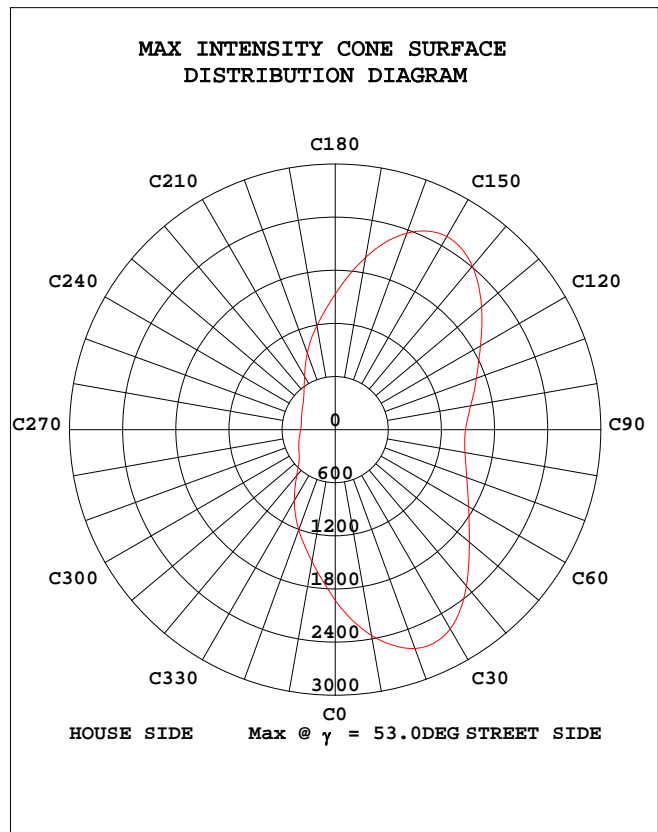
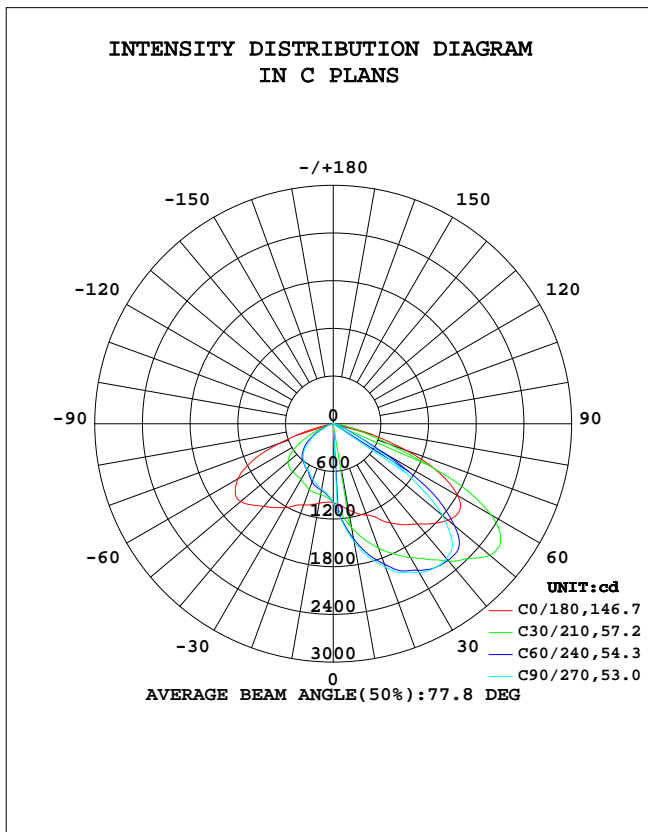


# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.67 lm/W			
MODEL	5050 40K RA70 T4 L	I <sub>max</sub> (cd)	2598	η street_up(%)	0.1
NOMINAL POWER(W)	40	LOR(%)	100.0	η street_down(%)	70.6
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	5145	η house_up(%)	0.2
NOMINAL FLUX(lm)	5145.31	MAXIMUM @(C,γ )	30,53.0	η house_down(%)	29.1
LAMPS INSIDE	1	η up(%)	0.3	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	230.0	η down(%)	99.7	SLI	17.500



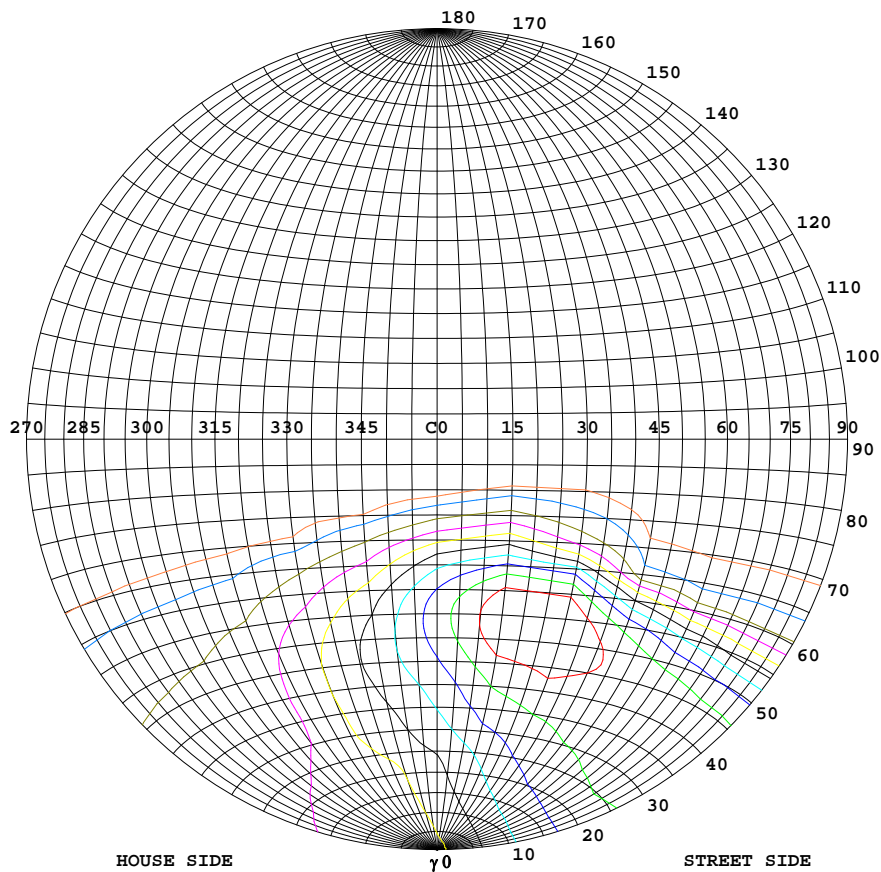
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.7DEG  
Operators:CS01  
Test Date:2021-07-19

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 35.5%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## STREETLIGHT ISOCANDELA DIAGRAM

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



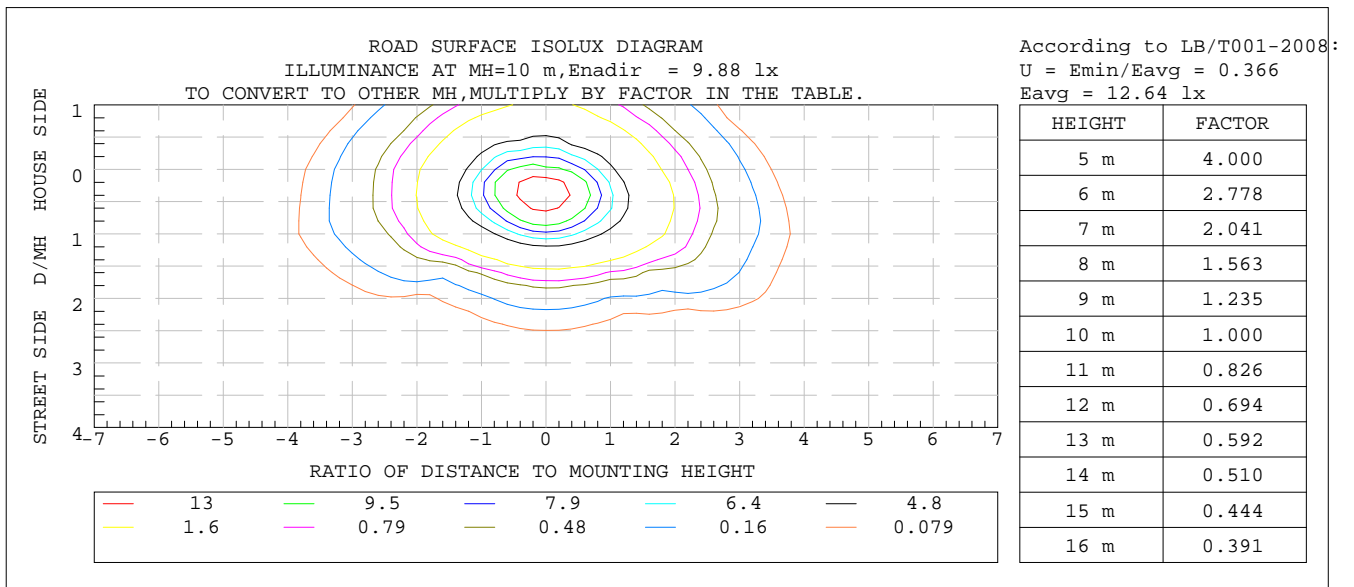
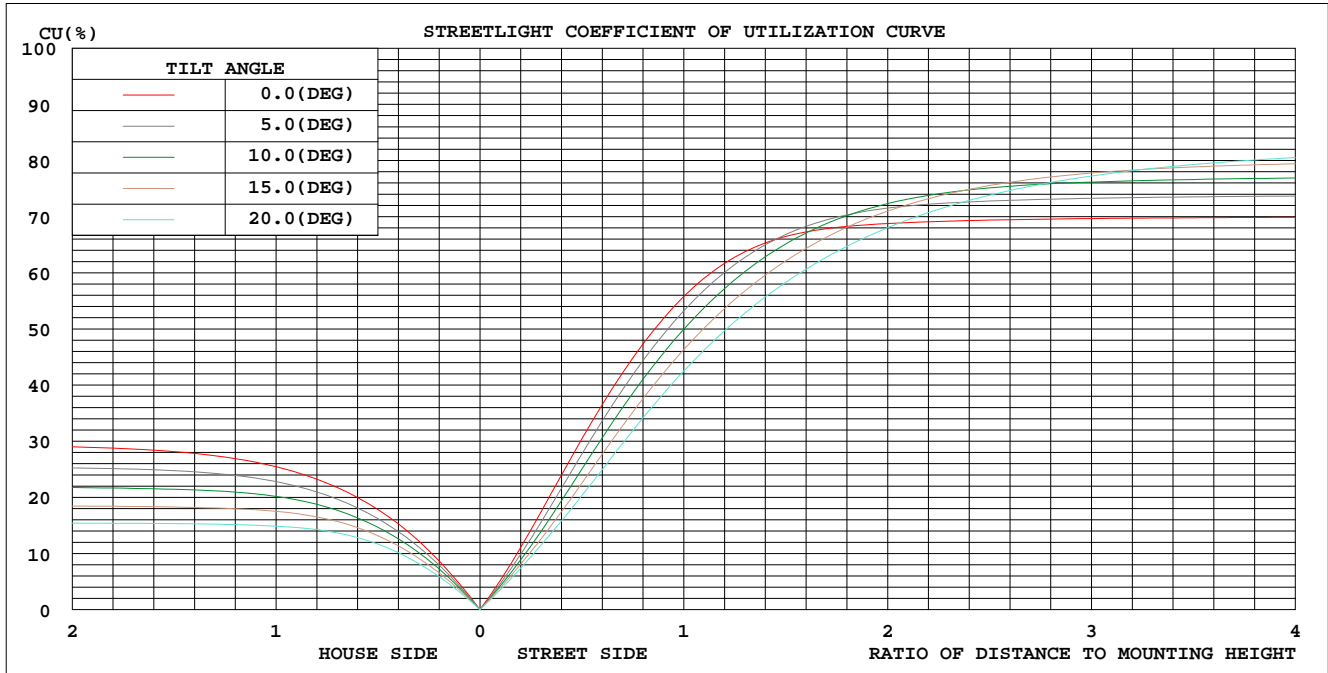
### Classification:

IES:Type II - Short  
 CIE:Narrow - Short  
 IES:Cut-off  
 CIE:Semi-cut-off  
 Max.At80:40.52cd/klm  
 Max.At90:0.5688cd/klm  
 Max.80-90:40.52cd/klm

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	2598
90%	2339
80%	2079
70%	1819
60%	1559
50%	1299
40%	1039
30%	780
20%	520
10%	260
5%	130

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 33.7DEG  
 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: 35.5%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4)L

COEFFICIENT OF UTILIZATION CURVE  
AND ISOLUX DIAGRAM

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.7DEG  
Operators: CS01  
Test Date: 2021-07-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 35.5%  
Test Distance: 26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	1098	1415	1504	1322	1016	872.1	839.9	894.2	0- 10	101.7	101.7	1.98,1.98
20	1224	1808	1919	1671	1088	826.6	747.9	858.6	10- 20	343.1	444.7	8.64,8.64
30	1441	2067	2160	1930	1218	686.7	660.7	780.8	20- 30	616.3	1061	20.6,20.6
40	1648	2259	2215	2143	1358	634.3	585.2	731.8	30- 40	898.6	1960	38.1,38.1
50	1887	2267	1792	2306	1521	554.0	451.7	647.7	40- 50	1149	3109	60.4,60.4
60	1808	1305	561.4	1777	1385	339.6	241.2	399.9	50- 60	1147	4256	82.7,82.7
70	969.7	167.4	111.9	313.0	720.1	95.92	78.32	106.6	60- 70	658.3	4914	95.5,95.5
80	71.42	45.58	27.89	73.08	54.86	27.47	13.73	32.00	70- 80	197.9	5112	99.3,99.3
90	0.6849	0.4010	0.4480	0.5570	2.926	0.2488	0.4762	0.4252	80- 90	19.44	5131	99.7,99.7
100	1.127	0.2476	0.3965	0.4632	1.814	0.7440	0.4943	0.9415	90-100	0.7337	5132	99.7,99.7
110	2.449	0.3957	0.3964	0.4861	2.990	2.183	1.140	2.473	100-110	1.262	5133	99.8,99.8
120	3.330	0.6888	0.3964	1.085	4.048	3.567	2.484	3.364	110-120	1.951	5135	99.8,99.8
130	3.484	1.180	1.041	1.295	4.214	4.354	4.609	4.509	120-130	2.522	5138	99.9,99.9
140	3.512	1.732	1.337	1.924	3.724	4.954	5.042	4.589	130-140	2.659	5140	99.9,99.9
150	3.187	1.997	1.981	2.003	3.548	5.043	5.005	4.400	140-150	2.192	5142	99.9,99.9
160	3.308	2.129	2.067	2.074	3.823	4.155	4.519	4.261	150-160	1.547	5144	100,100
170	3.445	2.971	2.773	2.817	3.994	3.862	4.397	4.331	160-170	0.9497	5145	100,100
180	3.479	3.615	3.568	3.461	4.018	3.467	3.563	3.658	170-180	0.3492	5145	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

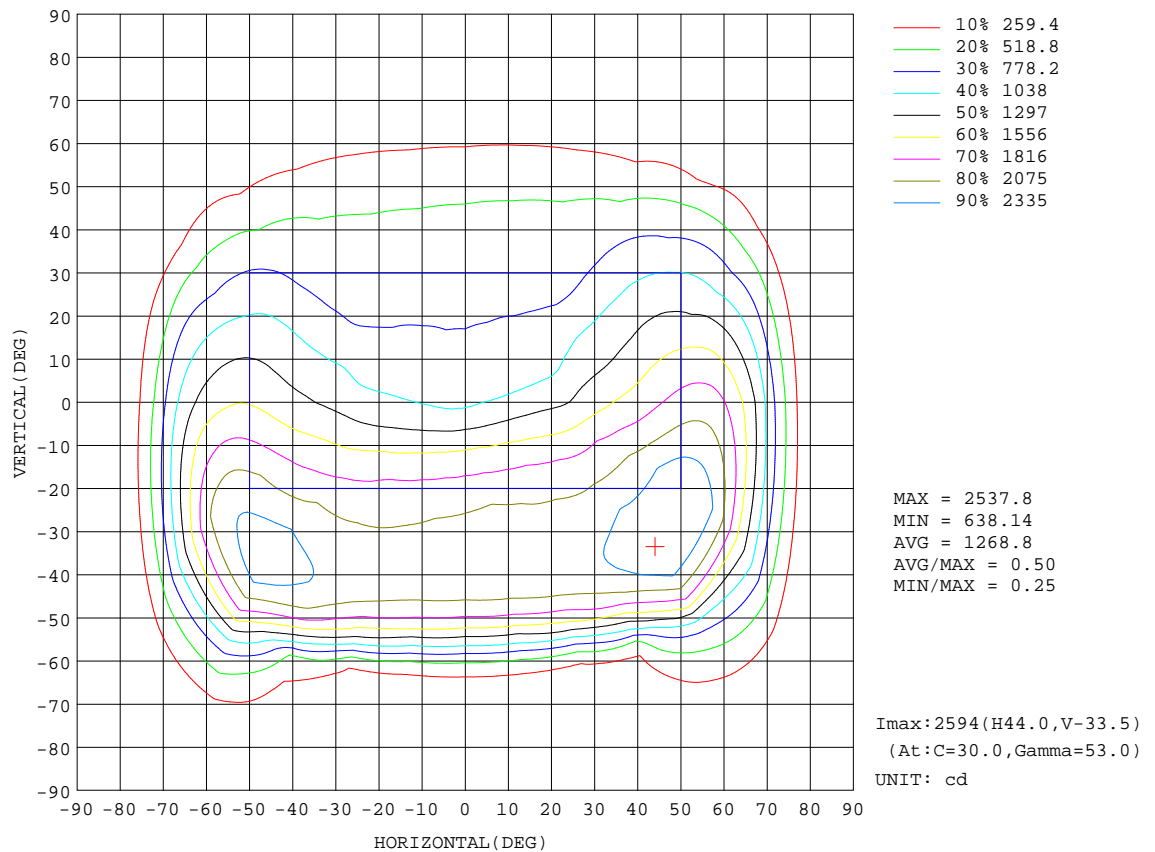
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 33.7DEG  
 Operators:CS01  
 Test Date:2021-07-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
 Humidity: 35.5%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

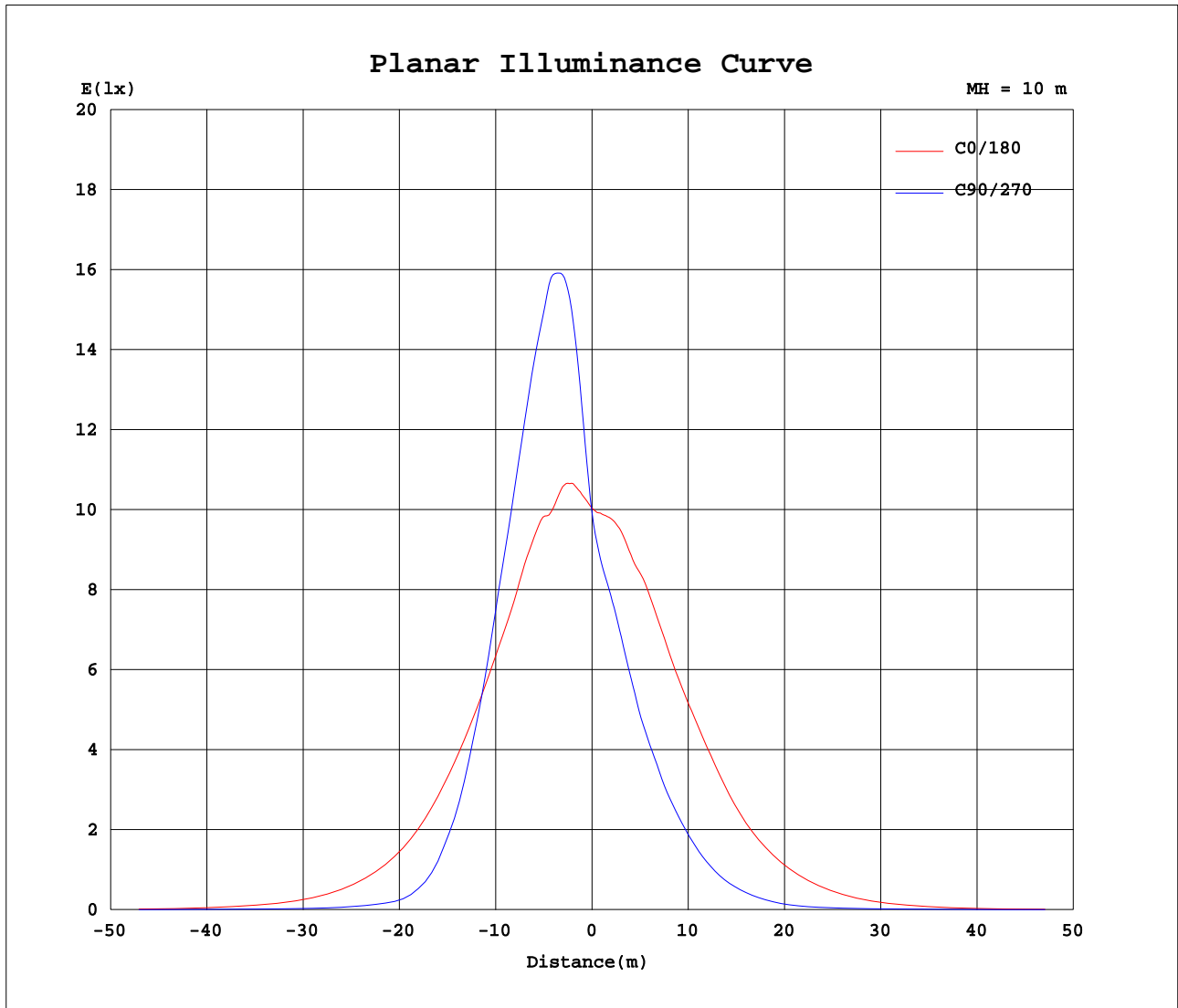
Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.7DEG  
Operators: CS01  
Test Date: 2021-07-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 35.5%  
Test Distance: 26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.7DEG  
Operators:CS01  
Test Date:2021-07-19

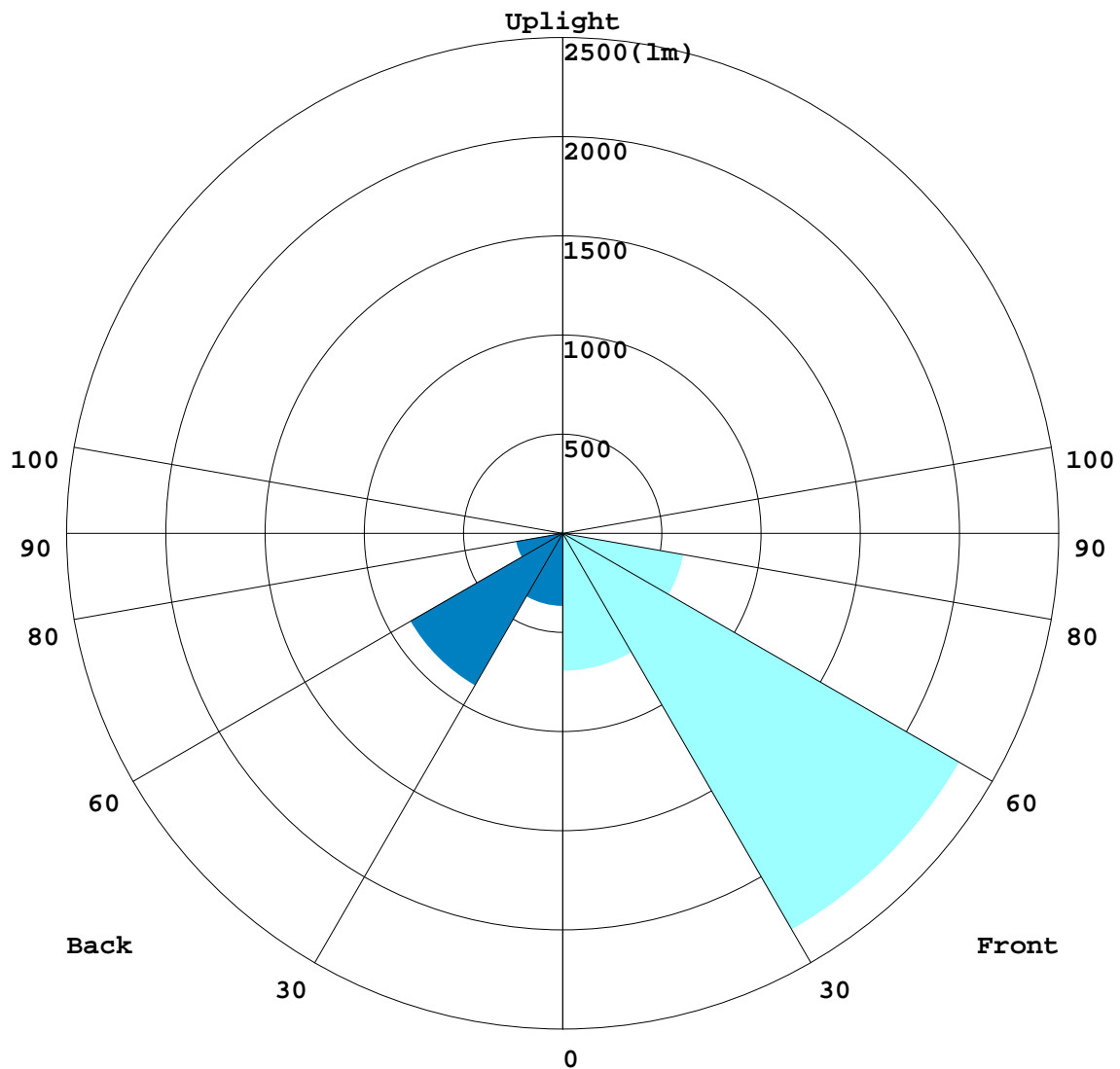
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 35.5%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LCS REPORT

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	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: 33.7DEG  
Operators:CS01  
Test Date:2021-07-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 35.5%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## BUG REPORT

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

### IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	693.85	13.5
FM - Front-Medium(30-60)	2309	44.9
FH - Front-High(60-80)	618.11	12.0
FVH - Front-Very High(80-90)	13.665	0.3
Total Forward Light	3639.1	70.7

BL - Back-Low(0-30)	367.21	7.1
BM - Back-Medium(30-60)	885.49	17.2
BH - Back-High(60-80)	238.05	4.6
BVH - Back-Very High(80-90)	5.7711	0.1
Total Back Light	1506.2	29.3

UL - Uplight-Low(90-100)	0.73367	0.0
UH - Uplight-High(100-180)	13.431	0.3
Total Up Light	14.165	0.3

BUG(Back,Up,Glare) Rating	B1-U2-G1
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1496.5	9.6468	1506.2
Street Side	3634.6	4.5181	3639.1

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 33.7DEG  
 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: 35.5%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4)L

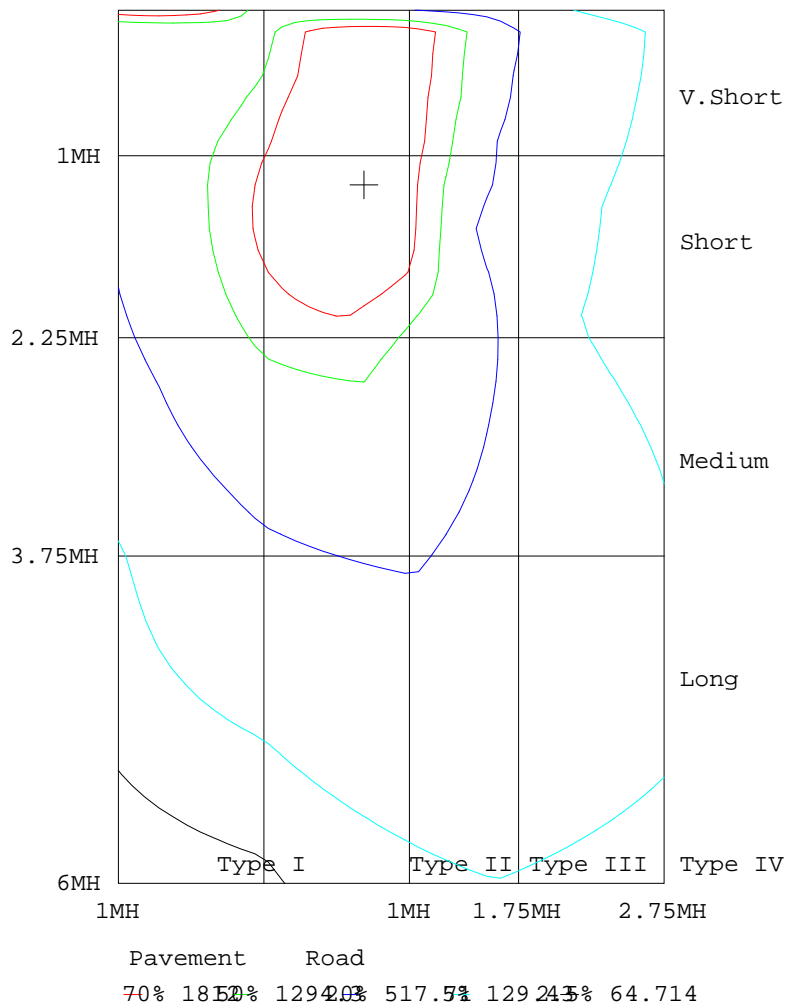


# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ROAD ISOCANDELA REPORT

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	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: 33.7DEG  
 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: 35.5%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm																			
NAME: D-20HLED40-16										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	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993
5	1033	1087	1141	1182	1207	1229	1227	1208	1179	1131	1085	1033	993	953	928	908	899	891	888
10	1098	1212	1327	1415	1469	1512	1504	1471	1419	1322	1222	1105	1016	945	908	872	852	842	840
15	1170	1334	1501	1632	1700	1750	1739	1704	1637	1503	1371	1197	1053	951	900	856	824	803	798
20	1224	1447	1665	1808	1881	1933	1919	1886	1811	1671	1511	1285	1088	954	881	827	780	751	748
25	1309	1566	1807	1964	2045	2093	2067	2042	1969	1826	1652	1376	1135	963	844	762	718	702	697
30	1441	1743	1945	2067	2128	2184	2160	2121	2047	1930	1772	1494	1218	1032	808	687	663	658	661
35	1553	1908	2085	2171	2215	2233	2218	2192	2131	2031	1897	1622	1286	1052	800	659	634	625	627
40	1648	2066	2260	2259	2245	2241	2215	2209	2190	2143	2069	1737	1358	1088	793	634	599	587	585
45	1777	2258	2401	2310	2227	2156	2118	2157	2214	2242	2223	1902	1444	1125	781	605	554	532	531
50	1887	2457	2574	2267	1988	1833	1792	1885	2102	2306	2415	2086	1521	1111	744	554	482	452	452
55	1932	2524	2573	1986	1536	1251	1214	1349	1694	2218	2547	2251	1505	1012	648	462	391	356	350
60	1808	2366	2293	1305	740	577	561	639	996	1777	2402	2218	1385	834	491	340	280	246	241
65	1484	1863	1639	356	221	222	220	223	254	855	1951	1850	1142	601	295	204	160	134	126
70	970	1207	741	167	120	114	112	120	131	313	1166	1234	720	304	136	95.9	86.0	80.4	78.3
75	441	621	342	90.7	71.8	66.6	64.4	69.4	76.9	158	571	596	289	87.4	69.4	59.5	54.3	47.3	44.5
80	71.4	175	138	45.6	33.6	29.3	27.9	30.9	36.1	73.1	208	146	54.9	43.2	36.9	27.5	23.1	16.4	13.7
85	20.2	29.7	29.8	12.4	8.14	6.22	5.71	6.98	9.15	18.0	33.6	28.9	18.2	13.7	8.98	4.80	2.80	1.78	1.58
90	0.68	0.59	0.65	0.40	0.50	0.45	0.45	0.45	0.45	0.56	0.61	0.65	2.93	0.74	1.37	0.25	0.75	1.17	0.48
95	0.65	0.66	0.54	0.25	0.40	0.41	0.40	0.40	0.41	0.45	0.55	0.72	0.98	1.13	0.89	0.55	0.35	0.65	0.45
100	1.13	0.76	0.55	0.25	0.41	0.44	0.40	0.40	0.44	0.46	0.55	0.79	1.81	2.07	1.64	0.74	0.55	0.56	0.49
105	1.86	1.08	0.55	0.40	0.43	0.46	0.40	0.40	0.46	0.47	0.55	1.19	2.36	2.71	2.34	1.39	0.84	0.75	0.70
110	2.45	1.47	0.64	0.40	0.44	0.48	0.40	0.43	0.49	0.49	1.15	1.83	2.99	3.25	3.37	2.18	1.34	1.14	1.14
115	2.68	1.89	1.15	0.46	0.44	0.51	0.40	0.46	0.52	0.59	1.30	2.18	3.38	4.13	3.82	2.87	2.08	1.64	1.69
120	3.33	2.12	1.18	0.69	0.44	0.53	0.40	0.48	0.54	1.09	1.69	2.67	4.05	4.42	4.12	3.57	2.82	2.44	2.48
125	3.41	2.75	1.34	1.10	0.77	0.69	0.64	0.99	1.09	1.24	1.89	2.93	4.17	4.52	4.22	4.11	4.25	3.68	3.77
130	3.48	2.71	1.83	1.18	3.49	1.19	1.04	3.76	1.20	1.29	2.09	2.97	4.21	4.56	4.29	4.35	5.04	4.52	4.61
135	3.53	2.71	1.89	1.26	4.16	1.33	1.15	3.48	1.39	1.33	2.09	2.97	4.26	4.46	4.36	4.51	5.17	5.32	4.93
140	3.51	2.75	1.94	1.73	2.18	1.39	1.34	2.23	1.82	1.92	2.09	2.97	3.72	4.41	4.43	4.95	5.22	5.36	5.04
145	3.23	2.75	2.03	1.98	2.27	1.99	1.68	2.28	1.87	1.99	2.29	2.97	3.57	4.36	4.50	5.00	5.19	5.40	5.16
150	3.19	2.81	2.08	2.00	2.33	1.99	1.98	2.32	1.92	2.00	2.55	2.97	3.55	4.18	4.26	5.04	4.98	5.20	5.00
155	3.25	2.82	2.18	2.04	2.39	1.99	2.01	2.37	1.97	2.02	2.59	2.97	3.58	3.74	4.21	4.50	4.39	4.57	4.58
160	3.31	2.83	2.18	2.13	2.45	1.99	2.07	2.41	2.02	2.07	2.62	2.97	3.82	3.66	3.72	4.15	4.29	4.40	4.52
165	3.37	2.85	2.72	2.52	2.51	2.08	2.13	2.45	2.59	2.52	2.69	2.97	3.97	3.84	3.67	3.86	4.35	4.34	4.46
170	3.44	3.20	2.97	2.97	2.86	2.78	2.77	2.68	2.89	2.82	2.94	3.46	3.99	4.08	3.67	3.86	4.32	4.29	4.40
175	3.47	3.46	3.52	3.47	3.46	3.48	3.47	3.52	3.39	3.41	3.24	3.54	4.01	3.98	3.67	3.82	4.20	4.28	4.26
180	3.48	3.44	3.47	3.62	3.66	3.53	3.57	3.58	3.64	3.46	3.54	3.57	4.02	3.54	3.47	3.47	3.61	3.63	3.56

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.7DEG  
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: 35.5%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:229.87V I:0.2156A P:39.376W PF:0.7947 Freq:50.01Hz Lamp Flux:5145.31x1 lm		
NAME: D-20HLED40-16	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	993	993	993	993	993														
5	893	906	924	955	991														
10	847	870	894	942	1003														
15	819	848	881	942	1024														
20	769	816	859	939	1043														
25	719	757	825	960	1127														
30	684	706	781	1020	1219														
35	647	675	740	1031	1276														
40	605	642	732	1048	1348														
45	560	603	705	1048	1406														
50	480	531	648	994	1396														
55	383	437	546	866	1300														
60	271	316	400	690	1120														
65	142	180	235	470	832														
70	84.0	92.1	107	170	499														
75	52.3	57.4	63.5	75.5	140														
80	22.0	25.6	32.0	40.3	45.2														
85	2.25	3.39	6.63	12.3	16.3														
90	0.70	0.51	0.43	0.75	0.79														
95	0.40	0.45	0.55	1.20	1.24														
100	0.56	0.60	0.94	1.99	2.13														
105	0.75	1.00	1.68	2.70	2.78														
110	1.19	1.65	2.47	3.54	3.42														
115	1.64	2.20	2.96	4.14	4.01														
120	2.59	2.90	3.36	4.19	4.21														
125	3.68	3.79	4.15	4.36	4.30														
130	4.33	4.54	4.51	4.55	4.34														
135	5.42	5.07	4.55	4.51	4.08														
140	5.78	5.23	4.59	4.42	3.82														
145	5.81	5.38	4.63	4.35	3.72														
150	5.21	5.04	4.40	4.30	3.67														
155	4.57	4.58	4.35	4.02	3.65														
160	4.57	4.55	4.26	3.96	3.63														
165	4.57	4.52	4.22	3.89	3.61														
170	4.54	4.50	4.33	3.83	3.59														
175	4.27	4.34	4.30	3.84	3.57														
180	3.67	3.64	3.66	3.49	3.51														

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.7DEG  
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: 35.5%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4)L