

Photometric Report - (ecs-vpr4-mn-432-unv-14n-p0w) - Page 1 of 4

Fri Apr 27 21:40:17 2012

IESNA:LM-63-1995

Photopia 2.0.0.17 PHOTOMETRIC REPORT

PROJECT: ecs-vpr4-mn-432-unv-14n-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 499456 initial lamp rays.  
Photometric test distance of 20.00 feet.

LUMENS EXITING SYSTEM:

Lumens(%)	Reflection
0( 0.0%)	0
5215( 45.0%)	1
2676( 23.1%)	2
895( 7.7%)	3
620( 5.3%)	4
272( 2.4%)	5
9679( 83.4%)	Total

LUMEN INTERACTION WITH SYSTEM:

Absorbed(%)	Incident(%)	Layer Name
209( 1.8%)	3200( 27.6%)	LAMP-F032311
13( 0.1%)	205( 1.8%)	LAMP-F032312
397( 3.4%)	7005( 60.4%)	Refl-Poly1
29( 0.3%)	298( 2.6%)	Refl-Poly2
499( 4.3%)	6463( 55.7%)	Tran-Lens1
5( 0.1%)	5972( 51.5%)	Tran-Lens2
1155( 10.0%)	23145(199.5%)	Total

  

Absorbed(%)	Incident(%)	Material Name
223( 1.9%)	3405( 29.4%)	PHOSGLAS
397( 3.4%)	7005( 60.4%)	ALMIRO04
29( 0.3%)	298( 2.6%)	PAINT006
499( 4.3%)	6463( 55.7%)	PRISM001
5( 0.1%)	5972( 51.5%)	POLYCRB1
1155( 10.0%)	23145(199.5%)	Total

UNACCOUNTED LUMENS:

reached interreflection limit: 764.24 ( 6.6%)  
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: 4                      Lumens per Lamp: 2900  
 Ballast Factor: 1.00    Ballast-Lamp Photometric Factor: 1.00  
 Luminaire Width: 1.4662    Length: 4.0000    Height: 0.4150  
 Photometry Type: C                      Units: feet

Candela Distribution:

	0.00	22.50	45.00	67.50	90.00
0.00	2711	2711	2711	2711	2711
5.00	2850	2708	2807	2873	2881
10.00	2800	2835	2708	2682	2606
15.00	2685	2746	2605	2399	2490
20.00	2593	2618	2397	2300	2147
25.00	2565	2391	2138	2003	2018
30.00	2336	2208	1941	1892	1933
35.00	2223	2008	1768	1850	1801
40.00	1908	1715	1634	1743	1794
45.00	1722	1544	1504	1667	1657
50.00	1455	1300	1444	1558	1556
55.00	1205	1118	1256	1347	1258
60.00	939	914	1082	1083	1152
65.00	675	730	849	1016	1106
70.00	462	533	688	923	985
75.00	288	348	570	786	826
80.00	137	220	425	591	672
85.00	48.7	117	251	421	468
90.00	12.3	67.1	188	332	399
95.00	22.5	68.4	188	320	381
100.00	43.5	85.3	192	329	397
105.00	84.1	117	229	348	391
110.00	108	143	274	387	447
115.00	149	201	309	429	447
120.00	207	233	358	466	511
125.00	288	296	395	498	529
130.00	330	349	404	501	549
135.00	441	408	437	508	511
140.00	484	478	488	508	544
145.00	548	542	520	538	552
150.00	616	614	553	588	577
155.00	631	622	615	616	626
160.00	711	699	663	623	592
165.00	744	713	694	709	646
170.00	741	722	695	676	755
175.00	807	743	732	713	776
180.00	640	640	640	640	640

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Zonal Lumens		
Cone	Between	Lumens
0.0	0.0- 2.5	16.21
5.0	2.5- 7.5	134.41
10.0	7.5- 12.5	260.05
15.0	12.5- 17.5	366.66
20.0	17.5- 22.5	453.92
25.0	22.5- 27.5	510.97
30.0	27.5- 32.5	560.19
35.0	32.5- 37.5	600.41
40.0	37.5- 42.5	611.58
45.0	42.5- 47.5	620.62
50.0	47.5- 52.5	609.55
55.0	52.5- 57.5	555.93
60.0	57.5- 62.5	489.51
65.0	62.5- 67.5	432.99
70.0	67.5- 72.5	369.30
75.0	72.5- 77.5	299.28
80.0	77.5- 82.5	221.25
85.0	82.5- 87.5	142.97
90.0	87.5- 92.5	108.57
95.0	92.5- 97.5	106.26
100.0	97.5-102.5	111.52
105.0	102.5-107.5	123.28
110.0	107.5-112.5	139.14
115.0	112.5-117.5	153.79
120.0	117.5-122.5	168.04
125.0	122.5-127.5	179.30
130.0	127.5-132.5	177.80
135.0	132.5-137.5	177.23
140.0	137.5-142.5	175.03
145.0	142.5-147.5	168.99
150.0	147.5-152.5	161.04
155.0	152.5-157.5	143.76
160.0	157.5-162.5	123.56
165.0	162.5-167.5	99.74
170.0	167.5-172.5	67.60
175.0	172.5-177.5	35.58
180.0	177.5-180.0	3.83

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0- 30	2012	17.3	20.8
0- 40	3201	27.6	33.1
0- 60	5542	47.8	57.3
0- 90	7310	63.0	75.5
90-120	773	6.7	8.0
90-130	1126	9.7	11.6
90-150	1818	15.7	18.8
90-180	2370	20.4	24.5
0-180	9680	83.4	100.0

Total Luminaire Optical Efficiency = 83.4%

Luminaire Spacing Criterion:

0 deg	90 deg
1.28	1.06

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

	0	45	90
0	4976.35	4976.35	4976.35
45	4049.87	3066.22	3351.83
50	3696.63	3108.51	3322.16
55	3358.75	2890.44	2866.35
60	2921.36	2694.68	2837.83
65	2397.55	2325.38	2988.53
70	1927.44	2109.47	2973.30
75	1470.73	1999.46	2849.84
80	911.24	1761.02	2724.44
85	469.10	1283.35	2324.69

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	94	94	94	94	90	90	90	90	81	81	81	73	73	73	66	66	66	63			
1	85	81	78	74	81	77	74	71	70	67	65	63	61	60	57	56	54	51			
2	77	71	65	60	73	67	62	58	61	57	53	55	52	49	50	47	45	42			
3	70	62	55	50	67	59	53	48	54	49	45	49	45	41	44	41	38	35			
4	64	55	48	42	61	52	46	41	48	42	38	43	39	35	39	36	33	30			
5	59	49	41	36	56	47	40	35	43	37	33	39	34	31	35	31	28	26			
6	55	44	37	31	52	42	35	30	38	33	29	35	30	27	32	28	25	23			
7	51	40	33	28	48	38	31	27	35	29	25	32	27	24	29	25	22	20			
8	47	36	29	24	45	35	28	24	32	26	22	29	25	21	27	23	20	18			
9	44	33	26	22	42	32	26	21	29	24	20	27	22	19	25	21	18	16			
10	41	30	24	20	39	29	23	19	27	22	18	25	20	17	23	19	16	15			