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Indoor Distribution Test Report

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

Prepared For
Scientific Lighting Products, Div Of Koller Enterprises

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United States

Catalog Number
CT4s FORTIMO (Clear DIRA Lens)

Order Number
11161897
Test Number
1216836

Test Date

2016-03-01

Prepared By

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Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White plastic housing, clear lens enclosure
Lamp: 176 white LEDs
Mounting: Pendant
Ballast/Driver: Two Philips Xitanium XI054C150V054DNT1

Luminaire



Luminaire Characteristics

Luminous Length: 26.00 in.
Luminous Width: 14.00 in.

Summary of Results

Total Luminaire Output: 12330 Lumens
Luminaire Efficacy: 116.3 lm/w
Maximum Candela: 4245 Candela

Electrical Data

Test Temperature: 25.1 °C
Voltage: 120.0 VAC
Current: 0.8921 A
Power: 106.0 W
Power Factor: 0.990
Frequency: 60 Hz
Current THD: 12.9 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.8921 A	106.0 W	0.990	60 Hz	12.9 %

Summary of Results

Spacing Criteria

0-180: 1.26
90-270: 1.26

Total Lumen Output:

12330 Lumens

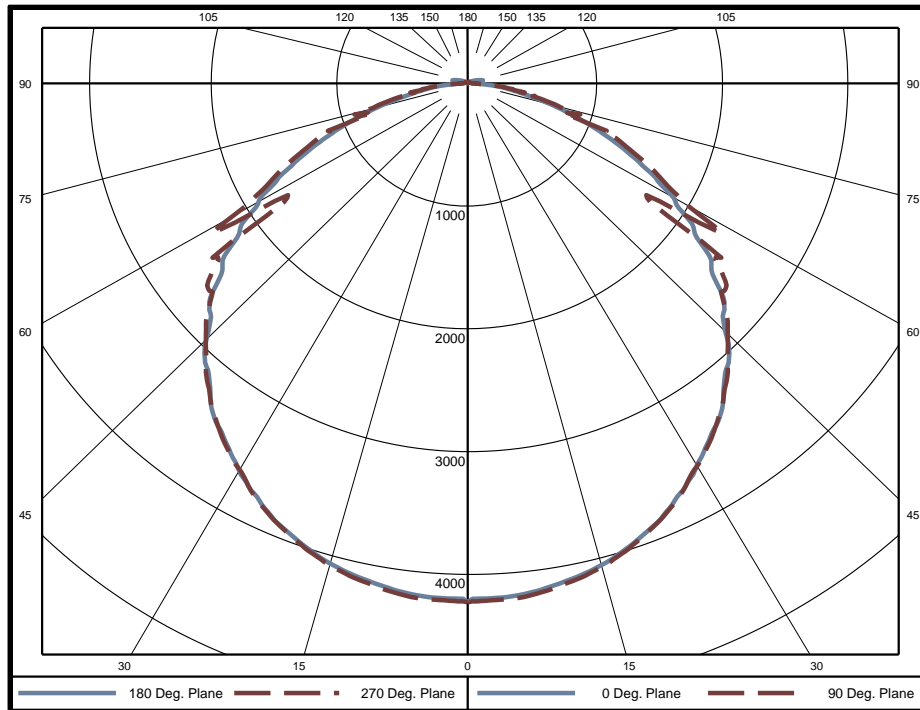
Luminaire Efficacy:

116.3 lm/w

Maximum Candela:

4245 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	101	0.8%	60-65	836	6.8%	120-125	10	0.1%
5-10	300	2.4%	65-70	667	5.4%	125-130	6	0.0%
10-15	490	4.0%	70-75	481	3.9%	130-135	4	0.0%
15-20	663	5.4%	75-80	310	2.5%	135-140	3	0.0%
20-25	816	6.6%	80-85	174	1.4%	140-145	2	0.0%
25-30	940	7.6%	85-90	64	0.5%	145-150	1	0.0%
30-35	1035	8.4%	90-95	24	0.2%	150-155	1	0.0%
35-40	1095	8.9%	95-100	17	0.1%	155-160	1	0.0%
40-45	1120	9.1%	100-105	19	0.2%	160-165	1	0.0%
45-50	1106	9.0%	105-110	22	0.2%	165-170	1	0.0%
50-55	1060	8.6%	110-115	16	0.1%	170-175	0	0.0%
55-60	933	7.6%	115-120	14	0.1%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	5440	44.1%
0-60	9659	78.3%
0-90	12191	98.9%
90-180	142	1.2%



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	4227	4227	4227	4227	4227	4227	4227	4227	4227	4227	4227	4227	4227	4227	4227
	5	4191	4235	4218	4218	4212	4218	4218	4235	4191	4235	4218	4218	4212	4218	4235
	10	4138	4188	4174	4167	4157	4167	4174	4188	4138	4188	4174	4167	4157	4167	4188
	15	4061	4107	4080	4080	4075	4080	4080	4107	4061	4107	4080	4080	4075	4080	4107
	20	3941	3986	3965	3959	3952	3959	3965	3986	3941	3986	3965	3959	3952	3959	3986
	25	3790	3832	3812	3810	3798	3810	3812	3832	3790	3832	3812	3810	3798	3810	3832
	30	3594	3639	3639	3603	3600	3603	3639	3639	3594	3639	3639	3603	3600	3603	3639
	35	3400	3418	3397	3408	3398	3408	3397	3418	3400	3418	3397	3408	3398	3408	3397
	40	3134	3190	3162	3149	3162	3149	3162	3190	3134	3190	3162	3149	3162	3149	3190
	45	2857	2883	2879	2882	2887	2882	2879	2883	2857	2883	2879	2882	2887	2882	2879
	50	2561	2586	2565	2584	2629	2584	2565	2586	2561	2586	2565	2584	2629	2584	2565
	55	2196	2239	2259	2321	2241	2321	2259	2239	2196	2239	2259	2321	2241	2321	2259
	60	1867	1867	1931	1940	2003	1940	1931	1867	1867	1931	1940	2003	1940	1931	1867
	65	1452	1486	1221	1535	1546	1535	1221	1486	1452	1486	1221	1535	1546	1535	1221
	70	1055	1110	1159	1163	1142	1163	1159	1110	1055	1110	1159	1163	1142	1163	1159
	75	697	715	777	824	756	824	777	715	697	715	777	824	756	824	777
	80	400	418	447	456	420	456	447	418	400	418	447	456	420	456	447
	85	200	184	225	237	219	237	225	184	200	184	225	237	219	237	225
	90	35	52	57	59	66	59	57	52	35	52	57	59	66	59	57
	95	39	32	36	33	31	33	36	32	39	32	36	33	31	33	36
	100	107	26	24	24	24	24	24	26	107	26	24	24	24	24	26
	105	104	75	20	19	20	19	20	75	104	75	20	19	20	19	75
	110	73	69	18	17	17	17	18	69	73	69	18	17	17	17	69
	115	52	42	14	15	17	15	14	42	52	42	14	15	17	15	42
	120	37	38	34	12	13	12	34	38	37	38	34	12	13	12	34
	125	28	22	14	9	10	9	14	22	28	22	14	9	10	9	14
	130	21	18	9	8	9	8	9	18	21	18	9	8	9	8	9
	135	15	13	7	6	7	6	7	13	15	13	7	6	7	6	7
	140	10	8	5	4	6	4	5	8	10	8	5	4	6	4	5
	145	8	5	4	4	4	4	5	8	5	4	4	4	4	4	5
	150	6	5	5	5	5	5	5	6	5	5	5	5	5	5	5
	155	4	5	5	5	5	5	5	4	5	5	5	5	5	5	5
	160	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	165	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	170	5	6	6	6	6	6	6	5	6	6	6	6	6	6	6
	175	5	6	6	6	6	6	6	5	6	6	6	6	6	6	6
	180	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

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

Vertical Angle (Degrees)	0	45	90
	0	18000	18000
	45	17200	17390
	55	16300	16770
	65	14630	15570
	75	11470	12430
	85	9771	11010



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	14648	14648	14648	14648	14291	14291	14291	14291	13624	13624	13624	13014	13014	13014	12454	12454	12454	12191
1	13380	12791	12262	11787	13029	12496	12016	11581	11945	11550	11188	11439	11118	10820	10972	10715	10474	10206
2	12165	11146	10303	9595	11826	10900	10126	9469	10439	9788	9226	10013	9471	8994	9619	9172	8773	8497
3	11084	9781	8772	7969	10765	9575	8640	7887	9186	8386	7728	8826	8146	7575	8492	7918	7427	7150
4	10142	8658	7572	6742	9846	8484	7471	6687	8156	7275	6578	7851	7089	6472	7567	6912	6370	6096
5	9321	7730	6617	5796	9050	7582	6538	5757	7303	6384	5680	7044	6237	5604	6801	6097	5531	5264
6	8603	6953	5846	5052	8356	6828	5783	5023	6590	5660	4966	6368	5542	4910	6160	5428	4856	4597
7	7972	6299	5215	4455	7749	6192	5163	4433	5988	5063	4390	5797	4967	4347	5618	4873	4305	4057
8	7418	5744	4691	3968	7216	5652	4649	3951	5476	4566	3917	5311	4486	3884	5155	4409	3852	3613
9	6928	5268	4252	3566	6744	5188	4217	3552	5036	4148	3525	4892	4081	3499	4757	4016	3473	3245
10	6493	4858	3880	3229	6327	4789	3850	3218	4656	3792	3196	4531	3736	3175	4412	3681	3154	2936

Cone of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	264	5.09
6.00	117	7.64
8.00	66.0	10.2
10.0	42.3	12.7
12.0	29.4	15.3
14.0	21.6	17.8
16.0	16.5	20.4

Cone of Light Plot

