

Photometric Report - (ecs-vct4-mn(30%up)-254-unv-12h-p0w) - Page 1 of 5

Fri Apr 27 18:11:22 2012

IESNA:LM-63-1995

Photopia 2.0.0.17 PHOTOMETRIC REPORT

PROJECT: ecs-vct4-mn(30%up)-254-unv-12h-p0w

OPTIONS:

Spawning 1 rays for each reaction.  
Random number generator seed: 8.  
Tracing 5 reflections.  
Stop tracing ray at 1.0% of initial magnitude.  
Tracing 500092 initial lamp rays.  
Photometric test distance of 20.00 feet.

LUMENS EXITING SYSTEM:

Lumens(%)	Reflection
708( 7.1%)	0
2776( 27.8%)	1
3517( 35.2%)	2
650( 6.5%)	3
625( 6.3%)	4
299( 3.0%)	5
8578( 85.8%)	Total

LUMEN INTERACTION WITH SYSTEM:

Absorbed(%)	Incident(%)	Layer Name
176( 1.8%)	2709( 27.1%)	LAMP-F54T5H01
7( 0.1%)	119( 1.2%)	LAMP-F54T5H02
490( 4.9%)	8644( 86.4%)	Refl-Poly1
56( 0.6%)	405( 4.1%)	Refl-Poly2
8( 0.1%)	8777( 87.8%)	Tran-Lens1
740( 7.4%)	20657(206.6%)	Total

Absorbed(%)	Incident(%)	Material Name
184( 1.8%)	2829( 28.3%)	PHOSGLAS
490( 4.9%)	8644( 86.4%)	ALMIRO04
56( 0.6%)	405( 4.1%)	PAINT001
8( 0.1%)	8777( 87.8%)	POLYCRB1
740( 7.4%)	20657(206.6%)	Total

UNACCOUNTED LUMENS:

reached interreflection limit: 681.21 ( 6.8%)  
fell below continuation minimum: 0.00 ( 0.0%)  
could not find in/out refractor facet: 0.00 ( 0.0%)  
reached try limit for scatter bounce: 0.00 ( 0.0%)  
lost elsewhere(i.e. outside distrib): 0.00 ( 0.0%)



Candela Distribution (continued):

	225.00	247.50	270.00	292.50	315.00	337.50	360.00
0.00	1922	1922	1922	1922	1922	1922	1922
5.00	2394	2162	2433	2119	2082	2167	1901
10.00	2366	2662	2805	2566	2432	2170	1954
15.00	2839	2794	2763	2891	2585	2272	2046
20.00	2662	2832	3037	2808	2742	2445	1766
25.00	2846	3062	3298	3060	2767	2474	1647
30.00	2895	3240	3252	3148	2849	2376	1619
35.00	3026	2723	2503	2759	2880	2348	1400
40.00	2708	2178	2015	2219	2696	2255	1338
45.00	2149	1535	1482	1581	2185	2209	1101
50.00	1559	1740	2363	1776	1578	1995	1028
55.00	1413	2755	3127	2708	1404	1687	810
60.00	1826	3489	3945	3378	1865	1289	629
65.00	2499	3559	3724	3600	2496	991	458
70.00	2589	3380	3491	3308	2635	935	315
75.00	2369	3028	3196	3006	2359	1015	195
80.00	2117	2942	3179	2953	2111	927	82.3
85.00	1673	2233	2384	2251	1682	691	30.7
90.00	1173	1803	1918	1776	1196	382	9.16
95.00	756	1239	1385	1235	729	149	9.17
100.00	398	868	1037	845	409	48.6	45.2
105.00	139	438	585	447	134	33.9	88.1
110.00	40.6	107	199	106	47.9	67.5	132
115.00	50.3	42.9	34.4	49.0	47.5	143	198
120.00	19.6	80.8	91.0	75.6	18.5	256	244
125.00	52.6	15.2	25.8	18.6	52.0	370	301
130.00	238	16.6	14.7	20.2	198	402	359
135.00	453	87.6	14.4	89.6	458	463	399
140.00	597	388	221	391	586	460	473
145.00	553	678	664	660	576	497	513
150.00	547	649	668	661	558	568	598
155.00	563	548	593	583	631	580	571
160.00	561	668	560	606	574	619	592
165.00	571	631	640	616	583	655	667
170.00	627	662	570	668	608	697	641
175.00	745	733	653	733	714	565	755
180.00	694	694	694	694	694	694	694

Zonal Lumens		
Cone	Between	Lumens
0.0	0.0- 2.5	11.49
5.0	2.5- 7.5	89.52
10.0	7.5- 12.5	172.40
15.0	12.5- 17.5	252.00
20.0	17.5- 22.5	311.17
25.0	22.5- 27.5	372.99
30.0	27.5- 32.5	425.50
35.0	32.5- 37.5	438.20
40.0	37.5- 42.5	430.81
45.0	42.5- 47.5	386.04
50.0	47.5- 52.5	397.77
55.0	52.5- 57.5	462.06
60.0	57.5- 62.5	544.62
65.0	62.5- 67.5	581.78
70.0	67.5- 72.5	578.37
75.0	72.5- 77.5	541.77
80.0	77.5- 82.5	516.76
85.0	82.5- 87.5	398.66
90.0	87.5- 92.5	296.28
95.0	92.5- 97.5	193.77
100.0	97.5-102.5	126.99
105.0	102.5-107.5	68.08
110.0	107.5-112.5	31.73
115.0	112.5-117.5	31.67
120.0	117.5-122.5	43.09
125.0	122.5-127.5	50.43
130.0	127.5-132.5	60.45
135.0	132.5-137.5	77.11
140.0	137.5-142.5	101.11
145.0	142.5-147.5	119.87
150.0	147.5-152.5	108.50
155.0	152.5-157.5	98.61
160.0	157.5-162.5	89.01
165.0	162.5-167.5	77.89
170.0	167.5-172.5	56.90
175.0	172.5-177.5	30.78
180.0	177.5-180.0	4.15

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0- 30	1414	14.1	16.5
0- 40	2283	22.8	26.6
0- 60	4019	40.2	46.8
0- 90	7060	70.6	82.3
90-120	622	6.2	7.3
90-130	725	7.2	8.4
90-150	1109	11.1	12.9
90-180	1518	15.2	17.7
0-180	8578	85.8	100.0

Total Luminaire Optical Efficiency = 85.8%

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Luminaire Spacing Criterion:

0 deg	90 deg	180 deg	270 deg
1.23	0.27	1.18	1.64

Average Luminaire Luminance (cd/m<sup>2</sup>):

	0	45	90	135	180
0	6838.39	6838.39	6838.39	6838.39	6838.39
45	4659.78	12.19	0.00	16.79	4956.85
50	4645.03	4.84	0.00	6.61	4366.89
55	3954.99	0.00	0.00	5.07	3859.00
60	3372.93	0.00	1.51	0.00	3313.58
65	2743.48	0.00	0.00	0.00	2603.71
70	2157.07	1.67	0.00	0.00	2197.81
75	1573.97	0.00	0.00	0.00	1493.93
80	814.30	5.08	1.57	3.20	643.41
85	396.43	5.46	0.00	3.89	473.15

Coefficients of Utilization - Zonal Cavity Method:

pfc = 0.20

pcc	.8				.7				.5				.3				.1				0
pw	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	0
RCR																					
0	98	98	98	98	94	94	94	94	86	86	86	79	79	79	73	73	73	70	70	70	70
1	85	80	75	70	81	76	72	67	70	66	62	64	61	58	58	56	54	51	51	51	51
2	76	67	60	54	72	64	58	52	59	53	49	53	49	45	49	45	42	39	39	39	39
3	68	58	50	43	65	55	48	42	50	44	39	46	41	37	42	38	34	31	31	31	31
4	62	51	42	36	59	48	41	35	44	38	32	40	35	30	37	32	28	26	26	26	26
5	57	45	36	30	54	43	35	29	39	33	28	36	30	26	33	28	24	22	22	22	22
6	52	40	32	26	50	38	31	25	35	29	24	32	27	22	30	25	21	19	19	19	19
7	48	36	28	23	46	35	27	22	32	26	21	30	24	20	27	22	19	17	17	17	17
8	45	33	25	20	43	32	25	20	29	23	19	27	22	18	25	20	17	15	15	15	15
9	42	30	23	18	40	29	22	18	27	21	17	25	20	16	23	18	15	13	13	13	13
10	39	28	21	16	38	27	20	16	25	19	15	23	18	14	21	17	14	12	12	12	12