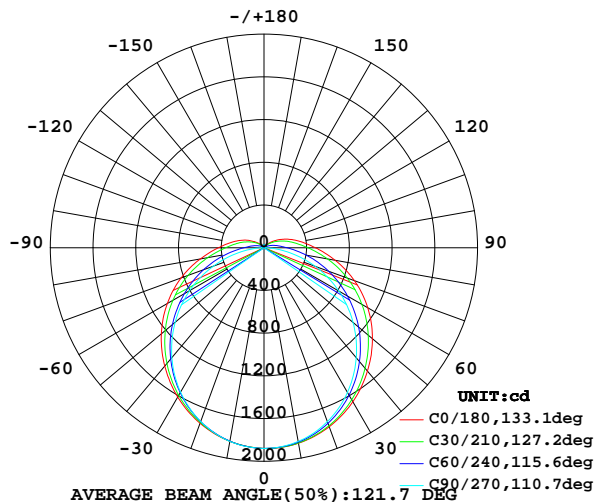


LUMINAIRE PHOTOMETRIC TEST REPORT

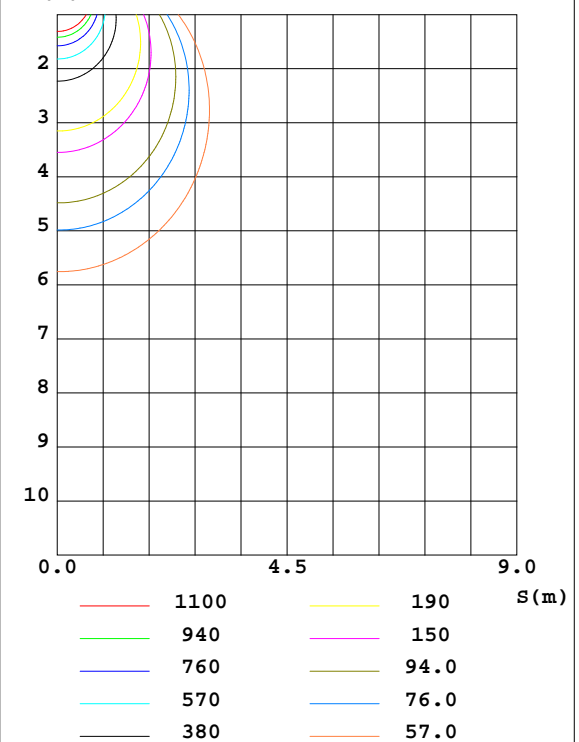
Test:U:230.0V I:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 139.06 lm/W			
MODEL:UP-TRP08-1500-50W-5000K		I _{max} (cd)	1879	S/MH(C0/180)	1.32
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	6786.2	η UP,DN(C0-180)	4.5,45.9
NOMINAL FLUX(lm)	6786.24	CIE CLASS	DIRECT	η UP,DN(C180-360)	4.4,45.2
LAMPS INSIDE	1	η up(%)	8.9	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.0	η down(%)	91.1	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:2020-01-08

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	%lum, lamp
10	1859	1852	1842	1840	1841	1839	1841	1851	0- 10	177.7	177.7	2.62,2.62
20	1784	1762	1734	1738	1750	1738	1732	1760	10- 20	509.5	687.2	10.1,10.1
30	1664	1619	1564	1583	1615	1583	1562	1615	20- 30	775.0	1462	21.5,21.5
40	1507	1432	1345	1386	1446	1387	1343	1427	30- 40	944.6	2407	35.5,35.5
50	1325	1216	1089	1162	1255	1163	1087	1209	40- 50	1005	3411	50.3,50.3
60	1122	980.4	808.1	921.6	1046	923.6	804.4	971.7	50- 60	957.1	4369	64.4,64.4
70	901.4	738.0	511.4	677.6	825.1	679.9	505.1	727.3	60- 70	816.1	5185	76.4,76.4
80	676.6	502.9	219.5	445.8	606.1	448.9	213.5	491.1	70- 80	609.1	5794	85.4,85.4
90	482.2	314.3	28.00	269.4	427.5	274.7	29.77	303.9	80- 90	390.0	6184	91.1,91.1
100	344.4	202.3	18.45	172.7	305.4	178.4	21.26	194.9	90-100	245.2	6429	94.7,94.7
110	236.6	124.8	17.27	106.3	210.0	110.4	18.85	118.2	100-110	157.0	6586	97,97
120	147.9	69.53	17.94	59.18	122.4	62.10	18.53	66.24	110-120	91.02	6677	98.4,98.4
130	80.55	38.29	19.39	34.63	67.41	35.49	19.74	36.20	120-130	47.86	6725	99.1,99.1
140	34.30	23.85	21.83	24.49	29.52	24.72	21.59	24.09	130-140	23.87	6749	99.4,99.4
150	26.87	25.26	24.05	25.36	27.04	25.25	23.47	24.95	140-150	15.63	6764	99.7,99.7
160	26.83	26.15	25.66	25.96	27.04	25.76	25.09	25.75	150-160	11.85	6776	99.9,99.9
170	27.17	26.92	26.89	26.66	27.55	26.73	26.61	26.66	160-170	7.476	6784	100,100
180	27.73	27.21	27.26	26.99	27.82	27.20	27.22	26.99	170-180	2.579	6786	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

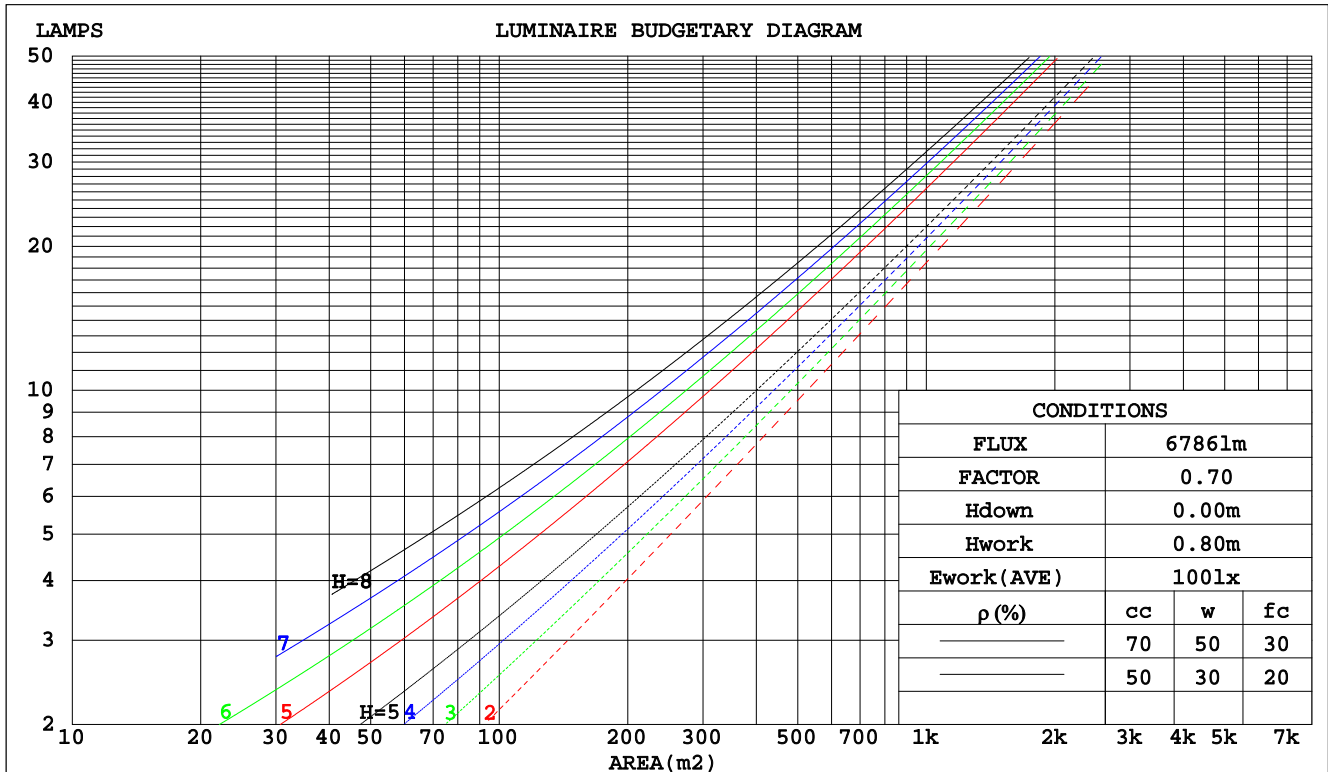
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-01-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ 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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	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	.89	.96	.91	.87	.90	.86	.83	.84	.81	.79	.79	.77	.75	.72
2.0	.85	.78	.71	.82	.76	.70	.77	.72	.67	.73	.68	.64	.68	.65	.61	.58
3.0	.74	.65	.58	.72	.64	.57	.68	.61	.55	.64	.58	.53	.60	.55	.51	.48
4.0	.65	.56	.49	.63	.55	.48	.60	.52	.46	.56	.50	.45	.53	.48	.43	.41
5.0	.58	.49	.42	.56	.48	.41	.53	.46	.40	.50	.44	.39	.48	.42	.37	.35
6.0	.52	.43	.36	.51	.42	.36	.48	.40	.35	.45	.39	.34	.43	.37	.33	.30
7.0	.47	.38	.32	.46	.37	.31	.44	.36	.31	.41	.35	.30	.39	.33	.29	.27
8.0	.43	.34	.28	.42	.34	.28	.40	.32	.27	.38	.31	.26	.36	.30	.26	.24
9.0	.39	.31	.25	.38	.30	.25	.37	.29	.24	.35	.28	.24	.33	.27	.23	.21
10.0	.36	.28	.23	.35	.28	.23	.34	.27	.22	.32	.26	.22	.31	.25	.21	.19



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-08

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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	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	.363	.206	.065	.353	.201	.064	.334	.192	.061	.317	.183	.059	.301	.175	.056	
2.0	.322	.176	.054	.313	.172	.053	.296	.165	.051	.281	.158	.049	.267	.151	.048	
3.0	.289	.154	.046	.281	.151	.045	.266	.144	.044	.253	.138	.042	.240	.133	.041	
4.0	.262	.136	.040	.255	.134	.039	.242	.128	.038	.229	.123	.037	.218	.118	.036	
5.0	.240	.122	.035	.233	.120	.035	.221	.115	.034	.210	.111	.033	.199	.107	.032	
6.0	.220	.110	.032	.215	.108	.031	.204	.104	.030	.193	.101	.030	.184	.097	.029	
7.0	.204	.101	.029	.199	.099	.028	.189	.095	.027	.179	.092	.027	.171	.089	.026	
8.0	.189	.093	.026	.185	.091	.026	.176	.088	.025	.167	.085	.024	.159	.082	.024	
9.0	.177	.086	.024	.172	.084	.024	.164	.081	.023	.156	.078	.022	.149	.076	.022	
10.0	.166	.079	.022	.162	.078	.022	.154	.076	.021	.147	.073	.021	.140	.071	.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	.258	.258	.258	.221	.221	.221	.151	.151	.151	.086	.086	.086	.028	.028	.028	
1.0	.252	.224	.198	.216	.192	.171	.148	.132	.118	.085	.076	.069	.027	.025	.022	
2.0	.245	.200	.163	.210	.173	.141	.144	.119	.098	.083	.069	.058	.027	.022	.019	
3.0	.237	.183	.141	.203	.158	.122	.140	.110	.086	.081	.064	.050	.026	.021	.017	
4.0	.229	.171	.126	.197	.147	.109	.135	.103	.077	.078	.060	.045	.025	.020	.015	
5.0	.222	.161	.115	.190	.139	.100	.131	.097	.071	.076	.057	.042	.024	.019	.014	
6.0	.214	.152	.108	.184	.132	.094	.127	.092	.067	.074	.054	.040	.024	.018	.013	
7.0	.207	.146	.102	.178	.126	.089	.123	.089	.063	.072	.052	.038	.023	.017	.012	
8.0	.201	.140	.098	.173	.121	.086	.119	.085	.061	.070	.050	.036	.022	.016	.012	
9.0	.194	.135	.095	.167	.117	.083	.116	.082	.059	.068	.049	.035	.022	.016	.012	
10.0	.188	.131	.093	.162	.114	.081	.113	.080	.057	.066	.047	.034	.021	.016	.011	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-08

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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm											
NAME: UP-TRP08-1500-50W-A2-5000K					TYPE:50W			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	21.7	23.1	22.1	23.5	23.9	20.3	21.8	20.7	22.2	22.6	
	3H	24.0	25.3	24.4	25.7	26.1	21.9	23.3	22.4	23.7	24.1
	4H	25.2	26.5	25.6	26.9	27.4	22.6	23.9	23.0	24.3	24.7
	6H	26.5	27.7	27.0	28.2	28.6	23.1	24.3	23.5	24.7	25.2
	8H	27.2	28.4	27.7	28.8	29.3	23.2	24.4	23.7	24.9	25.3
	12H	28.0	29.2	28.5	29.6	30.1	23.3	24.5	23.8	24.9	25.4
4H	2H	22.2	23.5	22.7	23.9	24.4	21.3	22.5	21.7	23.0	23.4
	3H	24.8	25.9	25.3	26.4	26.9	23.1	24.2	23.6	24.7	25.2
	4H	26.2	27.2	26.7	27.7	28.3	23.9	24.9	24.4	25.4	25.9
	6H	27.7	28.6	28.2	29.2	29.7	24.6	25.5	25.1	26.0	26.6
	8H	28.5	29.4	29.1	29.9	30.5	24.8	25.7	25.4	26.2	26.8
	12H	29.5	30.3	30.0	30.8	31.4	25.0	25.8	25.6	26.3	26.9
8H	4H	26.5	27.4	27.1	27.9	28.5	24.6	25.5	25.2	26.0	26.6
	6H	28.3	29.1	28.9	29.6	30.2	25.6	26.3	26.2	26.9	27.5
	8H	29.4	30.0	29.9	30.6	31.2	26.0	26.7	26.6	27.3	27.9
	12H	30.5	31.1	31.1	31.7	32.4	26.4	26.9	27.0	27.5	28.2
12H	4H	26.6	27.4	27.1	27.9	28.5	24.8	25.6	25.4	26.2	26.8
	6H	28.4	29.1	29.0	29.7	30.3	26.0	26.6	26.6	27.2	27.8
	8H	29.6	30.1	30.2	30.7	31.4	26.5	27.1	27.1	27.7	28.4
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 6786 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.7)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-08

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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

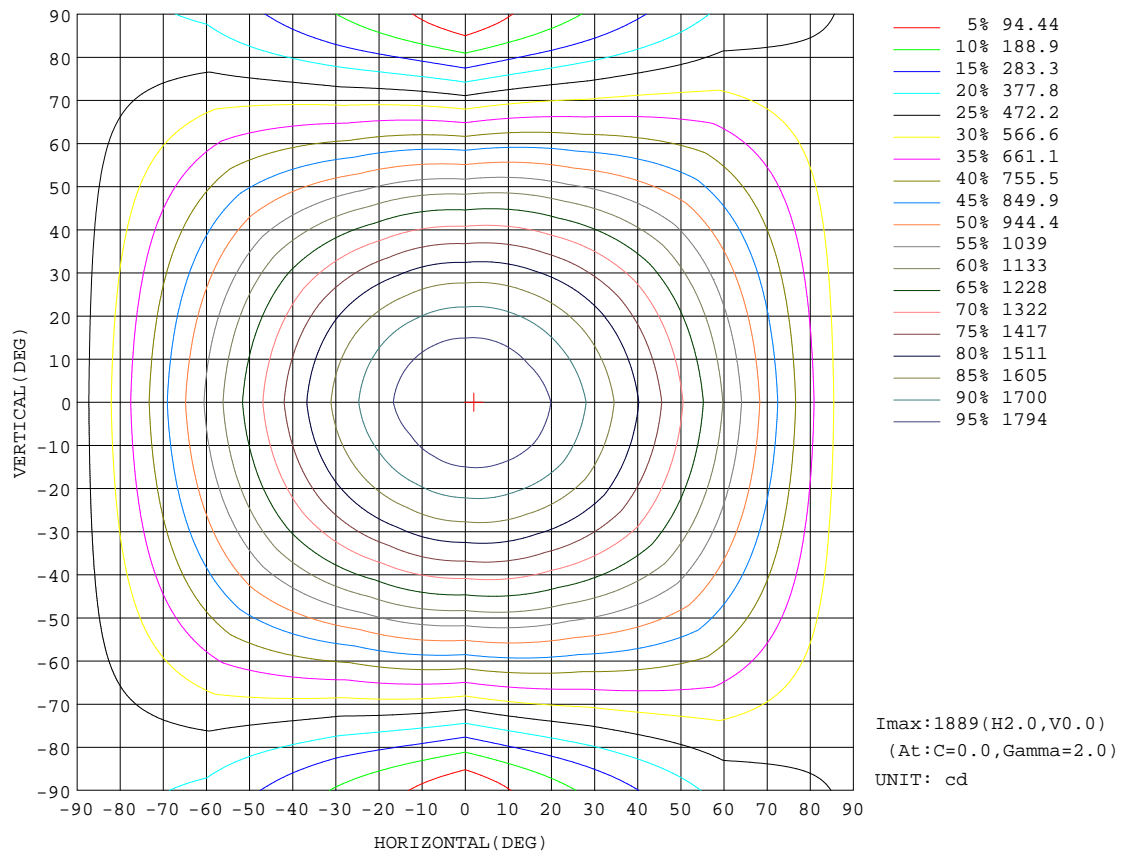
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	52	40	33	51	40	32	50	39	32	26
0.80	61	49	41	60	48	41	58	47	40	33
1.00	69	57	49	68	56	49	65	57	48	40
1.25	76	65	56	75	64	56	71	62	55	46
1.50	81	70	62	79	69	61	75	66	60	51
2.00	89	78	71	86	77	70	82	74	68	58
2.50	93	83	76	90	82	75	85	78	72	62
3.00	96	88	81	94	86	80	88	82	77	66
4.00	101	94	88	98	91	86	92	87	82	71
5.00	104	97	92	100	95	90	94	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:2020-01-08

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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:



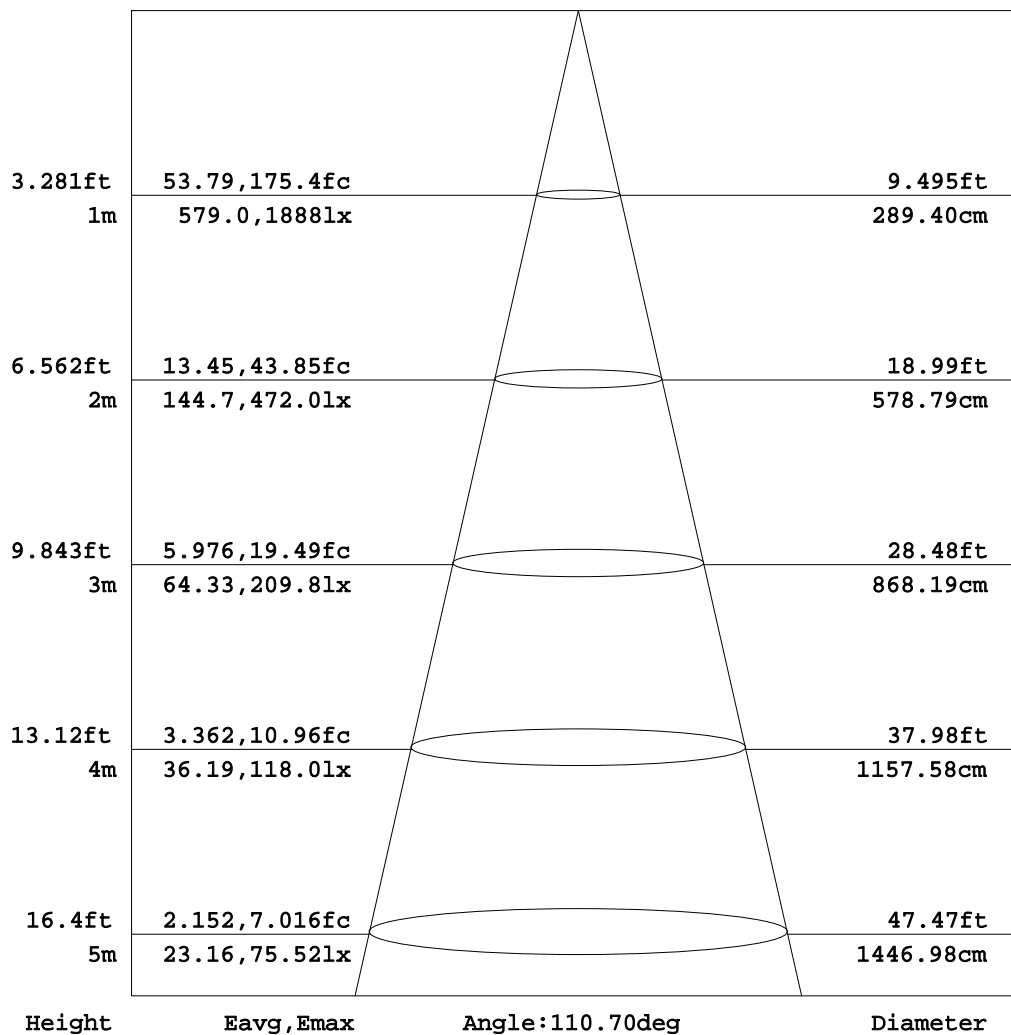
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-08

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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

Flux out:3998 lm



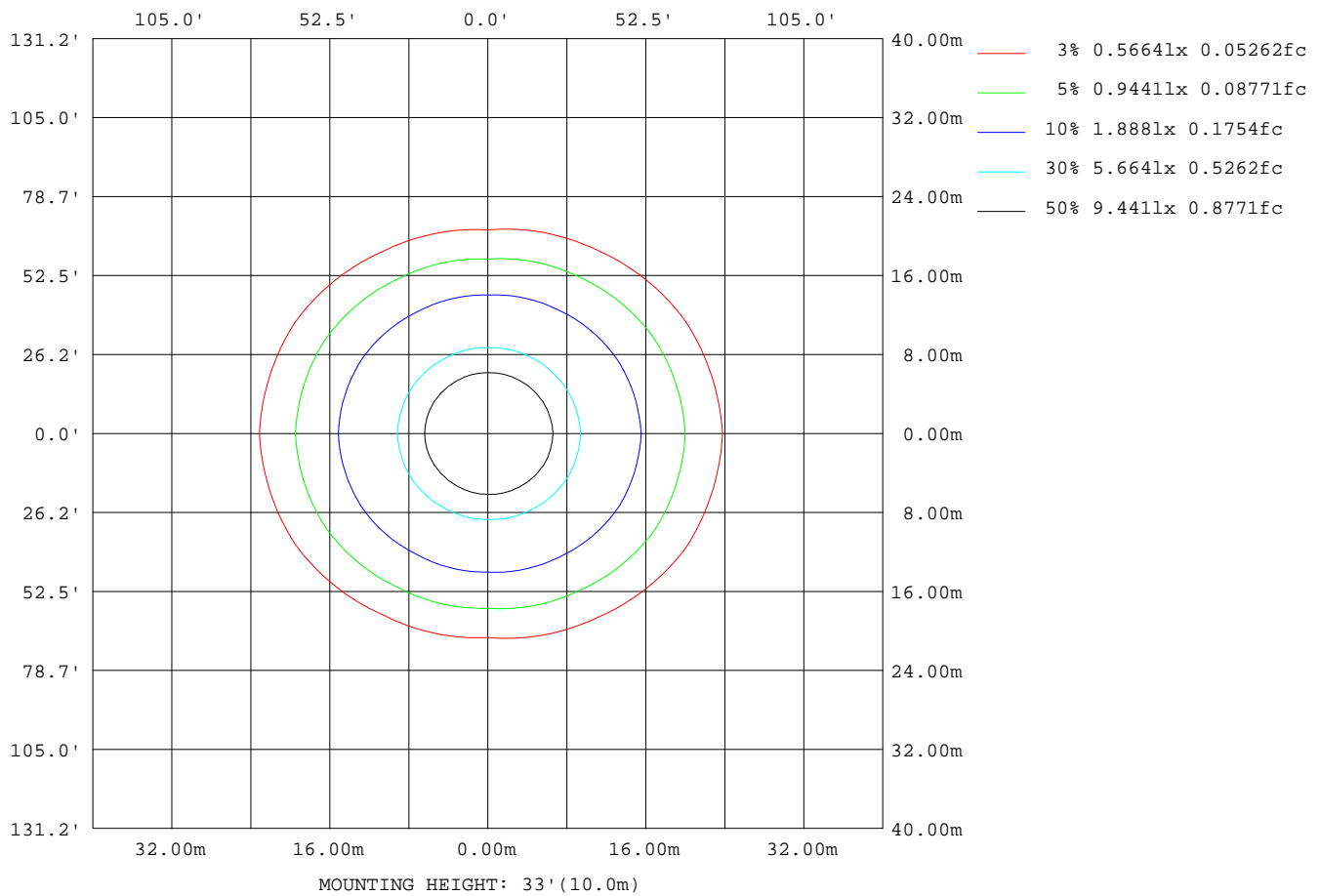
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-08

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

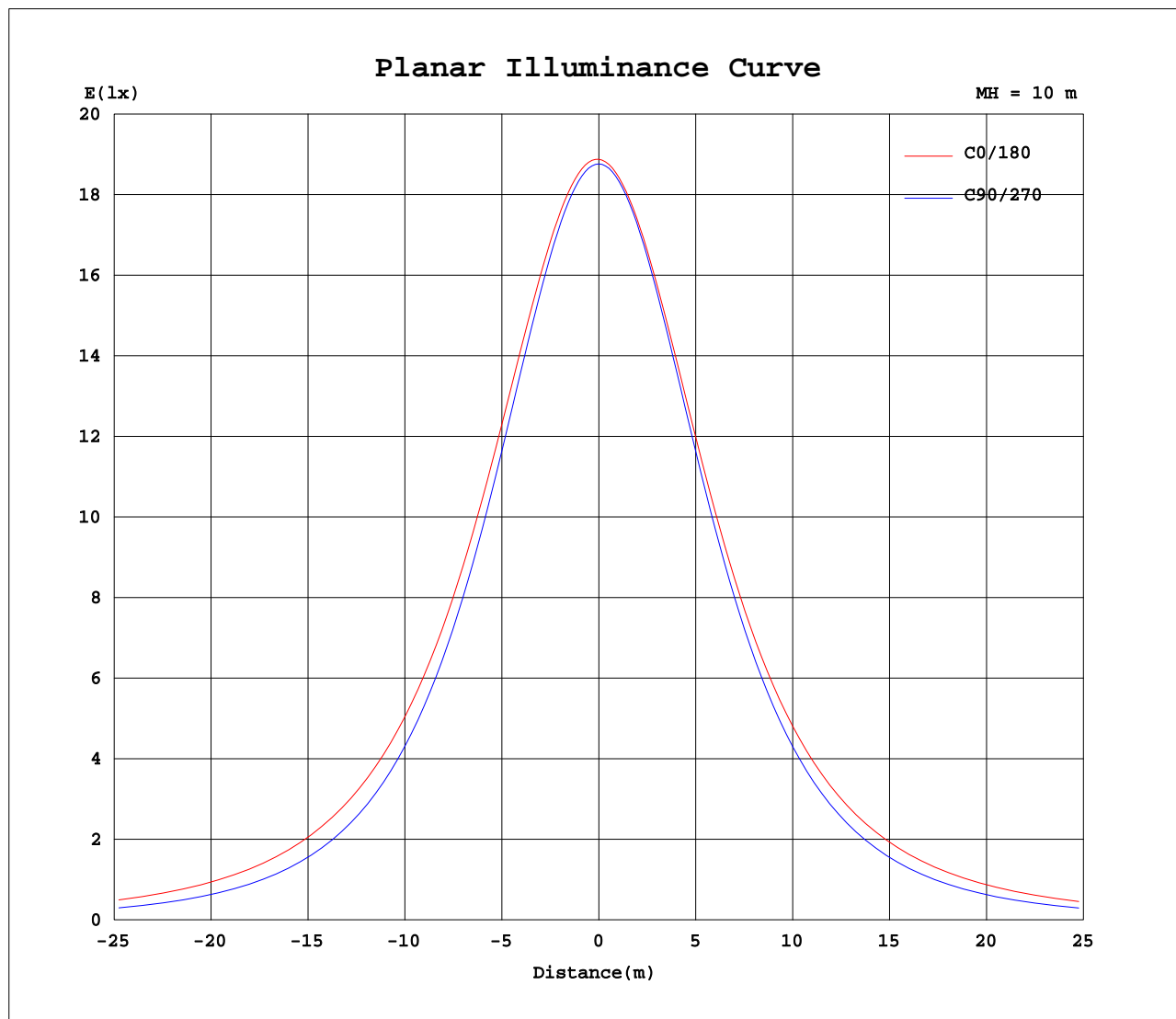
Test:U:230.0V I:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm		
NAME: UP-TRP08-1500-50W-A2-5000K	TYPE:50W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2020-01-08

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: 2020-01-08

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:0.2160A P:48.80W PF:0.9790 Lamp Flux:6786.24x1 lm																	
NAME: UP-TRP08-1500-50W-A2-5000K									TYPE:50W			WEIGHT:					
DIM.:									SPEC.:5000K			SERIAL No.:1					
MFR.:									SUR.:0.16			PROTECTION ANGLE:					

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	1879	1879	1879	1879	1879	1879	1879	1879	1879	1879	1879	1879						
5	1876	1875	1872	1870	1868	1867	1867	1867	1868	1869	1872	1874						
10	1859	1856	1848	1842	1839	1841	1841	1839	1839	1841	1848	1855						
15	1828	1822	1807	1796	1793	1799	1802	1798	1794	1795	1807	1820						
20	1784	1775	1750	1734	1732	1744	1750	1742	1733	1732	1750	1771						
25	1729	1715	1678	1656	1656	1677	1687	1675	1657	1654	1678	1710						
30	1664	1644	1594	1564	1567	1599	1615	1597	1569	1562	1593	1638						
35	1590	1563	1497	1460	1466	1512	1534	1510	1469	1458	1496	1556						
40	1507	1473	1391	1345	1357	1416	1446	1414	1360	1343	1389	1465						
45	1420	1376	1277	1221	1239	1315	1353	1313	1243	1218	1275	1367						
50	1325	1274	1157	1089	1115	1209	1255	1207	1120	1087	1154	1264						
55	1226	1168	1031	952	987	1099	1152	1098	991	948	1027	1157						
60	1122	1058	903	808	857	987	1046	985	862	804	897	1046						
65	1013	945	774	661	726	872	936	871	732	656	767	932						
70	901	830	646	511	598	758	825	756	603	505	638	817						
75	788	715	521	362	473	644	714	643	479	355	512	702						
80	677	603	402	220	357	535	606	535	363	213	393	590						
85	572	500	297	98.8	255	437	509	438	262	93.9	286	487						
90	482	412	216	28.0	181	358	428	360	189	29.8	207	401						
95	407	341	161	19.5	134	296	361	299	142	23.1	154	333						
100	344	283	121	18.4	99.6	246	305	250	107	21.3	114	276						
105	288	232	88.5	18.0	72.4	201	256	205	79.0	20.0	83.3	225						
110	237	187	62.7	17.3	51.5	161	210	164	56.9	18.8	58.8	178						
115	190	146	40.8	17.6	35.6	126	167	128	39.9	18.5	39.8	140						
120	148	111	27.6	17.9	23.6	94.8	122	96.9	27.2	18.5	27.1	105						
125	112	81.6	21.9	18.5	21.9	69.0	92.7	70.6	23.2	18.9	22.9	76.9						
130	80.6	54.8	21.8	19.4	22.1	47.2	67.4	47.8	23.1	19.7	22.5	49.9						
135	54.5	33.7	22.2	20.6	22.5	29.3	43.3	31.4	23.1	20.6	22.6	32.1						
140	34.3	25.0	22.7	21.8	23.2	25.8	29.5	26.1	23.4	21.6	22.9	25.3						
145	26.9	25.3	23.8	23.1	23.9	26.1	27.0	26.1	23.9	22.6	23.6	25.4						
150	26.9	25.9	24.6	24.1	24.5	26.2	27.0	26.2	24.3	23.5	24.2	25.7						
155	26.9	26.2	25.3	24.9	25.1	26.3	27.0	26.1	24.8	24.2	24.8	25.8						
160	26.8	26.4	25.9	25.7	25.6	26.3	27.0	26.1	25.4	25.1	25.4	26.1						
165	26.9	26.6	26.4	26.3	26.2	26.4	27.3	26.4	26.1	26.0	26.0	26.5						
170	27.2	27.0	26.9	26.9	26.7	26.6	27.6	26.7	26.7	26.6	26.5	26.8						
175	27.4	27.1	27.1	27.2	26.9	26.8	27.8	27.0	27.1	27.0	26.8	26.9						
180	27.7	27.2	27.2	27.3	27.0	27.0	27.8	27.1	27.3	27.2	27.0	26.9						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2020-01-08

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: