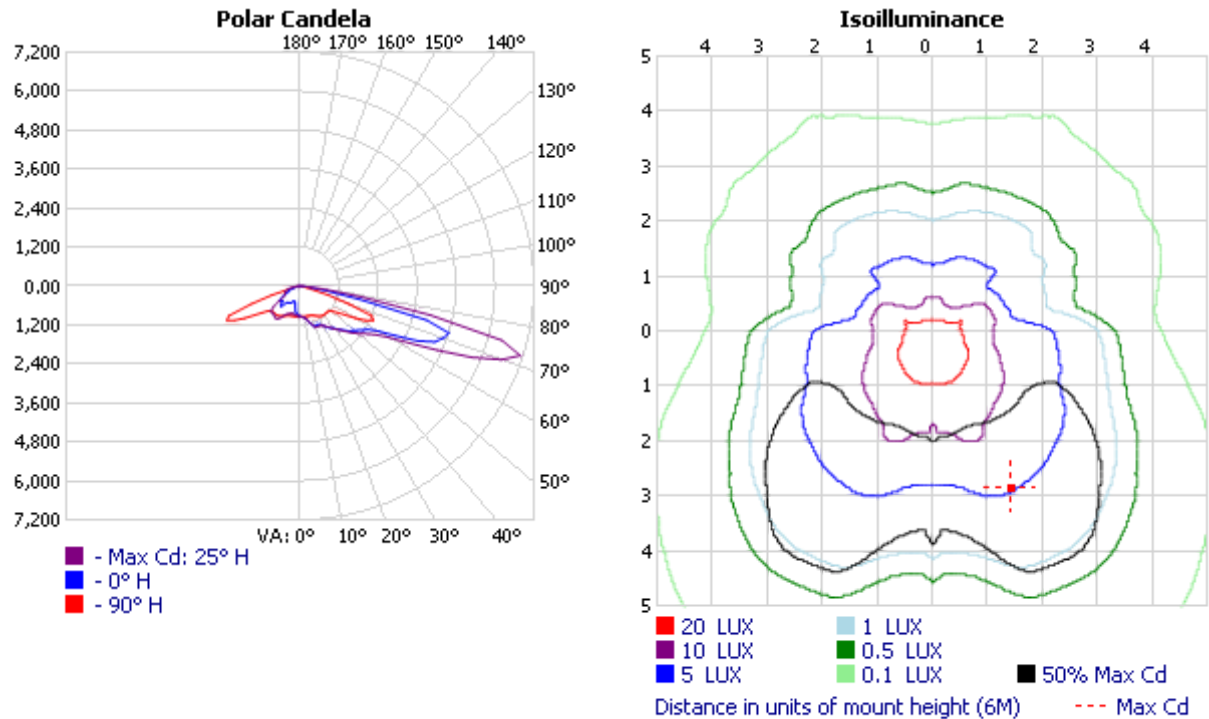


OUTDOOR PHOTOMETRIC REPORT

CATALOG: FTS.3.LA094.FW



Manufacturer: HOLOPHANE EUROPE LIMITED
 Test #: LTL23286P42 - SUM19030
 Test Lab: ACUITY BRANDS LIGHTING - CONYERS LAB - SCALED PHOTOMETRY
 Test Date: 13 Nov 2019
 Catalog: FTS.3.LA094.FW
 Description: FACTOR STREETLIGHT
 Lamp Catalog: LA094
 Lamp: LED C.9000LM-4000K
 Lamp Output: Total luminaire Lumens: 8383.4, absolute photometry *
 Input Wattage: 66
 Luminous Opening: Rectangle (L: 0.28M, W: 0.25M)
 Max Cd: 7,100.4 at Horizontal: 25°, Vertical: 72.5°
 Roadway Class: SHORT, TYPE IV



*Test based on absolute photometry where lamp lumens=lumens total.

*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

LTL23286P42 - SUM19030
 VISUAL PHOTOMETRIC TOOL

PAGE 1 OF 4

OUTDOOR PHOTOMETRIC REPORT
 CATALOG: FTS.3.LA094.FW

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	811.7	9.7%
0-40	1,512.7	18%
0-60	3,930.1	46.9%
60-90	4,453.4	53.1%
70-100	2,183.8	26%
90-120	0.000	0%
0-90	8,383.4	100%
90-180	0.000	0%
0-180	8,383.4	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	88.9	1.1%	90-100	0.000	0%
10-20	264.8	3.2%	100-110	0.000	0%
20-30	458.0	5.5%	110-120	0.000	0%
30-40	701.0	8.4%	120-130	0.000	0%
40-50	1,007.0	12.0%	130-140	0.000	0%
50-60	1,410.4	16.8%	140-150	0.000	0%
60-70	2,269.6	27.1%	150-160	0.000	0%
70-80	1,926.2	23.0%	160-170	0.000	0%
80-90	257.5	3.1%	170-180	0.000	0%

Roadway Summary

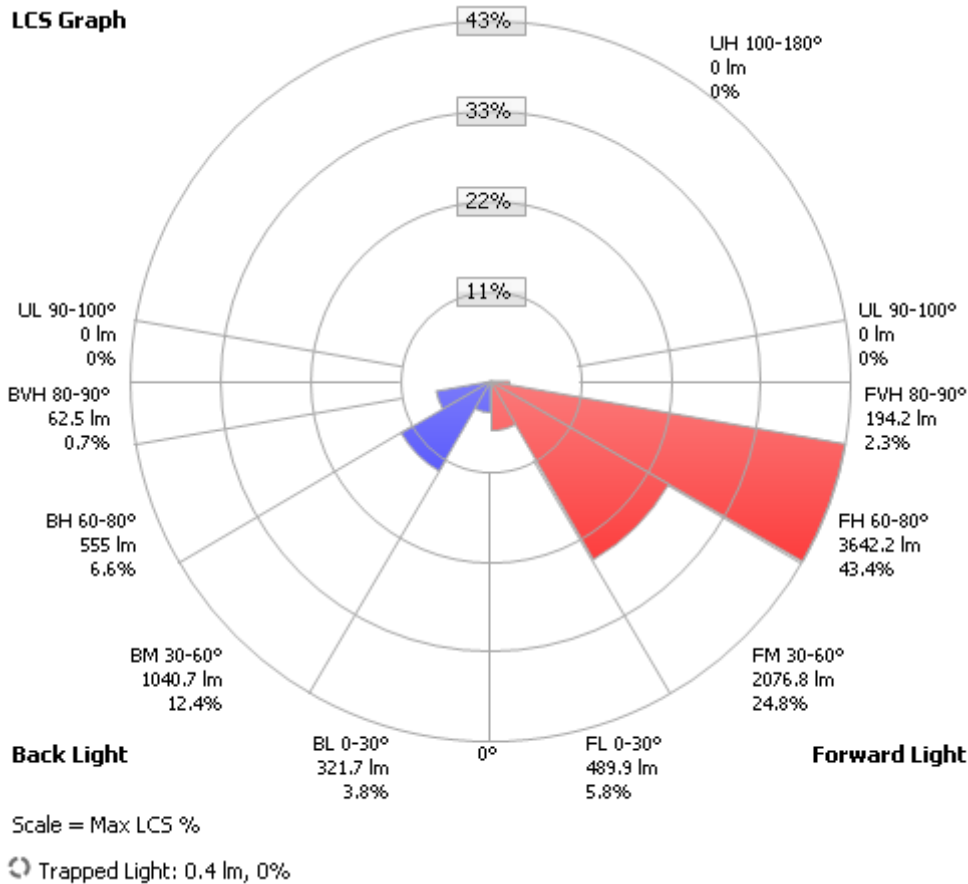
Distribution:	TYPE IV, SHORT	
Max Cd, 90 Deg Vert:	0.000	
Max Cd, 80 to <90 Deg:	2,093.0	
	Lumens	% Lamp
Downward Street Side:	6,403.1	76.4%
Downward House Side:	1,979.9	23.6%
Downward Total:	8,383.0	100%
Upward Street Side:	0.000	0%
Upward House Side:	0.000	0%
Upward Total:	0.000	0%
Total Lumens:	8,383.0	100%

LCS Table
BUG Rating
B2 - U0 - G2

Forward Light	Lumens	Lumens %
Low(0-30):	489.9	5.8%
Medium(30-60):	2,076.8	24.8%
High(60-80):	3,642.2	43.4%
Very High(80-90):	194.2	2.3%
Back Light		
Low(0-30):	321.7	3.8%
Medium(30-60):	1,040.7	12.4%
High(60-80):	555.0	6.6%
Very High(80-90):	62.5	0.7%
Uplight		
Low(90-100):	0.000	0%
High(100-180):	0.000	0%
Trapped Light:	0.4	0%

OUTDOOR PHOTOMETRIC REPORT

CATALOG: FTS.3.LA094.FW



OUTDOOR PHOTOMETRIC REPORT
 CATALOG: FTS.3.LA094.FW

Candela Table - Type C

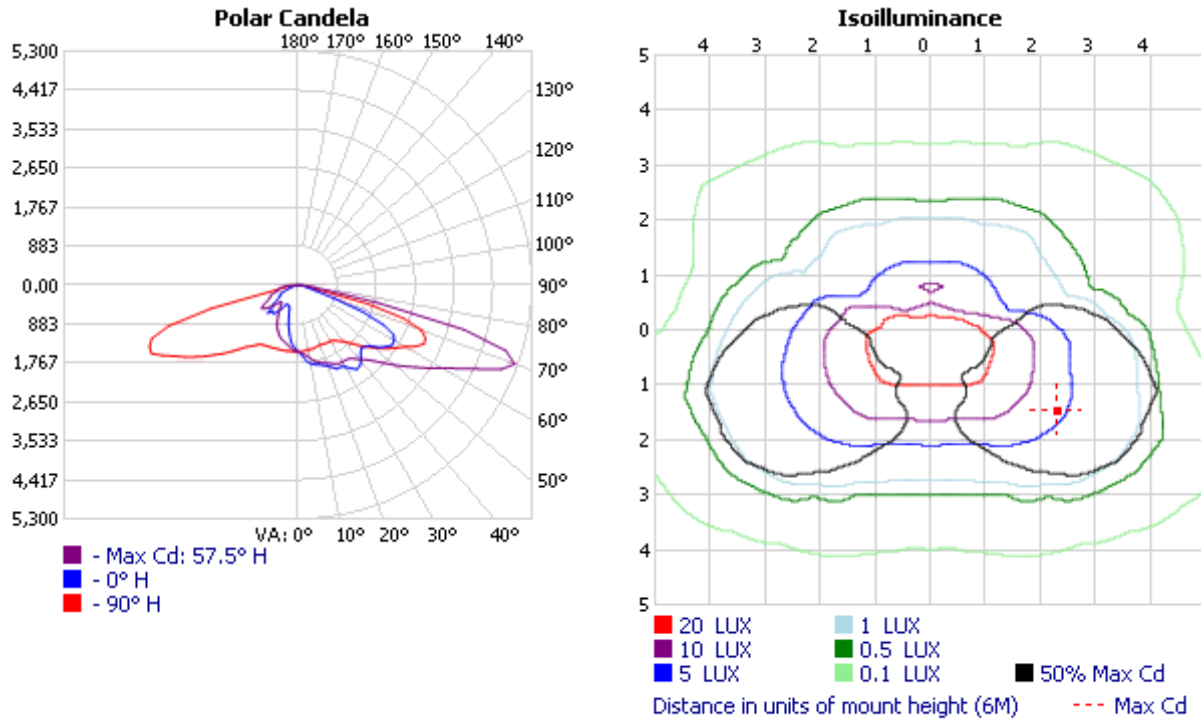
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937
5	953	967	965	960	957	953	949	945	945	943	934	926	918	912	902	895	889	885	865
10	1022	1040	1032	1018	1004	987	969	957	949	942	925	904	882	865	852	843	834	824	802
15	1162	1194	1174	1133	1087	1042	1003	977	962	945	917	891	867	844	780	703	652	622	578
20	1313	1328	1340	1324	1256	1154	1066	1017	988	962	931	911	876	748	635	564	528	513	505
25	1300	1323	1342	1370	1394	1325	1166	1075	1030	1001	978	985	882	727	580	523	512	511	519
30	1393	1424	1411	1398	1422	1430	1298	1147	1089	1062	1063	1102	1006	714	561	528	549	578	600
35	1558	1589	1564	1508	1472	1473	1394	1202	1133	1122	1163	1256	1067	690	560	558	584	607	619
40	1710	1740	1735	1702	1616	1544	1440	1264	1154	1147	1237	1319	1034	678	578	584	621	646	676
45	1925	1958	1977	1932	1836	1675	1531	1346	1174	1147	1256	1258	1051	675	620	718	868	881	851
50	2128	2177	2245	2226	2095	1874	1671	1463	1238	1193	1230	1175	1066	731	847	1060	927	793	700
55	2355	2445	2545	2518	2359	2166	1943	1715	1509	1426	1064	896	760	803	1236	1046	963	857	782
60	2768	3012	3176	3064	2857	2715	2618	2318	2194	1977	784	563	556	867	1032	1091	944	743	596
65	3980	4293	4719	4417	4087	4056	3824	3196	2914	2492	539	486	581	623	940	847	679	503	381
70	4685	5052	6350	6477	6037	5671	4574	2988	2182	1589	392	449	602	562	640	549	475	444	342
75	4034	3788	6084	6264	5685	4234	2465	1134	604	366	306	369	405	418	392	375	330	266	219
80	832	826	1775	2034	1868	1195	761	511	288	160	207	274	261	274	273	266	207	142	112
85	146	153	422	347	398	342	268	226	134	68	112	153	141	151	150	118	95	52	41
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

OUTDOOR PHOTOMETRIC REPORT

CATALOG: FTS.3.LA094.AY



Manufacturer: HOLOPHANE EUROPE LIMITED
 Test #: ISF 34282P5
 Test Lab: ACUITY BRANDS LIGHTING - CONYERS LAB - SCALED PHOTOMETRY
 Test Date: 14 Nov 2019
 Catalog: FTS.3.LA094.AY
 Description: FACTOR STREETLIGHT
 Lamp Catalog: LA094
 Lamp: LED C.9000LM-4000K
 Lamp Output: Total luminaire Lumens: 8885.2, **absolute photometry ***
 Input Wattage: 66
 Luminous Opening: Rectangle w/Luminous Sides (L: 0.14M, W: 0.24M, H: 0.01M)
 Nema Type: 7 X 7
Max Cd: 5,222.4 at Horizontal: 57.5°, Vertical: 70°
 Roadway Class: MEDIUM, TYPE III



*Test based on absolute photometry where lamp lumens=lumens total.

*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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ISF 34282P5
VISUAL PHOTOMETRIC TOOL

PAGE 1 OF 5

OUTDOOR PHOTOMETRIC REPORT
 CATALOG: FTS.3.LA094.AY

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1,203.1	13.5%
0-40	2,121.5	23.9%
0-60	5,243.9	59%
60-90	3,641.3	41%
70-100	1,425.7	16%
90-120	0.000	0%
0-90	8,885.2	100%
90-180	0.000	0%
0-180	8,885.2	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	144.7	1.6%	90-100	0.000	0%
10-20	411.0	4.6%	100-110	0.000	0%
20-30	647.3	7.3%	110-120	0.000	0%
30-40	918.4	10.3%	120-130	0.000	0%
40-50	1,317.2	14.8%	130-140	0.000	0%
50-60	1,805.3	20.3%	140-150	0.000	0%
60-70	2,215.7	24.9%	150-160	0.000	0%
70-80	1,244.0	14.0%	160-170	0.000	0%
80-90	181.7	2.0%	170-180	0.000	0%

Roadway Summary

Distribution:	TYPE III, MEDIUM	
Max Cd, 90 Deg Vert:	0.000	
Max Cd, 80 to <90 Deg:	839.8	
	Lumens	% Lamp
Downward Street Side:	6,516.7	73.3%
Downward House Side:	2,367.9	26.6%
Downward Total:	8,884.6	100%
Upward Street Side:	0.000	0%
Upward House Side:	0.000	0%
Upward Total:	0.000	0%
Total Lumens:	8,884.6	100%

LCS Table

BUG Rating	B2 - U0 - G2	
Forward Light	Lumens	Lumens %
Low(0-30):	784.5	8.8%
Medium(30-60):	2,901.5	32.7%
High(60-80):	2,726.4	30.7%
Very High(80-90):	104.2	1.2%
Back Light		
Low(0-30):	418.6	4.7%
Medium(30-60):	1,138.7	12.8%
High(60-80):	733.2	8.3%
Very High(80-90):	77.5	0.9%
Uplight		
Low(90-100):	0.000	0%
High(100-180):	0.000	0%
Trapped Light:	0.6	0%

Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	94.8%	8,419.7	152.9	130.7
Beam (50%):	40.2%	3,568.3	47.7	77.6
Total:	100%	8,881.3		

Illuminance at a Distance

Height(M)	Center Beam Footcandle	Beam Spread(M)		Field Spread(M)	
		Horizontal	Vertical	Horizontal	Vertical
1.00	1,503.00 LUX	0.9	1.6	8.3	4.4
2.00	375.75 LUX	1.8	3.2	16.6	8.7
3.00	167.00 LUX	2.6	4.8	24.9	13.1
4.00	93.94 LUX	3.5	6.4	33.2	17.4
5.00	60.12 LUX	4.4	8.0	41.5	21.8
6.00	41.75 LUX	5.3	9.6	49.8	26.1
		Beam Angle		Field Angle	
		47.7°	77.6°	152.9°	130.7°

Average Luminance (Cd/m2)

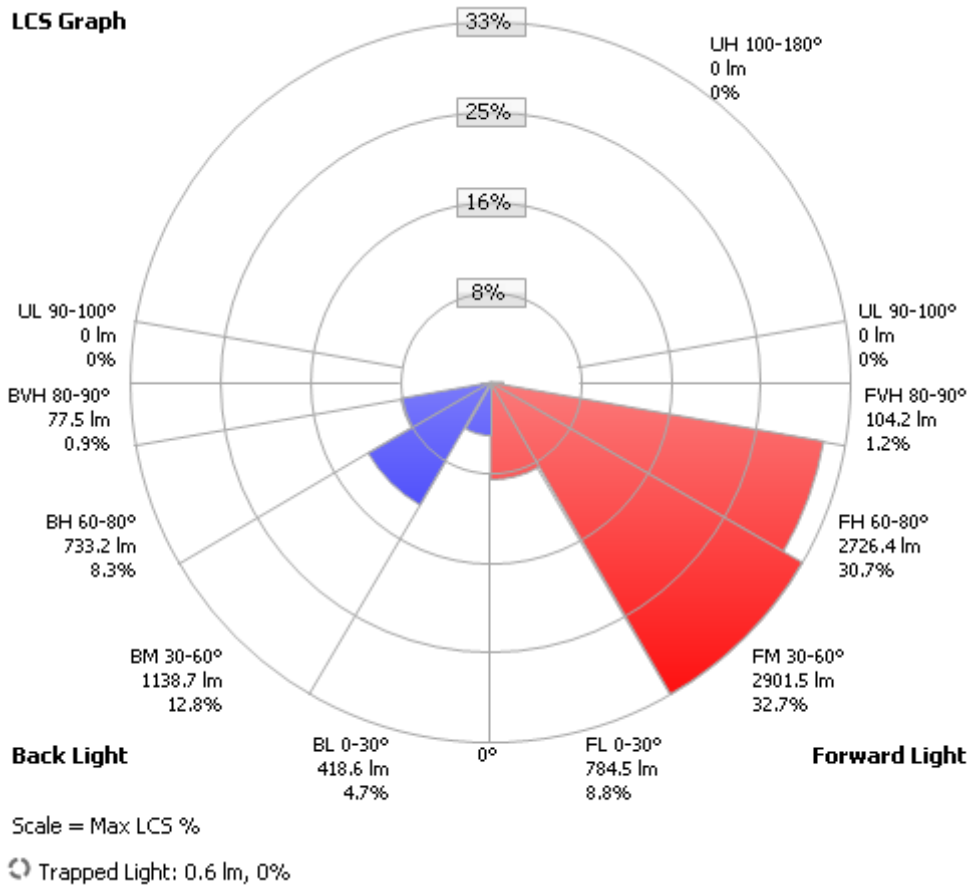
	0	35	65	95	135	175	205	237.5	270	305	345
0	44939	44939	44939	44939	44939	44939	44939	44939	44939	44939	44939
45	80322	104310	95727	75010	31327	31748	34588	21184	86239	96990	82464
55	115830	138611	150299	112240	43254	28146	38163	43971	140231	156347	117039
65	132292	240891	269913	161146	51075	25727	29406	44630	240330	275529	139547
75	24647	80419	362614	79332	34989	13629	17882	43922	206608	341908	31449
85	18232	27802	68730	29714	42071	4239	10438	57782	40799	41113	18647

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50				30				10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	0	50	30	20	0	50	30	20	0	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.11	1.06	1.06	1.06	1.06	1.02	1.02	1.02	1.02	1.00
1	1.06	1.00	.94	.90	1.03	.97	.93	.79	.93	.89	.85	.85	.89	.86	.83	.83	.85	.83	.80	.80	.78
2	.93	.83	.75	.67	.90	.81	.73	.61	.77	.71	.65	.65	.74	.68	.63	.63	.71	.66	.62	.62	.59
3	.83	.70	.60	.52	.80	.68	.59	.48	.65	.57	.50	.50	.62	.55	.49	.49	.59	.54	.49	.49	.46
4	.74	.60	.49	.41	.72	.59	.49	.39	.56	.47	.40	.40	.53	.46	.40	.40	.51	.44	.39	.39	.36
5	.67	.52	.41	.34	.65	.51	.41	.32	.49	.40	.33	.33	.46	.39	.32	.32	.44	.38	.32	.32	.30
6	.61	.46	.36	.28	.59	.45	.35	.27	.43	.34	.28	.28	.41	.33	.27	.27	.39	.32	.27	.27	.25
7	.56	.41	.31	.24	.55	.40	.31	.23	.38	.30	.23	.23	.37	.29	.23	.23	.35	.28	.23	.23	.21
8	.52	.37	.27	.21	.50	.36	.27	.20	.35	.26	.20	.20	.33	.26	.20	.20	.32	.25	.20	.20	.18
9	.49	.34	.24	.18	.47	.33	.24	.18	.32	.24	.18	.18	.30	.23	.18	.18	.29	.23	.18	.18	.16
10	.45	.31	.22	.16	.44	.30	.22	.16	.29	.21	.16	.16	.28	.21	.16	.16	.27	.20	.16	.16	.14

LCS Graph



OUTDOOR PHOTOMETRIC REPORT

CATALOG: FTS.3.LA094.AY



Candela Table - Type C

	0	15	25	35	45	55	65	75	85	90	105	115	125	135	145	155	165	175	180	195	205	215	220
0	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503	1503
5	1671	1672	1645	1643	1614	1593	1568	1526	1512	1498	1474	1459	1448	1431	1417	1394	1379	1371	1372	1379	1394	1417	1431
10	1811	1799	1786	1793	1762	1712	1656	1587	1516	1478	1430	1373	1331	1292	1245	1167	1143	1136	1127	1143	1167	1245	1292
15	1866	1871	1867	1857	1834	1817	1763	1642	1517	1463	1380	1299	1209	1085	966	886	843	828	826	843	886	966	1085
20	1949	1950	1926	1934	1907	1886	1842	1729	1523	1445	1351	1224	1016	847	720	630	582	577	572	582	630	720	847
25	2095	2064	2035	2010	1994	1967	1946	1809	1539	1463	1355	1104	842	645	532	514	505	507	509	505	514	532	645
30	2137	2063	2045	2049	2031	2022	1981	1875	1568	1465	1327	949	633	506	487	473	481	496	498	481	473	487	506
35	2327	2279	2213	2153	2097	2043	1994	1954	1658	1541	1266	773	511	496	514	555	606	639	656	606	555	514	496
40	2226	2313	2419	2418	2296	2216	2153	2085	1828	1682	1226	617	514	602	699	761	801	828	837	801	761	699	602
45	2026	2095	2384	2655	2635	2452	2405	2363	2116	1926	1166	535	648	795	874	880	805	803	831	805	880	874	795
50	2147	2186	2361	2733	2989	2852	2750	2713	2454	2201	1043	697	853	898	918	911	888	778	767	888	911	918	898
55	2434	2483	2634	2948	3294	3295	3139	3137	2834	2501	985	925	896	917	904	812	689	594	587	689	812	904	917
60	2510	2589	3027	3520	3620	3780	3623	3527	3216	2796	954	913	824	828	825	633	514	474	471	514	633	825	828
65	2137	2286	2936	3961	4364	4470	4324	3994	3670	3151	921	722	689	836	634	484	461	418	403	461	484	634	836
70	861	1044	1894	3444	4514	5161	4840	3902	3531	2965	637	654	611	610	471	408	275	225	220	275	408	471	637
75	266	348	492	894	2634	3721	3867	2686	2039	1614	477	476	432	386	316	199	163	149	143	163	199	316	386
80	155	182	237	292	372	583	840	614	331	280	371	431	442	292	189	116	97	83	67	97	116	189	292
85	94	100	131	152	161	214	343	325	170	141	166	298	402	226	97	57	36	22	25	36	57	97	226
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0