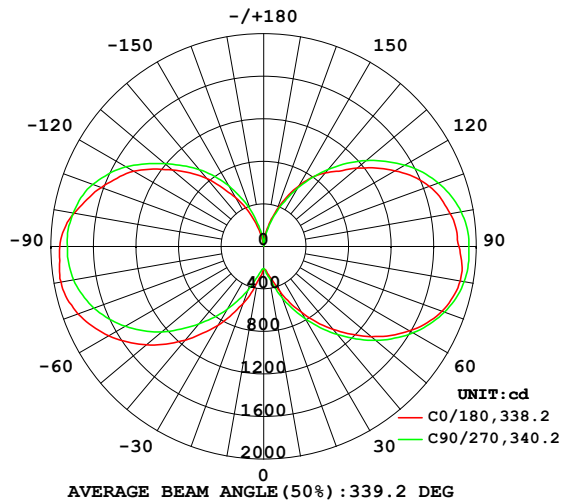


LUMINAIRE PHOTOMETRIC TEST REPORT

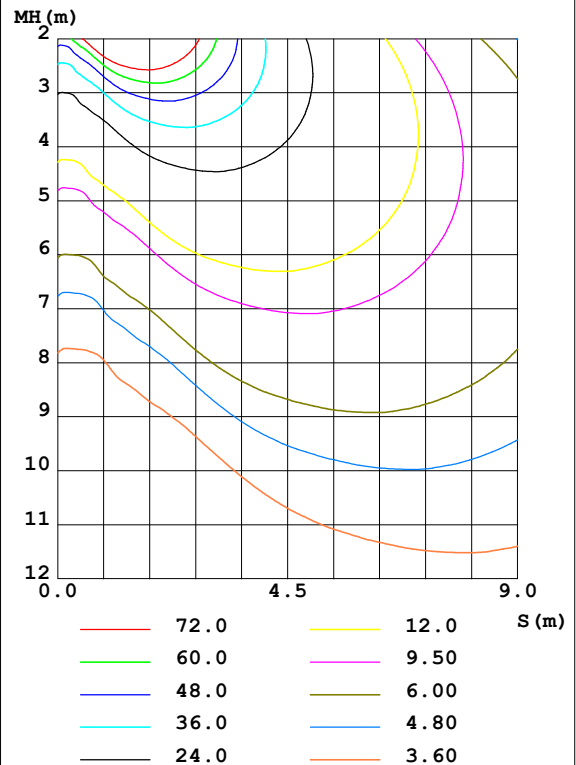
Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm		
NAME: T20-150W-16-5K-120V	TYPE:5000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.SATCO NUVO S38975:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 115.69 lm/W			
MODEL	T20-150W-16	I _{max} (cd)	1940	S/MH(C0/180)	4.38
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	4.33
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	16902	η UP,DN(C0-180)	24.8,26.2
NOMINAL FLUX(lm)	16901.9	CIE CLASS	DIFFUSE	η UP,DN(C180-360)	23.3,25.7
LAMPS INSIDE	1	η up(%)	48.1	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	120	η down(%)	51.9	CIBSE SHR MAX	2.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-05-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

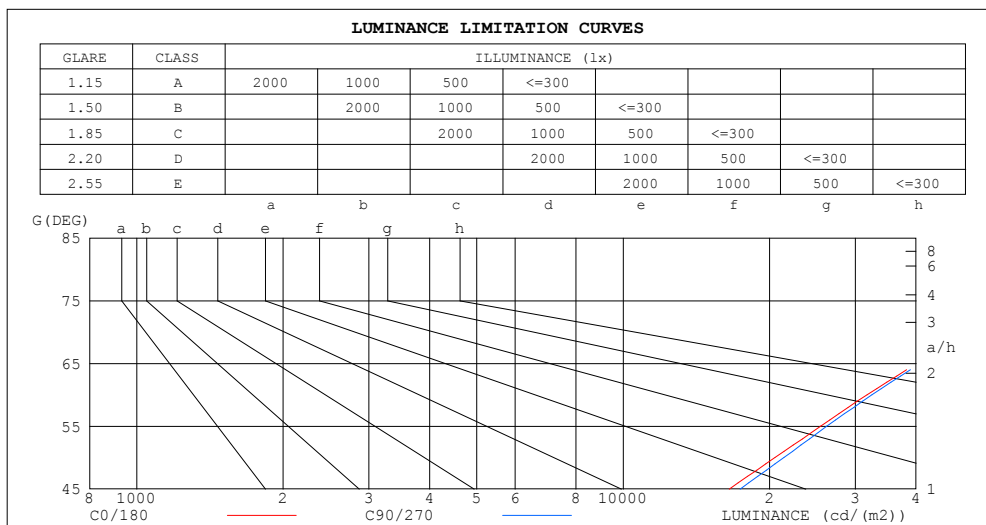
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	271.6	288.3	298.6	278.1	335.2	317.4	266.0	267.3	0- 10	24.24	24.24	0.14,0.14
20	450.5	479.3	517.9	480.2	570.9	540.1	438.6	465.7	10- 20	111.6	135.8	0.80,0.80
30	718.2	733.6	785.7	732.2	856.1	801.9	680.5	700.1	20- 30	289.2	425.1	2.51,2.51
40	1018	1013	1083	1013	1151	1086	951.5	973.0	30- 40	563.7	988.7	5.85,5.85
50	1320	1298	1375	1300	1441	1363	1249	1245	40- 50	917.8	1907	11.3,11.3
60	1587	1545	1624	1547	1682	1547	1502	1472	50- 60	1302	3209	19,19
70	1785	1728	1809	1732	1856	1671	1699	1637	60- 70	1647	4855	28.7,28.7
80	1876	1843	1915	1842	1936	1750	1816	1717	70- 80	1898	6753	40,40
90	1836	1862	1928	1847	1918	1740	1846	1716	80- 90	2011	8764	51.9,51.9
100	1782	1841	1885	1829	1810	1675	1819	1676	90-100	1990	10754	63.6,63.6
110	1658	1726	1748	1706	1626	1545	1709	1541	100-110	1831	12585	74.5,74.5
120	1425	1531	1531	1502	1414	1351	1498	1342	110-120	1550	14136	83.6,83.6
130	1148	1272	1257	1238	1121	1149	1212	1086	120-130	1187	15323	90.7,90.7
140	904.2	978.5	947.5	945.8	838.4	891.4	945.1	802.5	130-140	813.5	16136	95.5,95.5
150	656.2	660.3	629.0	634.9	532.2	599.2	659.9	512.5	140-150	480.1	16616	98.3,98.3
160	368.4	357.2	335.2	342.7	253.2	315.5	365.8	253.1	150-160	219.0	16835	99.6,99.6
170	138.1	107.6	73.58	98.83	71.54	102.1	124.4	77.92	160-170	61.50	16897	100,100
180	13.90	12.81	11.41	10.87	14.06	12.77	13.73	10.57	170-180	5.371	16902	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm		
NAME: T20-150W-16-5K-120V	TYPE:5000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	214584	221663
80	108045	110255
75	71177	72385
70	52192	52893
65	40155	40811
60	31736	32472
55	25475	26225
50	20535	21397
45	16534	17398

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm					
NAME: T20-150W-16-5K-120V			TYPE:5000K		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:		Shielding 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	.449	.255	.081	.427	.244	.077	.386	.221	.071	.348	.201	.064	.313	.181	.059		
2.0	.368	.202	.062	.348	.192	.059	.310	.173	.054	.275	.155	.048	.243	.138	.043		
3.0	.317	.169	.051	.299	.160	.048	.264	.143	.044	.232	.127	.039	.203	.112	.035		
4.0	.280	.145	.043	.263	.138	.041	.232	.123	.037	.202	.109	.033	.175	.095	.029		
5.0	.251	.128	.037	.236	.121	.035	.206	.108	.032	.179	.095	.028	.154	.082	.025		
6.0	.227	.114	.033	.213	.108	.031	.187	.096	.028	.162	.084	.025	.138	.073	.022		
7.0	.208	.103	.029	.195	.097	.028	.170	.086	.025	.147	.075	.022	.125	.065	.019		
8.0	.192	.094	.026	.180	.088	.025	.157	.078	.022	.135	.068	.020	.115	.059	.017		
9.0	.178	.086	.024	.166	.081	.023	.145	.072	.020	.125	.063	.018	.106	.054	.016		
10.0	.166	.079	.022	.155	.075	.021	.135	.066	.019	.116	.058	.016	.098	.049	.014		

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	.557	.557	.557	.476	.476	.476	.325	.325	.325	.187	.187	.187	.060	.060	.060	
1.0	.560	.525	.493	.479	.450	.424	.328	.310	.294	.189	.179	.171	.060	.058	.055	
2.0	.555	.504	.461	.475	.434	.399	.326	.300	.278	.188	.175	.163	.060	.056	.053	
3.0	.548	.489	.442	.470	.422	.383	.322	.293	.269	.186	.171	.158	.060	.056	.052	
4.0	.540	.478	.430	.464	.413	.373	.319	.288	.263	.184	.168	.156	.059	.055	.051	
5.0	.533	.469	.421	.458	.406	.367	.315	.283	.259	.183	.166	.154	.059	.054	.051	
6.0	.525	.461	.416	.452	.400	.362	.312	.280	.256	.181	.165	.152	.058	.054	.050	
7.0	.518	.455	.411	.446	.395	.358	.308	.277	.254	.179	.163	.151	.058	.053	.050	
8.0	.512	.450	.408	.440	.390	.356	.305	.274	.252	.177	.162	.150	.057	.053	.050	
9.0	.505	.446	.406	.435	.387	.354	.302	.272	.251	.176	.161	.150	.057	.053	.050	
10.0	.499	.442	.404	.430	.384	.352	.299	.270	.250	.174	.160	.149	.056	.052	.049	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm											
NAME: T20-150W-16-5K-120V						TYPE:5000K			WEIGHT:		
SPEC.:						DIM.:			SERIAL No.:		
MFR.:						SUR.:			Shielding 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		11.5	12.7	12.4	13.6	14.7	11.7	12.8	12.5	13.7	14.8
3H		15.4	16.4	16.2	17.3	18.5	15.5	16.5	16.3	17.4	18.6
4H		17.5	18.5	18.3	19.4	20.6	17.6	18.5	18.4	19.5	20.7
6H		19.7	20.7	20.6	21.6	22.8	19.8	20.8	20.7	21.7	22.9
8H		20.9	21.8	21.8	22.8	24.0	21.1	22.0	22.0	22.9	24.1
12H		22.3	23.2	23.2	24.1	25.3	22.4	23.3	23.4	24.3	25.5
4H 2H		12.7	13.7	13.6	14.6	15.8	12.8	13.8	13.7	14.7	15.9
3H		16.6	17.4	17.5	18.4	19.6	16.6	17.5	17.5	18.4	19.7
4H		18.7	19.5	19.7	20.5	21.8	18.8	19.6	19.7	20.6	21.8
6H		21.1	21.8	22.1	22.8	24.1	21.2	21.9	22.2	22.9	24.2
8H		22.4	23.1	23.4	24.1	25.4	22.5	23.2	23.5	24.2	25.5
12H		23.9	24.5	24.9	25.5	26.8	24.0	24.6	25.0	25.6	26.9
8H 4H		19.5	20.2	20.5	21.2	22.5	19.6	20.2	20.5	21.2	22.5
6H		22.1	22.7	23.1	23.7	25.0	22.2	22.8	23.2	23.8	25.1
8H		23.6	24.1	24.6	25.1	26.5	23.7	24.2	24.7	25.2	26.6
12H		25.3	25.7	26.3	26.8	28.1	25.4	25.9	26.4	26.9	28.2
12H 4H		19.7	20.4	20.7	21.4	22.7	19.8	20.4	20.8	21.4	22.7
6H		22.5	23.0	23.5	24.0	25.3	22.5	23.1	23.5	24.1	25.4
8H		24.1	24.5	25.1	25.5	26.9	24.1	24.6	25.1	25.6	27.0
Variations with the observer position at spacings:											
S = 1.0H		+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 16902 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 9.8$)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm		
NAME: T20-150W-16-5K-120V	TYPE:5000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

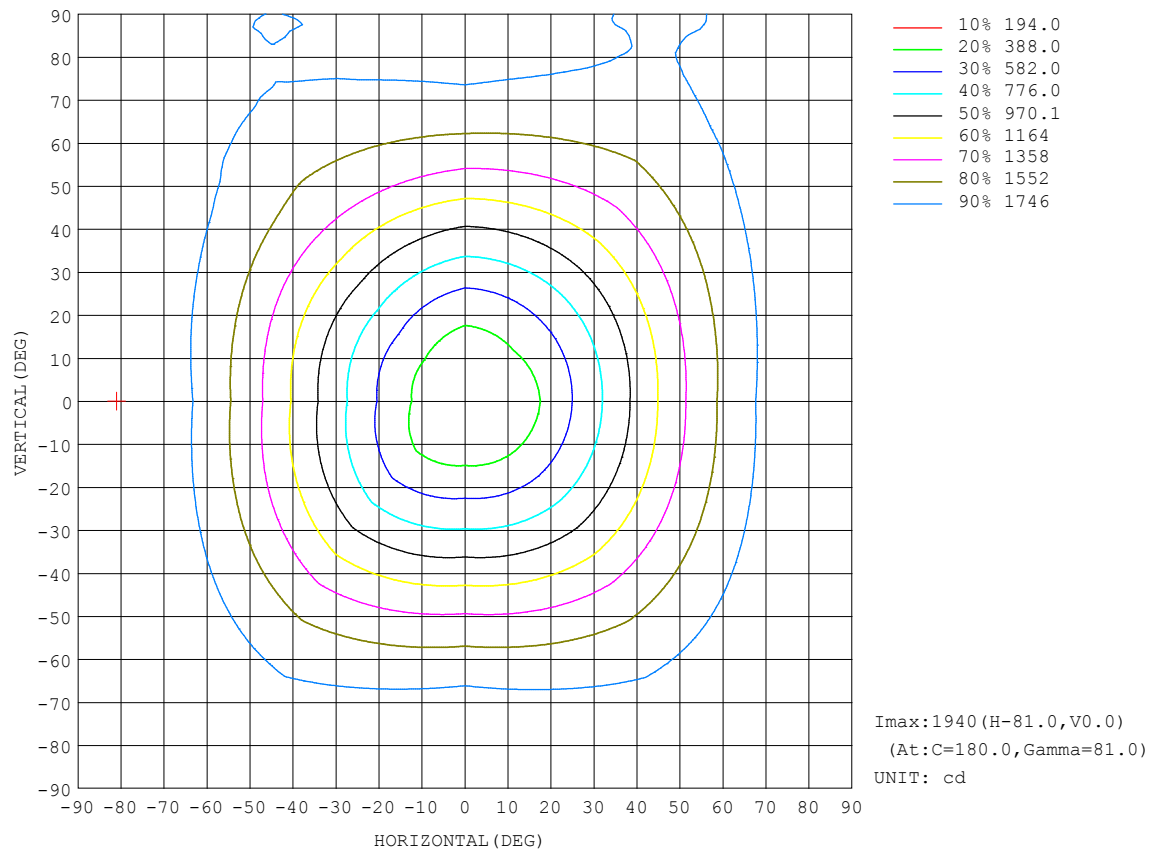
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	34	20	13	32	19	12	28	18	11	4
0.80	42	27	18	39	26	18	35	23	16	6
1.00	49	34	24	46	32	23	40	30	21	9
1.25	56	41	30	52	38	29	45	33	26	12
1.50	61	46	36	57	43	34	49	38	30	14
2.00	69	55	45	64	51	42	54	44	37	19
2.50	74	61	51	69	57	48	58	49	42	22
3.00	79	67	57	73	62	53	61	53	46	25
4.00	84	74	65	78	69	61	66	58	52	29
5.00	88	79	71	81	73	66	68	62	57	32
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity: 65.0%
Test Distance: 8.800m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm		
NAME: T20-150W-16-5K-120V	TYPE:5000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-05-22

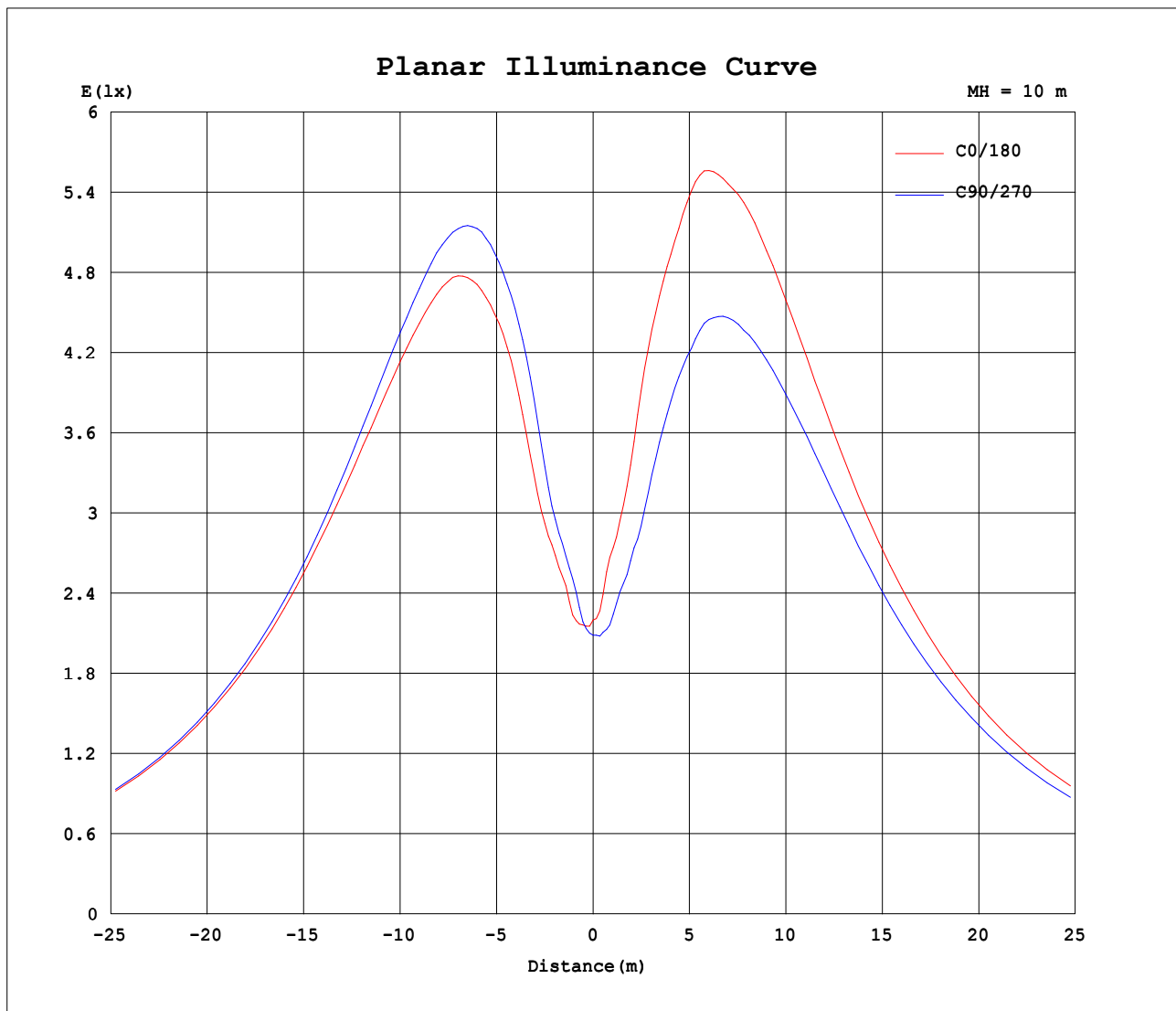
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity: 65.0%
Test Distance: 8.800m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.9V I:1.225A P:146.1W PF:0.9941 Freq:59.98Hz Lamp Flux:16901.9x1 lm		
NAME: T20-150W-16-5K-120V	TYPE:5000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	45	90	135	180	225	270	315										
0	220	215	209	196	220	215	209	196										
5	222	234	244	210	270	249	219	222										
10	272	288	299	278	335	317	266	267										
15	335	359	390	361	453	427	336	360										
20	451	479	518	480	571	540	439	466										
25	583	602	645	597	703	660	550	571										
30	718	734	786	732	856	802	681	700										
35	869	871	933	870	994	940	812	832										
40	1018	1013	1083	1013	1151	1086	952	973										
45	1169	1156	1230	1156	1299	1228	1100	1112										
50	1320	1298	1375	1300	1441	1363	1249	1245										
55	1461	1427	1504	1427	1565	1480	1382	1363										
60	1587	1545	1624	1547	1682	1547	1502	1472										
65	1697	1645	1725	1650	1777	1619	1608	1562										
70	1785	1728	1809	1732	1856	1671	1699	1637										
75	1842	1794	1873	1797	1912	1707	1765	1684										
80	1876	1843	1915	1842	1936	1750	1816	1717										
85	1870	1868	1932	1863	1928	1746	1840	1731										
90	1836	1862	1928	1847	1918	1740	1846	1716										
95	1819	1864	1921	1858	1884	1725	1846	1719										
100	1782	1841	1885	1829	1810	1675	1819	1676										
105	1730	1797	1826	1777	1719	1637	1779	1613										
110	1658	1726	1748	1706	1626	1545	1709	1541										
115	1554	1637	1651	1616	1522	1471	1615	1453										
120	1425	1531	1531	1502	1414	1351	1498	1342										
125	1290	1406	1399	1372	1269	1274	1357	1215										
130	1148	1272	1257	1238	1121	1149	1212	1086										
135	1003	1128	1107	1098	980	1032	1076	947										
140	904	979	947	946	838	891	945	802										
145	794	821	786	796	669	746	806	651										
150	656	660	629	635	532	599	660	512										
155	510	496	470	480	400	454	507	375										
160	368	357	335	343	253	316	366	253										
165	249	232	207	224	143	189	224	151										
170	138	108	73.6	98.8	71.5	102	124	77.9										
175	60.3	41.8	23.0	34.4	16.0	28.6	53.1	24.7										
180	13.9	12.8	11.4	10.9	14.1	12.8	13.7	10.6										

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-05-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks: