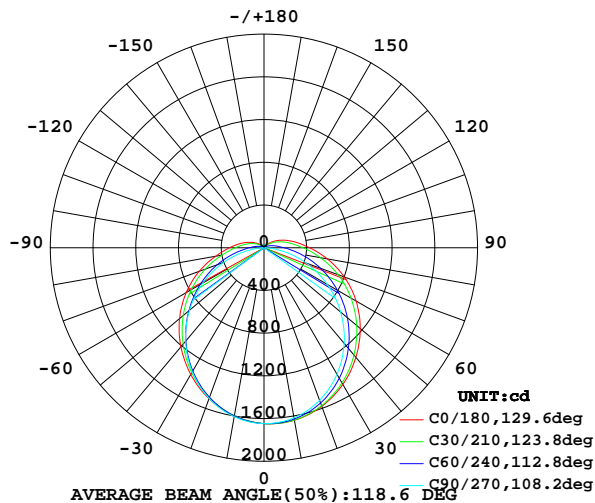


LUMINAIRE PHOTOMETRIC TEST REPORT

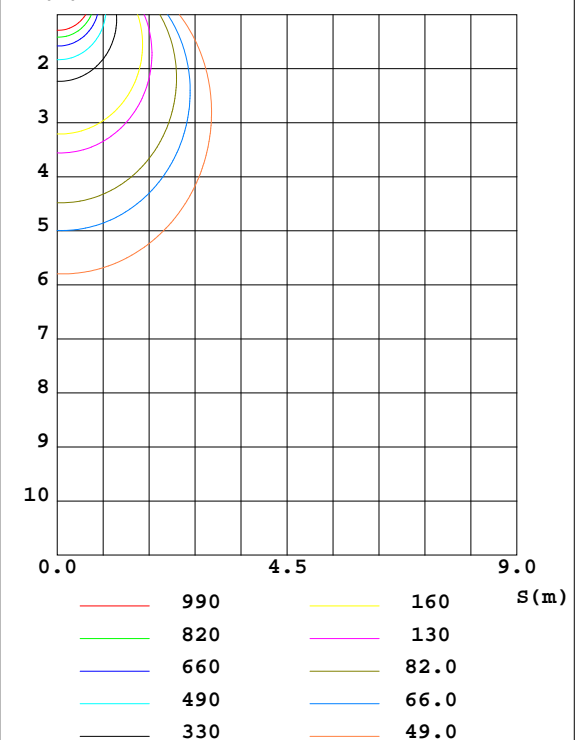
Test:U:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm		
NAME: UP-TRP08-1500-41W-5000K	TYPE:41W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 141.53 lm/W			
MODEL:UP-TRP08-1500-41W-5000K		I _{max} (cd)	1650	S/MH(C0/180)	1.34
NOMINAL POWER(W)	41	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	5760.3	η UP,DN(C0-180)	4.5,46.7
NOMINAL FLUX(lm)	5760.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	4.1,44.8
LAMPS INSIDE	1	η up(%)	8.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.0	η down(%)	91.4	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:DAMIN
Test Date:2020-01-10

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	I lum, lamp
10	1640	1634	1617	1605	1599	1598	1607	1627	0- 10	155.7	155.7	2.7,2.7
20	1581	1561	1521	1505	1504	1493	1502	1548	10- 20	445.3	601.0	10.4,10.4
30	1478	1436	1367	1358	1371	1343	1343	1418	20- 30	674.5	1276	22.1,22.1
40	1339	1270	1168	1175	1211	1158	1142	1250	30- 40	816.9	2092	36.3,36.3
50	1177	1076	937.2	969.7	1032	953.3	911.3	1055	40- 50	861.5	2954	51.3,51.3
60	995.1	866.2	684.6	752.7	841.2	738.8	661.5	844.7	50- 60	811.9	3766	65.4,65.4
70	800.3	651.2	420.7	536.3	644.6	525.9	401.6	631.1	60- 70	682.6	4448	77.2,77.2
80	602.0	444.2	168.0	338.9	460.0	333.1	156.4	426.8	70- 80	500.5	4949	85.9,85.9
90	427.3	277.1	18.69	202.9	322.5	204.0	21.48	264.9	80- 90	317.0	5266	91.4,91.4
100	302.8	178.1	14.11	127.8	228.9	130.0	17.17	171.2	90-100	199.9	5466	94.9,94.9
110	209.1	111.0	13.50	75.39	152.9	77.79	15.48	105.9	100-110	126.9	5593	97.1,97.1
120	132.5	62.80	14.50	41.68	92.42	43.26	16.06	61.44	110-120	73.53	5666	98.4,98.4
130	74.54	34.61	16.29	24.65	47.82	25.91	17.62	33.80	120-130	39.29	5706	99,99
140	33.94	21.02	18.88	21.26	24.15	22.14	19.78	22.13	130-140	20.57	5726	99.4,99.4
150	23.89	22.41	21.41	22.59	24.40	22.99	21.84	22.95	140-150	14.01	5740	99.7,99.7
160	24.58	23.82	23.38	23.66	24.77	23.91	23.62	24.07	150-160	10.80	5751	99.8,99.8
170	25.35	24.97	24.92	24.78	25.65	25.05	25.07	25.13	160-170	6.937	5758	100,100
180	26.03	25.42	25.52	25.32	26.04	25.45	25.54	25.34	170-180	2.413	5760	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

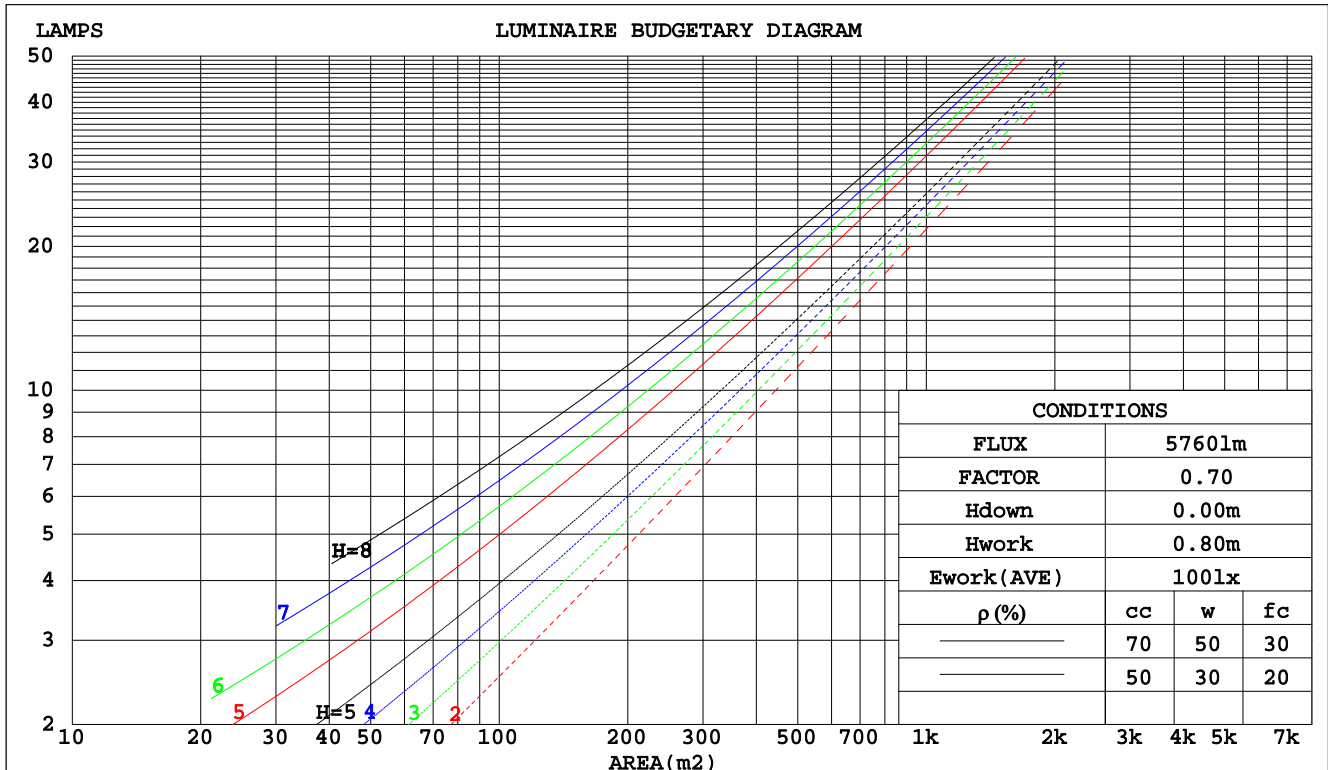
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm		
NAME: UP-TRP08-1500-41W-5000K	TYPE:41W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	.00	.00	.00	.94	.94	.94	.91
1.0	.99	.94	.90	.96	.92	.88	.90	.87	.83	.85	.82	.79	.80	.77	.75	.72
2.0	.86	.78	.72	.83	.76	.70	.78	.72	.67	.73	.69	.64	.69	.65	.62	.59
3.0	.75	.66	.59	.72	.64	.58	.68	.61	.56	.64	.58	.54	.61	.56	.52	.49
4.0	.66	.57	.50	.64	.55	.49	.60	.53	.47	.57	.51	.46	.54	.48	.44	.41
5.0	.59	.49	.42	.57	.48	.42	.54	.46	.40	.51	.44	.39	.48	.43	.38	.36
6.0	.53	.43	.37	.51	.43	.36	.49	.41	.35	.46	.39	.34	.44	.38	.33	.31
7.0	.48	.39	.32	.46	.38	.32	.44	.37	.31	.42	.35	.30	.40	.34	.29	.27
8.0	.43	.35	.29	.42	.34	.28	.40	.33	.28	.38	.32	.27	.37	.31	.26	.24
9.0	.40	.31	.26	.39	.31	.25	.37	.30	.25	.35	.29	.24	.34	.28	.24	.22
10.0	.37	.29	.23	.36	.28	.23	.34	.27	.23	.33	.26	.22	.31	.26	.22	.20



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm					
NAME: UP-TRP08-1500-41W-5000K			TYPE:41W		WEIGHT:
DIM.:			SPEC.:5000K		SERIAL No.:1
MFR.:			SUR.:0.16		PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.358	.203	.064	.348	.198	.063	.330	.189	.060	.313	.180	.058	.297	.172	.056	
2.0	.318	.174	.054	.310	.171	.053	.293	.163	.051	.278	.156	.049	.264	.149	.047	
3.0	.287	.153	.046	.279	.149	.045	.264	.143	.044	.251	.137	.042	.238	.132	.041	
4.0	.260	.135	.040	.253	.133	.039	.240	.127	.038	.228	.122	.037	.216	.118	.036	
5.0	.238	.121	.035	.232	.119	.035	.220	.114	.034	.209	.110	.033	.198	.106	.032	
6.0	.219	.110	.031	.213	.108	.031	.203	.104	.030	.193	.100	.029	.183	.096	.029	
7.0	.203	.100	.028	.198	.098	.028	.188	.095	.027	.179	.092	.027	.170	.088	.026	
8.0	.189	.092	.026	.184	.091	.026	.175	.087	.025	.167	.084	.024	.159	.082	.024	
9.0	.176	.085	.024	.172	.084	.024	.164	.081	.023	.156	.078	.022	.149	.076	.022	
10.0	.165	.079	.022	.161	.078	.022	.154	.075	.021	.147	.073	.021	.140	.070	.020	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.256	.256	.256	.219	.219	.219	.149	.149	.149	.086	.086	.086	.027	.027	.027	
1.0	.250	.222	.197	.214	.190	.169	.146	.131	.117	.084	.076	.068	.027	.024	.022	
2.0	.242	.198	.161	.207	.171	.139	.142	.118	.097	.082	.069	.057	.026	.022	.019	
3.0	.234	.181	.139	.201	.156	.120	.138	.109	.084	.080	.063	.050	.026	.021	.016	
4.0	.227	.168	.124	.194	.145	.107	.134	.101	.076	.077	.059	.045	.025	.019	.015	
5.0	.219	.158	.113	.188	.137	.099	.130	.096	.070	.075	.056	.041	.024	.018	.014	
6.0	.212	.150	.106	.182	.130	.092	.125	.091	.065	.073	.053	.039	.023	.017	.013	
7.0	.205	.143	.100	.176	.124	.087	.122	.087	.062	.071	.051	.037	.023	.017	.012	
8.0	.198	.138	.096	.170	.119	.084	.118	.084	.059	.069	.049	.035	.022	.016	.012	
9.0	.192	.133	.093	.165	.115	.081	.114	.081	.057	.067	.048	.034	.022	.016	.011	
10.0	.186	.128	.090	.160	.112	.079	.111	.078	.056	.065	.046	.033	.021	.015	.011	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm											
NAME: UP-TRP08-1500-41W-5000K					TYPE:41W			WEIGHT:			
DIM.:					SPEC.:5000K			SERIAL No.:1			
MFR.:					SUR.:0.16			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	21.4	22.8	21.8	23.2	23.6	19.9	21.4	20.3	21.8	22.1	
	23.7	25.1	24.1	25.4	25.9	21.5	22.8	21.9	23.2	23.6	
	24.9	26.2	25.4	26.6	27.1	22.1	23.4	22.5	23.8	24.2	
	26.2	27.4	26.7	27.9	28.3	22.5	23.7	23.0	24.1	24.6	
	26.9	28.1	27.4	28.6	29.0	22.6	23.8	23.1	24.2	24.7	
	27.7	28.9	28.2	29.3	29.8	22.7	23.8	23.2	24.3	24.8	
4H	2H	22.0	23.3	22.4	23.7	24.1	20.9	22.2	21.3	22.6	23.0
	3H	24.5	25.7	25.0	26.1	26.6	22.7	23.8	23.1	24.2	24.7
	4H	25.9	27.0	26.4	27.4	28.0	23.4	24.5	23.9	25.0	25.5
	6H	27.5	28.4	28.0	28.9	29.4	24.1	25.0	24.6	25.5	26.0
	8H	28.3	29.1	28.8	29.7	30.2	24.3	25.1	24.8	25.7	26.2
	12H	29.2	30.0	29.8	30.5	31.1	24.4	25.2	25.0	25.7	26.3
8H	4H	26.3	27.1	26.8	27.7	28.2	24.2	25.1	24.8	25.6	26.2
	6H	28.1	28.8	28.6	29.4	30.0	25.1	25.9	25.7	26.4	27.0
	8H	29.1	29.7	29.7	30.3	31.0	25.5	26.2	26.1	26.8	27.4
	12H	30.3	30.8	30.9	31.4	32.1	25.8	26.4	26.5	27.0	27.7
12H	4H	26.3	27.1	26.8	27.6	28.2	24.4	25.2	25.0	25.8	26.4
	6H	28.2	28.8	28.8	29.4	30.0	25.5	26.2	26.1	26.8	27.4
	8H	29.3	29.9	29.9	30.5	31.1	26.1	26.6	26.7	27.2	27.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117 Corrected 5760 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.1)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm		
NAME: UP-TRP08-1500-41W-5000K	TYPE:41W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

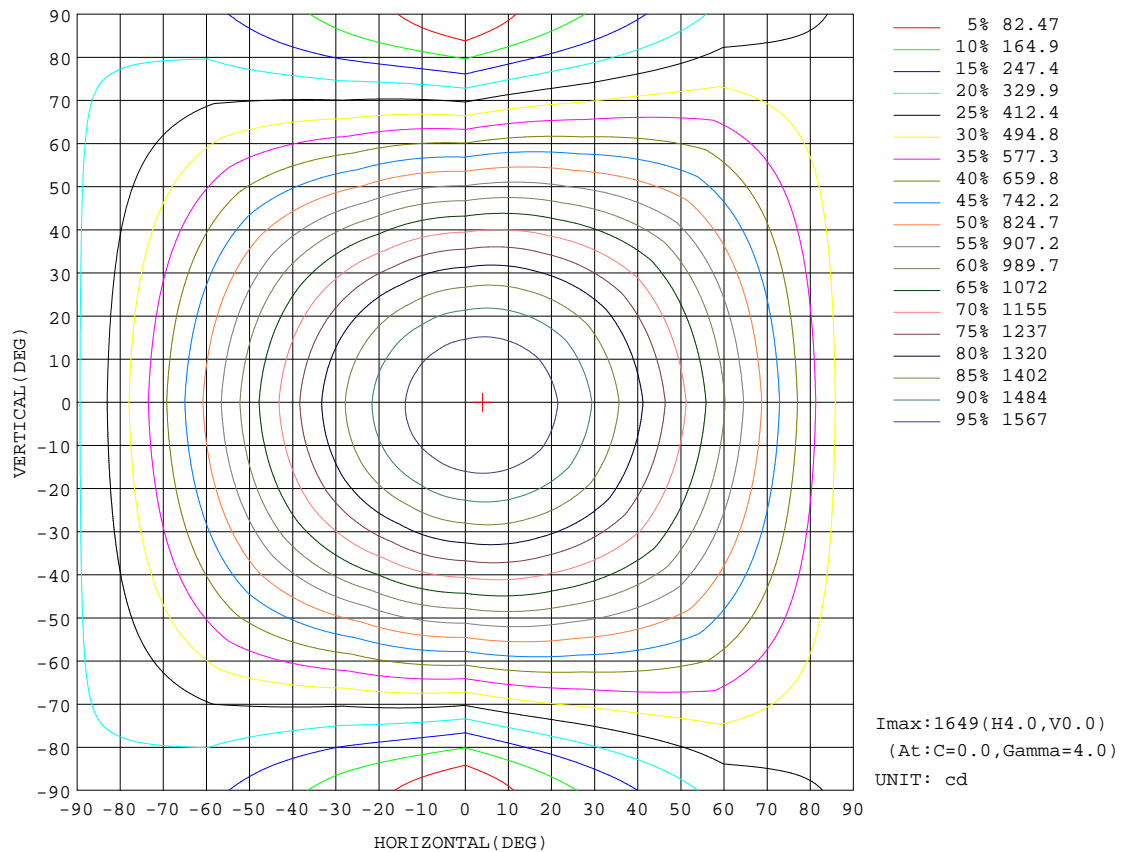
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	52	40	33	52	40	33	50	39	33	26
0.80	62	50	42	61	49	42	58	48	41	34
1.00	70	58	50	68	57	49	66	58	49	41
1.25	77	65	57	75	64	57	72	62	56	47
1.50	82	71	63	80	69	62	76	67	61	52
2.00	89	79	71	87	77	70	82	74	68	59
2.50	93	84	77	91	82	76	86	79	73	63
3.00	97	88	82	94	86	80	89	83	77	67
4.00	101	94	88	98	92	86	92	87	83	71
5.00	104	98	93	101	95	91	95	90	86	74
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:2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm		
NAME: UP-TRP08-1500-41W-5000K	TYPE:41W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:



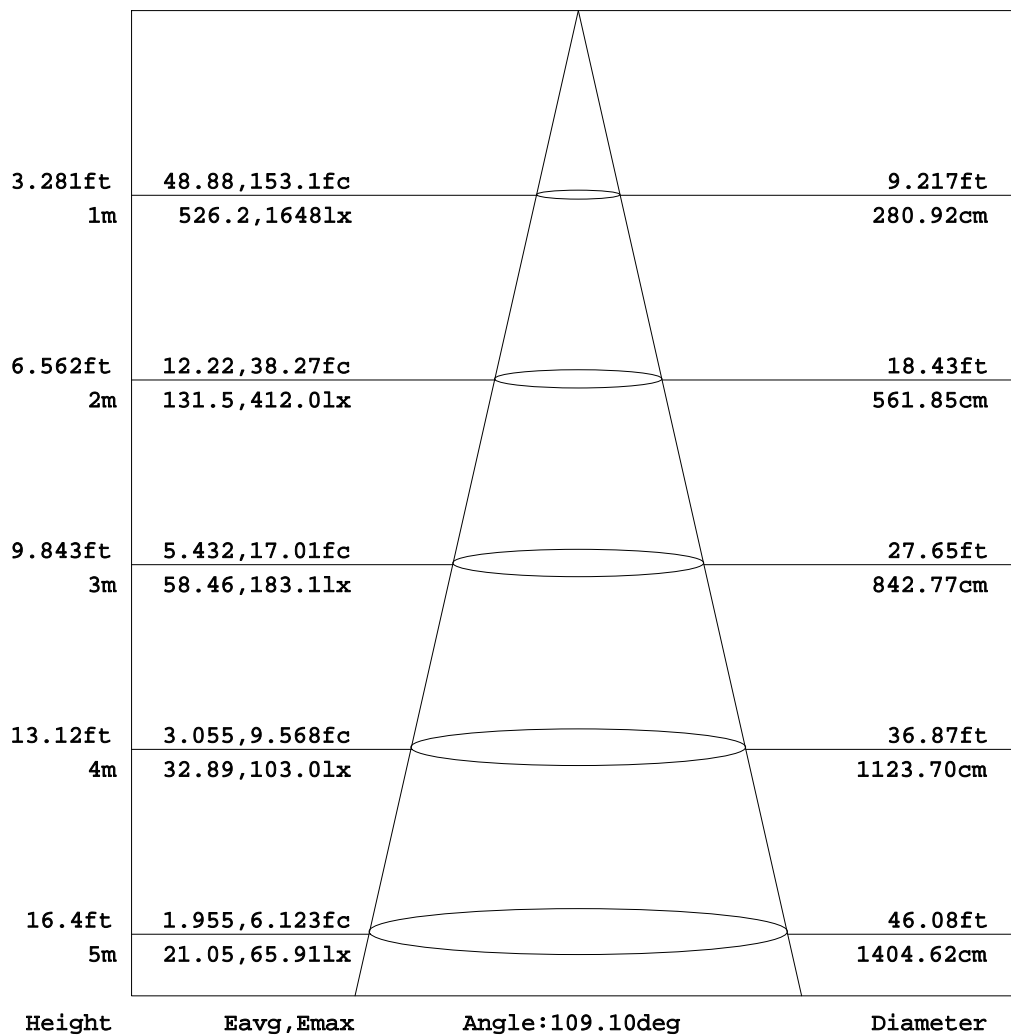
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm		
NAME: UP-TRP08-1500-41W-5000K	TYPE:41W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

Flux out:3372 lm



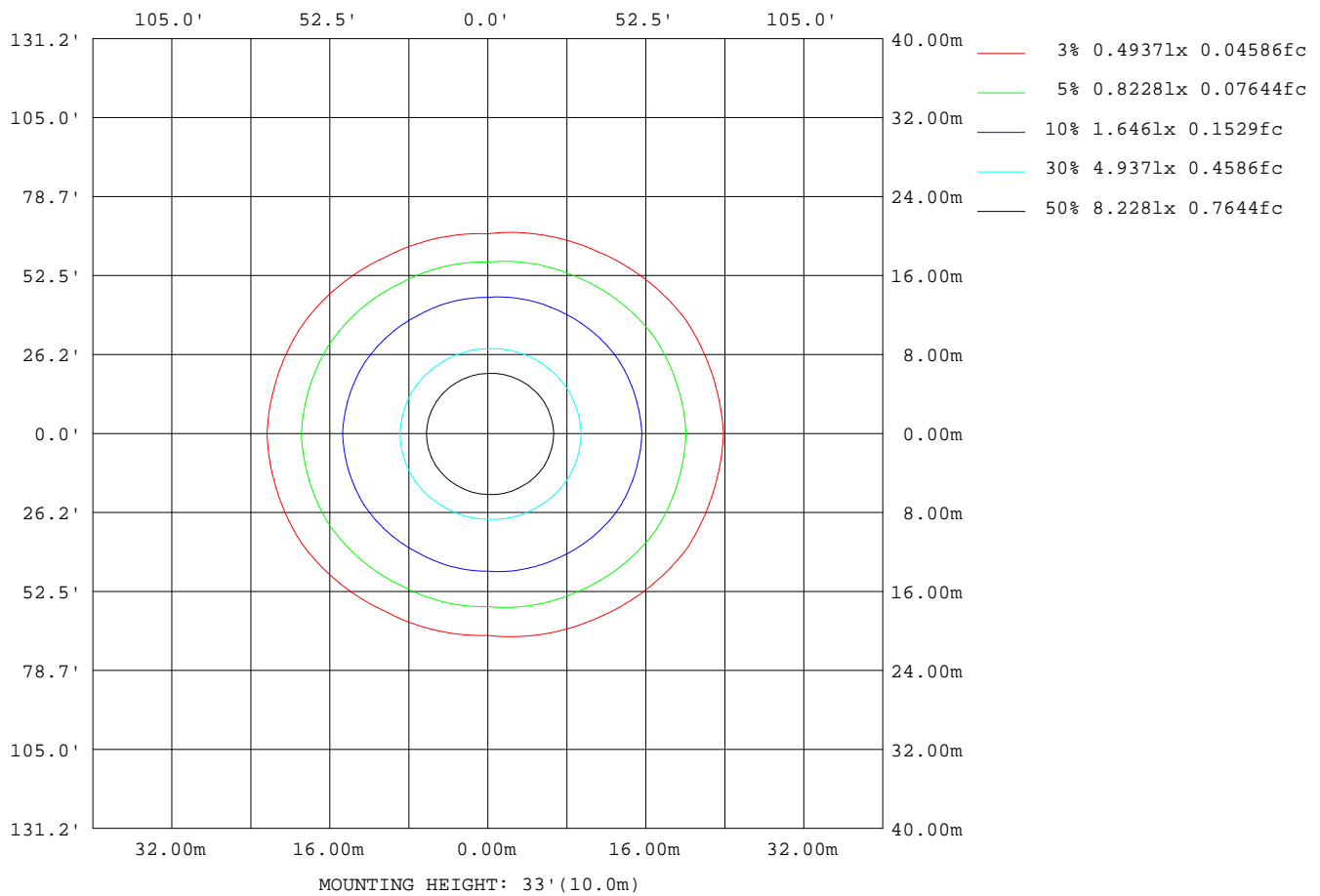
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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

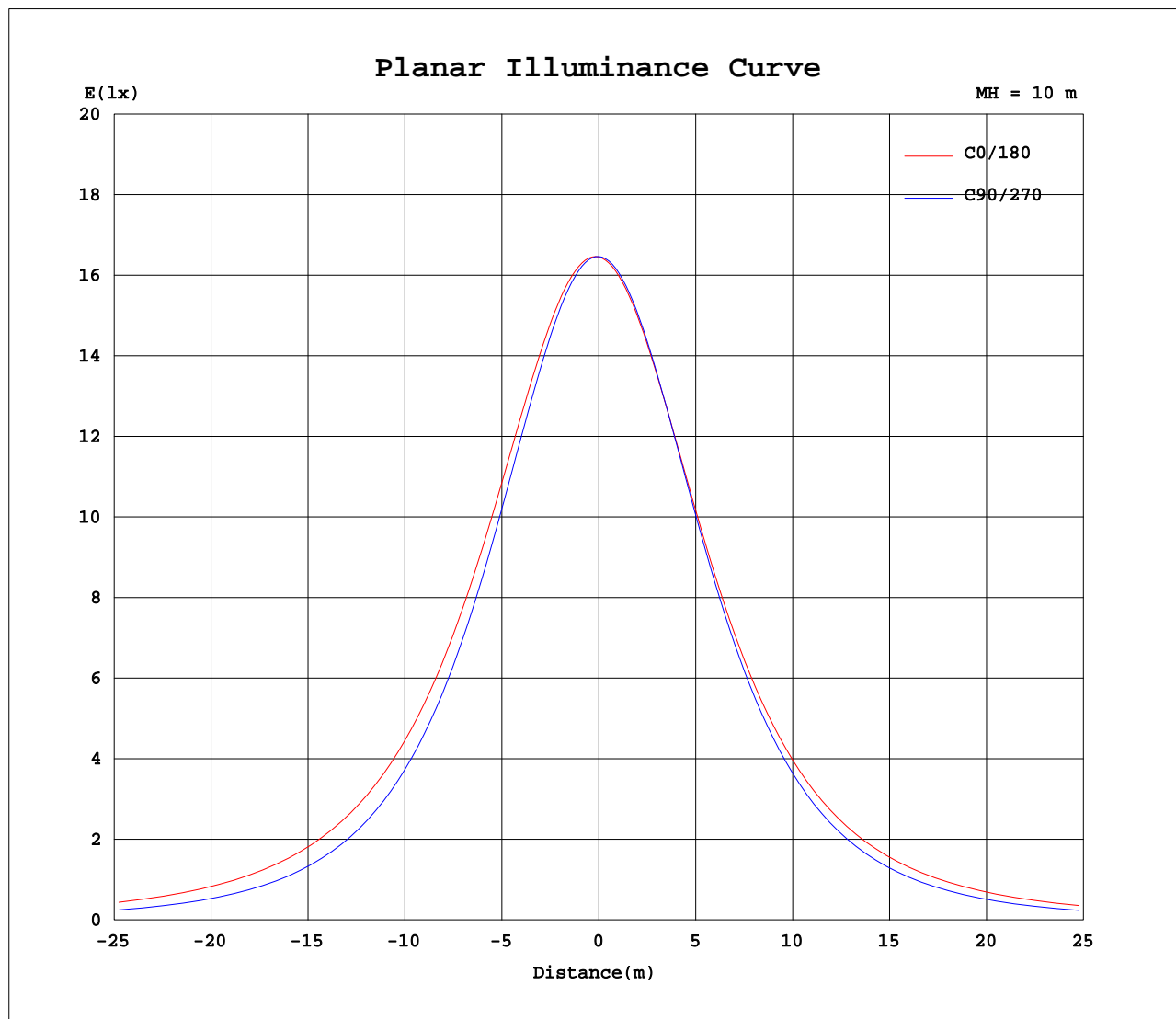
Test:U:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm		
NAME: UP-TRP08-1500-41W-5000K	TYPE:41W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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: 2020-01-10

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:230.0V I:0.1810A P:40.70W PF:0.9740 Lamp Flux:5760.3x1 lm																	
NAME: UP-TRP08-1500-41W-5000K									TYPE:41W			WEIGHT:					
DIM.:									SPEC.:5000K			SERIAL No.:1					
MFR.:									SUR.:0.16			PROTECTION ANGLE:					

Table--1

UNIT: cd

C(DEC)	0	30	60	90	120	150	180	210	240	270	300	330						
γ (DEC)	0	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646						
5	1650	1650	1646	1640	1635	1631	1630	1629	1631	1635	1642	1647						
10	1640	1639	1629	1617	1607	1602	1599	1597	1599	1607	1620	1633						
15	1616	1613	1596	1577	1564	1560	1557	1552	1552	1562	1584	1605						
20	1581	1574	1547	1521	1506	1505	1504	1495	1491	1502	1532	1563						
25	1534	1523	1485	1451	1435	1440	1442	1428	1418	1429	1467	1510						
30	1478	1461	1410	1367	1352	1365	1371	1352	1333	1343	1390	1446						
35	1412	1390	1324	1273	1259	1282	1293	1268	1239	1247	1302	1374						
40	1339	1311	1229	1168	1158	1193	1211	1178	1138	1142	1206	1293						
45	1260	1224	1127	1056	1050	1099	1123	1085	1031	1030	1103	1205						
50	1177	1133	1019	937	938	1002	1032	988	919	911	996	1113						
55	1088	1038	907	813	822	902	938	888	805	788	884	1018						
60	995	940	792	685	706	800	841	787	690	661	769	920						
65	899	840	678	553	590	697	743	686	577	532	656	820						
70	800	738	564	421	476	596	645	585	466	402	543	719						
75	700	637	454	289	368	498	549	489	361	274	435	619						
80	602	538	351	168	271	407	460	400	266	156	333	521						
85	509	445	259	68.6	190	330	385	327	190	63.2	244	431						
90	427	366	189	18.7	135	271	322	270	138	21.5	176	354						
95	359	301	140	14.8	99.2	224	273	224	104	18.6	132	292						
100	303	250	106	14.1	71.8	184	229	183	76.6	17.2	99.4	243						
105	254	206	78.8	13.9	50.7	148	189	148	55.3	16.0	71.9	195						
110	209	166	56.1	13.5	34.9	116	153	117	38.9	15.5	51.7	160						
115	168	131	37.4	13.9	23.4	88.6	121	89.6	26.7	15.7	36.2	127						
120	132	101	25.0	14.5	18.1	65.3	92.4	66.4	20.1	16.1	25.5	97.4						
125	101	74.7	18.5	15.3	18.2	46.0	68.2	47.1	19.8	16.7	20.3	68.0						
130	74.5	51.0	18.3	16.3	18.6	30.7	47.8	31.8	20.0	17.6	20.1	47.5						
135	52.0	31.7	18.8	17.5	19.2	22.4	31.7	23.3	20.4	18.7	20.3	32.6						
140	33.9	22.4	19.6	18.9	20.0	22.5	24.2	23.3	21.0	19.8	20.8	23.5						
145	23.7	22.1	20.7	20.2	20.9	23.0	24.3	23.5	21.7	20.9	21.6	22.9						
150	23.9	22.9	21.9	21.4	21.8	23.4	24.4	23.7	22.3	21.8	22.5	23.4						
155	24.2	23.5	22.8	22.5	22.7	23.6	24.5	23.8	23.0	22.8	23.1	23.9						
160	24.6	24.1	23.6	23.4	23.4	23.9	24.8	24.1	23.7	23.6	23.8	24.3						
165	24.9	24.6	24.3	24.2	24.2	24.3	25.2	24.6	24.5	24.5	24.5	24.8						
170	25.3	25.0	24.9	24.9	24.8	24.8	25.7	25.0	25.1	25.1	25.0	25.2						
175	25.7	25.3	25.2	25.3	25.1	25.1	25.9	25.3	25.4	25.4	25.3	25.3						
180	26.0	25.4	25.5	25.5	25.3	25.3	26.0	25.4	25.5	25.5	25.3	25.3						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-10

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: