

Photometric Report - (ecs-spi4-mn-132-unv-11n) - Page 1 of 4

Mon Apr 23 18:58:29 2012

IESNA:LM-63-1995

Photopia 2.0.0.17 PHOTOMETRIC REPORT

PROJECT: ecs-spi4-mn-132-unv-11n

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 500066 initial lamp rays.  
Photometric test distance of 20.00 feet.

LUMENS EXITING SYSTEM:

Lumens(%)	Reflection
1398( 48.2%)	0
1100( 38.0%)	1
65( 2.3%)	2
111( 3.9%)	3
13( 0.5%)	4
20( 0.7%)	5
2710( 93.5%)	Total

LUMEN INTERACTION WITH SYSTEM:

Absorbed(%)	Incident(%)	Layer Name
22( 0.8%)	342( 11.8%)	LAMP-F032311
1( 0.0%)	17( 0.6%)	LAMP-F032312
68( 2.4%)	1221( 42.1%)	Refl-Poly1
68( 2.3%)	523( 18.1%)	Refl-Poly2
160( 5.5%)	2104( 72.6%)	Total

  

Absorbed(%)	Incident(%)	Material Name
23( 0.8%)	359( 12.4%)	PHOSGLAS
68( 2.4%)	1221( 42.1%)	ALMIRO04
68( 2.3%)	523( 18.1%)	PAINT007
160( 5.5%)	2104( 72.6%)	Total

UNACCOUNTED LUMENS:

reached interreflection limit: 29.32 ( 1.0%)  
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: 1                      Lumens per Lamp: 2900  
 Ballast Factor: 1.00    Ballast-Lamp Photometric Factor: 1.00  
 Luminaire Width: 0.7241    Length: 4.0000    Height: 0.1449  
 Photometry Type: C                      Units: feet

Candela Distribution:

	0.00	22.50	45.00	67.50	90.00
0.00	466	466	466	466	466
5.00	466	466	496	484	520
10.00	450	489	536	567	604
15.00	448	504	588	677	686
20.00	432	524	661	732	788
25.00	436	533	706	822	845
30.00	410	562	756	856	868
35.00	408	567	769	845	867
40.00	373	577	756	829	844
45.00	355	569	732	777	757
50.00	317	541	687	659	633
55.00	288	511	597	534	526
60.00	263	462	470	418	406
65.00	228	394	347	338	365
70.00	199	298	269	327	355
75.00	152	200	247	322	350
80.00	109	137	231	298	320
85.00	54.2	105	161	185	189
90.00	21.5	36.3	47.5	48.8	51.4
95.00	7.55	13.7	8.74	1.67	0.070
100.00	3.23	7.02	4.56	1.33	0.000
105.00	2.44	4.42	3.69	0.710	0.000
110.00	1.46	2.30	2.23	0.370	0.000
115.00	1.08	1.15	0.410	0.140	0.000
120.00	0.390	0.480	0.510	0.040	0.000
125.00	0.280	0.400	0.100	0.040	0.000
130.00	0.000	0.100	0.000	0.000	0.000
135.00	0.000	0.090	0.050	0.000	0.000
140.00	0.000	0.000	0.000	0.000	0.000
145.00	0.000	0.000	0.000	0.000	0.000
150.00	0.000	0.000	0.000	0.000	0.000
155.00	0.000	0.000	0.000	0.000	0.000
160.00	0.000	0.000	0.000	0.000	0.000
165.00	0.000	0.000	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	2.78
5.0	2.5- 7.5	23.15
10.0	7.5- 12.5	50.42
15.0	12.5- 17.5	82.84
20.0	17.5- 22.5	118.43
25.0	22.5- 27.5	156.47
30.0	27.5- 32.5	192.72
35.0	32.5- 37.5	221.48
40.0	37.5- 42.5	244.02
45.0	42.5- 47.5	255.20
50.0	47.5- 52.5	247.94
55.0	52.5- 57.5	230.03
60.0	57.5- 62.5	200.00
65.0	62.5- 67.5	170.85
70.0	67.5- 72.5	150.70
75.0	72.5- 77.5	135.01
80.0	77.5- 82.5	118.92
85.0	82.5- 87.5	78.08
90.0	87.5- 92.5	23.18
95.0	92.5- 97.5	3.82
100.0	97.5-102.5	1.96
105.0	102.5-107.5	1.33
110.0	107.5-112.5	0.72
115.0	112.5-117.5	0.28
120.0	117.5-122.5	0.15
125.0	122.5-127.5	0.08
130.0	127.5-132.5	0.01
135.0	132.5-137.5	0.01
140.0	137.5-142.5	0.00
145.0	142.5-147.5	0.00
150.0	147.5-152.5	0.00
155.0	152.5-157.5	0.00
160.0	157.5-162.5	0.00
165.0	162.5-167.5	0.00
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	527	18.2	19.4
0- 40	967	33.3	35.7
0- 60	1924	66.4	71.0
0- 90	2691	92.8	99.3
90-120	20	0.7	0.7
90-130	20	0.7	0.7
90-150	20	0.7	0.7
90-180	20	0.7	0.7
0-180	2711	93.5	100.0

Total Luminaire Optical Efficiency = 93.5%

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Luminaire Spacing Criterion:

0 deg	90 deg
1.34	2.11

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

	0	45	90
0	1730.21	1730.21	1730.21
45	1800.73	3296.52	3314.72
50	1756.03	3311.18	2955.94
55	1774.42	3122.79	2651.34
60	1841.64	2708.92	2241.39
65	1860.78	2247.00	2245.15
70	1966.55	2000.24	2488.28
75	1916.67	2184.83	2878.10
80	1929.03	2538.30	3210.29
85	1634.27	2352.50	2457.35

Coefficients of Utilization - Zonal Cavity Method:

pfc = 0.20

pcc	.8				.7				.5				
pw	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1		
RCR													
0	111	111	111	111	108	108	108	108	103	103	103		
1	99	94	89	84	96	91	87	83	87	84	80		
2	89	80	73	67	86	78	71	66	75	69	64		
3	80	69	61	54	78	68	60	53	65	58	52		
4	73	61	52	45	71	59	51	44	57	49	44		
5	67	54	44	38	65	52	44	37	50	43	37		
6	61	48	39	32	59	47	38	32	45	37	32		
7	56	43	34	28	55	42	34	28	40	33	27		
8	52	39	30	24	51	38	30	24	37	29	24		
9	49	35	27	22	47	35	27	21	33	26	21		
10	45	32	24	19	44	32	24	19	31	24	19		

pcc	.3			.1			0
pw	.5	.3	.1	.5	.3	.1	0
RCR							
0	99	99	99	95	95	95	93
1	83	80	78	80	77	75	73
2	72	67	62	69	65	61	59
3	62	56	51	60	55	50	48
4	55	48	43	52	47	42	40
5	48	42	36	47	41	36	34
6	43	37	31	42	36	31	29
7	39	32	27	38	32	27	25
8	35	29	24	34	28	24	22
9	32	26	21	31	25	21	19
10	30	23	19	29	23	19	17