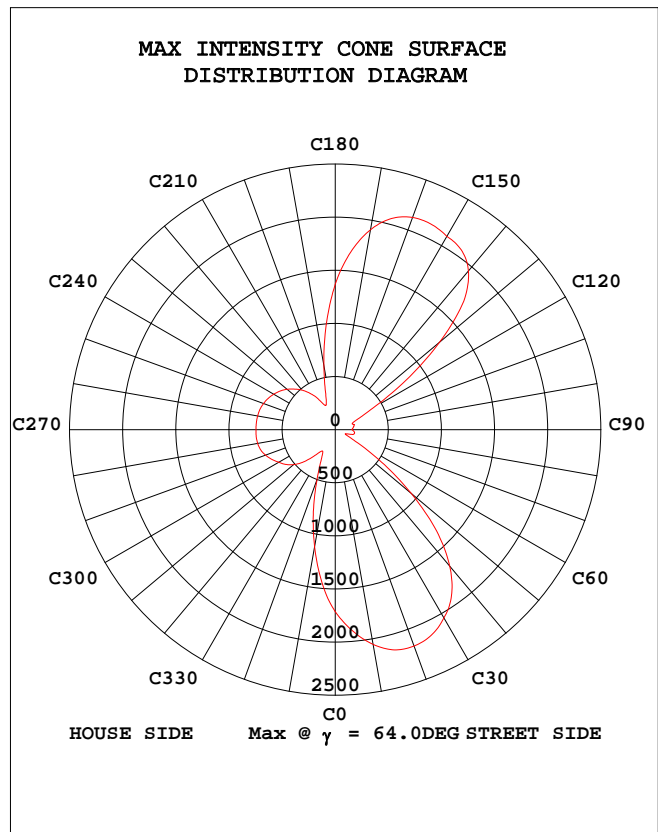
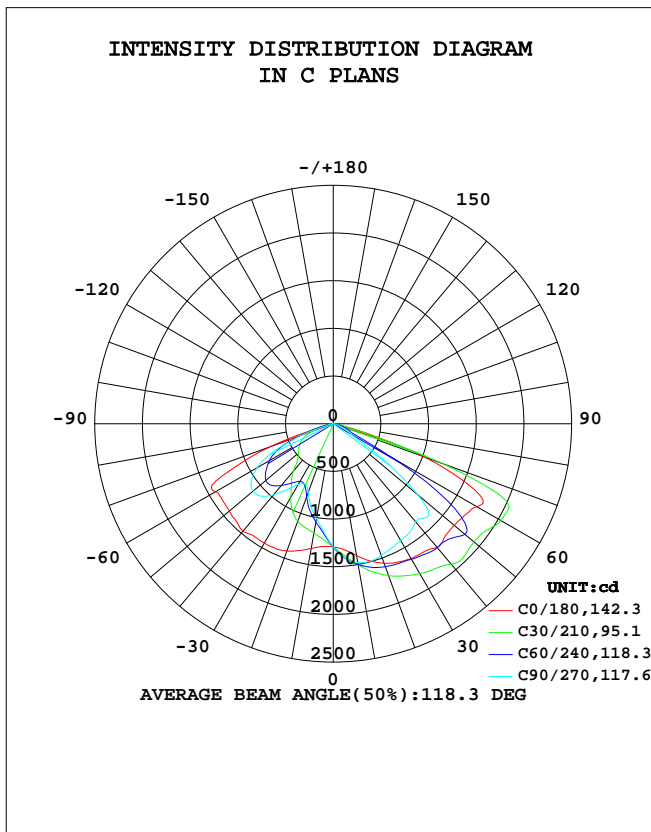


# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.24 lm/W			
MODEL	5050 40K RA70 T3A L	Imax(cd)	2146	$\eta$ street_up(%)	0.1
NOMINAL POWER(W)	40	LOR(%)	100.0	$\eta$ street_down(%)	63.8
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	5044	$\eta$ house_up(%)	0.2
NOMINAL FLUX(lm)	5043.87	MAXIMUM @(C, $\gamma$ )	15,64.0	$\eta$ house_down(%)	36.0
LAMPS INSIDE	1	$\eta$ up(%)	0.3	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	230.0	$\eta$ down(%)	99.7	SLI	17.360



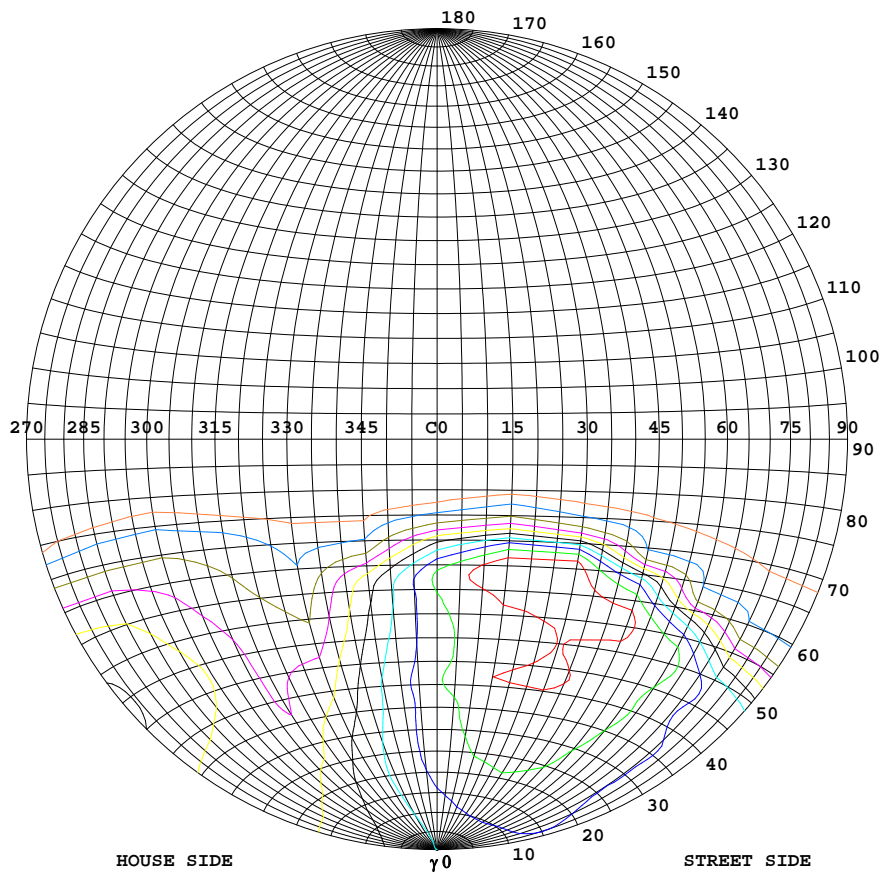
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 0.0DEG  
Operators:CS01  
Test Date:2021-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## STREETLIGHT ISOCANDELA DIAGRAM

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



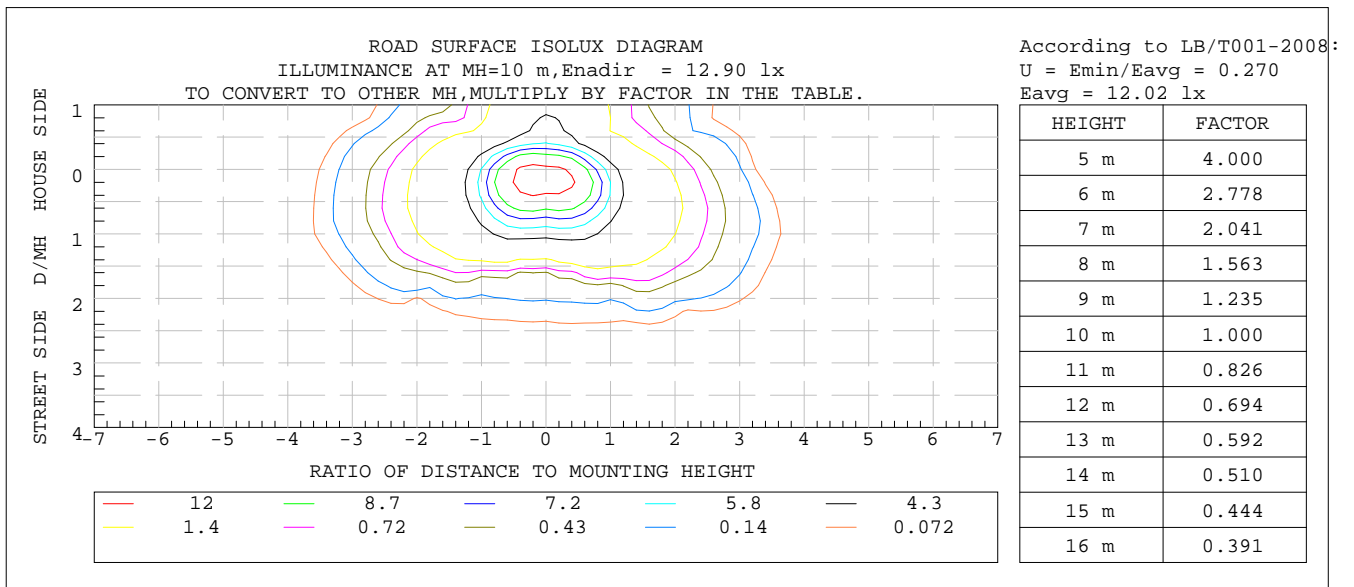
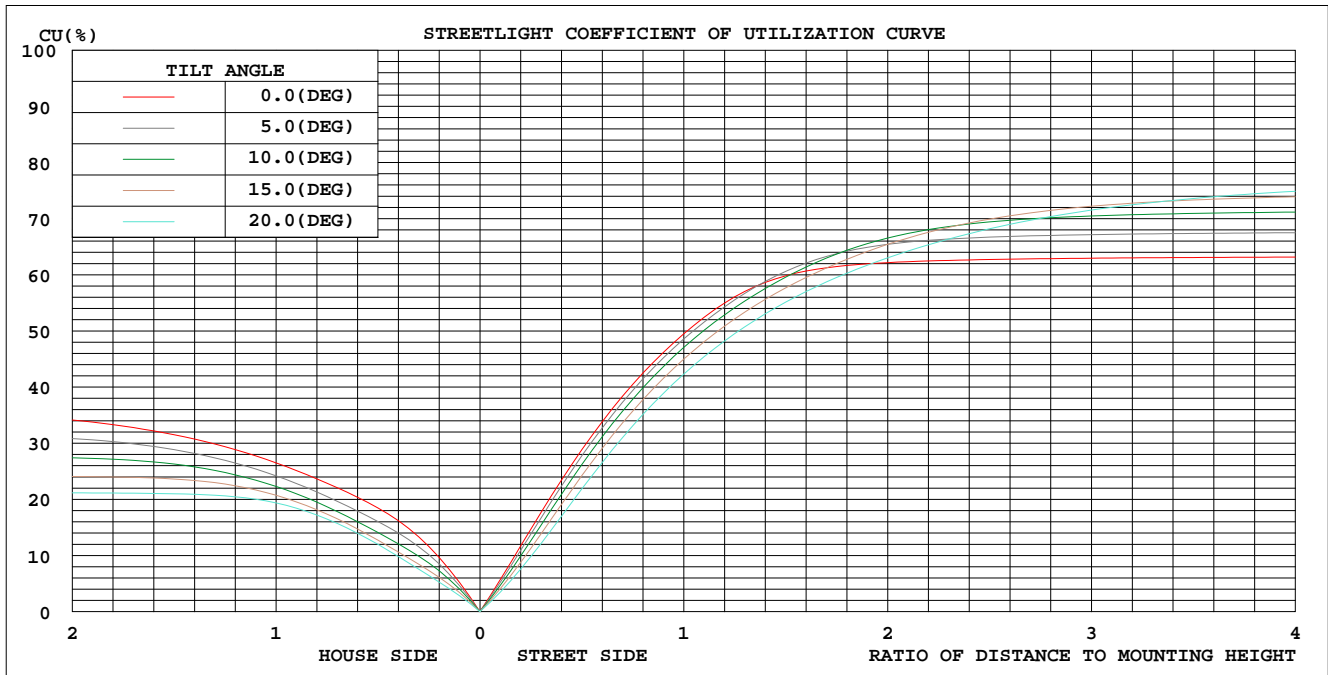
### Classification:

IES:Type II - Short  
 CIE:Average - Intermediate  
 IES:Cut-off  
 CIE:Full cut-off  
 Max.At80:16.17cd/klm  
 Max.At90:0.4423cd/klm  
 Max.80-90:16.17cd/klm

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	2146
90%	1932
80%	1717
70%	1503
60%	1288
50%	1073
40%	859
30%	644
20%	429
10%	215
5%	107

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 0.0DEG  
 Operators:CS01  
 Test Date:2021-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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-20HLED40-16(5050 40K RA70 T3A)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:2021-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 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	1404	1506	1476	1456	1329	1095	1009	1147	0- 10	123.8	123.8	2.45,2.45
20	1558	1670	1470	1604	1420	930.1	769.9	1020	10- 20	371.0	494.8	9.81,9.81
30	1633	1755	1413	1696	1446	715.2	734.7	776.1	20- 30	595.9	1091	21.6,21.6
40	1694	1852	1346	1800	1473	690.7	971.9	617.9	30- 40	811.7	1902	37.7,37.7
50	1658	1901	1153	1838	1423	710.4	1097	583.0	40- 50	1017	2920	57.9,57.9
60	1740	1809	205.7	1945	1423	604.8	921.4	492.4	50- 60	1062	3982	78.9,78.9
70	1011	193.2	89.43	538.4	693.8	399.6	362.7	307.6	60- 70	816.2	4798	95.1,95.1
80	64.29	52.48	21.31	57.52	55.54	45.48	37.99	39.77	70- 80	213.8	5012	99.4,99.4
90	0.5133	0.5553	0.4125	0.4592	0.5083	0.4039	0.6058	0.4074	80- 90	18.37	5030	99.7,99.7
100	1.067	0.5547	0.4795	0.4836	1.678	0.8624	0.4167	1.225	90-100	0.7132	5031	99.7,99.7
110	2.185	0.6748	1.062	0.4599	2.544	2.475	0.7100	2.444	100-110	1.197	5032	99.8,99.8
120	2.846	1.121	1.569	1.069	3.507	3.231	1.624	3.007	110-120	1.867	5034	99.8,99.8
130	3.084	1.291	1.916	1.154	3.649	3.814	3.452	3.932	120-130	2.352	5036	99.9,99.9
140	3.275	1.763	1.978	1.578	3.746	4.293	4.058	4.074	130-140	2.392	5039	99.9,99.9
150	3.452	1.969	2.025	2.189	3.711	4.342	4.213	4.268	140-150	2.073	5041	99.9,99.9
160	3.580	2.373	2.073	2.799	4.140	4.283	4.327	4.330	150-160	1.574	5042	100,100
170	3.760	3.483	3.491	3.499	4.467	4.493	4.361	4.412	160-170	1.028	5043	100,100
180	4.371	4.243	4.210	4.023	4.524	3.778	4.157	4.222	170-180	0.3854	5044	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

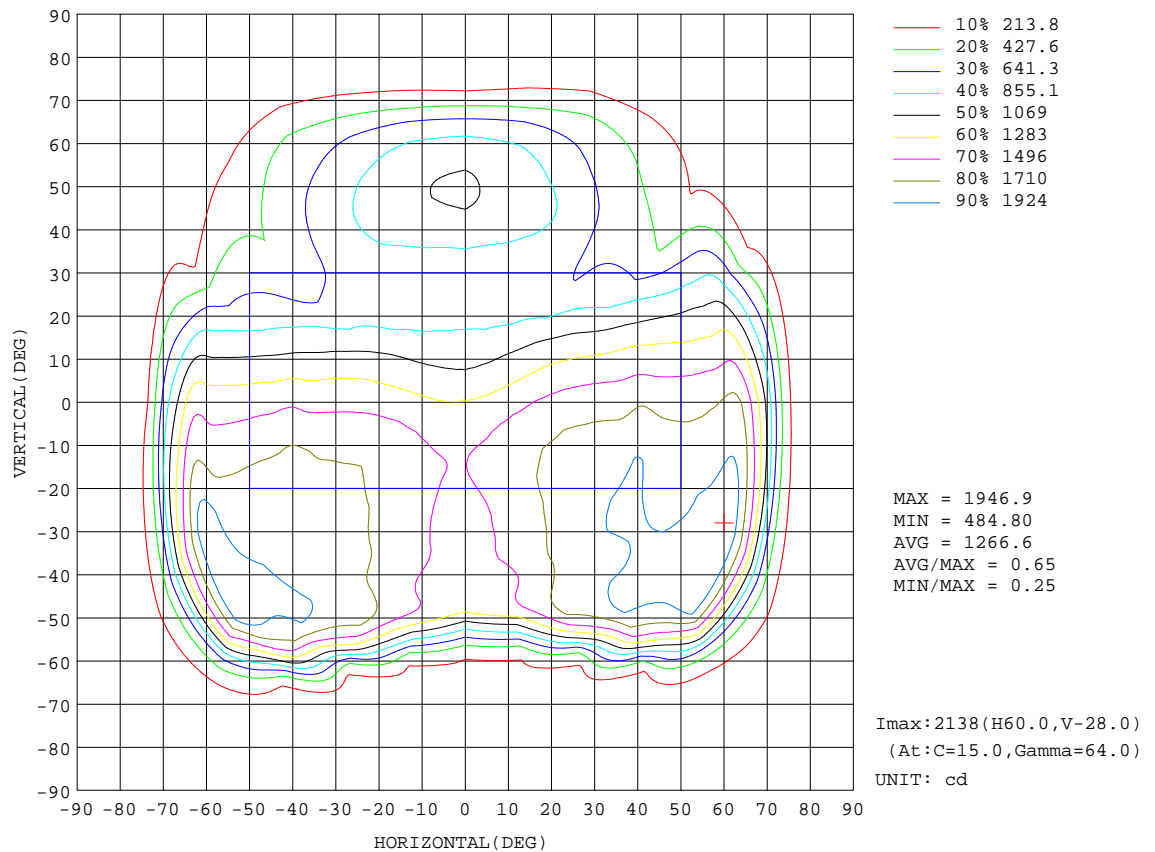
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 0.0DEG  
 Operators:CS01  
 Test Date:2021-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
 Humidity: 0.0%  
 Test Distance:26.000m [K=1.0000]  
 Remarks: D-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

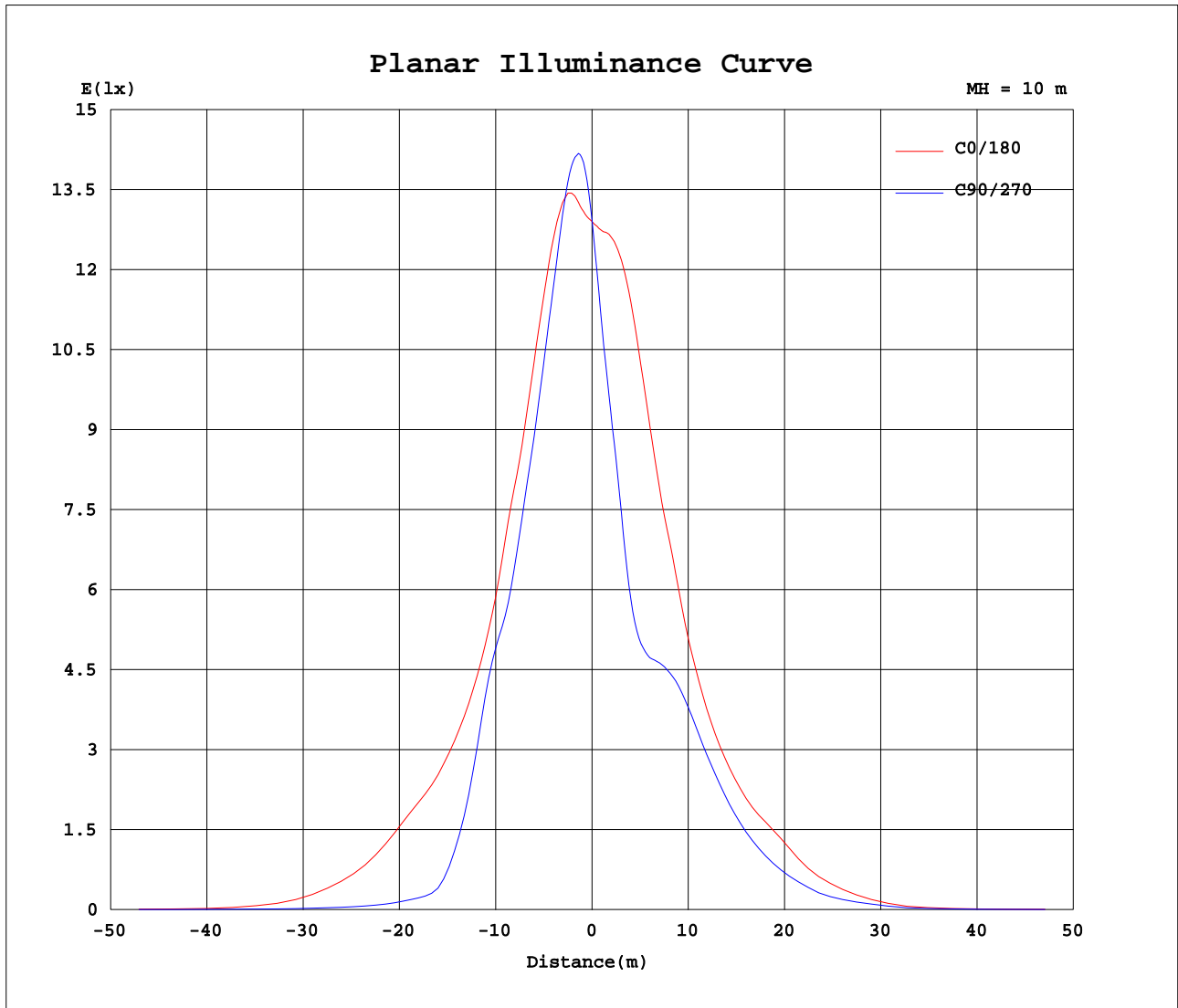
Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 0.0DEG  
Operators: CS01  
Test Date: 2021-07-17

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-20HLED40-16(5050 40K RA70 T3A)L

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 0.0DEG  
Operators:CS01  
Test Date:2021-07-17

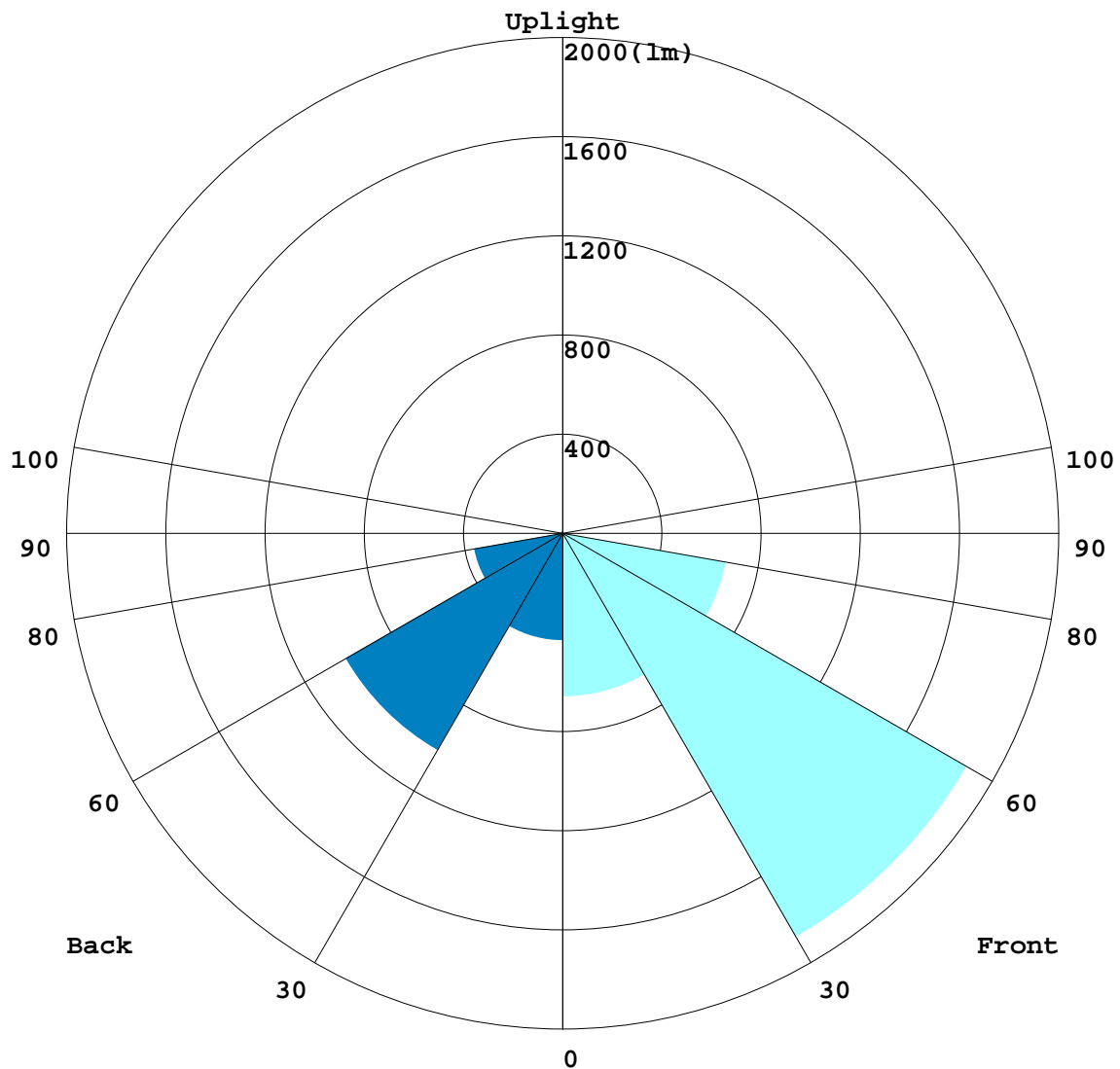
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.404.7  
Humidity: 0.0%  
Test Distance:26.000m [K=1.0000]  
Remarks: D-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LCS REPORT

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 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: 0.0DEG  
Operators:CS01  
Test Date:2021-07-17

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## BUG REPORT

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 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)	658.69	13.1
FM - Front-Medium(30-60)	1880.7	37.3
FH - Front-High(60-80)	667.77	13.2
FVH - Front-Very High(80-90)	9.5467	0.2
Total Forward Light	3221.5	63.9

BL - Back-Low(0-30)	432.05	8.6
BM - Back-Medium(30-60)	1010.5	20.0
BH - Back-High(60-80)	362.29	7.2
BVH - Back-Very High(80-90)	8.8252	0.2
Total Back Light	1822.4	36.1

UL - Uplight-Low(90-100)	0.71321	0.0
UH - Uplight-High(100-180)	12.867	0.3
Total Up Light	13.58	0.3

BUG(Back,Up,Glare) Rating	B2-U2-G1
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1813.6	8.7508	1822.4
Street Side	3216.7	4.8296	3221.5

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 0.0DEG  
 Operators:CS01  
 Test Date:2021-07-17

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-20HLED40-16(5050 40K RA70 T3A)L

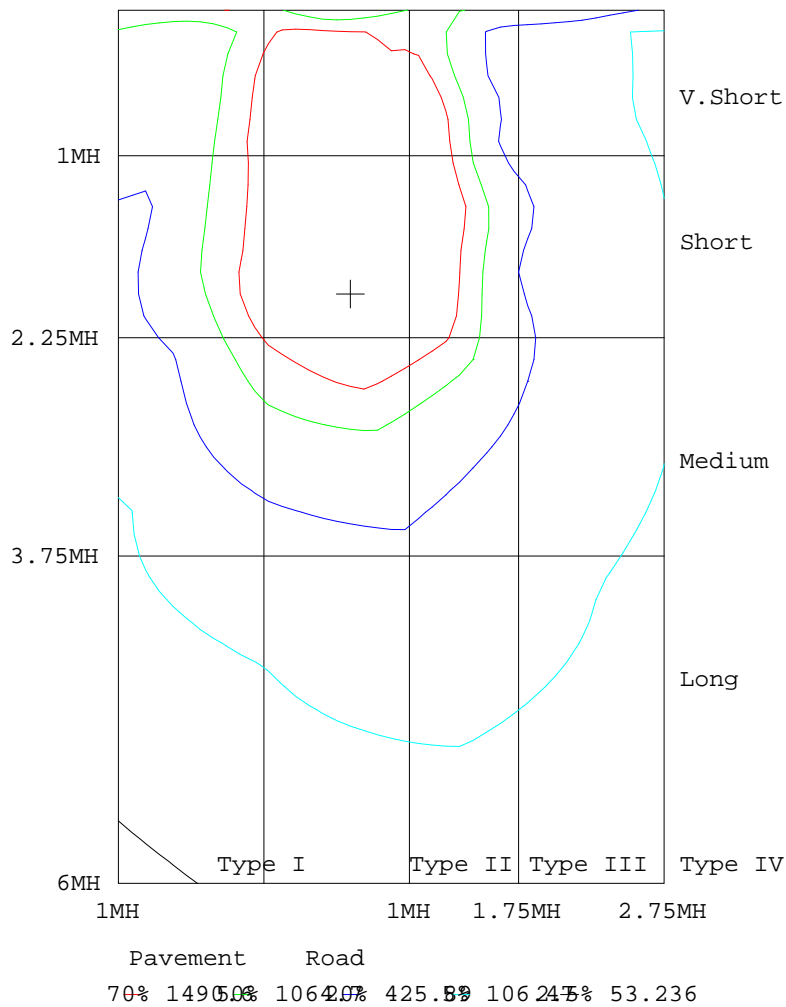


# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ROAD ISOCANDELA REPORT

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 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: 0.0DEG  
 Operators:CS01  
 Test Date:2021-07-17

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-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 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	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293	1293
5	1327	1365	1389	1400	1416	1415	1417	1408	1395	1378	1351	1327	1293	1256	1218	1183	1157	1140	1138
10	1404	1471	1499	1506	1499	1485	1476	1472	1465	1456	1437	1395	1329	1253	1165	1095	1048	1014	1009
15	1487	1575	1610	1602	1559	1517	1494	1496	1518	1534	1527	1476	1376	1258	1129	1018	946	902	901
20	1558	1665	1693	1670	1596	1515	1470	1489	1550	1604	1606	1550	1420	1257	1089	930	816	772	770
25	1600	1734	1760	1714	1617	1501	1442	1482	1580	1656	1677	1606	1442	1245	1013	801	711	693	702
30	1633	1787	1814	1755	1641	1503	1413	1486	1611	1696	1730	1645	1446	1197	889	715	698	717	735
35	1645	1820	1857	1799	1670	1513	1395	1506	1640	1740	1772	1678	1444	1119	762	676	759	811	842
40	1694	1915	1922	1852	1697	1456	1346	1492	1673	1800	1844	1761	1473	1044	654	691	845	929	972
45	1663	1903	1952	1870	1713	1459	1387	1478	1684	1836	1874	1765	1442	944	528	709	916	1033	1073
50	1658	1883	1929	1901	1804	1341	1153	1473	1772	1838	1875	1776	1423	839	474	710	924	1054	1097
55	1680	1902	1957	1983	1564	751	582	969	1759	1917	1890	1786	1411	719	440	675	863	1010	1048
60	1740	2019	2030	1809	734	223	206	311	1259	1945	1977	1848	1423	566	398	605	774	892	921
65	1636	2109	2034	1130	203	161	142	175	293	1616	2128	2029	1268	290	336	527	633	682	691
70	1011	1431	1212	193	141	96.6	89.4	108	161	538	1542	1405	694	151	240	400	375	365	363
75	251	414	230	115	82.7	55.9	51.1	65.4	99.8	126	422	445	142	86.4	116	190	164	106	88.3
80	64.3	81.6	71.4	52.5	35.6	24.2	21.3	27.9	41.4	57.5	80.0	77.5	55.5	43.6	39.9	45.5	55.5	41.3	38.0
85	43.6	24.8	20.1	9.58	5.28	3.13	2.67	3.92	6.91	12.5	22.6	23.1	29.0	16.0	12.5	11.0	12.9	10.3	9.32
90	0.51	0.51	0.51	0.56	0.45	0.41	0.41	0.41	0.55	0.46	0.56	0.51	0.51	2.19	2.23	0.40	1.00	1.97	0.61
95	0.47	0.48	0.47	0.56	0.47	0.44	0.45	0.41	0.49	0.47	0.46	0.61	0.72	0.87	0.76	0.51	0.51	0.99	0.44
100	1.07	0.52	0.50	0.55	0.49	0.47	0.48	0.45	0.52	0.48	0.48	0.77	1.68	1.99	1.67	0.86	0.51	0.60	0.42
105	1.47	0.55	0.52	0.55	0.50	0.50	0.51	0.55	0.55	0.50	0.49	1.11	2.13	2.35	2.33	1.62	0.81	0.57	0.51
110	2.19	1.22	0.55	0.67	0.81	1.06	1.06	0.96	0.61	0.46	0.56	1.42	2.54	2.90	2.96	2.47	1.32	0.71	0.71
115	2.54	1.47	0.71	0.86	1.12	1.17	1.12	1.17	1.07	0.67	1.03	2.02	3.10	3.72	3.39	2.88	2.03	1.17	1.02
120	2.85	1.93	1.01	1.12	1.27	1.62	1.57	1.47	1.12	1.07	1.11	2.18	3.51	4.02	3.71	3.23	2.54	3.49	1.62
125	3.01	1.95	1.26	1.23	1.67	1.78	1.88	2.27	1.17	1.11	1.42	2.53	3.59	4.33	4.10	3.59	3.30	2.78	2.74
130	3.08	1.97	1.36	1.29	2.51	1.98	1.92	3.19	1.46	1.15	1.93	2.71	3.65	4.47	4.38	3.81	4.01	3.34	3.45
135	3.19	1.99	1.61	1.41	2.84	2.01	1.95	2.89	1.78	1.28	1.96	2.75	3.70	4.46	4.49	3.88	4.20	3.85	3.65
140	3.28	2.80	2.05	1.76	2.69	2.12	1.98	2.55	1.90	1.58	2.06	2.78	3.75	4.45	4.50	4.29	4.31	4.25	4.06
145	3.36	2.92	2.11	1.95	2.47	2.12	2.00	2.48	2.04	1.96	2.33	2.79	3.73	4.44	4.43	4.34	4.27	4.35	4.16
150	3.45	2.95	2.32	1.97	2.48	2.12	2.03	2.48	2.04	2.19	2.77	2.97	3.71	4.43	4.30	4.34	4.28	4.37	4.21
155	3.52	2.99	2.58	2.12	2.52	2.12	2.05	2.56	2.04	2.44	2.84	3.08	4.00	4.17	4.23	4.32	4.30	4.39	4.27
160	3.58	3.05	2.73	2.37	2.56	2.12	2.07	2.64	2.29	2.80	2.91	3.18	4.14	3.92	4.21	4.28	4.33	4.40	4.33
165	3.65	3.10	2.93	2.83	2.79	2.48	2.63	2.72	2.75	2.84	2.99	3.29	4.36	4.17	4.24	4.24	4.38	4.42	4.36
170	3.76	3.56	3.54	3.48	3.55	3.44	3.49	3.40	3.51	3.50	3.45	3.70	4.47	4.52	4.34	4.49	4.44	4.44	4.36
175	4.11	3.87	3.64	3.99	3.90	3.79	3.85	3.75	3.82	3.72	3.52	3.77	4.51	4.63	4.30	4.40	4.50	4.35	4.36
180	4.37	3.97	3.79	4.24	4.36	4.10	4.21	3.96	4.38	4.02	3.60	3.75	4.52	4.43	3.94	3.78	4.31	4.29	4.16

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 0.0DEG  
Operators:CS01  
Test Date:2021-07-17

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-20HLED40-16(5050 40K RA70 T3A)L

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.24V I:0.2165A P:39.331W PF:0.7893 Freq:50.01Hz Lamp Flux:5043.87x1 lm		
NAME: D-20HLED40-16	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLED	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEC) γ (DEC)	285	300	315	330	345													
0	1293	1293	1293	1293	1293													
5	1152	1177	1212	1245	1289													
10	1034	1081	1147	1224	1318													
15	918	985	1094	1208	1355													
20	786	871	1020	1196	1381													
25	708	751	903	1143	1385													
30	717	708	776	1064	1361													
35	797	736	682	943	1326													
40	900	791	618	825	1304													
45	985	841	600	706	1247													
50	1002	839	583	549	1184													
55	965	767	551	413	1111													
60	864	687	492	316	1033													
65	683	589	420	222	697													
70	379	400	308	161	228													
75	146	194	134	90.7	93.2													
80	45.3	55.7	39.8	41.1	47.7													
85	11.3	11.8	11.6	14.9	25.8													
90	0.30	0.36	0.41	0.56	0.61													
95	0.34	0.40	0.61	1.01	0.96													
100	0.44	0.61	1.22	1.88	1.88													
105	0.61	0.97	1.94	2.43	2.53													
110	0.91	1.63	2.44	2.99	2.99													
115	1.32	2.04	2.70	3.34	3.40													
120	1.88	2.39	3.01	3.85	3.81													
125	2.74	3.06	3.67	4.00	3.82													
130	3.25	3.52	3.93	4.00	3.84													
135	3.96	4.23	4.03	4.00	3.80													
140	4.47	4.48	4.07	4.00	3.75													
145	4.48	4.49	4.24	4.00	3.75													
150	4.49	4.50	4.27	4.00	3.75													
155	4.50	4.51	4.30	4.00	3.75													
160	4.51	4.51	4.33	4.00	3.75													
165	4.56	4.52	4.48	4.21	3.75													
170	4.49	4.53	4.41	4.30	3.75													
175	4.41	4.45	4.39	4.41	3.75													
180	4.11	3.92	4.22	3.95	3.65													

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 0.0DEG  
Operators:CS01  
Test Date:2021-07-17

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-20HLED40-16(5050 40K RA70 T3A)L