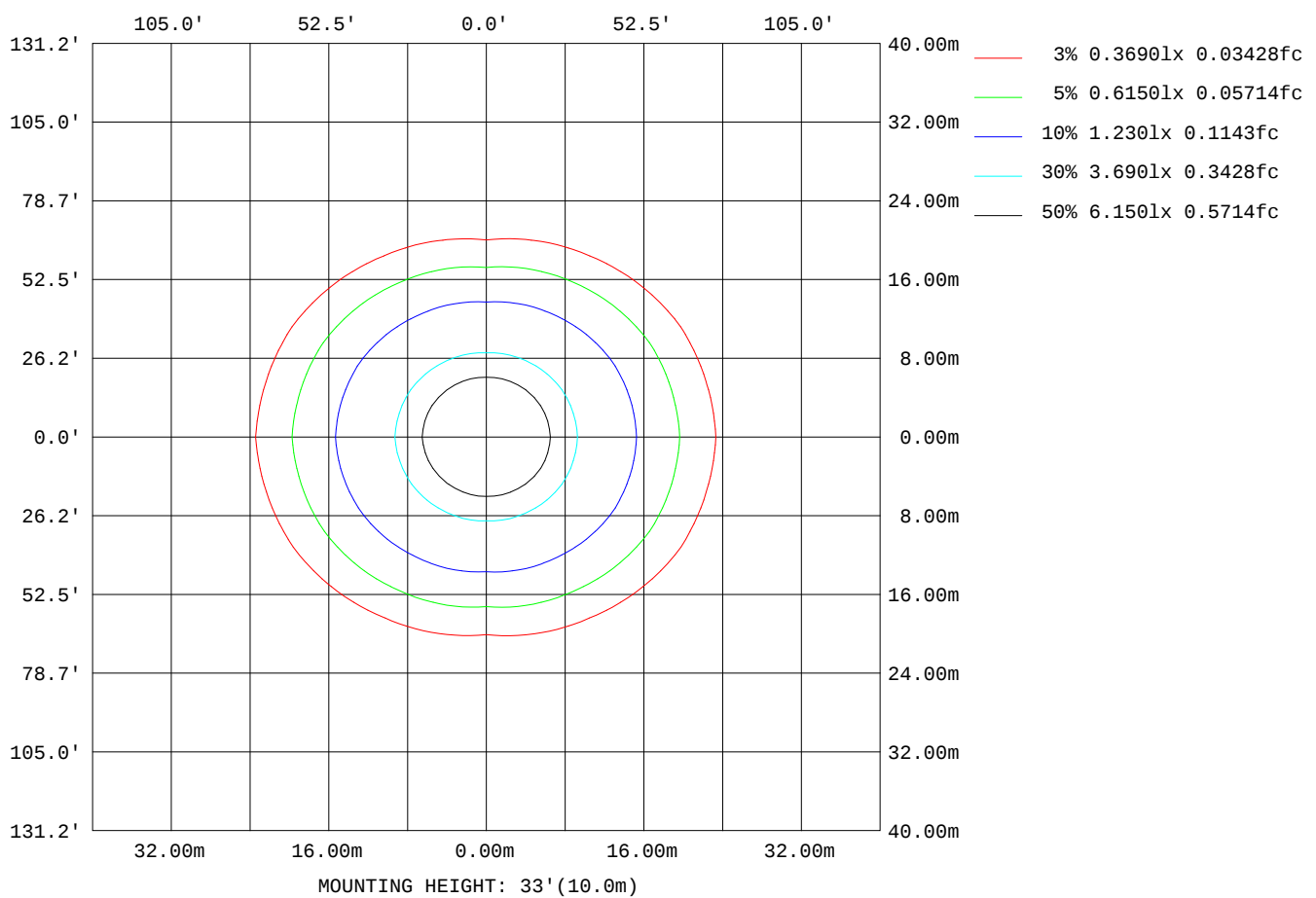
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

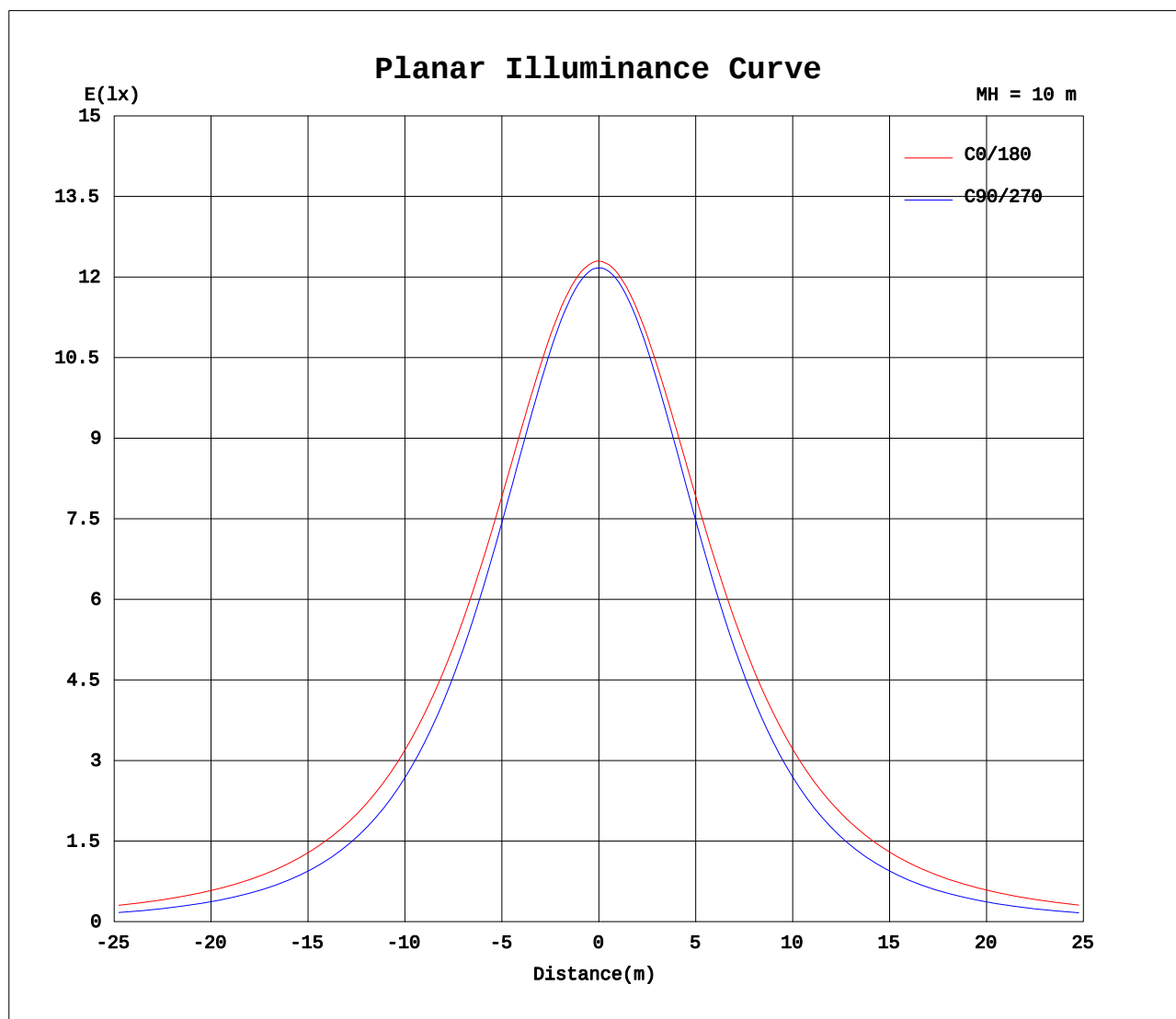
Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm		
NAME: E-B40W-CC	TYPE:40W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.066*1.168	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_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: DAMAN
Test Date: 2020-05-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.443m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.7V I:0.1650A P:37.40W PF:0.9430 Lamp Flux:4487.39x1 lm																	
NAME: E-B40W-CC									TYPE:40W				WEIGHT:				
DIM.:									SPEC.:4000K				SERIAL No.:1				
MFR.:									SUR.:0.066*1.168				PROTECTION ANGLE:				

Table--1

UNIT: cd

γ (DEG)	C (DEG)																	
	0	30	60	90	120	150	180	210	240	270	300	330						
0	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220						
5	1215	1215	1214	1212	1211	1214	1215	1215	1214	1214	1216	1216						
10	1202	1201	1195	1192	1193	1197	1202	1200	1197	1195	1199	1203						
15	1180	1176	1165	1158	1161	1171	1179	1175	1167	1163	1172	1180						
20	1149	1142	1124	1114	1120	1136	1148	1140	1128	1119	1132	1147						
25	1110	1100	1074	1060	1068	1094	1110	1098	1078	1065	1083	1105						
30	1065	1050	1015	995	1009	1044	1066	1049	1019	1001	1025	1056						
35	1013	994	949	923	944	988	1016	993	953	928	959	1001						
40	957	933	877	844	871	927	960	933	881	848	887	940						
45	896	868	799	760	795	862	901	868	804	763	810	874						
50	832	799	719	671	715	794	838	799	723	674	729	806						
55	765	727	636	579	633	723	772	727	639	580	645	734						
60	695	654	553	485	550	649	703	654	554	483	559	660						
65	623	580	469	389	466	575	631	578	468	383	472	584						
70	550	504	386	291	383	500	558	502	382	282	387	508						
75	477	430	307	197	303	425	485	427	298	185	303	432						
80	407	359	232	110	228	355	415	356	223	96.0	227	360						
85	344	294	167	39.7	165	292	352	294	160	28.0	163	297						
90	298	247	122	4.73	122	248	304	252	121	3.94	122	251						
95	269	220	101	4.61	101	220	274	224	100	4.78	103	224						
100	242	196	85.5	5.63	85.0	196	246	198	84.7	5.87	87.6	200						
105	216	174	73.7	6.69	72.9	173	219	175	73.2	6.77	76.1	178						
110	193	154	60.0	7.86	63.6	153	195	154	64.4	7.84	65.5	157						
115	171	137	49.5	8.99	56.3	135	172	136	57.7	8.95	54.6	139						
120	150	121	41.7	10.1	50.5	118	149	120	51.6	10.2	47.3	122						
125	132	97.4	36.5	11.3	46.0	104	124	104	46.4	11.4	41.9	100						
130	115	75.6	32.7	12.4	42.2	90.6	107	88.6	42.4	12.5	37.5	84.0						
135	99.8	62.5	29.8	13.6	38.3	78.9	95.8	77.0	39.4	13.6	34.1	69.0						
140	85.9	52.2	27.7	15.4	35.2	68.5	82.9	67.7	36.9	14.7	31.2	58.7						
145	73.4	46.1	27.2	16.6	32.9	59.3	71.0	59.2	34.4	16.0	28.9	50.0						
150	62.0	39.1	26.5	17.7	30.8	50.7	60.5	51.3	31.9	17.2	27.5	42.6						
155	51.9	33.3	25.3	18.8	28.7	43.3	50.9	44.1	29.4	18.3	26.5	36.2						
160	42.7	28.7	24.3	19.6	26.5	37.2	41.7	37.6	26.6	19.2	25.5	31.1						
165	34.6	25.9	23.8	20.3	24.7	31.3	32.4	31.7	24.7	20.0	24.5	27.2						
170	27.7	23.5	23.2	20.9	23.1	26.2	26.6	26.4	23.1	20.7	23.7	24.5						
175	20.5	22.3	22.8	21.3	21.8	22.8	21.5	23.0	21.9	21.2	23.1	22.8						
180	19.3	20.5	21.2	21.4	21.0	20.7	19.4	20.5	21.1	21.5	21.7	20.7						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-05-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks: