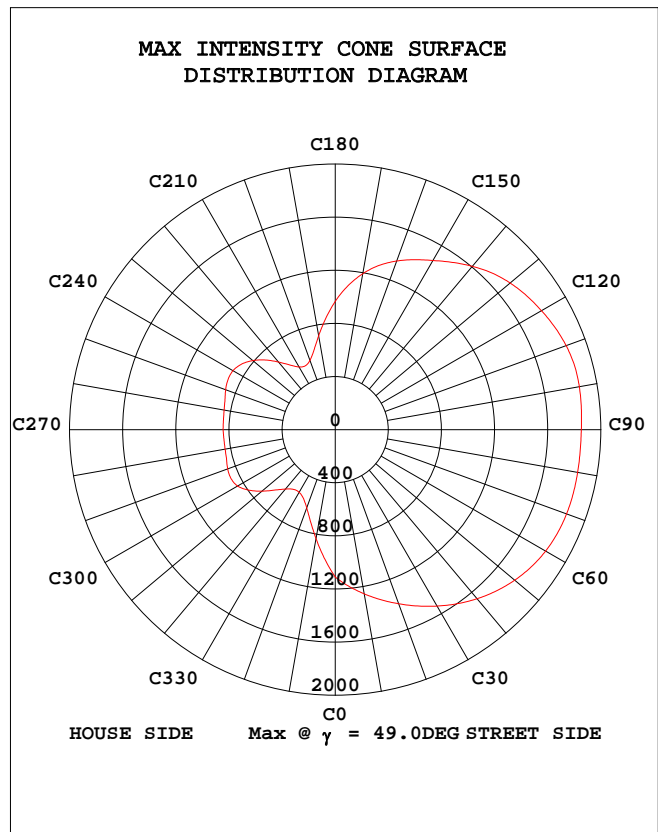
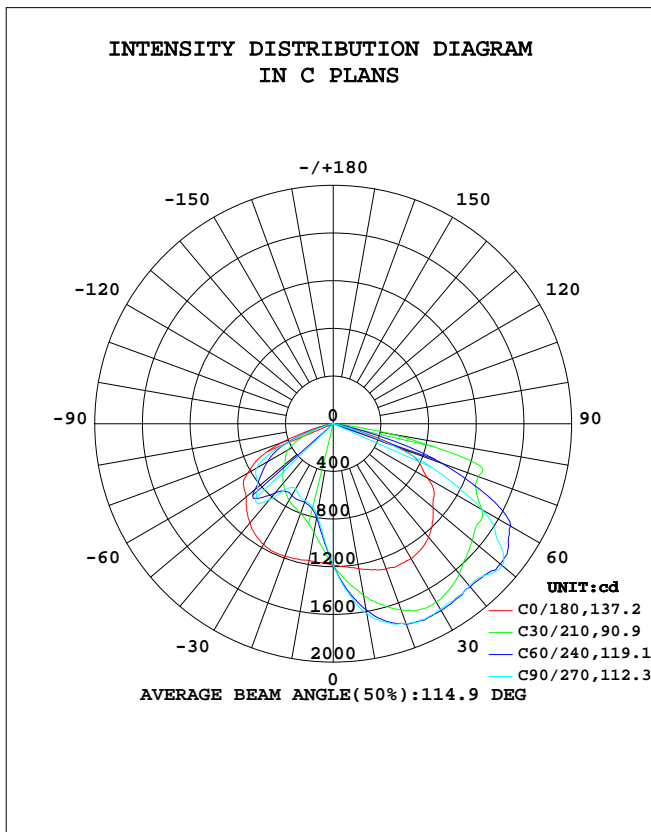


# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 125.87 lm/W			
MODEL	5050 40K RA70 T4A L	I <sub>max</sub> (cd)	1866	η street_up(%)	0.1
NOMINAL POWER(W)	40	LOR(%)	100.0	η street_down(%)	69.4
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	4958	η house_up(%)	0.2
NOMINAL FLUX(lm)	4957.71	MAXIMUM @(C,γ )	105,49.0	η house_down(%)	30.3
LAMPS INSIDE	1	η up(%)	0.3	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	230.0	η down(%)	99.7	SLI	16.928



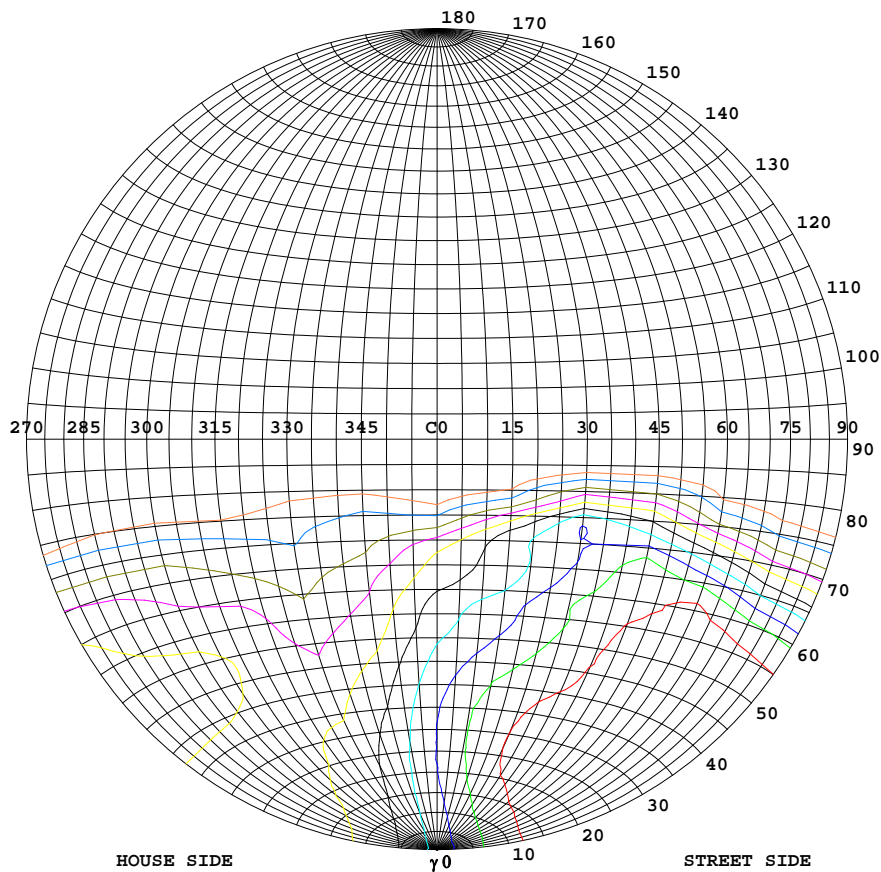
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.4DEG  
Operators:CS01  
Test Date:2021-07-19

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## STREETLIGHT ISOCANDELA DIAGRAM

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



### Classification:

IES:Type III - Very Short  
 CIE:Broad - Short  
 IES:Cut-off  
 CIE:Semi-cut-off  
 Max.At80:98.05cd/klm  
 Max.At90:0.2052cd/klm  
 Max.80-90:98.05cd/klm

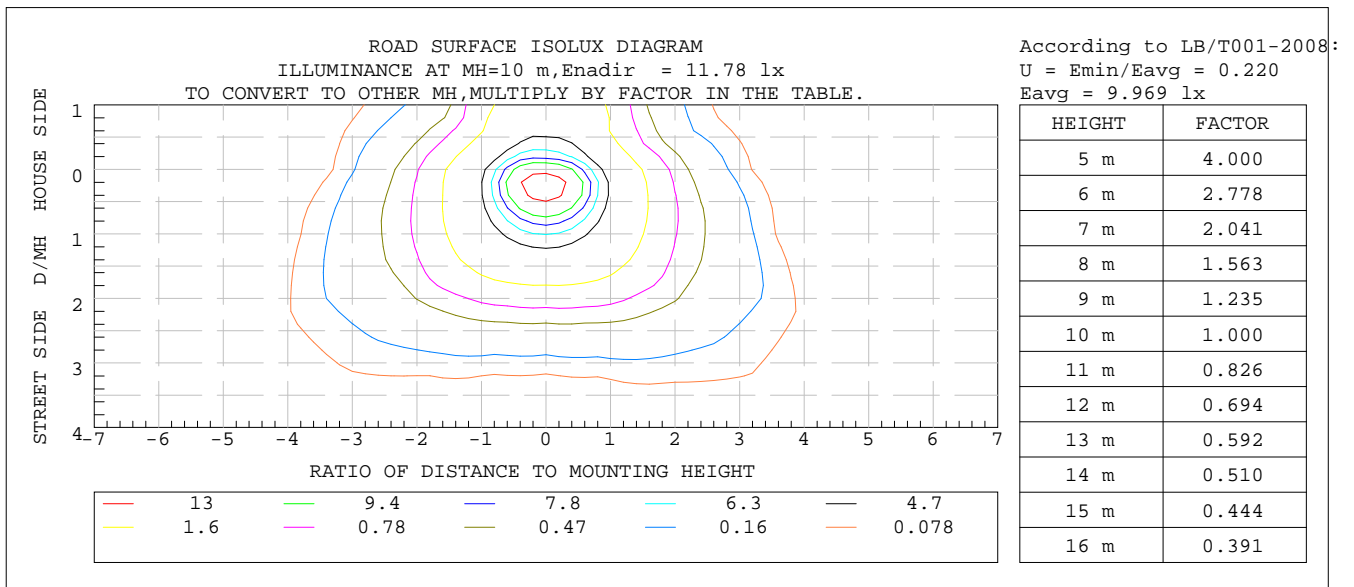
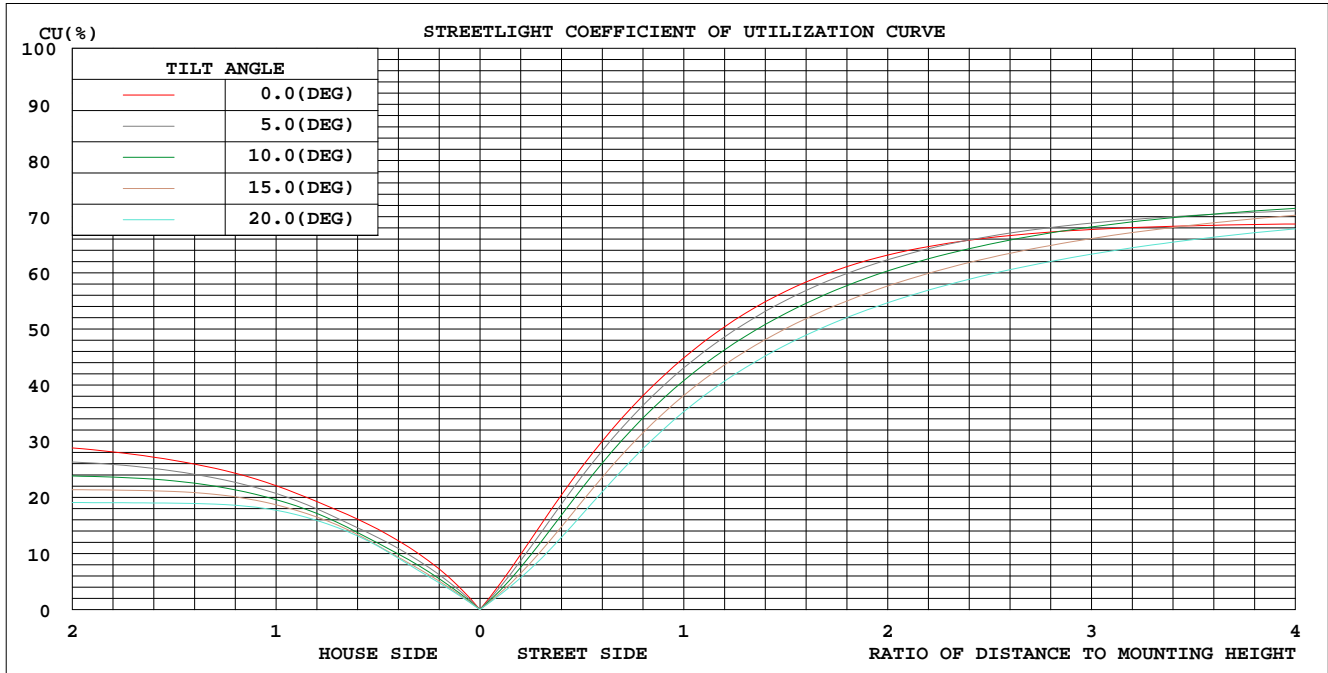
ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	1866
90%	1679
80%	1492
70%	1306
60%	1119
50%	933
40%	746
30%	560
20%	373
10%	187
5%	93

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 33.4DEG  
 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: 42.4%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## COEFFICIENT OF UTILIZATION CURVE AND ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.4DEG  
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: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 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	1234	1529	1614	1484	1165	853.3	780.0	908.5	0- 10	113.5	113.5	2.29,2.29
20	1298	1737	1786	1691	1187	727.7	686.7	777.3	10- 20	345.4	458.9	9.26,9.26
30	1306	1784	1800	1747	1166	717.0	634.5	734.3	20- 30	574.4	1033	20.8,20.8
40	1245	1736	1779	1711	1087	688.5	831.6	688.7	30- 40	766.4	1800	36.3,36.3
50	1094	1711	1852	1664	957.7	750.7	827.5	641.0	40- 50	930.2	2730	55.1,55.1
60	915.7	1627	1444	1635	829.6	593.1	743.4	531.0	50- 60	986.3	3716	75,75
70	601.1	1329	520.5	1384	456.7	287.5	281.3	238.5	60- 70	826.8	4543	91.6,91.6
80	48.00	367.9	44.76	444.5	45.70	30.50	22.56	31.63	70- 80	368.8	4912	99.1,99.1
90	0.5801	0.7728	0.5365	0.7891	0.4838	0.8714	0.3878	0.9794	80- 90	32.30	4944	99.7,99.7
100	0.9183	0.6057	0.5099	0.5865	1.258	1.929	0.9720	2.008	90-100	0.9211	4945	99.7,99.7
110	1.640	0.7204	0.9591	0.5869	1.975	2.653	2.227	2.935	100-110	1.444	4946	99.8,99.8
120	1.983	1.212	1.249	1.124	2.316	3.280	3.587	3.422	110-120	1.962	4948	99.8,99.8
130	2.177	1.398	1.858	1.159	3.048	3.595	4.358	3.901	120-130	2.300	4951	99.9,99.9
140	2.779	1.686	1.975	1.418	3.302	4.053	4.357	4.253	130-140	2.293	4953	99.9,99.9
150	2.836	1.868	2.094	1.907	3.330	4.327	4.330	4.350	140-150	1.954	4955	99.9,99.9
160	3.330	2.024	2.214	2.004	3.678	4.194	4.301	4.350	150-160	1.470	4956	100,100
170	3.672	3.321	2.903	2.982	4.122	4.153	4.272	4.322	160-170	0.9614	4957	100,100
180	3.677	3.857	3.922	3.520	4.112	3.518	3.628	3.860	170-180	0.3599	4958	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

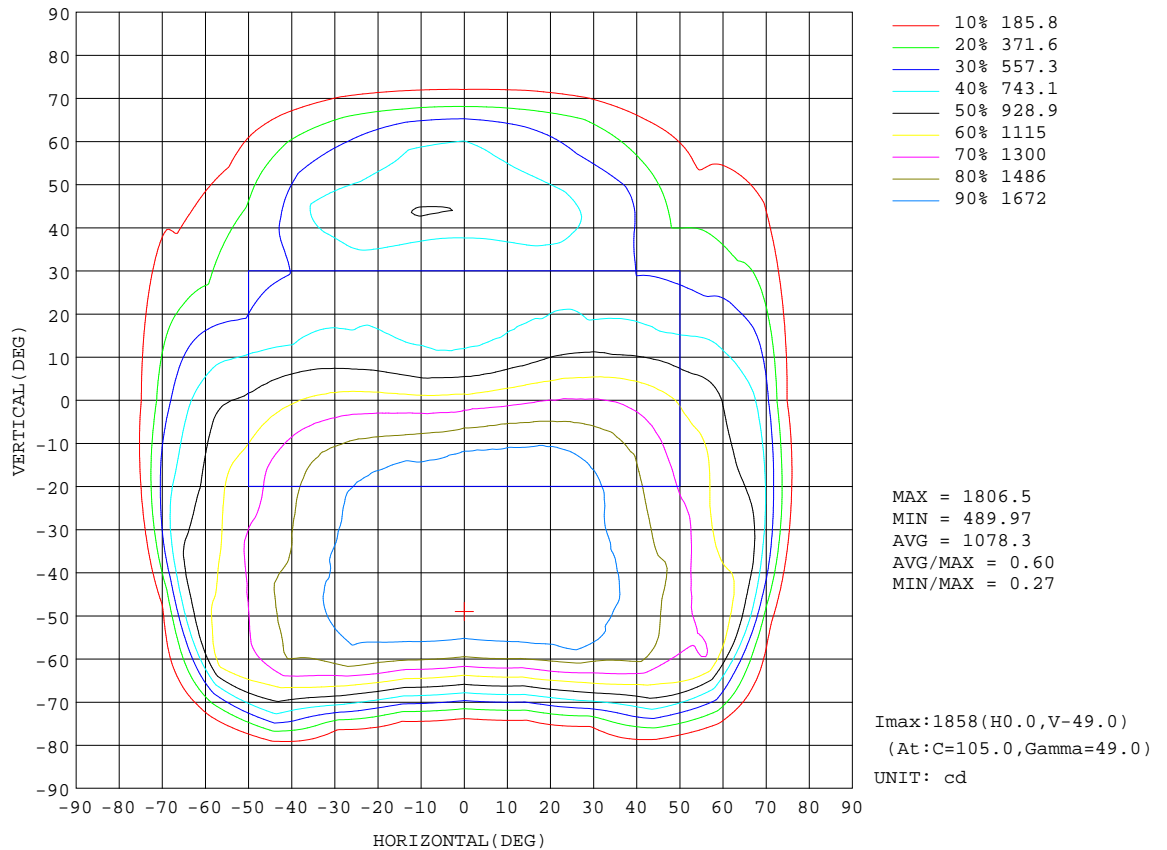
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 33.4DEG  
 Operators:CS01  
 Test Date:2021-07-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
 Humidity: 42.4%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

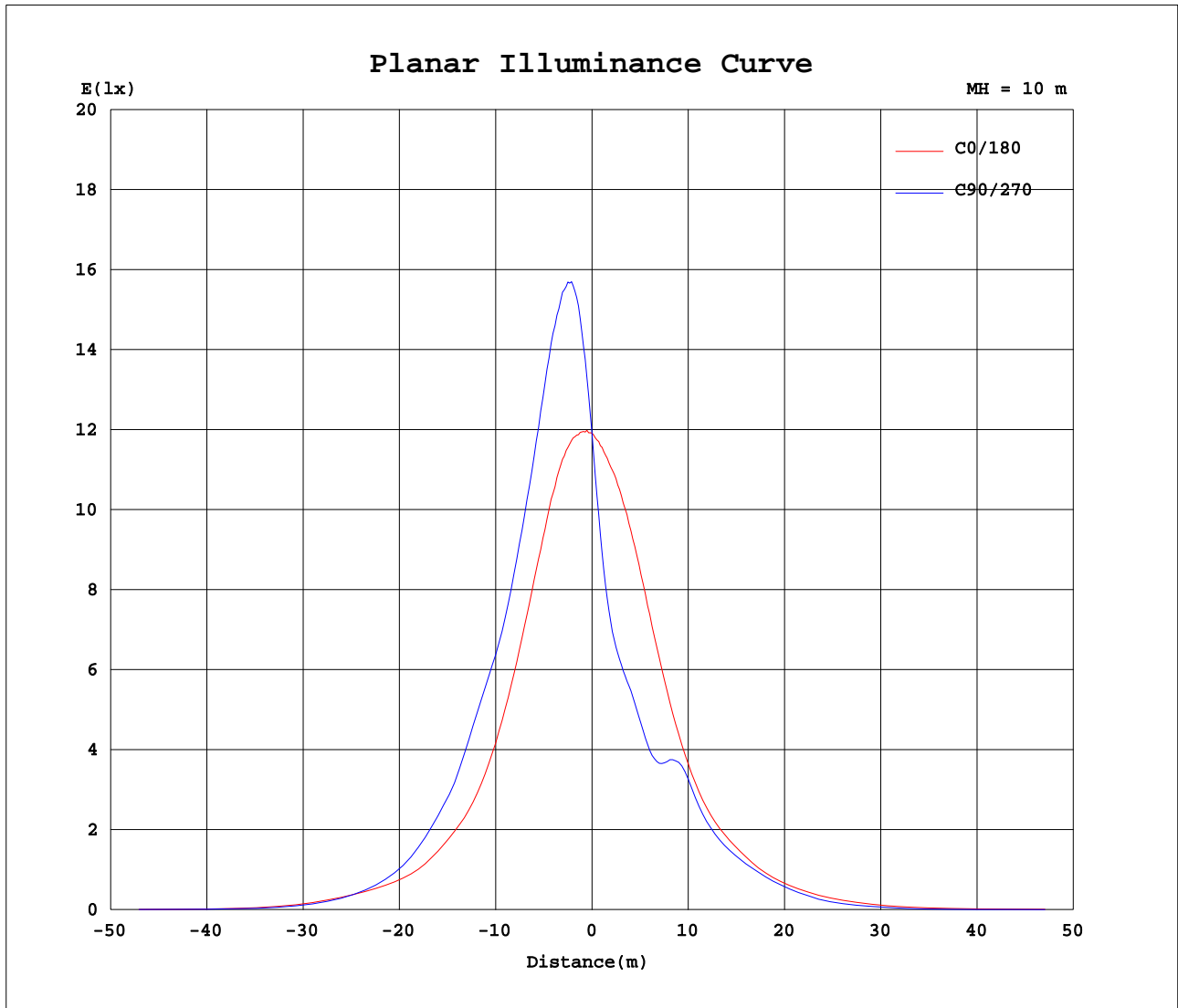
Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.4DEG  
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: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.4DEG  
Operators:CS01  
Test Date:2021-07-19

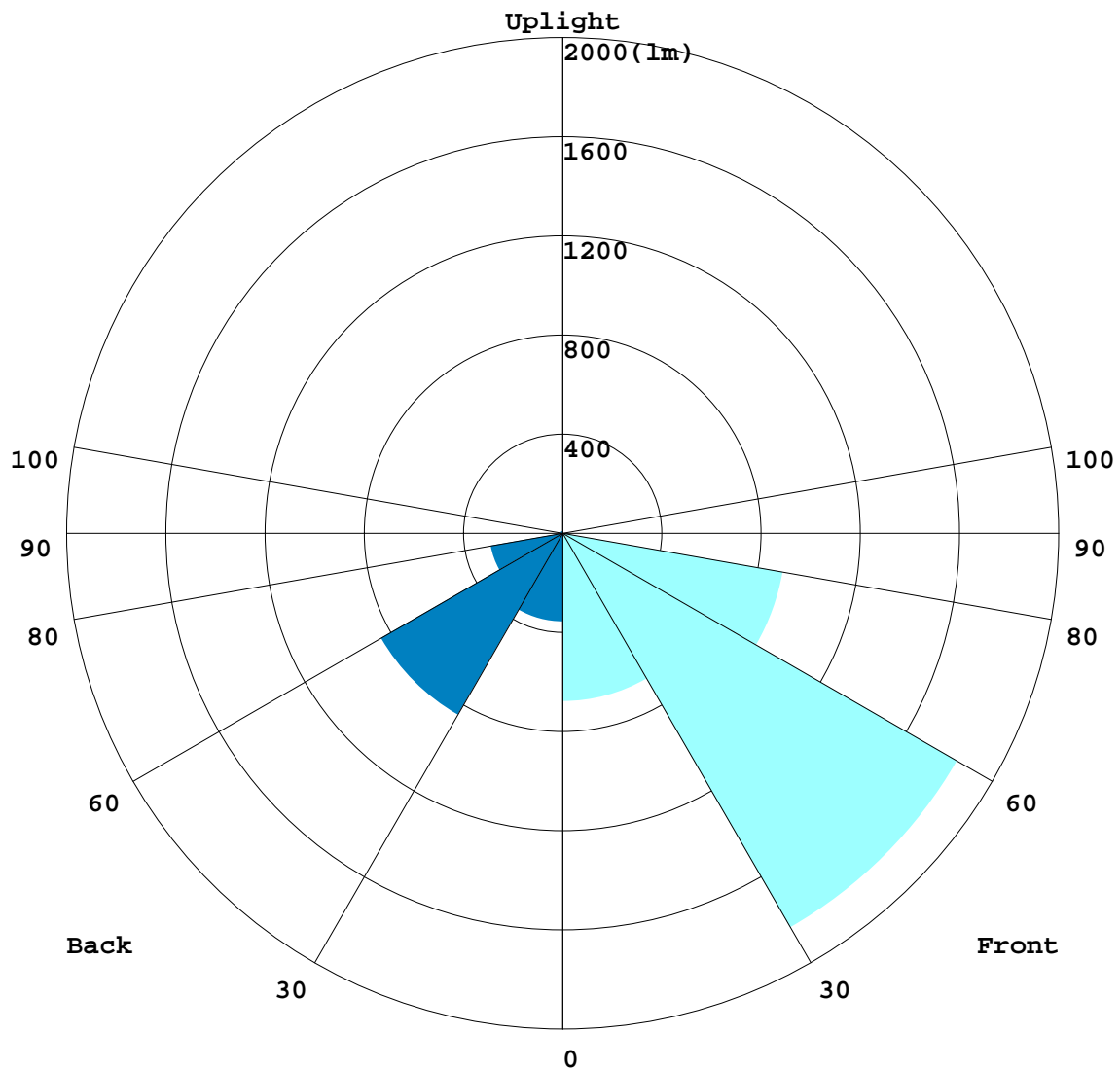
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LCS REPORT

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 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: 33.4DEG  
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: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## BUG REPORT

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 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)	677.36	13.7
FM - Front-Medium(30-60)	1836.8	37.0
FH - Front-High(60-80)	901.03	18.2
FVH - Front-Very High(80-90)	25.048	0.5
Total Forward Light	3444.7	69.5

BL - Back-Low(0-30)	355.95	7.2
BM - Back-Medium(30-60)	846.08	17.1
BH - Back-High(60-80)	294.52	5.9
BVH - Back-Very High(80-90)	7.2479	0.1
Total Back Light	1513	30.5

UL - Uplight-Low(90-100)	0.9211	0.0
UH - Uplight-High(100-180)	12.745	0.3
Total Up Light	13.666	0.3

BUG(Back,Up,Glare) Rating	B1-U2-G1
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1503.8	9.2142	1513
Street Side	3440.2	4.4516	3444.7

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 33.4DEG  
 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: 42.4%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

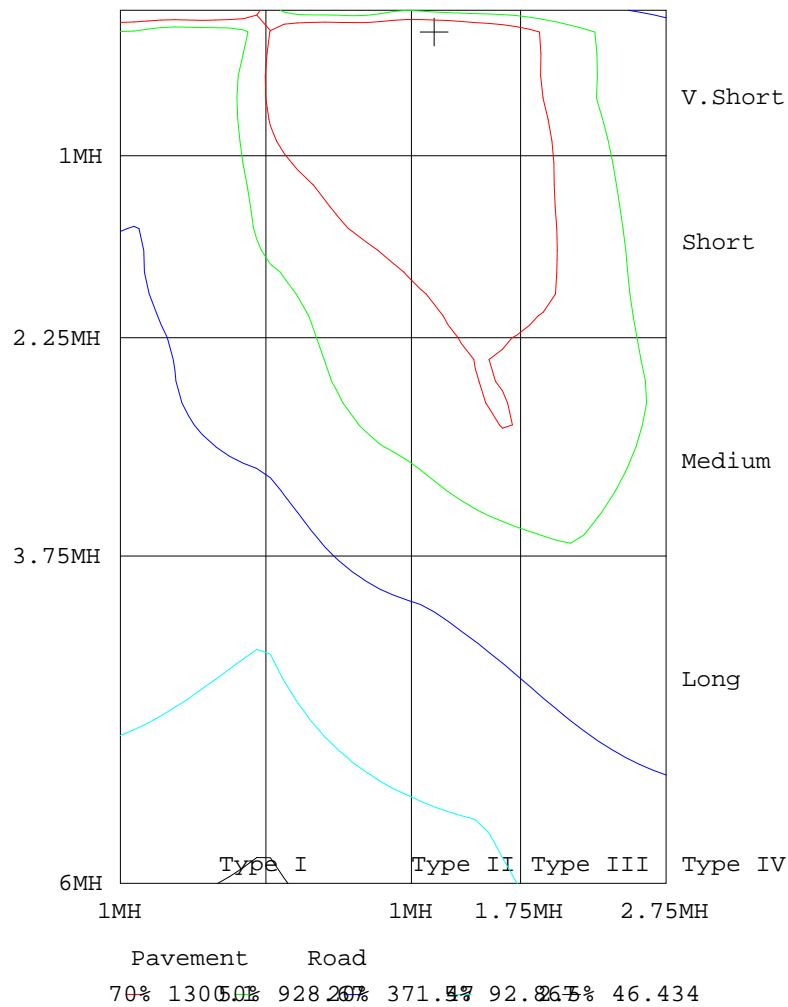


# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ROAD ISOCANDELA REPORT

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 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: 33.4DEG  
 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: 42.4%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 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	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187	1187
5	1205	1264	1327	1367	1404	1420	1419	1409	1383	1340	1289	1229	1169	1101	1042	997	968	949	946
10	1234	1351	1463	1529	1586	1616	1614	1603	1552	1484	1387	1284	1165	1035	926	853	802	781	780
15	1269	1432	1570	1657	1716	1740	1723	1719	1667	1604	1482	1342	1174	992	850	766	725	705	709
20	1298	1492	1660	1737	1790	1790	1786	1779	1736	1691	1560	1393	1187	962	801	728	700	687	687
25	1308	1542	1719	1787	1817	1817	1810	1803	1771	1733	1617	1430	1184	927	771	715	705	677	667
30	1306	1556	1727	1784	1811	1804	1800	1792	1786	1747	1642	1447	1166	883	741	717	695	647	634
35	1286	1549	1696	1763	1797	1790	1788	1782	1772	1734	1642	1452	1139	828	700	713	693	670	664
40	1245	1482	1647	1736	1788	1785	1779	1783	1768	1711	1588	1420	1087	757	652	688	756	816	832
45	1175	1407	1579	1725	1795	1813	1799	1805	1767	1694	1525	1350	1028	683	597	704	884	939	921
50	1094	1309	1521	1711	1831	1856	1852	1864	1799	1664	1449	1258	958	607	533	751	856	843	827
55	1034	1243	1473	1674	1795	1734	1675	1753	1776	1652	1415	1200	917	515	488	747	736	782	786
60	916	1110	1440	1627	1718	1541	1444	1569	1692	1635	1374	1081	830	422	439	593	636	726	743
65	806	1021	1324	1600	1428	1113	1006	1152	1504	1551	1261	984	689	312	328	463	517	567	568
70	601	1035	1294	1329	972	626	520	671	1043	1384	1223	929	457	204	187	288	293	291	281
75	176	619	1193	915	410	168	129	186	510	976	1118	374	180	179	110	110	112	70.3	59.3
80	48.0	97.9	486	368	82.5	53.1	44.8	55.5	95.0	445	347	66.4	45.7	102	36.1	30.5	29.9	24.5	22.6
85	22.9	22.6	45.0	36.6	20.1	12.9	10.4	14.1	22.1	40.2	36.8	19.3	20.7	17.5	8.89	6.55	5.25	3.79	3.38
90	0.58	0.72	0.78	0.77	0.68	0.63	0.54	0.64	0.78	0.79	0.77	0.68	0.48	0.67	1.02	0.87	0.53	0.48	0.39
95	0.69	0.62	0.68	0.62	0.57	0.49	0.45	0.54	0.60	0.61	0.67	0.53	0.63	1.01	1.50	1.50	0.97	0.68	0.63
100	0.92	0.60	0.70	0.61	0.56	0.51	0.51	0.66	0.63	0.59	0.73	0.53	1.26	1.59	1.88	1.93	1.56	1.12	0.97
105	1.16	0.58	0.71	0.59	0.54	0.53	0.67	0.78	0.65	0.59	0.79	0.87	1.70	1.98	2.08	2.38	2.13	1.75	1.55
110	1.64	0.94	0.72	0.72	0.68	0.87	0.96	0.98	0.68	0.59	0.85	1.15	1.97	2.31	2.61	2.65	2.43	2.28	2.23
115	1.90	1.17	1.05	1.06	1.11	1.21	1.14	1.22	0.98	0.78	1.17	1.26	2.08	2.79	2.95	2.80	2.77	3.01	2.86
120	1.98	1.35	1.14	1.21	1.12	1.21	1.25	1.35	1.25	1.12	1.25	1.50	2.32	2.94	3.07	3.28	3.25	3.59	3.59
125	2.04	1.73	1.21	1.30	1.40	1.80	1.59	1.80	1.35	1.14	1.30	1.90	2.57	3.18	3.34	3.57	3.99	4.08	4.36
130	2.18	1.88	1.39	1.40	1.70	1.89	1.86	3.94	1.45	1.16	1.41	1.95	3.05	3.56	3.54	3.60	4.05	4.37	4.36
135	2.71	1.91	1.50	1.48	3.35	1.89	1.92	3.32	1.77	1.27	1.52	1.99	3.29	3.60	3.68	3.62	4.10	4.46	4.36
140	2.78	1.96	1.88	1.69	2.52	1.89	1.98	2.34	1.81	1.42	1.90	2.04	3.30	3.61	3.76	4.05	4.16	4.44	4.36
145	2.81	2.21	1.95	1.81	2.33	1.89	2.03	2.15	1.86	1.86	1.97	2.38	3.32	3.62	3.74	4.28	4.22	4.43	4.34
150	2.84	2.55	1.98	1.87	2.23	1.89	2.09	2.19	1.95	1.91	2.05	2.66	3.33	3.63	3.75	4.33	4.27	4.42	4.33
155	2.90	2.59	2.10	1.93	2.25	1.89	2.15	2.24	2.01	1.91	2.20	2.79	3.48	3.64	3.72	4.18	4.31	4.36	4.32
160	3.33	2.62	2.32	2.02	2.27	1.89	2.21	2.29	2.01	2.00	2.58	2.88	3.68	3.66	3.71	4.19	4.26	4.35	4.30
165	3.46	2.74	2.66	2.65	2.62	2.09	2.27	2.34	2.59	2.64	2.73	2.97	3.92	3.85	3.70	4.17	4.22	4.33	4.29
170	3.67	3.32	3.34	3.32	3.10	2.91	2.90	2.84	3.03	2.98	3.07	3.44	4.12	4.16	3.69	4.15	4.18	4.32	4.27
175	3.69	3.61	3.46	3.57	3.44	3.45	3.48	3.42	3.43	3.37	3.46	3.41	4.22	4.14	3.68	4.03	4.13	4.27	4.31
180	3.68	3.66	3.53	3.86	3.68	3.54	3.92	3.86	3.72	3.52	3.51	3.49	4.11	3.65	3.67	3.52	3.83	3.78	3.63

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.4DEG  
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: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.14V I:0.2141A P:39.387W PF:0.7995 Freq:50.01Hz Lamp Flux:4957.71x1 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	1187	1187	1187	1187	1187														
5	961	991	1033	1087	1145														
10	803	843	909	1004	1119														
15	727	763	827	940	1099														
20	711	731	777	890	1072														
25	703	731	752	844	1046														
30	681	727	734	790	998														
35	695	717	719	730	940														
40	814	749	689	666	868														
45	913	825	656	598	786														
50	824	824	641	531	705														
55	745	691	636	451	624														
60	679	580	531	358	556														
65	537	470	379	271	449														
70	289	295	239	181	319														
75	90.3	108	97.0	134	204														
80	25.9	31.0	31.6	65.4	73.4														
85	4.17	5.64	8.01	11.9	26.4														
90	0.73	0.59	0.98	0.93	0.68														
95	0.59	0.98	1.47	1.47	0.92														
100	1.18	1.62	2.01	1.95	1.75														
105	1.67	2.10	2.40	2.34	2.09														
110	2.05	2.45	2.93	2.92	2.38														
115	2.69	2.74	3.13	3.10	2.74														
120	3.48	3.38	3.42	3.20	2.90														
125	3.91	3.92	3.72	3.56	3.21														
130	4.21	4.21	3.90	3.82	3.46														
135	4.78	4.56	4.07	3.86	3.51														
140	4.92	4.58	4.25	3.93	3.54														
145	5.06	4.60	4.40	4.02	3.56														
150	4.74	4.52	4.35	4.07	3.57														
155	4.71	4.45	4.35	4.06	3.59														
160	4.68	4.45	4.35	4.05	3.61														
165	4.65	4.47	4.34	4.14	3.62														
170	4.65	4.49	4.32	4.26	3.64														
175	4.45	4.45	4.30	4.24	3.53														
180	4.01	3.91	3.86	3.56	3.50														

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 33.4DEG  
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: 42.4%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T4A)L