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Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
Precision Architectural Lighting

Fred Compton
4830 Timber Creek Drive
Houston, TX 77017

Catalog Number
ML5IP65-D-HO-K40-4'-W-LOH-FXXX-EF-UNIV

Order Number
10822132
Test Number
1094335

Test Date

2015-06-04 - 2015-06-05

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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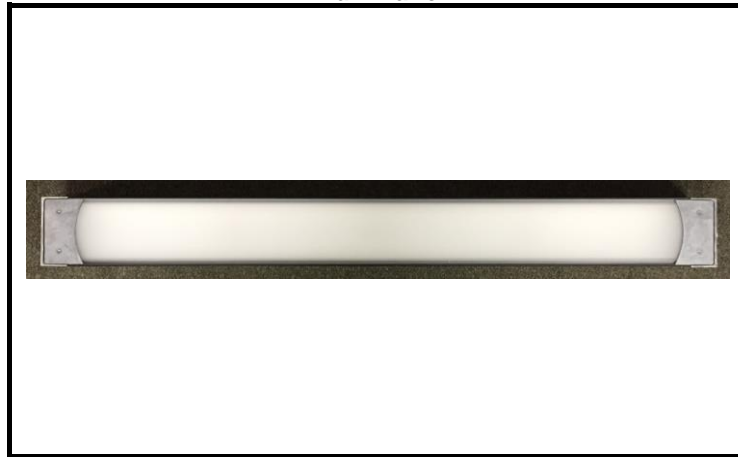
Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.
Absorption correction was employed for Sphere measurement



Luminaire Description: Aluminum housing, white enamel aluminum reflector, frosted plastic lens
Lamp: 144 white LEDs
Mounting: Recessed
Ballast/Driver: Osram OT50W/PRG1400C/UNV/DIM/L

Luminaire



Luminaire Characteristics

Luminous Length: 47.00 in.
Luminous Width: 5.000 in.

Summary of Results

Integrating Sphere

Luminous Flux: 3346 Lumens
Efficacy: 81.7 lm/w
CCT: 3994 K
CRI (Ra): 82.8

Distribution

Total Luminaire Output: 3226 Lumens
Luminaire Efficacy: 78.7 lm/w
Maximum Candela: 1354 Candela

Electrical Data at 120 VAC

Test Temperature: 25.5 °C
Voltage: 120.0 VAC
Current: 0.3427 A
Power: 40.97 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 7.51 %



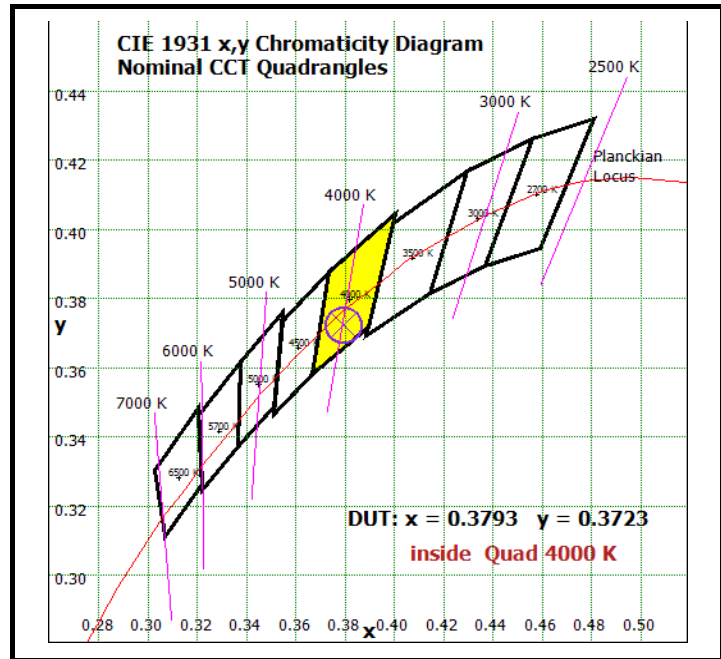
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.5 °C	120.0 VAC	0.3427 A	40.97 W	0.996	60 Hz	7.51 %

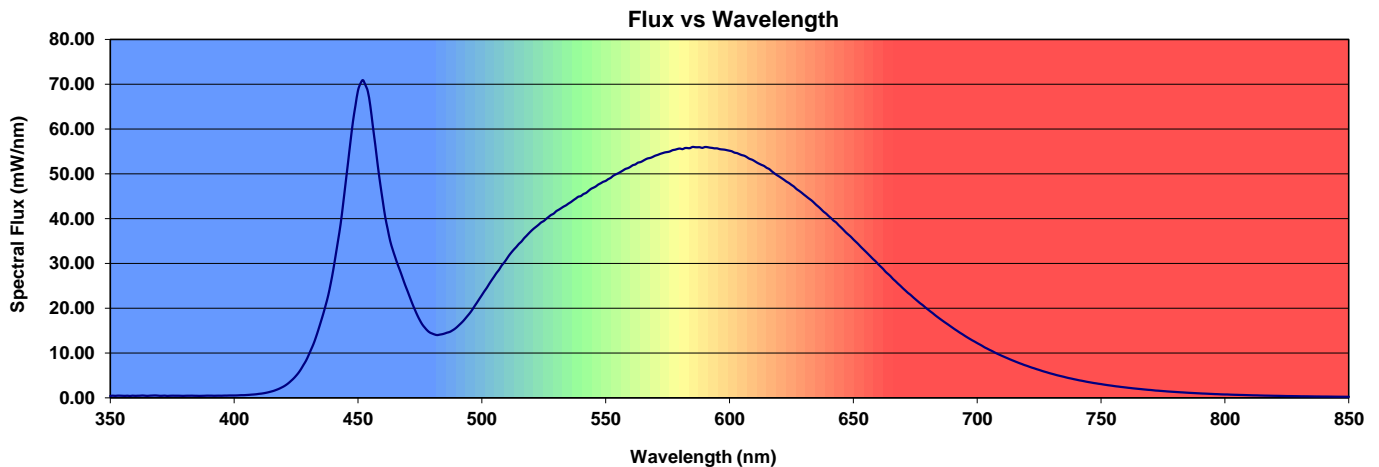
Summary of Results

Total Output:	3346 Lumens
Efficacy:	81.7 lm/w
CCT:	3994 K
CRI (Ra):	82.8
CRI (R9):	22.8
Chromaticity (x):	0.3793
Chromaticity (y):	0.3723
Chromaticity (u):	0.2262
Chromaticity (v):	0.3330
Chromaticity (u')	0.2262
Chromaticity (v')	0.4994
Duv:	-0.0018



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
82.8	81.6	87.9	91.1	81.4	80.7	81.5	87.9	70.3	22.8	69.8	78.5	56.5	82.9	94.8





Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.3427 A	40.98 W	0.996	60 Hz	7.51 %

Summary of Results

Spacing Criteria

0-180: 1.18
90-270: 1.18

Total Lumen Output:

3226 Lumens

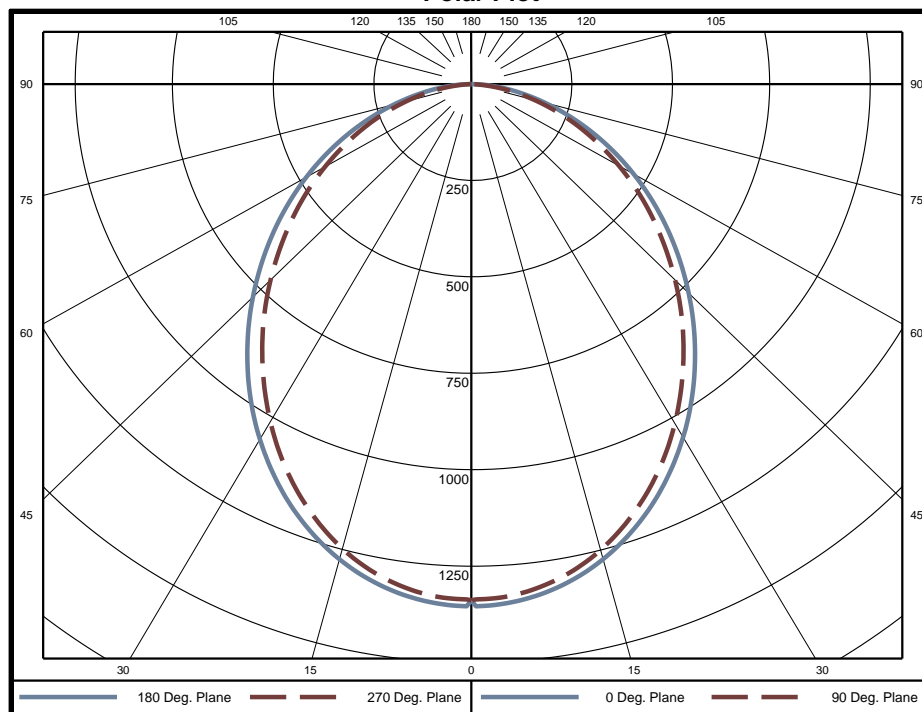
Luminaire Efficacy:

78.7 lm/w

Maximum Candela:

1354 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	31.9	1.0%	60-65	193.8	6.0%	120-125	0	0.0%
5-10	94.1	2.9%	65-70	156.0	4.8%	125-130	0	0.0%
10-15	151.7	4.7%	70-75	116.2	3.6%	130-135	0	0.0%
15-20	201.8	6.3%	75-80	76.5	2.4%	135-140	0	0.0%
20-25	242.3	7.5%	80-85	39.8	1.2%	140-145	0	0.0%
25-30	271.8	8.4%	85-90	9.1	0.3%	145-150	0	0.0%
30-35	289.6	9.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	296.3	9.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	292.2	9.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	278.3	8.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	256.5	8.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	227.9	7.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1580	49.0%
0-60	2363	81.7%
0-90	3226	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	
	0	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339	1339
	5	1345	1328	1323	1330	1328	1330	1323	1328	1345	1328	1323	1330	1328	1330	1323	1328
	10	1319	1302	1295	1301	1297	1301	1295	1302	1319	1302	1295	1301	1297	1301	1295	1302
	15	1276	1258	1250	1252	1248	1252	1250	1258	1276	1258	1250	1252	1248	1252	1250	1258
	20	1217	1199	1188	1187	1181	1187	1188	1199	1217	1199	1188	1187	1181	1187	1188	1199
	25	1145	1126	1113	1108	1102	1108	1113	1126	1145	1126	1113	1108	1102	1108	1113	1126
	30	1062	1043	1026	1018	1011	1018	1026	1043	1062	1043	1026	1018	1011	1018	1026	1043
	35	971	951	933	922	914	922	933	951	971	951	933	922	914	922	933	951
	40	874	856	837	823	815	823	837	856	874	856	837	823	815	823	837	856
	45	774	756	737	722	713	722	737	756	774	756	737	722	713	722	737	756
	50	674	656	637	622	613	622	637	656	674	656	637	622	613	622	637	656
	55	574	557	540	524	517	524	540	557	574	557	540	524	517	524	540	557
	60	475	461	445	429	422	429	445	461	475	461	445	429	422	429	445	461
	65	379	367	352	338	332	338	352	367	379	367	352	338	332	338	352	367
	70	285	277	265	252	246	252	265	277	285	277	265	252	246	252	265	277
	75	197	192	182	170	166	170	182	192	197	192	182	170	166	170	182	192
80	119	116	107	97	94	97	107	116	119	116	107	97	94	97	107	116	
85	54	50	41	33	31	33	41	50	54	50	41	33	31	33	41	50	
90	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	
100	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	
110	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	
120	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	
130	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	
140	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	
150	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	
160	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	
170	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	
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90	
	0	8829	8829	8829
	45	7222	6872	6652
	55	6600	6209	5942
	65	5907	5499	5175
	75	5029	4631	4226
	85	4097	3132	2329



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	3840	3840	3840	3840	3751	3751	3751	3751	3584	3584	3584	3432	3432	3432	3292	3292	3292	3226
1	3525	3378	3246	3128	3438	3305	3185	3077	3169	3070	2980	3043	2963	2888	2927	2863	2803	2736
2	3220	2964	2752	2575	3136	2903	2709	2544	2790	2626	2485	2685	2548	2428	2588	2475	2375	2306
3	2946	2618	2364	2161	2867	2567	2332	2142	2472	2270	2104	2384	2212	2068	2302	2157	2032	1963
4	2706	2331	2056	1847	2633	2288	2032	1834	2208	1985	1809	2134	1941	1784	2065	1898	1761	1692
5	2495	2092	1810	1602	2428	2056	1791	1594	1988	1755	1576	1925	1720	1559	1866	1687	1543	1476
6	2310	1891	1610	1408	2249	1860	1595	1402	1803	1566	1389	1749	1538	1377	1699	1512	1365	1300
7	2146	1720	1444	1251	2091	1694	1432	1246	1645	1409	1237	1599	1387	1228	1556	1365	1220	1157
8	2001	1574	1306	1122	1951	1552	1296	1118	1510	1277	1112	1470	1259	1105	1433	1241	1098	1038
9	1873	1449	1189	1014	1828	1430	1181	1012	1393	1166	1006	1359	1151	1001	1326	1136	996	938
10	1758	1340	1090	923	1717	1324	1083	921	1292	1070	917	1262	1058	913	1233	1045	909	854

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	83.7	4.62
6.00	37.2	6.93
8.00	20.9	9.24
10.0	13.4	11.6
12.0	9.30	13.9
14.0	6.83	16.2
16.0	5.23	18.5

Cone of Light Plot

