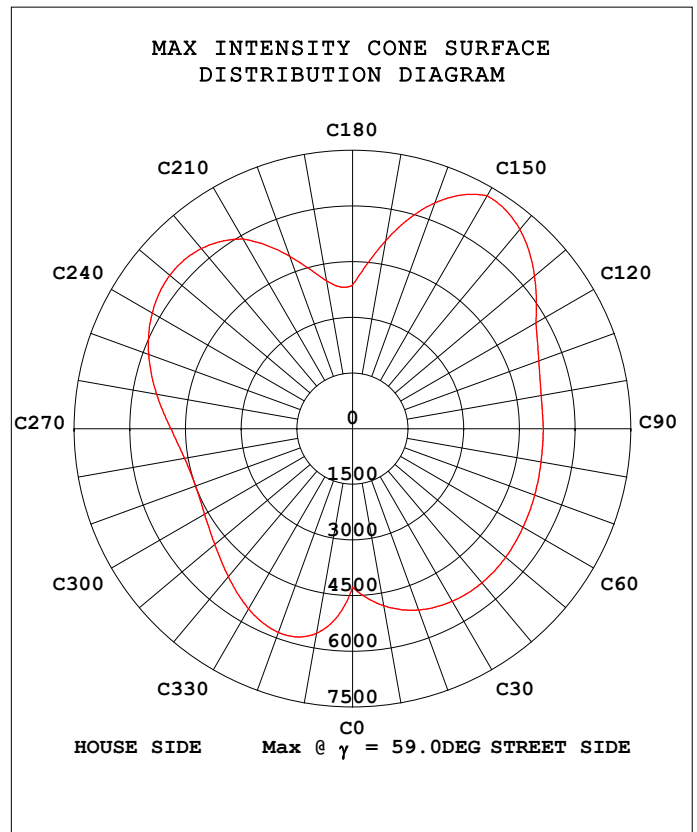
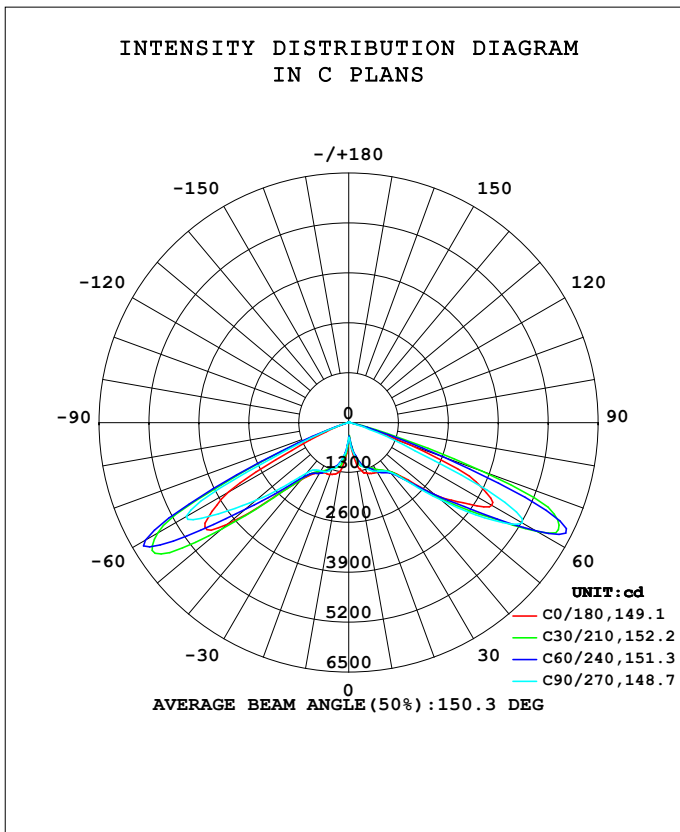


**STREETLIGHT PHOTOMETRIC TEST REPORT**

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	223101	Imax (cd)	7249	$\eta$ street_up (%)	0.3
NOMINAL POWER (W)	100	LOR (%)	100.0	$\eta$ street_down (%)	51.3
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	12214	$\eta$ house_up (%)	0.4
NOMINAL FLUX (lm)	12213.8	MAXIMUM @ (C, $\gamma$ )	150,59.0	$\eta$ house_down (%)	48.0
LAMPS INSIDE	1	$\eta$ up (%)	0.7	76 FLASHAREA (m2)	0.05000
TEST VOLTAGE (V)	230	$\eta$ down (%)	99.3	SLI	17.684

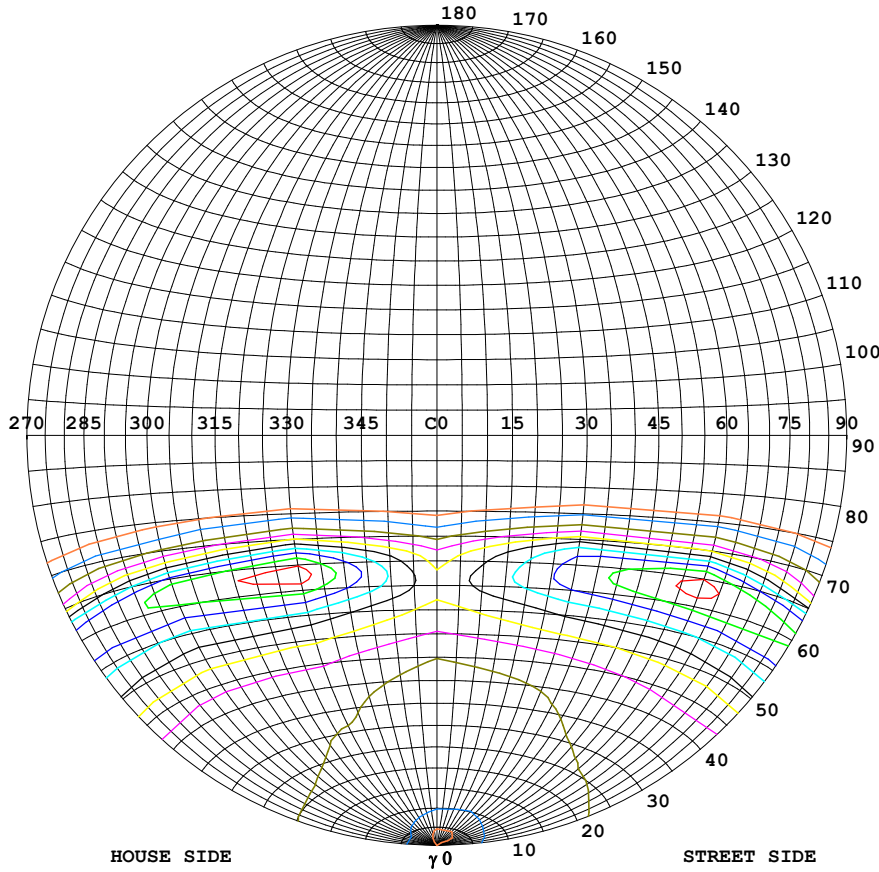


C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: ADMIN  
 Test Date: 2023-07-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity: 65.0%  
 Test Distance: 9.345m [K=1.0000]  
 Remarks:

**STREETLIGHT ISOCANDELA DIAGRAM**

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:



**Classification:**

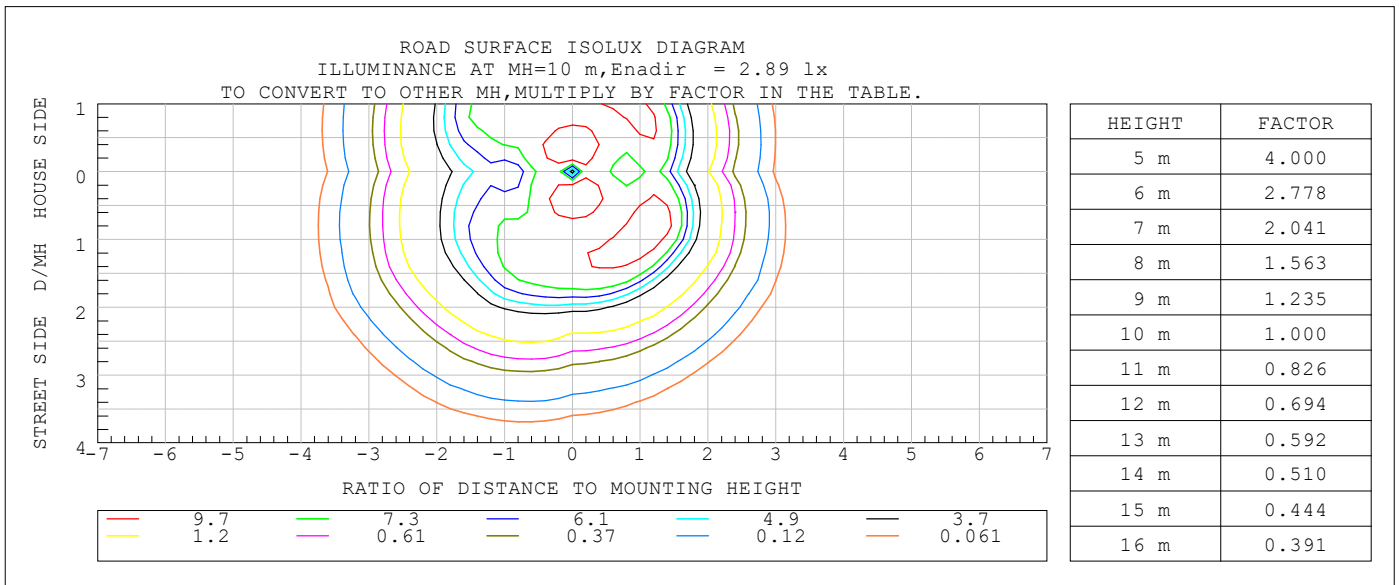
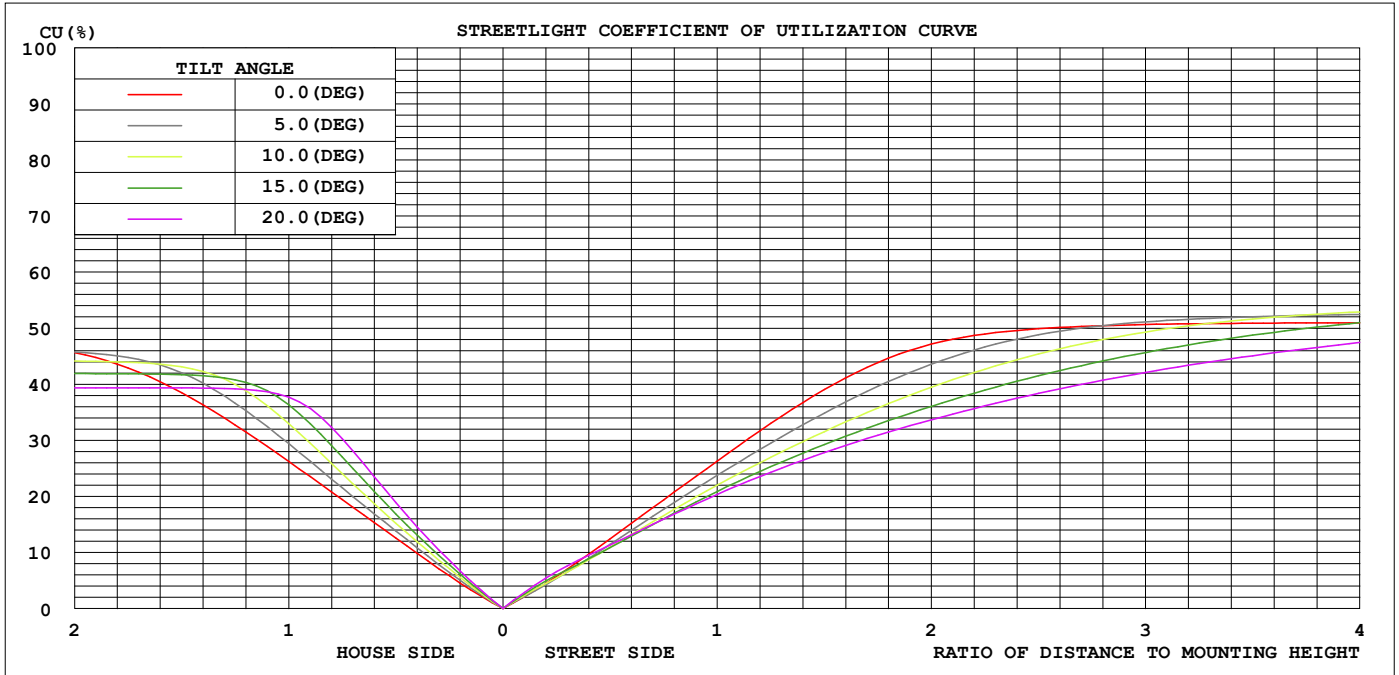
IES:Type VS - Short  
 CIE:Narrow - Short  
 IES:Cut-off  
 CIE:Full cut-off  
 Max.At80:7.421cd/klm  
 Max.At90:1.088cd/klm  
 Max.80-90:7.421cd/klm

ISOCANDELA DIAGRAM	
UNIT	cd
I <sub>max</sub> =100%	7249
— 90%	6524
— 80%	5799
— 70%	5074
— 60%	4349
— 50%	3624
— 40%	2900
— 30%	2175
— 20%	1450
— 10%	725
— 5%	362

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ADMIN  
 Test Date:2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity:65.0%  
 Test Distance:9.345m [K=1.0000]  
 Remarks:

**COEFFICIENT OF UTILIZATION CURVE  
AND ISOLUX DIAGRAM**



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: ADMIN  
 Test Date: 2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity: 65.0%  
 Test Distance: 9.345m [K=1.0000]  
 Remarks:

**ZONAL FLUX DIAGRAM**

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:

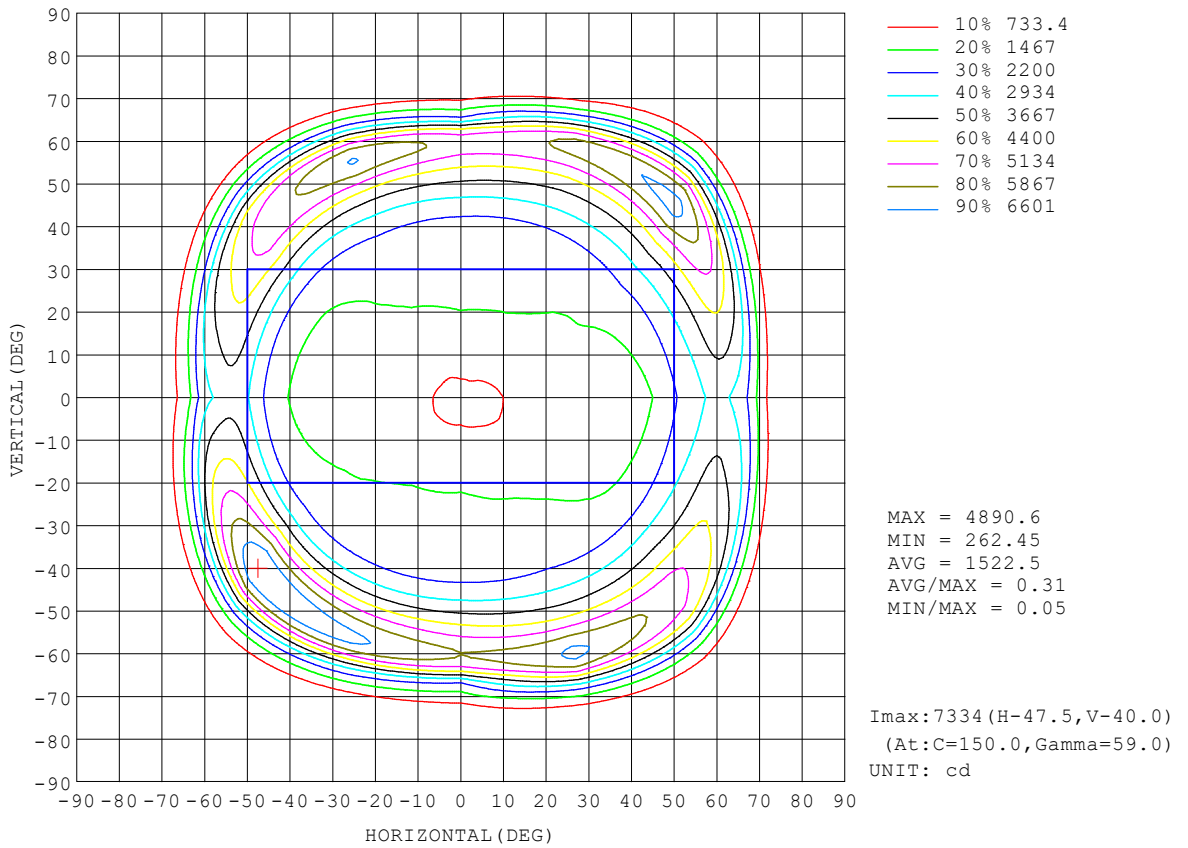
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1020	806.4	840.7	850.9	1285	1021	965.1	893.6	0- 10	68.95	68.95	0.56,0.56
20	1408	1223	1236	1168	1444	1272	1292	1187	10- 20	322.2	391.1	3.2,3.2
30	1493	1441	1469	1400	1518	1497	1458	1387	20- 30	627.5	1019	8.34,8.34
40	1661	1698	1691	1712	1976	1894	1724	1638	30- 40	981.1	2000	16.4,16.4
50	2913	2957	3133	3576	4119	3872	3150	2851	40- 50	1849	3848	31.5,31.5
60	4306	5664	5218	6371	3612	5946	4880	5413	50- 60	4066	7914	64.8,64.8
70	1702	3132	1045	991.2	391.6	670.7	557.4	2054	60- 70	3760	11674	95.6,95.6
80	35.55	73.15	20.77	9.628	13.63	10.09	9.726	24.88	70- 80	439.6	12114	99.2,99.2
90	11.49	8.561	6.044	6.529	13.29	9.568	6.274	7.092	80- 90	11.36	12125	99.3,99.3
100	7.762	8.396	6.519	8.055	10.67	11.42	8.628	9.213	90-100	8.966	12134	99.3,99.3
110	9.700	10.77	10.74	10.92	15.14	14.23	13.18	12.73	100-110	11.11	12145	99.4,99.4
120	15.78	13.44	14.09	13.84	21.21	17.60	16.40	15.20	110-120	13.67	12159	99.5,99.5
130	21.35	15.65	15.91	15.27	24.25	19.08	16.69	16.79	120-130	14.92	12174	99.7,99.7
140	23.84	16.42	15.13	16.83	25.23	20.90	16.39	17.10	130-140	13.57	12187	99.8,99.8
150	27.44	20.89	17.65	19.47	24.90	21.19	17.59	19.77	140-150	12.34	12200	99.9,99.9
160	24.58	18.21	14.02	15.50	20.32	16.26	12.97	15.29	150-160	8.766	12208	100,100
170	19.76	14.90	11.02	13.49	16.27	12.81	10.74	12.57	160-170	4.250	12213	100,100
180	17.30	13.51	10.43	10.60	17.32	13.52	10.43	10.60	170-180	1.241	12214	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ADMIN  
 Test Date:2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity:65.0%  
 Test Distance:9.345m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

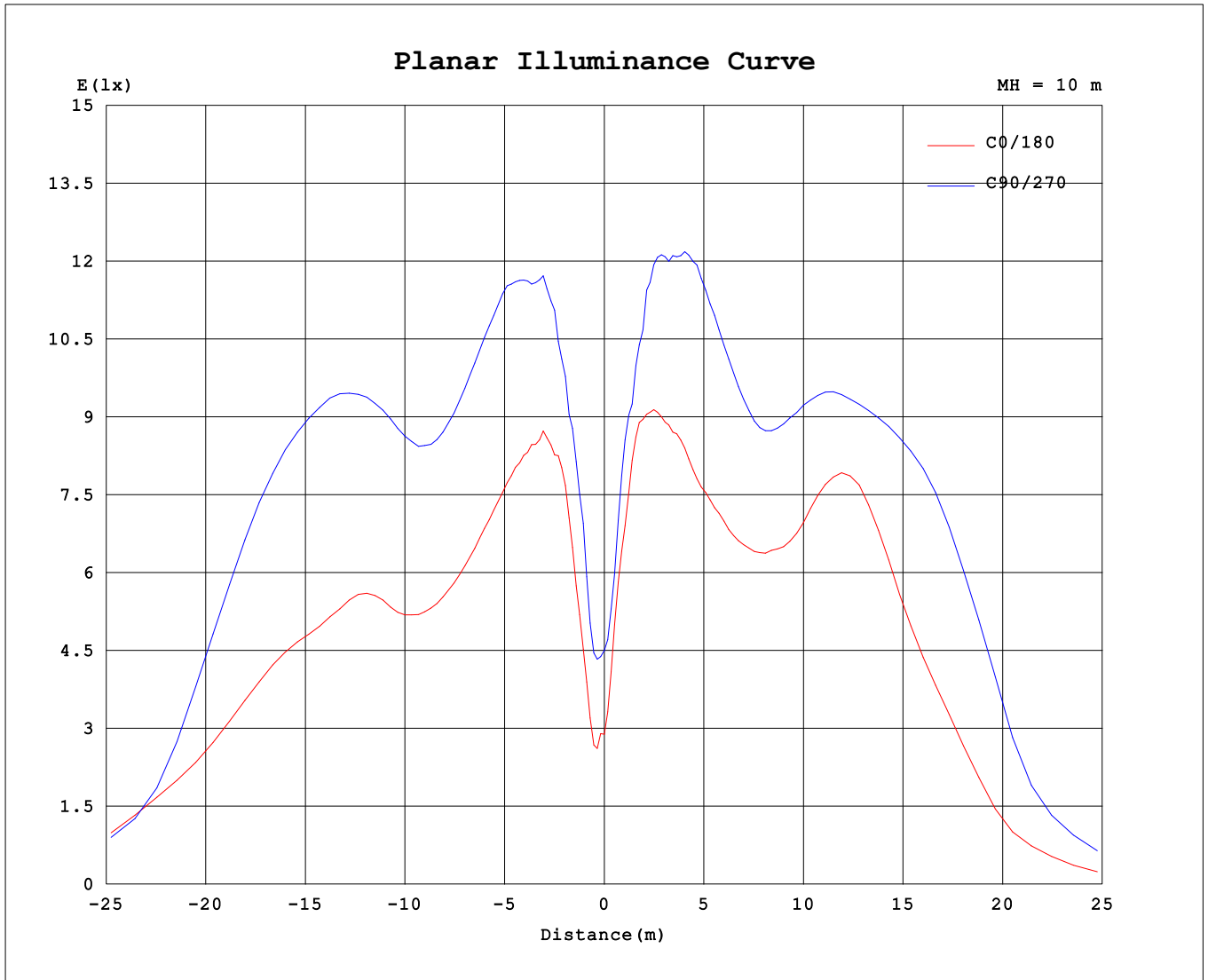
Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: ADMIN  
 Test Date: 2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity: 65.0%  
 Test Distance: 9.345m [K=1.0000]  
 Remarks:

**Planar Illuminance Curve**



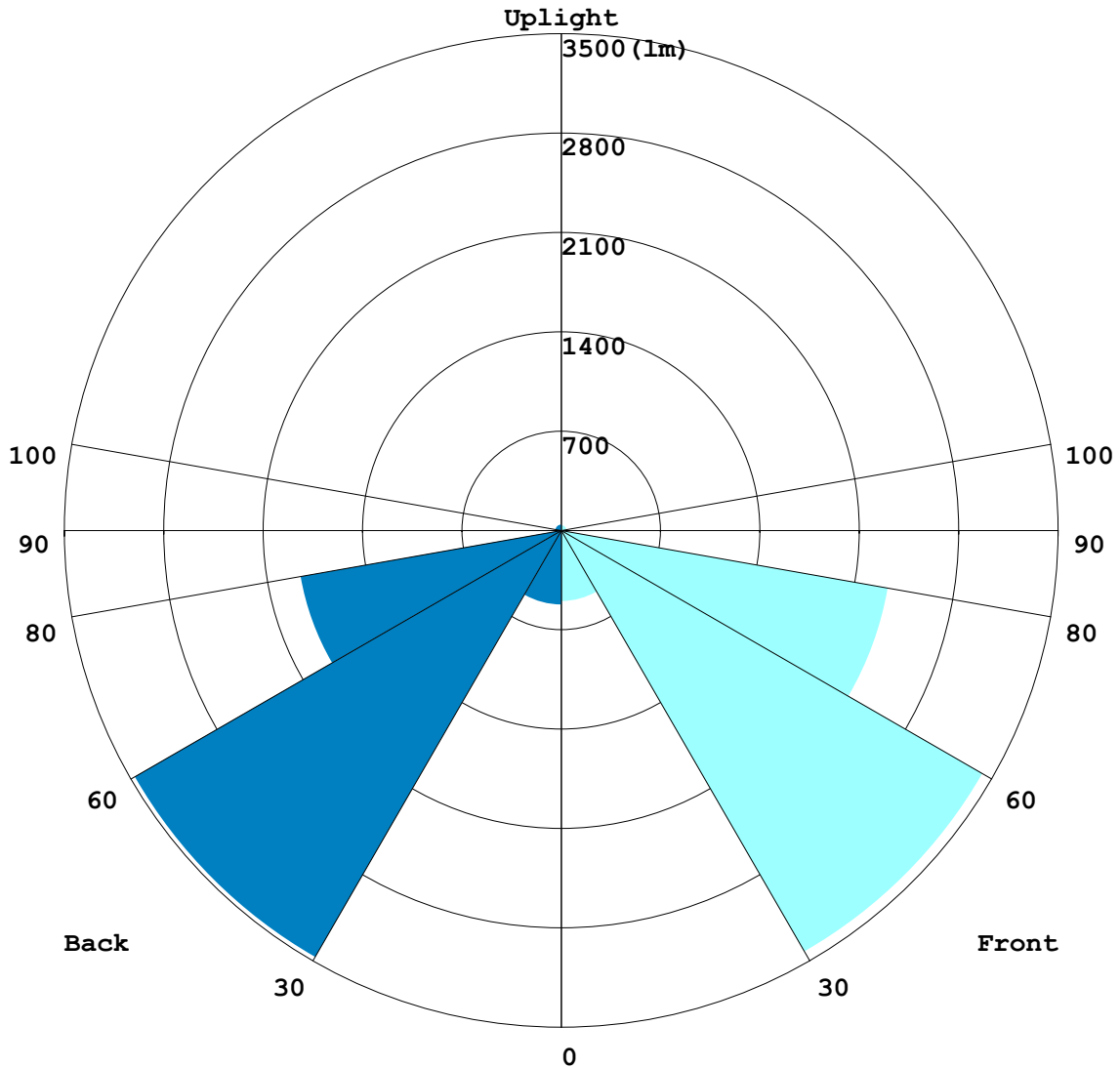
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: ADMIN  
 Test Date: 2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity: 65.0%  
 Test Distance: 9.345m [K=1.0000]  
 Remarks:

**LCS REPORT**

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz		
Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:

**LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH**



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ADMIN  
 Test Date:2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity:65.0%  
 Test Distance:9.345m [K=1.0000]  
 Remarks:

**BUG REPORT**

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:

**IESNA Luminaire Flux Distribution Table:**

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	497.08	4.1
FM - Front-Medium(30-60)	3426	28.1
FH - Front-High(60-80)	2334.8	19.1
FVH - Front-Very High(80-90)	6.2071	0.1
<b>Total Forward Light</b>	<b>6305.8</b>	<b>51.6</b>

BL - Back-Low(0-30)	521.51	4.3
BM - Back-Medium(30-60)	3469.7	28.4
BH - Back-High(60-80)	1864.4	15.3
BVH - Back-Very High(80-90)	5.1572	0.0
<b>Total Back Light</b>	<b>5908</b>	<b>48.4</b>

UL - Uplight-Low(90-100)	8.9659	0.1
UH - Uplight-High(100-180)	79.876	0.7
<b>Total Up Light</b>	<b>88.842</b>	<b>0.7</b>

<b>BUG(Back,Up,Glare) Rating</b>	<b>B3-U3-G2</b>
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	5860.8	47.174	5908
Street Side	6264.1	41.668	6305.8

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ADMIN  
 Test Date:2023-07-11

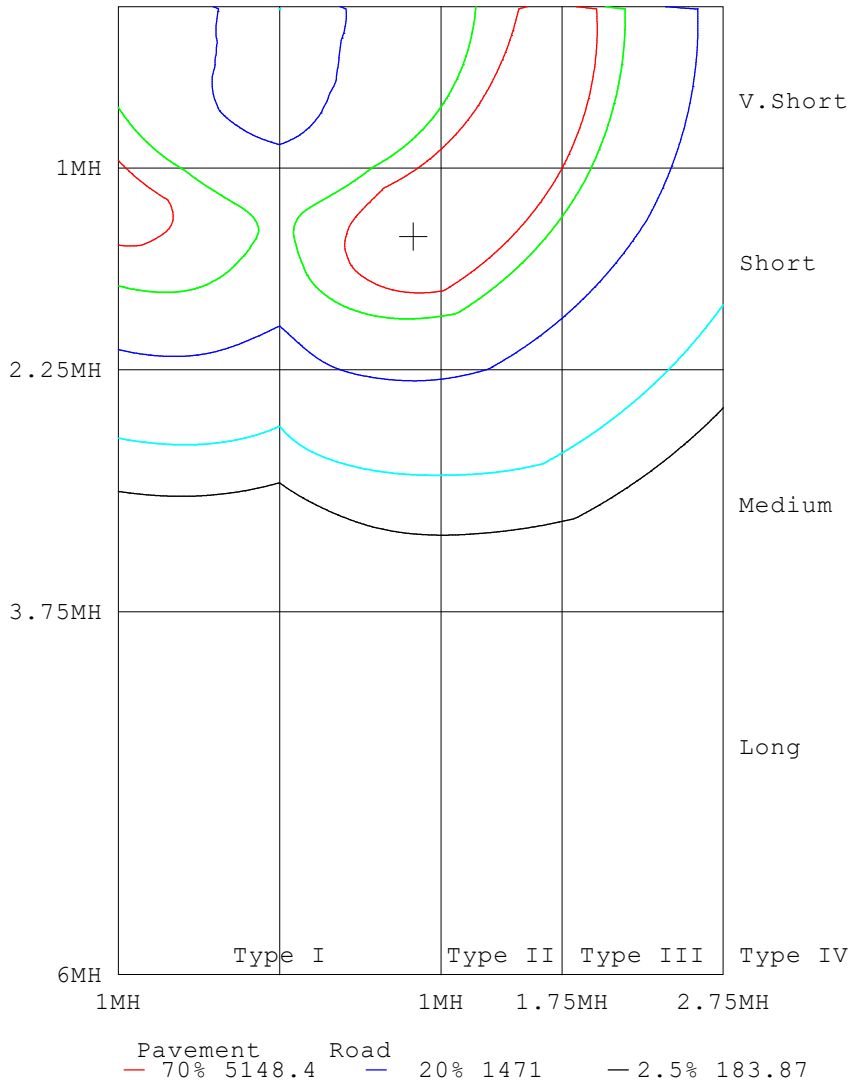
γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity:65.0%  
 Test Distance:9.345m [K=1.0000]  
 Remarks:



**ROAD ISOCANDELA REPORT**

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ADMIN  
 Test Date:2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity:65.0%  
 Test Distance:9.345m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.35V I:0.4352A P:98.064W PF:0.9783 Freq:49.99Hz Lamp Flux:12213.8x1 lm		
NAME: MINARELLI-223101	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: BBT-LIGHTING	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	400	400	400	400	400	400	400	400	400	400	400	400							
5	545	445	483	531	491	621	896	796	665	707	668	613							
10	1020	807	806	841	815	893	1285	1103	952	965	883	905							
15	1297	1155	1041	1106	1044	1075	1393	1216	1149	1189	1096	1073							
20	1408	1231	1216	1236	1165	1172	1444	1265	1278	1292	1192	1181							
25	1459	1291	1318	1377	1296	1284	1448	1366	1398	1421	1323	1282							
30	1493	1408	1469	1469	1406	1393	1518	1462	1527	1458	1383	1391							
35	1539	1516	1596	1542	1478	1551	1644	1596	1616	1508	1425	1520							
40	1661	1665	1725	1691	1634	1802	1976	1929	1866	1724	1564	1724							
45	2028	2126	2140	2167	2093	2424	2722	2764	2506	2315	2029	2209							
50	2913	3019	2906	3133	3206	4004	4119	4315	3504	3150	2734	2987							
55	3637	4160	3986	4317	4763	6333	4569	5971	5150	4145	3588	4113							
60	4306	5683	5647	5218	5760	7079	3612	5738	6118	4880	4877	6035							
65	3666	6012	6071	3233	3382	4030	1351	2992	3218	2242	4473	6364							
70	1702	3715	2650	1045	994	988	392	623	710	557	1332	2891							
75	378	734	510	230	157	165	43.5	93.3	98.1	100	215	511							
80	35.6	90.6	58.7	20.8	9.76	9.48	13.63	13.7	7.07	9.73	12.4	39.3							
85	12.30	12.7	6.41	8.08	6.45	8.55	13.72	13.2	6.42	7.41	6.81	8.66							
90	11.49	12.1	5.65	6.04	5.37	7.87	13.29	12.9	6.81	6.27	6.03	8.33							
95	10.15	11.3	5.74	5.49	5.60	8.03	11.32	12.3	8.32	6.63	6.67	8.83							
100	7.76	10.05	7.03	6.52	7.13	9.13	10.67	12.5	10.6	8.63	8.55	9.98							
105	7.40	9.57	9.24	8.67	9.01	10.3	12.51	13.4	12.5	11.2	10.9	11.5							
110	9.70	10.51	11.0	10.7	10.5	11.4	15.1	14.6	14.0	13.2	12.7	12.7							
115	12.70	11.7	12.3	12.4	12.0	12.7	18.3	16.3	15.6	14.9	14.1	13.7							
120	15.8	13.2	13.6	14.1	13.6	14.2	21.2	18.1	17.2	16.4	15.6	14.8							
125	18.8	14.8	14.8	15.5	14.7	15.2	23.4	19.4	18.0	17.4	16.8	15.8							
130	21.3	15.8	15.5	15.9	14.7	15.9	24.3	20.4	18.0	16.7	17.2	16.4							
135	22.8	16.2	15.8	14.8	14.4	16.7	24.5	21.4	18.0	15.8	17.2	16.5							
140	23.8	16.6	16.3	15.1	15.4	18.5	25.2	22.9	19.3	16.4	17.2	16.9							
145	25.5	19.2	18.4	16.8	17.5	20.7	25.8	23.8	20.7	17.7	18.5	19.2							
150	27.4	22.0	20.0	17.7	18.2	21.0	24.9	22.6	20.0	17.6	19.0	20.7							
155	27.2	22.1	19.3	16.6	16.8	19.1	22.8	20.0	17.5	15.5	17.0	19.2							
160	24.6	20.0	16.8	14.0	14.6	16.5	20.3	17.6	15.2	13.0	14.2	16.6							
165	21.6	17.7	14.6	12.0	13.2	15.1	19.3	16.5	13.9	11.5	12.5	14.7							
170	19.8	16.5	13.6	11.0	12.6	14.6	16.3	13.8	12.0	10.7	11.2	14.1							
175	19.4	16.1	13.4	11.0	12.2	13.6	15.8	13.1	11.0	10.1	9.71	11.6							
180	17.3	14.7	12.6	10.4	10.2	11.1	17.3	14.7	12.6	10.4	10.2	11.1							

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:ADMIN  
 Test Date:2023-07-11

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.471  
 Humidity:65.0%  
 Test Distance:9.345m [K=1.0000]  
 Remarks: