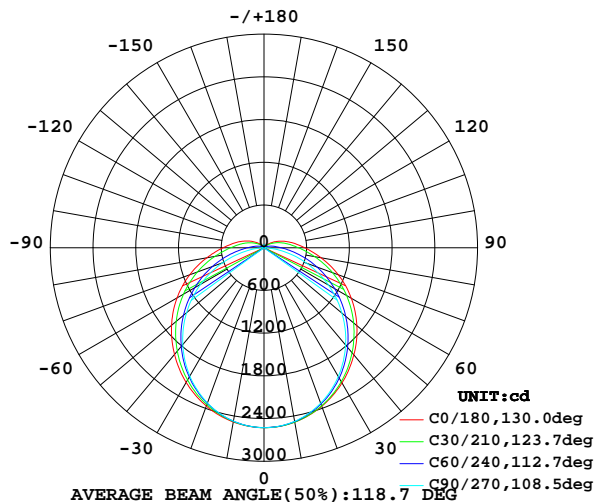


LUMINAIRE PHOTOMETRIC TEST REPORT

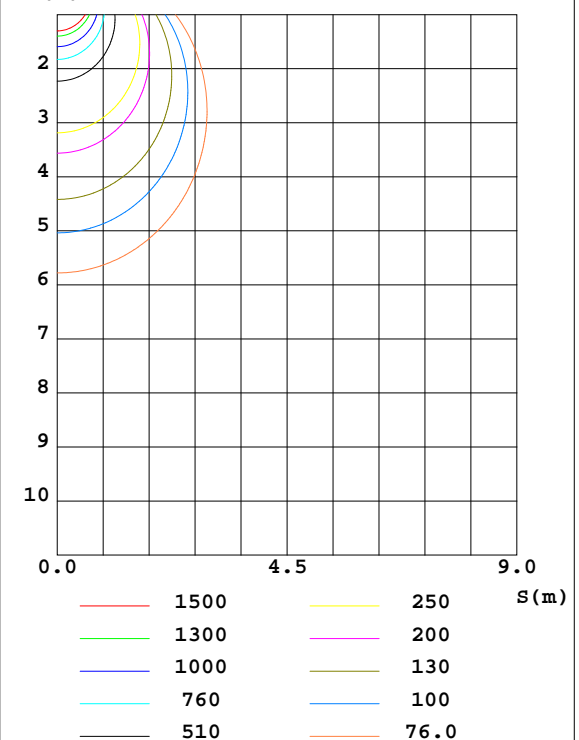
Test:U:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm		
NAME: UP-TRP08-1500-65W-5000K	TYPE:65W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 137.22 lm/W			
MODEL:UP-TRP08-1500-65W-5000K		I _{max} (cd)	2527	S/MH(C0/180)	1.29
NOMINAL POWER(W)	65	LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	8850.4	η UP,DN(C0-180)	4.2,45.8
NOMINAL FLUX(lm)	8850.37	CIE CLASS	DIRECT	η UP,DN(C180-360)	4.3,45.7
LAMPS INSIDE	1	η up(%)	8.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.2	η down(%)	91.5	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:
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	lum, lamp
10	2487	2484	2476	2476	2485	2476	2473	2484	0- 10	239.0	239.0	2.7,2.7
20	2370	2350	2325	2337	2366	2337	2320	2353	10- 20	683.7	922.7	10.4,10.4
30	2192	2142	2088	2125	2186	2123	2082	2147	20- 30	1036	1959	22.1,22.1
40	1965	1876	1784	1856	1956	1852	1775	1881	30- 40	1256	3216	36.3,36.3
50	1704	1570	1431	1550	1696	1543	1420	1577	40- 50	1326	4542	51.3,51.3
60	1416	1242	1044	1224	1411	1215	1030	1248	50- 60	1250	5792	65.4,65.4
70	1112	908.6	639.1	895.0	1111	883.6	621.7	915.5	60- 70	1050	6842	77.3,77.3
80	813.4	596.4	254.3	588.1	816.6	576.7	238.7	604.0	70- 80	768.4	7611	86,86
90	573.4	364.1	27.31	360.6	576.8	351.3	28.70	372.6	80- 90	484.9	8096	91.5,91.5
100	406.5	231.3	22.57	230.7	411.6	225.3	24.77	240.0	90-100	306.2	8402	94.9,94.9
110	273.7	138.2	21.72	141.0	280.5	137.6	24.01	146.0	100-110	194.3	8596	97.1,97.1
120	166.8	76.36	22.42	78.96	174.9	77.19	24.86	81.60	110-120	111.9	8708	98.4,98.4
130	87.99	41.90	25.05	45.87	95.10	45.70	27.10	45.93	120-130	59.34	8767	99.1,99.1
140	39.43	31.84	29.07	32.60	43.09	33.54	30.32	33.96	130-140	30.83	8798	99.4,99.4
150	37.33	34.65	32.89	34.33	37.22	34.82	33.52	35.64	140-150	21.43	8820	99.7,99.7
160	37.89	36.64	35.85	35.94	37.65	36.25	36.14	37.07	150-160	16.55	8836	99.8,99.8
170	39.14	38.38	38.11	37.68	39.12	38.06	38.31	38.48	160-170	10.60	8847	100,100
180	39.90	38.94	39.02	38.71	39.99	38.94	38.97	38.70	170-180	3.689	8850	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

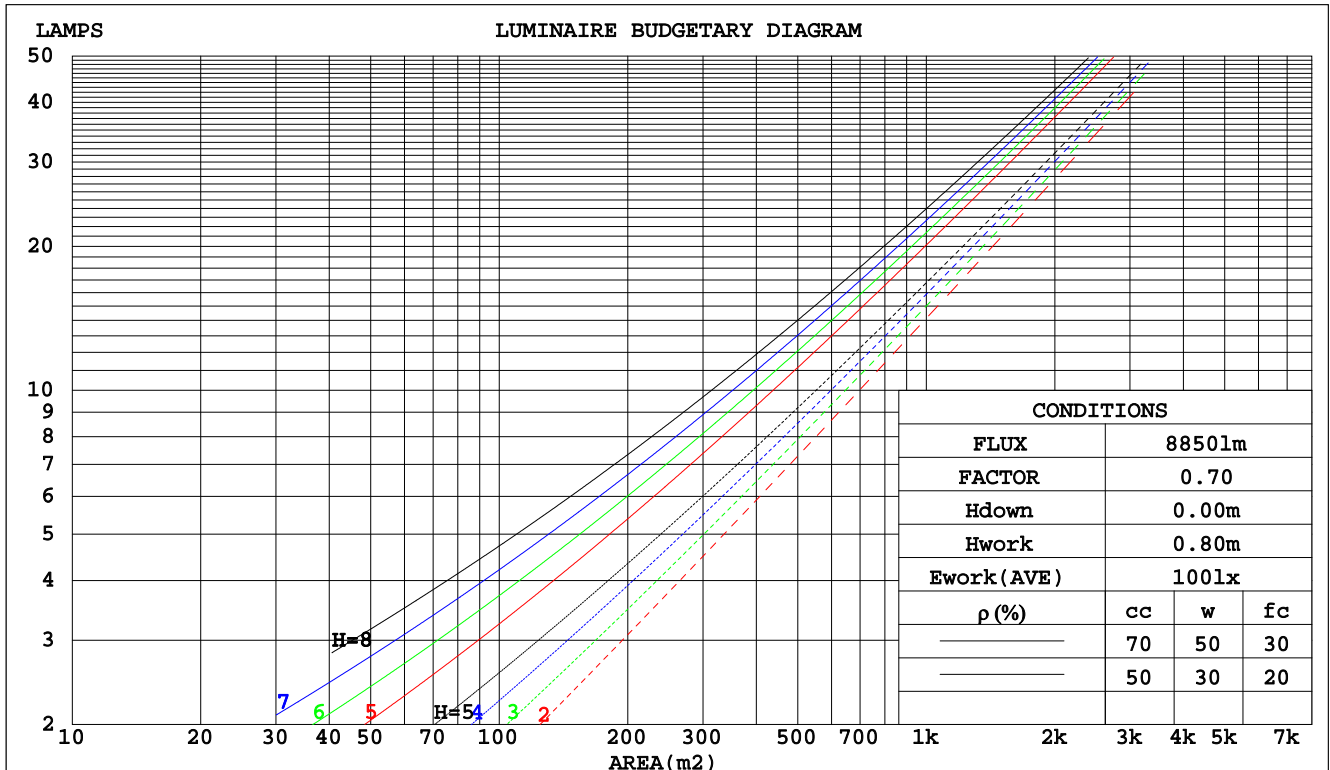
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-01-10

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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm		
NAME: UP-TRP08-1500-65W-5000K	TYPE:65W	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	1.00	1.00	1.00	.94	.94	.94	.91
1.0	.99	.94	.90	.96	.92	.88	.90	.87	.83	.85	.82	.79	.80	.78	.75	.73
2.0	.86	.78	.72	.83	.76	.70	.78	.72	.67	.73	.69	.65	.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:
 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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm					
NAME: UP-TRP08-1500-65W-5000K			TYPE:65W		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	.329	.189	.060	.313	.180	.058	.297	.172	.056	
2.0	.318	.174	.054	.310	.170	.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	.115	.034	.209	.110	.033	.198	.106	.032	
6.0	.219	.110	.031	.214	.108	.031	.203	.104	.030	.193	.100	.029	.183	.096	.029	
7.0	.203	.100	.028	.198	.099	.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	.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	.255	.255	.255	.218	.218	.218	.149	.149	.149	.086	.086	.086	.027	.027	.027	
1.0	.249	.221	.196	.213	.190	.169	.146	.131	.117	.084	.076	.068	.027	.024	.022	
2.0	.242	.198	.161	.207	.170	.139	.142	.118	.097	.082	.069	.057	.026	.022	.019	
3.0	.234	.181	.138	.201	.156	.120	.138	.108	.084	.080	.063	.050	.026	.021	.016	
4.0	.226	.168	.123	.194	.145	.107	.133	.101	.075	.077	.059	.045	.025	.019	.015	
5.0	.219	.158	.113	.188	.136	.098	.129	.095	.069	.075	.056	.041	.024	.018	.014	
6.0	.211	.150	.105	.182	.130	.092	.125	.091	.065	.073	.053	.039	.023	.017	.013	
7.0	.204	.143	.100	.176	.124	.087	.121	.087	.062	.070	.051	.037	.023	.017	.012	
8.0	.198	.137	.096	.170	.119	.083	.118	.084	.059	.068	.049	.035	.022	.016	.012	
9.0	.191	.132	.092	.165	.115	.081	.114	.081	.057	.067	.048	.034	.022	.016	.011	
10.0	.185	.128	.090	.160	.111	.078	.111	.078	.056	.065	.046	.033	.021	.015	.011	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm											
NAME: UP-TRP08-1500-65W-5000K						TYPE:65W			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	2H	22.4	23.9	22.8	24.2	24.6	21.2	22.6	21.6	23.0	23.4
	3H	24.6	26.0	25.1	26.4	26.8	22.7	24.0	23.1	24.4	24.8
	4H	25.8	27.1	26.2	27.5	27.9	23.3	24.6	23.7	25.0	25.4
	6H	27.0	28.2	27.5	28.7	29.1	23.7	24.9	24.2	25.3	25.8
	8H	27.7	28.9	28.2	29.3	29.8	23.8	25.0	24.3	25.4	25.9
	12H	28.5	29.6	28.9	30.0	30.5	23.9	25.0	24.4	25.5	26.0
4H	2H	23.0	24.3	23.4	24.7	25.1	22.0	23.3	22.5	23.7	24.2
	3H	25.4	26.6	25.9	27.0	27.5	23.8	24.9	24.3	25.4	25.8
	4H	26.8	27.8	27.3	28.3	28.8	24.5	25.6	25.0	26.0	26.6
	6H	28.2	29.1	28.7	29.7	30.2	25.1	26.1	25.7	26.6	27.1
	8H	29.0	29.9	29.5	30.4	31.0	25.3	26.2	25.9	26.7	27.3
	12H	29.9	30.7	30.5	31.2	31.8	25.5	26.3	26.0	26.8	27.4
8H	4H	27.1	28.0	27.6	28.5	29.1	25.2	26.1	25.8	26.6	27.2
	6H	28.8	29.5	29.4	30.1	30.7	26.1	26.8	26.7	27.4	28.0
	8H	29.8	30.4	30.4	31.0	31.7	26.5	27.1	27.0	27.7	28.3
	12H	30.9	31.5	31.5	32.1	32.8	26.7	27.3	27.4	27.9	28.6
12H	4H	27.1	27.9	27.7	28.4	29.0	25.4	26.2	26.0	26.7	27.3
	6H	28.9	29.6	29.5	30.1	30.8	26.4	27.1	27.0	27.7	28.3
	8H	30.0	30.6	30.6	31.2	31.8	26.9	27.5	27.5	28.1	28.7
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					+ 0.1 / - 0.4					

CIE Pub.117 Corrected 8850 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.6)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm		
NAME: UP-TRP08-1500-65W-5000K	TYPE:65W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

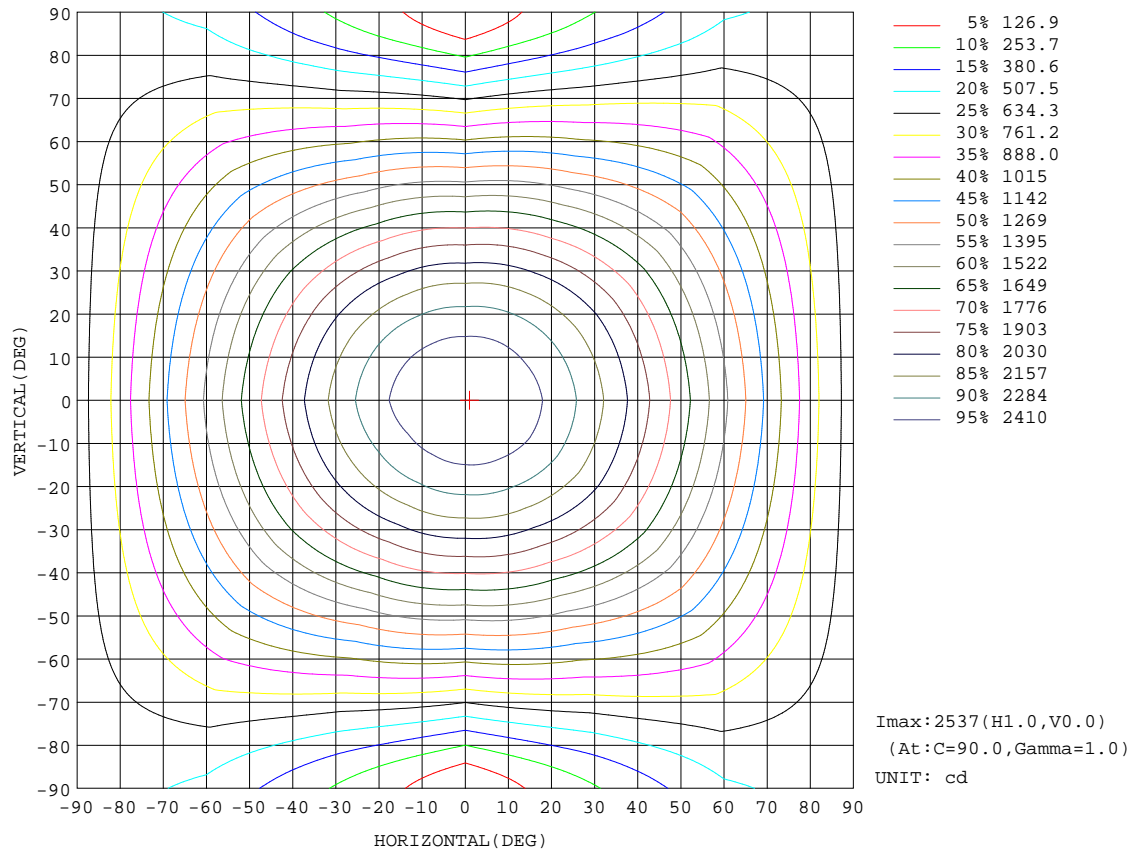
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	52	40	33	52	40	33	50	39	33	26
0.80	62	50	42	61	49	42	59	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	70	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	93	87	83	71
5.00	104	98	93	101	95	91	95	90	87	75
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:
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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm		
NAME: UP-TRP08-1500-65W-5000K	TYPE:65W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:



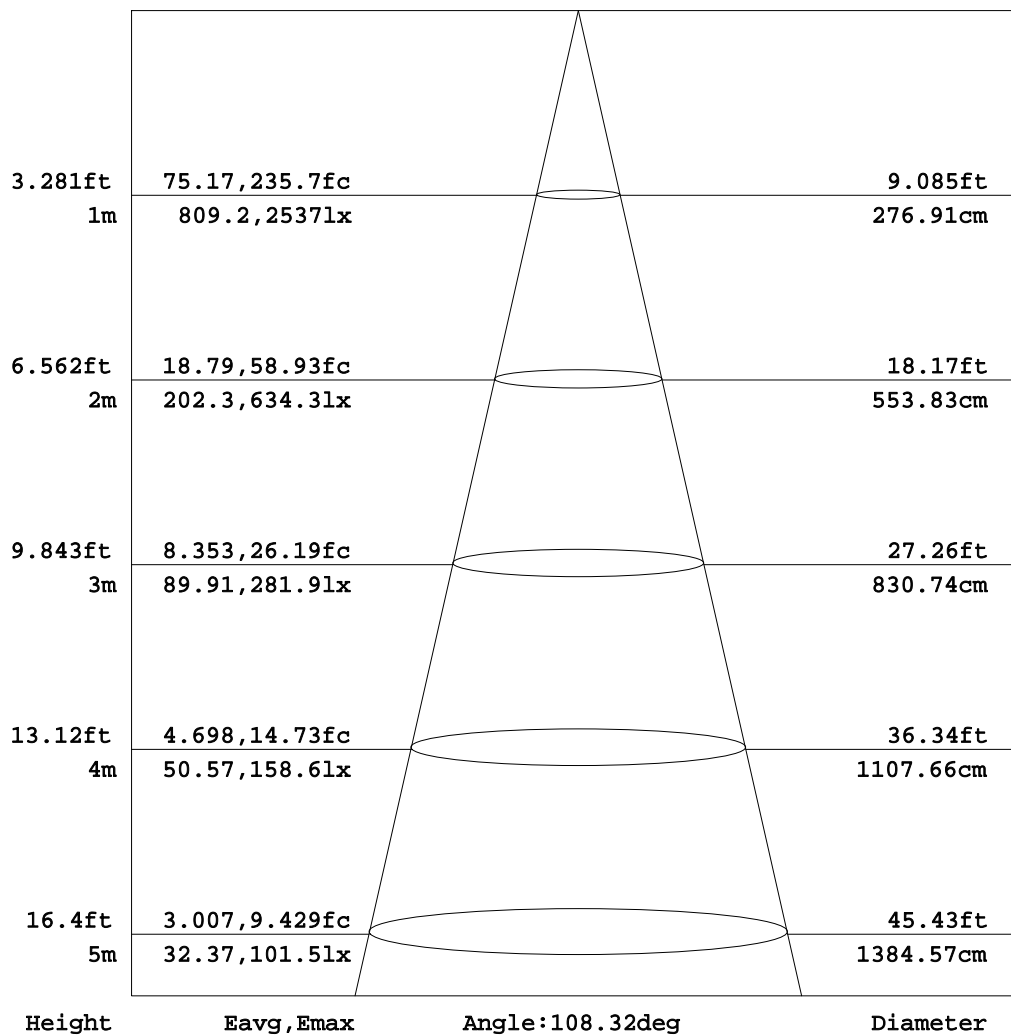
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2020-01-10

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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm		
NAME: UP-TRP08-1500-65W-5000K	TYPE:65W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:

Flux out:5185 lm



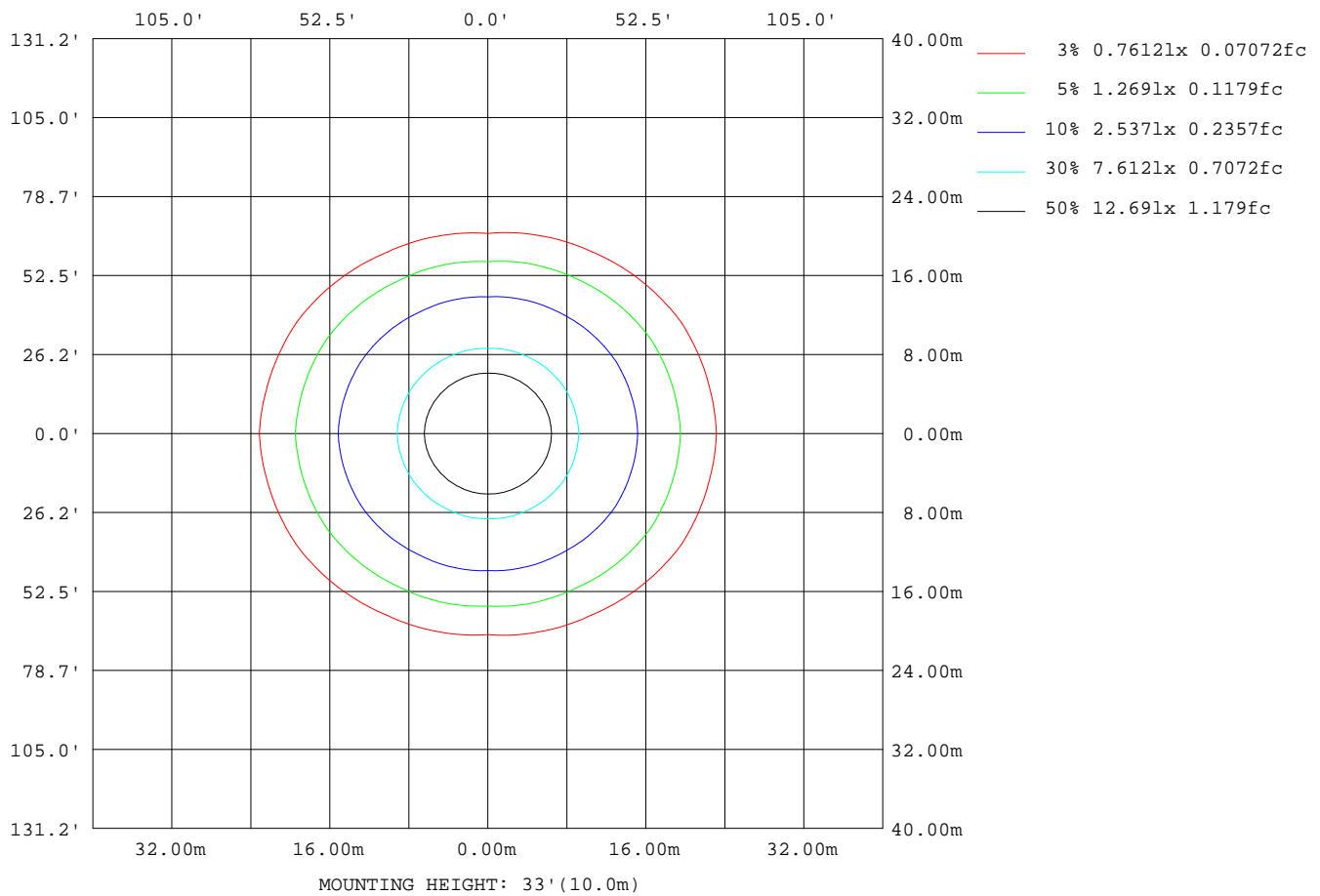
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
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

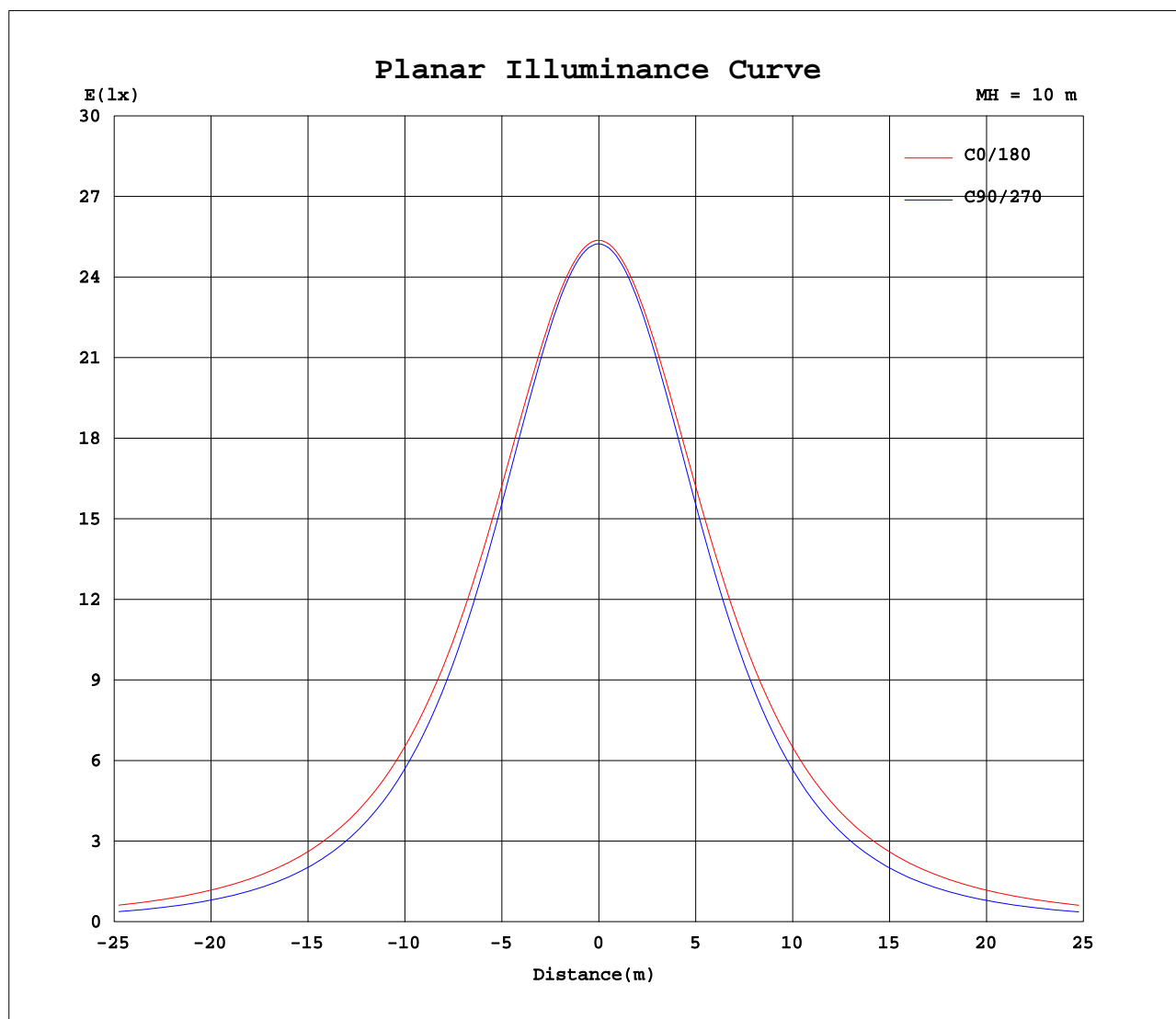
Test:U:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm		
NAME: UP-TRP08-1500-65W-5000K	TYPE:65W	WEIGHT:
DIM.:	SPEC.:5000K	SERIAL No.:1
MFR.:	SUR.:0.16	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
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:
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:220.2V I:0.3040A P:64.50W PF:0.9640 Lamp Flux:8850.37x1 lm																	
NAME: UP-TRP08-1500-65W-5000K									TYPE:65W			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	2527	2527	2527	2527	2527	2527	2527	2527	2527	2527	2527	2527						
5	2518	2518	2516	2515	2511	2514	2516	2514	2512	2514	2516	2518						
10	2487	2488	2480	2476	2472	2479	2485	2479	2474	2473	2481	2487						
15	2437	2434	2419	2413	2410	2424	2435	2421	2411	2410	2422	2436						
20	2370	2364	2337	2325	2326	2349	2366	2347	2328	2320	2341	2366						
25	2288	2275	2236	2216	2221	2258	2283	2255	2221	2211	2240	2277						
30	2192	2171	2113	2088	2099	2151	2186	2148	2098	2082	2120	2175						
35	2083	2055	1977	1943	1960	2032	2076	2027	1960	1936	1984	2057						
40	1965	1925	1827	1784	1811	1901	1956	1895	1809	1775	1834	1928						
45	1838	1787	1667	1612	1650	1763	1829	1755	1647	1602	1675	1791						
50	1704	1643	1498	1431	1481	1619	1696	1610	1477	1420	1506	1648						
55	1563	1493	1323	1241	1307	1469	1556	1460	1301	1228	1331	1498						
60	1416	1339	1144	1044	1131	1317	1411	1307	1123	1030	1153	1344						
65	1265	1182	968	842	956	1162	1262	1151	946	826	976	1187						
70	1112	1025	792	639	783	1007	1111	996	771	622	801	1030						
75	959	870	625	440	617	856	961	844	605	422	634	876						
80	813	723	470	254	465	711	817	700	453	239	479	729						
85	683	592	338	104	336	583	686	573	324	92.4	350	599						
90	573	485	243	27.3	243	479	577	470	233	28.7	253	492						
95	484	401	180	23.6	181	397	487	389	173	26.2	190	408						
100	406	330	133	22.6	134	327	412	322	128	24.8	143	338						
105	337	268	94.9	22.0	97.5	267	342	262	93.3	24.1	103	275						
110	274	212	64.0	21.7	69.4	213	280	209	66.3	24.0	73.2	219						
115	217	164	41.9	21.9	48.1	165	224	162	46.2	24.3	50.9	167						
120	167	123	29.8	22.4	33.4	125	175	122	32.8	24.9	36.3	127						
125	124	88.4	27.8	23.5	28.9	90.6	132	88.1	30.2	25.8	31.2	91.9						
130	88.0	55.5	28.3	25.1	29.2	62.6	95.1	61.0	30.4	27.1	31.2	60.7						
135	59.1	36.7	29.1	26.9	29.7	41.9	65.1	41.2	30.8	28.5	31.6	41.5						
140	39.4	33.3	30.4	29.1	30.6	34.6	43.1	35.4	31.7	30.3	32.2	35.7						
145	37.1	34.4	32.2	31.1	32.0	34.9	37.2	35.6	32.8	32.0	33.5	36.1						
150	37.3	35.4	33.9	32.9	33.3	35.4	37.2	35.8	33.8	33.5	34.6	36.7						
155	37.6	36.2	35.2	34.5	34.5	35.7	37.2	36.1	34.9	34.9	35.6	37.1						
160	37.9	36.9	36.4	35.9	35.7	36.2	37.6	36.5	36.0	36.1	36.6	37.5						
165	38.4	37.7	37.4	37.1	36.8	36.8	38.3	37.2	37.2	37.3	37.6	38.1						
170	39.1	38.5	38.3	38.1	37.8	37.6	39.1	38.0	38.1	38.3	38.3	38.7						
175	39.5	38.7	38.7	38.7	38.4	38.1	39.7	38.5	38.8	38.8	38.7	38.7						
180	39.9	38.9	39.0	39.0	38.8	38.6	40.0	38.9	39.0	39.0	38.8	38.6						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
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: