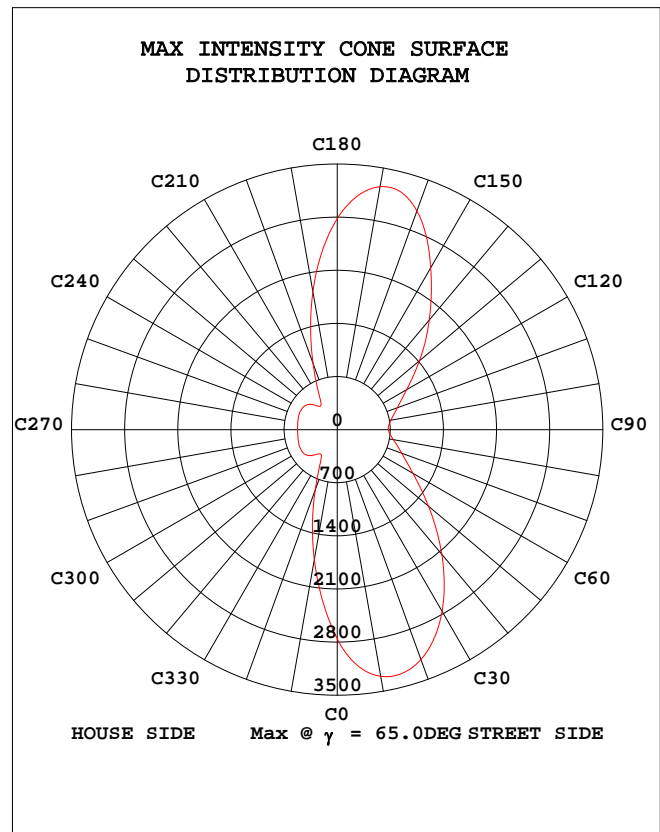
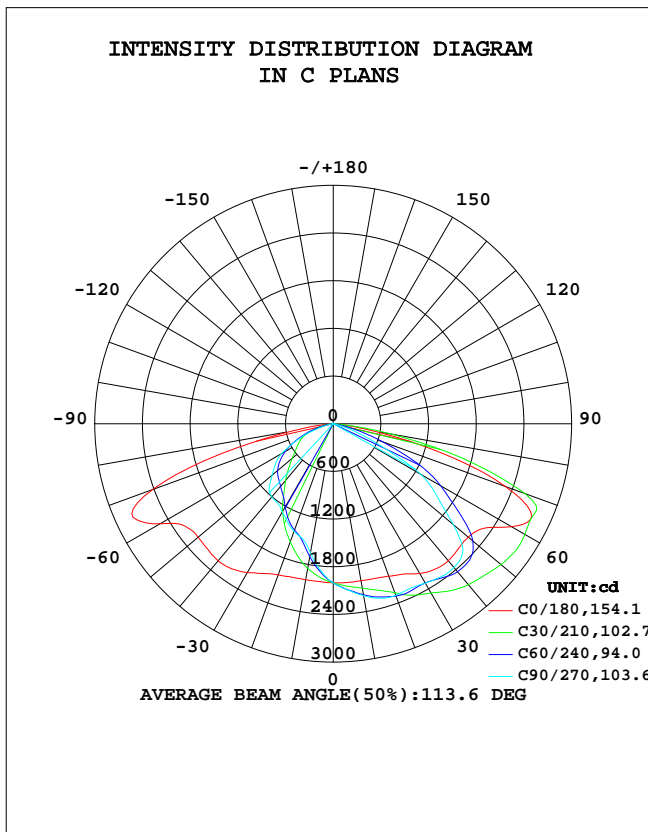


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm					
NAME: D-20HLED60-24		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.: KLED		SUR.:		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.89 lm/W			
MODEL	5050 RA70 40K T3D	Imax(cd)	3322	η street_up(%)	0.1
NOMINAL POWER(W)	60	LOR(%)	100.0	η street_down(%)	66.3
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	7664	η house_up(%)	0.2
NOMINAL FLUX(lm)	7663.77	MAXIMUM @(C, γ)	15,65.0	η house_down(%)	33.4
LAMPS INSIDE	1	η up(%)	0.3	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	230.0	η down(%)	99.7	SLI	20.500



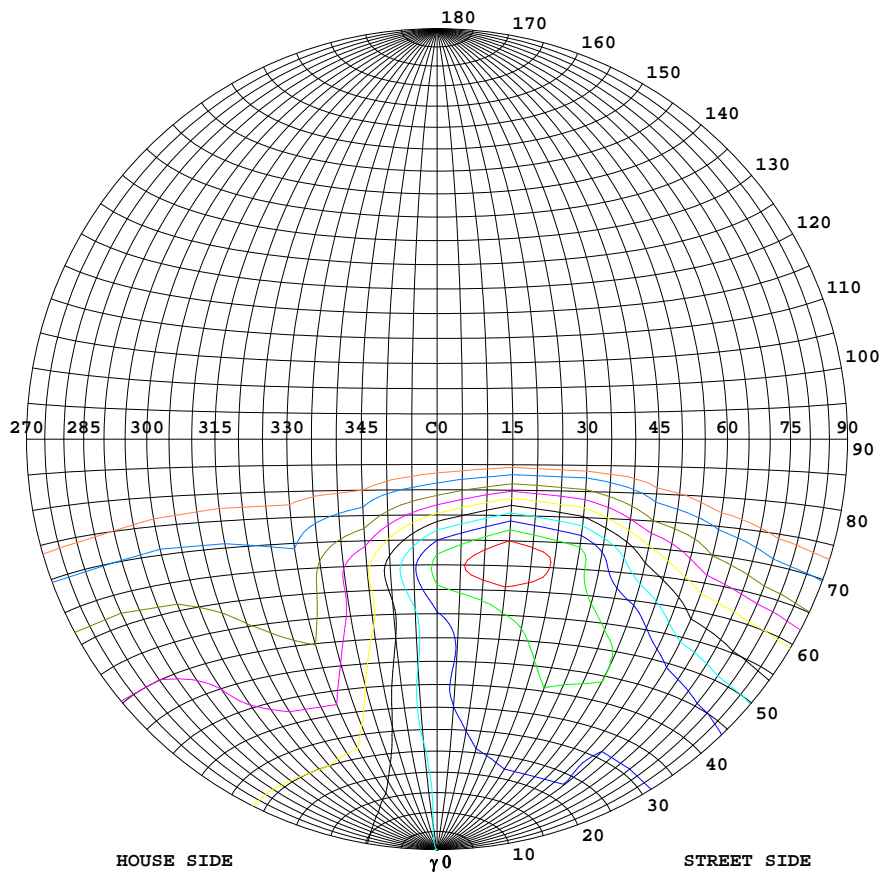
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators:CS01
Test Date:2021-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance:26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



Classification:

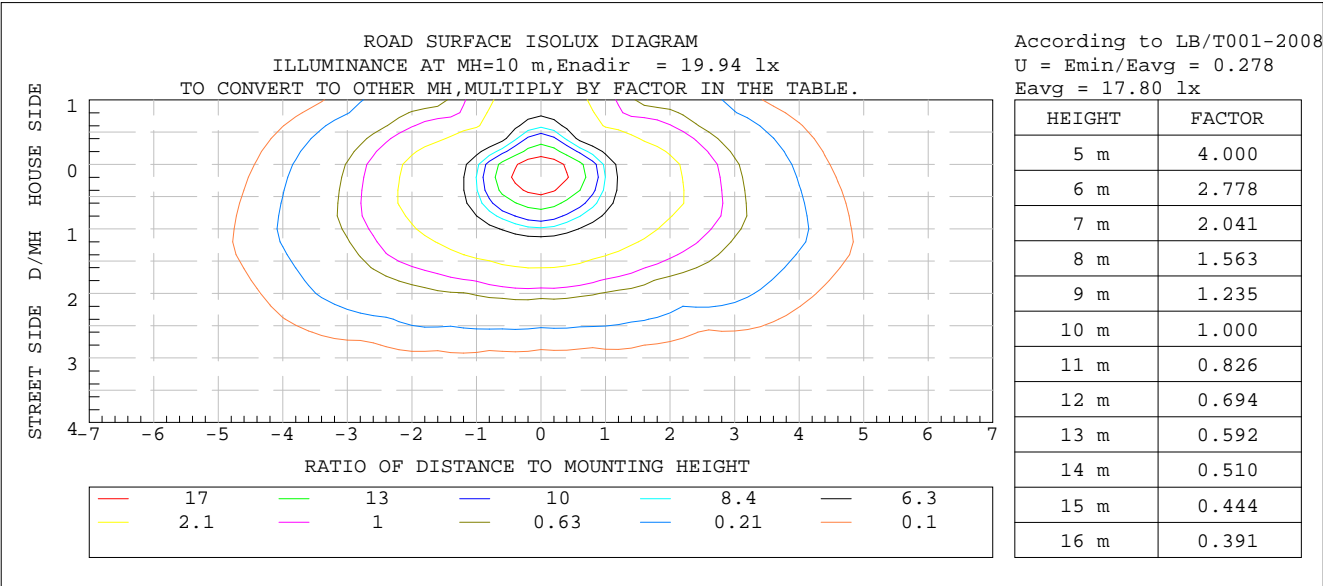
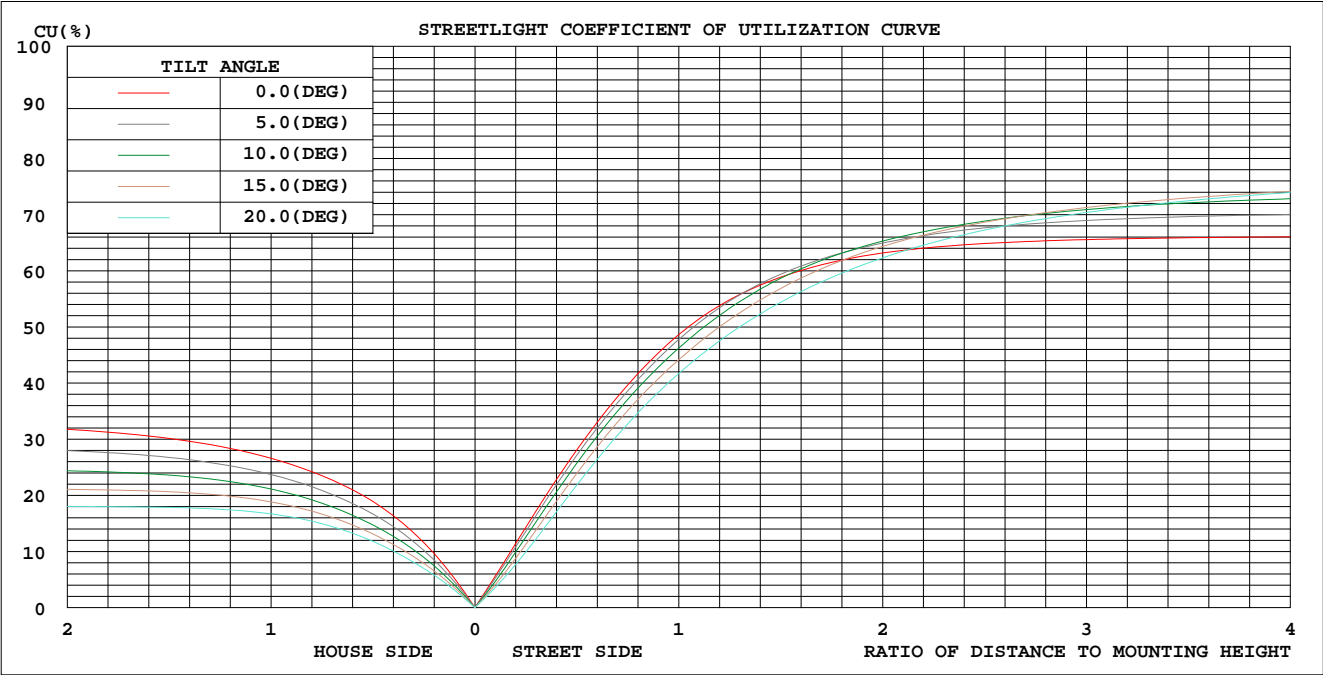
IES:Type III - Short
 CIE:Narrow - Intermediate
 IES:Semi cut-off
 CIE:Non-cut-off
 Max.At80:131.2cd/klm
 Max.At90:0.2901cd/klm
 Max.80-90:131.2cd/klm

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	3322
90%	2990
80%	2657
70%	2325
60%	1993
50%	1661
40%	1329
30%	997
20%	664
10%	332
5%	166

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 0.0DEG
 Operators:CS01
 Test Date:2021-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
 Humidity: 0.0%
 Test Distance:26.000m [K=1.0000]
 Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators:CS01
Test Date:2021-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance:26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum,lamp
10	2007	2142	2197	2131	1993	1767	1652	1747	0- 10	188.7	188.7	2.46,2.46
20	2042	2286	2297	2249	2024	1446	1442	1441	10- 20	544.8	733.5	9.57,9.57
30	2177	2418	2317	2315	2162	1206	1285	1211	20- 30	871.8	1605	20.9,20.9
40	2252	2588	2362	2426	2252	926.3	1202	937.5	30- 40	1160	2765	36.1,36.1
50	2218	2643	1972	2492	2221	722.0	1006	742.8	40- 50	1384	4150	54.1,54.1
60	2592	2253	1270	2019	2520	571.9	747.9	590.5	50- 60	1431	5581	72.8,72.8
70	2302	1367	315.6	1010	2415	351.6	313.3	353.5	60- 70	1310	6891	89.9,89.9
80	489.7	231.9	40.62	189.8	524.1	106.2	41.63	106.1	70- 80	671.5	7562	98.7,98.7
90	1.957	0.9618	0.6618	0.9732	1.657	0.8576	0.4049	0.8097	80- 90	80.12	7643	99.7,99.7
100	3.712	0.9051	0.5359	0.8034	3.869	2.417	0.8087	1.927	90-100	1.502	7644	99.7,99.7
110	5.422	1.158	1.036	0.8591	4.904	3.878	1.820	3.339	100-110	2.388	7646	99.8,99.8
120	5.449	1.408	1.415	1.257	5.191	4.683	3.336	4.152	110-120	3.037	7650	99.8,99.8
130	5.474	1.952	2.173	1.971	5.269	5.235	5.158	5.211	120-130	3.401	7653	99.9,99.9
140	5.433	2.665	2.829	2.674	5.225	5.437	5.914	5.924	130-140	3.398	7656	99.9,99.9
150	4.772	3.523	3.467	4.152	4.823	5.856	5.912	6.088	140-150	3.025	7659	99.9,99.9
160	5.089	4.077	3.622	4.194	5.582	5.881	5.964	6.132	150-160	2.309	7662	100,100
170	5.876	5.681	5.204	5.209	5.866	6.118	6.645	6.413	160-170	1.537	7663	100,100
180	6.178	6.090	6.114	5.969	6.027	6.141	5.961	6.069	170-180	0.5791	7664	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

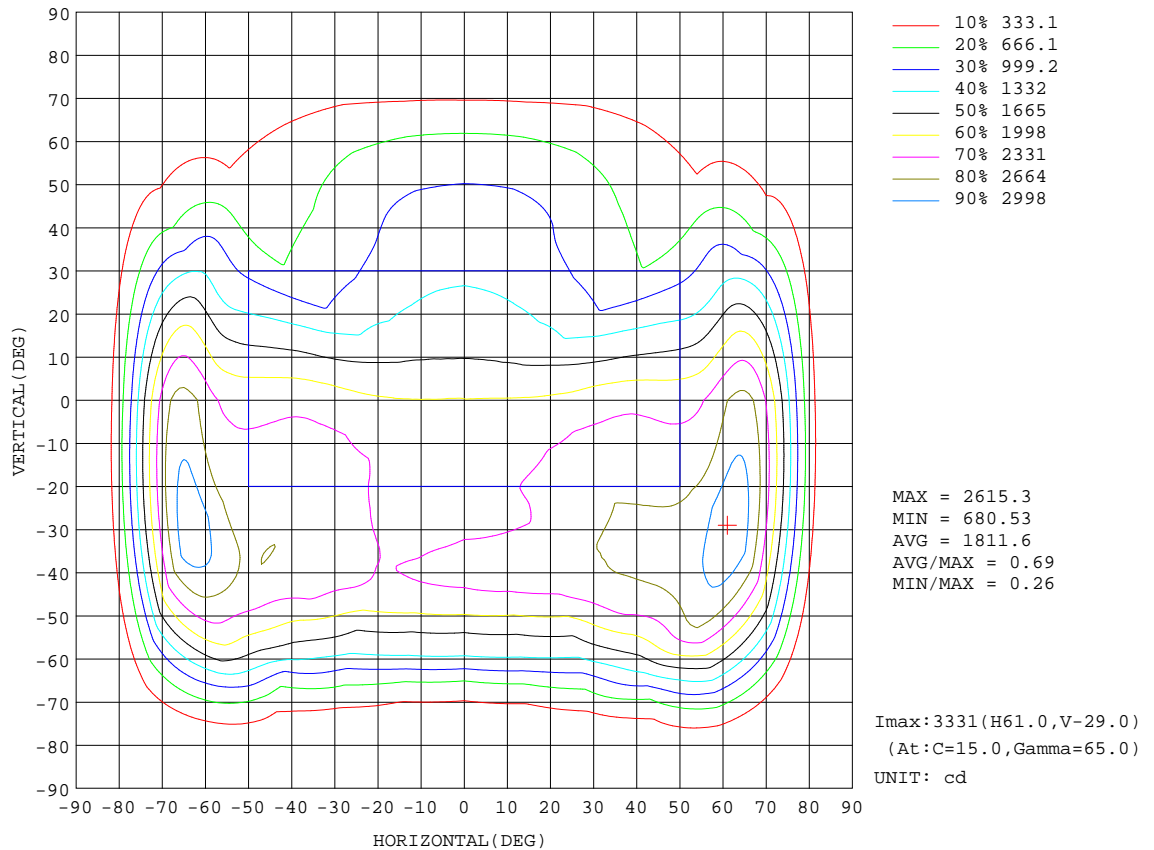
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 0.0DEG
 Operators:CS01
 Test Date:2021-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
 Humidity: 0.0%
 Test Distance:26.000m [K=1.0000]
 Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

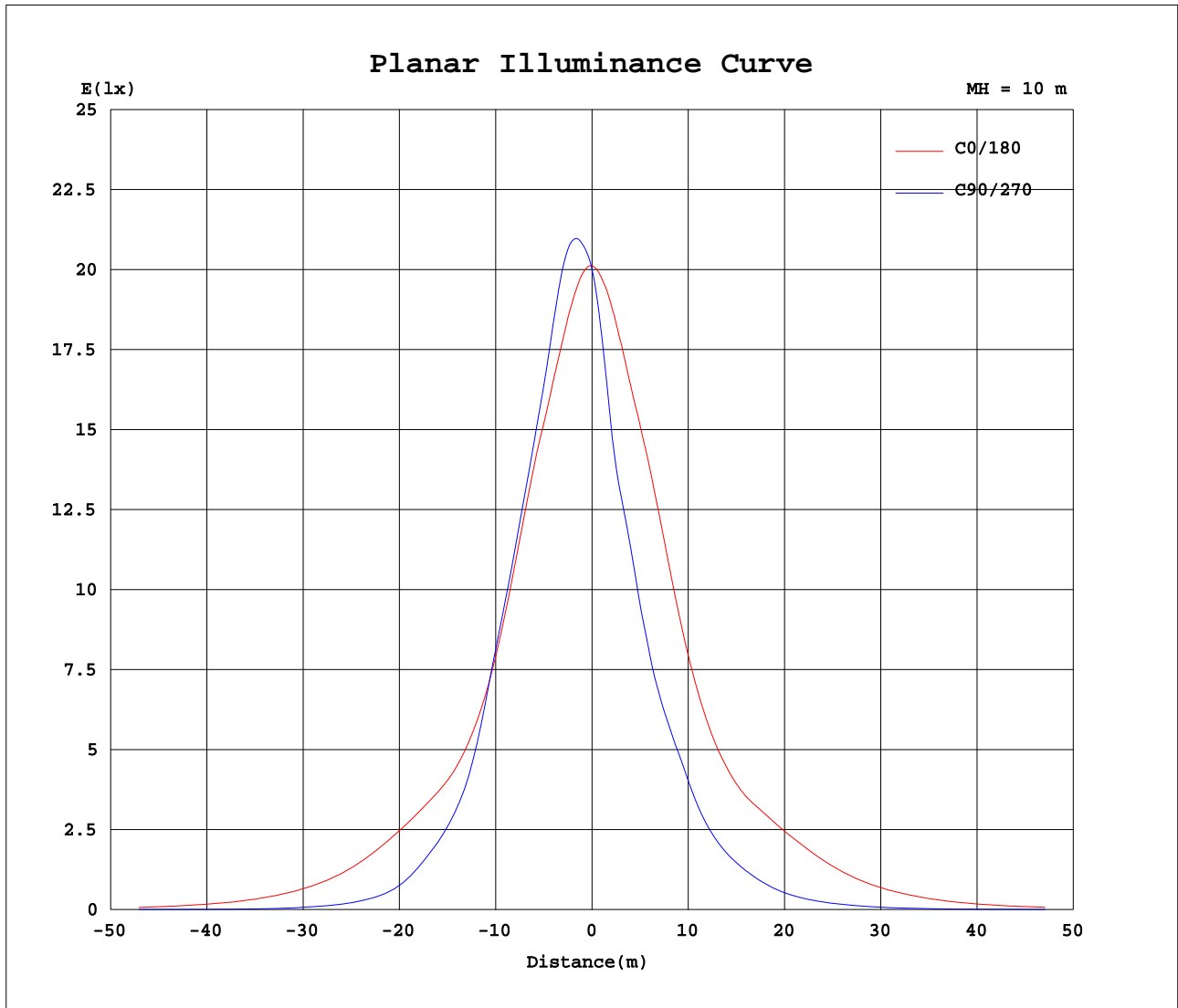
Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators: CS01
Test Date: 2021-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance: 26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators:CS01
Test Date:2021-07-19

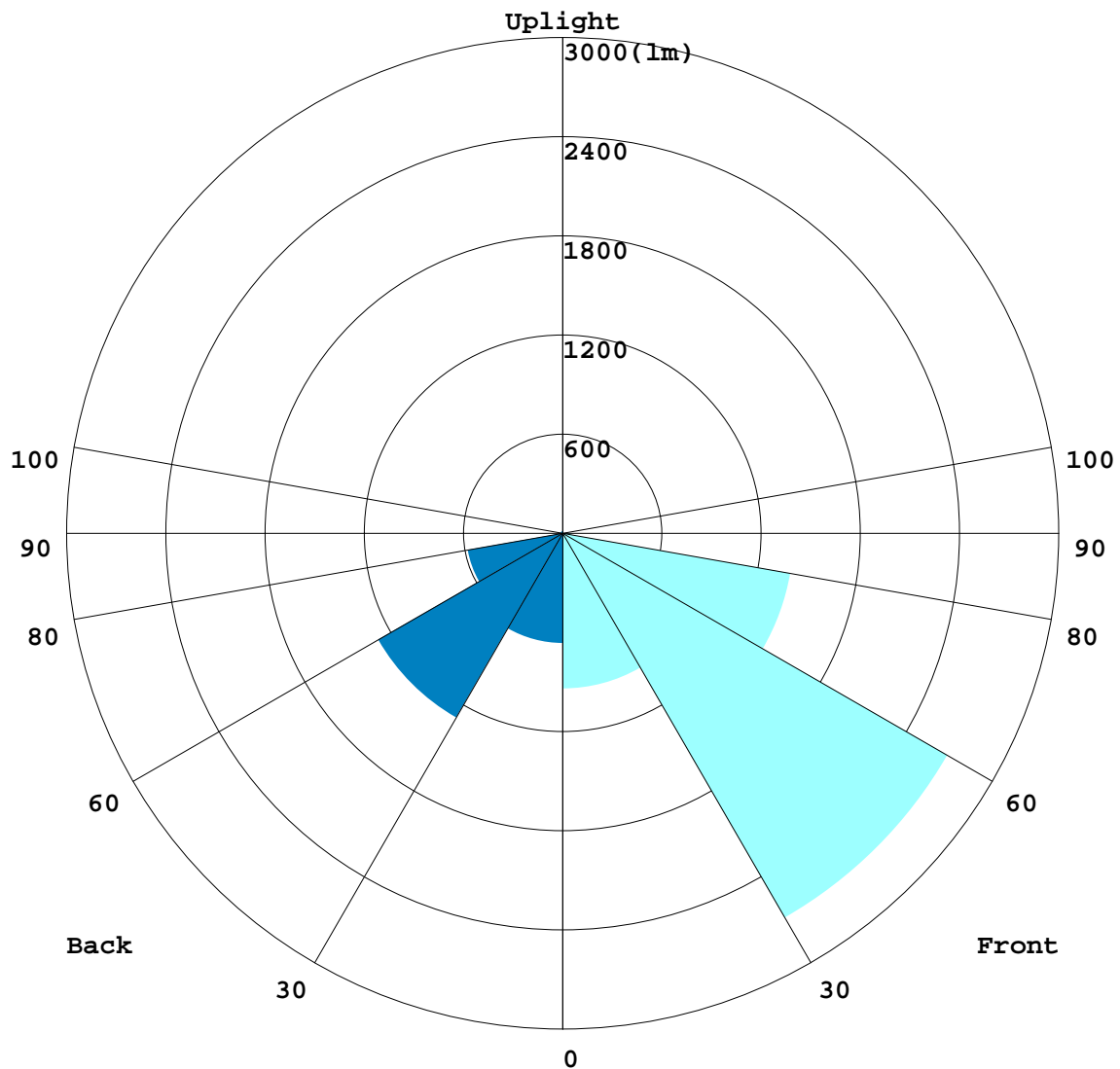
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance:26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LCS REPORT

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators:CS01
Test Date:2021-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance:26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

BUG REPORT

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	939.96	12.3
FM - Front-Medium(30-60)	2687.3	35.1
FH - Front-High(60-80)	1398.3	18.2
FVH - Front-Very High(80-90)	56.702	0.7
Total Forward Light	5090	66.4

BL - Back-Low(0-30)	665.36	8.7
BM - Back-Medium(30-60)	1288.2	16.8
BH - Back-High(60-80)	583.37	7.6
BVH - Back-Very High(80-90)	23.415	0.3
Total Back Light	2573.8	33.6

UL - Uplight-Low(90-100)	1.5016	0.0
UH - Uplight-High(100-180)	19.674	0.3
Total Up Light	21.175	0.3

BUG(Back,Up,Glare) Rating	B2-U2-G2
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	2560.4	13.417	2573.8
Street Side	5082.2	7.7581	5090

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 0.0DEG
 Operators:CS01
 Test Date:2021-07-19

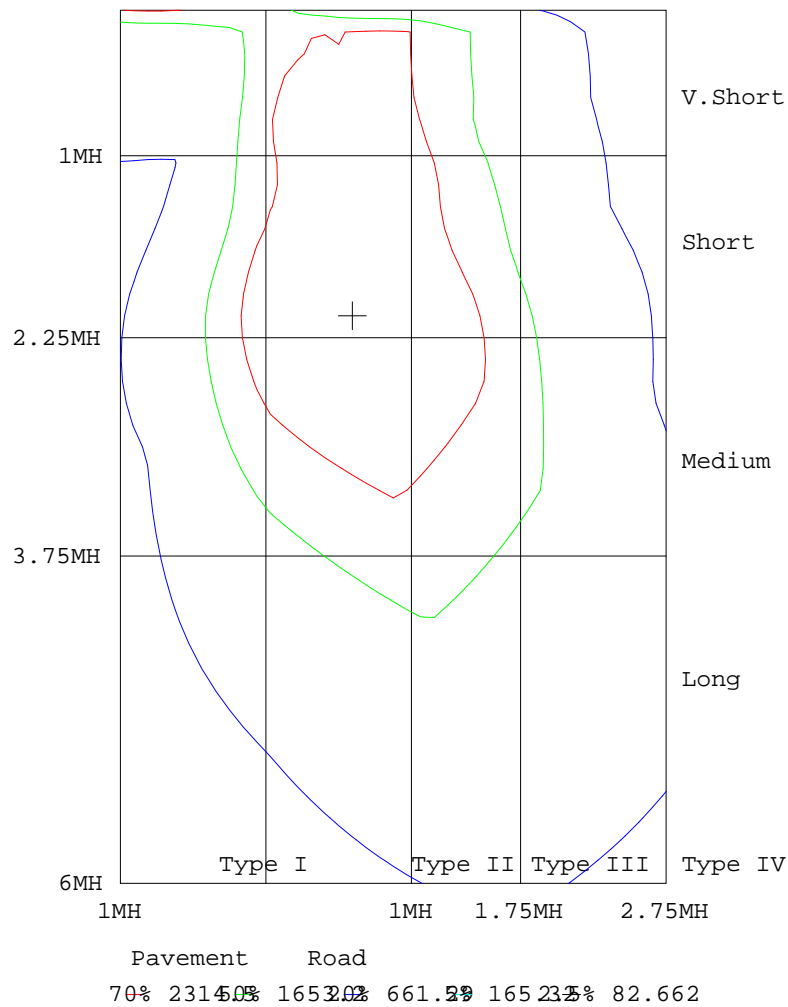
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
 Humidity: 0.0%
 Test Distance:26.000m [K=1.0000]
 Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ROAD ISOCANDELA REPORT

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 0.0DEG
 Operators:CS01
 Test Date:2021-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
 Humidity: 0.0%
 Test Distance:26.000m [K=1.0000]
 Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm																			
NAME: D-20HLED60-24										TYPE:					WEIGHT:				
SPEC.:										DIM.:					SERIAL No.:				
MFR.: KLED										SUR.:					Shielding Angle:				

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
5	2005	2025	2052	2070	2097	2103	2100	2099	2091	2069	2051	2027	1994	1970	1941	1904	1871	1855	1851
10	2007	2053	2101	2142	2184	2198	2197	2192	2177	2131	2094	2042	1993	1931	1848	1767	1700	1661	1652
15	2015	2095	2169	2219	2257	2271	2274	2269	2246	2195	2147	2073	2000	1877	1725	1597	1519	1494	1498
20	2042	2173	2261	2286	2307	2303	2297	2296	2279	2249	2220	2134	2024	1817	1583	1446	1424	1433	1442
25	2088	2297	2381	2367	2319	2296	2287	2281	2272	2283	2321	2256	2080	1751	1436	1332	1333	1357	1363
30	2177	2390	2460	2418	2314	2318	2317	2301	2267	2315	2396	2360	2162	1702	1274	1206	1210	1249	1285
35	2234	2467	2567	2486	2371	2353	2354	2332	2289	2366	2468	2435	2229	1659	1088	1054	1101	1176	1223
40	2252	2515	2646	2588	2432	2375	2362	2350	2334	2426	2538	2483	2252	1613	934	926	1031	1141	1202
45	2226	2526	2696	2653	2426	2340	2302	2315	2336	2491	2579	2492	2235	1536	796	809	974	1095	1140
50	2218	2550	2757	2643	2294	2061	1972	2030	2216	2492	2645	2499	2221	1443	674	722	914	987	1006
55	2299	2636	2796	2546	1924	1678	1600	1650	1822	2382	2681	2557	2261	1346	579	652	820	867	889
60	2592	2895	2784	2253	1561	1365	1270	1341	1502	2019	2645	2711	2520	1324	509	572	696	740	748
65	2755	3322	2764	1842	1153	821	673	773	1056	1642	2462	3243	2782	1358	439	472	542	535	524
70	2302	2977	2563	1367	652	404	316	369	591	1010	2184	3073	2415	948	329	352	373	332	313
75	1388	2098	1693	668	299	136	101	127	259	486	1516	2249	1464	484	212	228	206	158	127
80	490	944	718	232	73.5	49.4	40.6	47.7	68.4	190	616	1005	524	198	122	106	89.5	56.3	41.6
85	82.4	120	90.0	33.2	17.6	11.0	8.42	10.6	17.2	29.5	79.3	150	85.3	52.6	35.7	20.9	14.3	8.66	7.13
90	1.96	1.46	1.21	0.96	0.76	0.66	0.66	0.66	0.76	0.97	1.26	1.48	1.66	1.96	1.57	0.86	0.61	1.18	0.40
95	1.86	1.67	0.97	0.87	0.81	0.59	0.52	0.58	0.65	0.78	0.92	1.59	2.11	2.67	2.43	1.62	0.91	0.61	0.56
100	3.71	2.11	1.02	0.91	0.87	0.64	0.54	0.61	0.63	0.80	0.94	1.97	3.87	4.43	3.93	2.42	1.36	0.96	0.81
105	4.72	2.91	1.11	0.94	0.92	0.69	0.55	0.65	0.62	0.83	0.96	2.67	4.52	4.89	4.26	3.32	2.02	1.51	1.27
110	5.42	3.57	1.86	1.16	1.06	0.98	1.04	1.01	0.91	0.86	1.26	2.93	4.90	5.28	5.24	3.88	2.57	2.02	1.82
115	5.44	3.81	2.01	1.20	1.13	1.09	1.16	1.19	1.17	1.22	1.72	3.63	5.12	5.71	5.36	4.33	3.38	2.73	2.48
120	5.45	3.88	2.22	1.41	1.36	1.31	1.41	1.37	1.25	1.26	1.92	3.66	5.19	5.81	5.44	4.68	4.09	3.59	3.34
125	5.46	4.00	2.36	1.80	2.00	3.01	1.97	1.72	1.83	1.62	2.12	3.68	5.26	5.99	5.68	5.16	4.60	4.45	4.50
130	5.47	3.96	2.67	1.95	2.08	2.71	2.17	1.98	1.93	1.97	2.38	3.70	5.27	5.93	5.79	5.24	5.70	5.10	5.16
135	5.48	3.89	2.79	2.21	2.98	2.81	2.53	2.58	3.95	2.02	2.63	3.73	5.25	5.83	5.83	5.28	5.89	5.91	5.81
140	5.43	3.91	2.97	2.66	3.17	2.98	2.83	2.91	5.17	2.67	2.83	3.76	5.23	5.58	5.77	5.44	5.93	6.29	5.91
145	5.22	4.27	3.58	3.02	3.29	3.49	3.13	3.09	4.17	4.25	3.54	3.79	4.90	5.57	5.71	5.81	5.98	6.34	5.91
150	4.77	4.47	4.13	3.52	3.41	3.55	3.47	3.53	3.72	4.15	3.70	4.44	4.82	5.56	5.65	5.86	6.02	6.26	5.91
155	4.77	4.83	4.37	3.72	3.58	3.61	3.55	3.64	3.77	4.17	4.10	4.45	5.43	5.55	5.62	5.86	6.06	6.15	5.94
160	5.09	4.98	4.46	4.08	4.38	3.83	3.62	3.75	4.05	4.19	4.45	4.57	5.58	5.54	5.59	5.88	6.10	6.13	5.96
165	5.37	5.13	5.08	4.73	4.64	4.39	4.29	4.35	4.51	4.55	4.61	4.69	5.75	5.99	5.94	6.06	6.01	6.21	6.27
170	5.88	5.88	5.67	5.68	5.45	5.50	5.20	5.27	5.32	5.21	5.21	5.35	5.87	6.07	6.19	6.12	6.21	6.70	6.65
175	6.23	6.43	6.14	6.09	5.91	5.91	5.96	6.08	5.93	5.92	5.67	5.96	5.98	6.15	6.19	6.13	6.20	6.66	6.62
180	6.18	6.14	6.10	6.09	5.95	5.96	6.11	6.18	6.09	5.97	5.72	5.91	6.03	6.19	6.19	6.14	6.10	6.06	5.96

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators:CS01
Test Date:2021-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance:26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.20V I:0.2646A P:59.924W PF:0.9839 Freq:50.01Hz Lamp Flux:7663.77x1 lm		
NAME: D-20HLED60-24	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEG) γ (DEG)	285	300	315	330	345														
0	2002	2002	2002	2002	2002														
5	1856	1871	1897	1930	1964														
10	1665	1699	1747	1829	1916														
15	1506	1531	1579	1699	1860														
20	1443	1431	1441	1550	1801														
25	1355	1338	1332	1400	1732														
30	1260	1223	1211	1237	1674														
35	1187	1118	1060	1060	1612														
40	1158	1048	938	921	1547														
45	1115	1001	825	779	1468														
50	1002	936	743	660	1379														
55	884	836	674	567	1284														
60	745	702	591	495	1277														
65	533	546	483	419	1269														
70	327	368	354	308	896														
75	154	200	226	206	437														
80	54.1	85.1	106	118	165														
85	8.31	13.0	20.6	47.7	66.4														
90	0.72	0.56	0.81	1.52	2.22														
95	0.61	0.71	1.32	2.23	3.03														
100	0.86	1.22	1.93	3.40	4.44														
105	1.37	1.67	2.63	4.10	4.95														
110	1.77	2.23	3.34	4.81	5.56														
115	2.49	2.85	3.70	5.21	5.76														
120	3.40	3.71	4.15	5.06	5.83														
125	4.36	4.47	4.96	5.40	5.92														
130	4.92	5.23	5.21	5.54	5.91														
135	5.78	6.24	5.51	5.68	5.89														
140	6.58	6.32	5.92	5.82	5.91														
145	6.55	6.39	6.01	6.08	6.01														
150	6.28	6.25	6.09	6.11	6.05														
155	6.28	6.24	6.17	6.02	5.95														
160	6.29	6.27	6.13	5.92	5.81														
165	6.29	6.45	6.28	6.58	6.10														
170	6.57	6.61	6.41	6.58	6.08														
175	6.74	6.77	6.39	6.38	6.06														
180	6.08	6.23	6.07	6.02	5.70														

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 0.0DEG
Operators:CS01
Test Date:2021-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.7
Humidity: 0.0%
Test Distance:26.000m [K=1.0000]
Remarks: D-20HLED60-24(5050 RA70 40K T3D)L