

Photometric Report - (ecs-xvt4-ms-232-unv-12n-cal) - Page 1 of 4

Fri Apr 29 11:51:14 2011

IESNA:LM-63-1995

Photopia 2.0.0.17 PHOTOMETRIC REPORT

PROJECT: ecs-xvt4-ms-232-unv-12n-cal

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
0( 0.0%)	0
2036( 35.1%)	1
1743( 30.1%)	2
363( 6.3%)	3
462( 8.0%)	4
166( 2.9%)	5
4771( 82.3%)	Total

LUMEN INTERACTION WITH SYSTEM:

Absorbed(%)	Incident(%)	Layer Name
173( 3.0%)	2652( 45.7%)	LAMP-FO32311
8( 0.2%)	134( 2.3%)	LAMP-FO32312
267( 4.6%)	4760( 82.1%)	Refl-Poly1
5( 0.1%)	5589( 96.4%)	Tran-Lens1
454( 7.8%)	13137(226.5%)	Total

  

Absorbed(%)	Incident(%)	Material Name
182( 3.1%)	2786( 48.0%)	PHOSGLAS
267( 4.6%)	4760( 82.1%)	ALMIRO04
5( 0.1%)	5589( 96.4%)	POLYCRB1
454( 7.8%)	13137(226.5%)	Total

UNACCOUNTED LUMENS:

reached interreflection limit: 573.36 ( 9.9%)  
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%)

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Number of Lamps: 2                      Lumens per Lamp: 2900  
 Ballast Factor: 1.00    Ballast-Lamp Photometric Factor: 1.00  
 Luminaire Width: 0.5196    Length: 4.0000    Height: 0.1935  
 Photometry Type: C                      Units: feet

Candela Distribution:

	0.00	22.50	45.00	67.50	90.00
0.00	1946	1946	1946	1946	1946
5.00	1905	1858	1869	1866	1837
10.00	1818	1809	1752	1701	1669
15.00	1790	1778	1652	1656	1702
20.00	1691	1667	1642	1580	1590
25.00	1634	1578	1528	1554	1598
30.00	1574	1477	1457	1485	1462
35.00	1450	1368	1400	1333	1275
40.00	1360	1265	1245	1146	1102
45.00	1190	1157	1062	985	954
50.00	1057	1013	904	855	851
55.00	909	862	745	786	812
60.00	728	678	631	643	623
65.00	571	520	525	510	504
70.00	422	379	383	384	392
75.00	277	250	262	274	286
80.00	154	146	175	181	177
85.00	79.7	83.8	78.9	64.3	62.3
90.00	42.7	34.3	22.6	14.6	16.4
95.00	40.4	32.3	20.0	12.1	10.4
100.00	36.8	36.2	40.4	20.8	15.3
105.00	29.9	24.3	50.5	54.3	44.2
110.00	18.8	18.7	27.4	47.1	48.5
115.00	13.7	14.8	19.4	20.7	28.1
120.00	7.77	8.71	17.8	18.5	15.5
125.00	7.30	7.94	9.25	16.5	17.4
130.00	4.85	4.83	8.10	10.7	14.1
135.00	3.57	3.91	6.26	8.50	12.5
140.00	5.05	2.09	2.20	4.08	7.48
145.00	2.44	1.24	2.69	4.13	3.74
150.00	1.25	0.800	0.480	3.45	4.98
155.00	1.14	0.550	0.000	0.160	1.72
160.00	0.470	0.000	0.230	0.410	0.000
165.00	0.000	0.310	0.000	0.000	0.000
170.00	0.000	0.000	0.000	0.000	0.000
175.00	0.000	0.000	0.000	0.000	0.000
180.00	0.000	0.000	0.000	0.000	0.000

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Zonal Lumens		
Cone	Between	Lumens
0.0	0.0- 2.5	11.64
5.0	2.5- 7.5	89.14
10.0	7.5- 12.5	166.72
15.0	12.5- 17.5	242.28
20.0	17.5- 22.5	306.04
25.0	22.5- 27.5	363.52
30.0	27.5- 32.5	406.81
35.0	32.5- 37.5	429.40
40.0	37.5- 42.5	430.39
45.0	42.5- 47.5	414.39
50.0	47.5- 52.5	391.17
55.0	52.5- 57.5	365.26
60.0	57.5- 62.5	311.79
65.0	62.5- 67.5	259.75
70.0	67.5- 72.5	200.06
75.0	72.5- 77.5	141.20
80.0	77.5- 82.5	90.10
85.0	82.5- 87.5	40.68
90.0	87.5- 92.5	13.84
95.0	92.5- 97.5	12.25
100.0	97.5-102.5	16.66
105.0	102.5-107.5	21.99
110.0	107.5-112.5	16.34
115.0	112.5-117.5	9.41
120.0	117.5-122.5	6.73
125.0	122.5-127.5	5.17
130.0	127.5-132.5	3.48
135.0	132.5-137.5	2.59
140.0	137.5-142.5	1.29
145.0	142.5-147.5	0.88
150.0	147.5-152.5	0.54
155.0	152.5-157.5	0.12
160.0	157.5-162.5	0.04
165.0	162.5-167.5	0.01
170.0	167.5-172.5	0.00
175.0	172.5-177.5	0.00
180.0	177.5-180.0	0.00

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0- 30	1375	23.7	28.8
0- 40	2225	38.4	46.6
0- 60	3771	65.0	79.0
0- 90	4667	80.5	97.8
90-120	87	1.5	1.8
90-130	97	1.7	2.0
90-150	104	1.8	2.2
90-180	104	1.8	2.2
0-180	4772	82.3	100.0

Total Luminaire Optical Efficiency = 82.3%

Luminaire Spacing Criterion:

0 deg	90 deg
1.20	1.13

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

	0	45	90
0	10078.87	10078.87	10078.87
45	8314.20	5994.56	5091.18
50	8054.07	5378.38	4750.59
55	7679.93	4723.18	4787.65
60	6954.89	4313.74	3923.32
65	6343.27	3925.68	3430.42
70	5641.34	3193.79	2933.17
75	4689.45	2479.62	2390.27
80	3614.50	1942.38	1695.93
85	3049.24	1064.80	704.38

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	0
RCR																		
0	97	97	97	97	95	95	95	95	90	90	90	86	86	86	82	82	82	80
1	89	85	82	79	87	83	80	77	80	77	75	76	74	72	73	71	70	68
2	81	75	69	65	79	73	68	64	70	66	62	67	63	60	64	61	59	57
3	74	66	59	54	72	64	58	53	62	57	52	59	55	51	57	53	50	48
4	68	58	51	46	66	57	51	46	55	49	45	53	48	44	51	47	43	41
5	63	52	45	40	61	51	45	39	49	43	39	48	42	38	46	41	38	36
6	58	47	40	35	56	46	39	35	45	39	34	43	38	34	42	37	33	31
7	54	43	36	31	52	42	35	31	41	35	30	39	34	30	38	33	30	28
8	50	39	32	27	49	38	32	27	37	31	27	36	31	27	35	30	27	25
9	47	36	29	25	46	35	29	25	34	28	24	33	28	24	32	27	24	22
10	44	33	27	22	43	33	26	22	32	26	22	31	26	22	30	25	22	20