

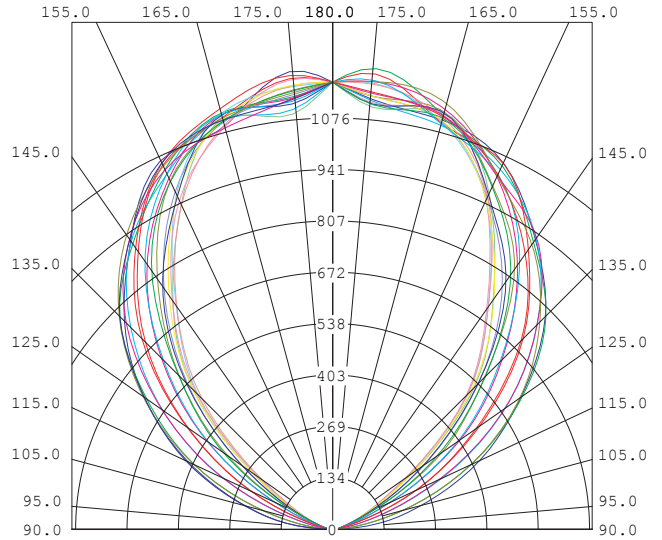
wed Sep 16 10:35:41 2009

IESNA:LM-63-1995
 Photopia 2.0.0.10 PHOTOMETRIC REPORT
 PROJECT: KEL325-1T5-4
 OPTIONS:

Spawning 1 rays for each reaction.
 Random number generator seed: 8.
 Tracing 8 reflections.
 Stop tracing ray at 2.0% of initial magnitude.
 Tracing 2000052 initial lamp rays.
 Photometric test distance of 6.10 meters.

LUMENS EXITING SYSTEM:

Lumens(%)	Reflection
769(26.5%)	0
1436(49.5%)	1
62(2.2%)	2
164(5.7%)	3
31(1.1%)	4
40(1.4%)	5
14(0.5%)	6
13(0.5%)	7
7(0.2%)	8
2539(87.6%)	Total



LUMEN INTERACTION WITH SYSTEM:

Absorbed(%)	Incident(%)	Layer Name
153(5.3%)	512(17.7%)	KEL325 - 1T5 - Photometrics - 4 foot extrusio
127(4.4%)	2291(79.0%)	KEL325 - 1T5 - Photometrics - 4' liner and so
1(0.1%)	10(0.3%)	KEL325 - 1T5 - Photometrics - 4' liner and so
1(0.1%)	5(0.2%)	KEL325 - 1T5 - Photometrics - 4' liner and so
0(0.0%)	1(0.0%)	KEL325 - 1T5 - Photometrics - 4' liner and so
0(0.0%)	1(0.0%)	KEL325 - 1T5 - Photometrics - 4' liner and so
43(1.5%)	685(23.6%)	LAMP-F28T51
1(0.1%)	25(0.9%)	LAMP-F28T52
330(11.4%)	3532(121.8%)	Total
Absorbed(%)	Incident(%)	Material Name
45(1.6%)	710(24.5%)	PHOSGLAS
153(5.3%)	512(17.7%)	AL1300MF
127(4.4%)	2291(79.0%)	ALMIRO04
4(0.1%)	17(0.6%)	PAINT002
330(11.4%)	3532(121.8%)	Total

UNACCOUNTED LUMENS:

reached interreflection limit:	29.90 (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%)

Number of Lamps: 1 Lumens per Lamp: 2900
 Ballast Factor: 1.00 Ballast-Lamp Photometric Factor: 1.00
 Luminaire width: 0.0826 Length: 1.2065 Height: 0.0825
 Photometry Type: C Units: meters

Candela Distribution:

	0.00	10.00	20.00	30.00	40.00	50.00	60.00	70.00	80.00	90.00
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.00	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000

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25.00	0.000	0.000	0.080	0.210	0.100	0.000	0.000	0.000	0.000	0.000
35.00	0.100	0.100	0.020	0.120	0.240	0.040	0.050	0.000	0.000	0.000
45.00	0.030	0.070	0.270	0.190	0.200	0.180	0.240	0.000	0.000	0.000
55.00	0.150	0.190	0.450	0.450	0.230	0.350	0.120	0.070	0.000	0.000
65.00	0.220	0.630	0.560	0.500	0.350	0.260	0.280	0.000	0.000	0.000
75.00	0.660	0.990	1.02	0.510	0.550	0.560	0.170	0.040	0.030	0.000
85.00	1.13	1.83	2.57	1.18	0.850	0.430	0.430	0.180	0.030	0.000
90.00	8.17	4.95	5.21	3.34	2.33	1.67	1.57	1.55	1.25	1.67
95.00	85.5	38.0	15.4	11.5	11.3	12.4	12.4	14.6	17.2	20.5
105.00	240	190	108	55.5	36.7	29.7	28.8	32.5	36.1	41.2
115.00	424	400	316	240	166	117	103	92.8	92.1	89.1
125.00	601	607	552	469	407	349	291	252	232	231
135.00	787	789	757	705	627	562	539	523	498	501
145.00	925	917	928	893	844	830	774	733	709	710
155.00	1057	1049	1038	1056	1018	991	958	969	950	960
165.00	1108	1120	1094	1100	1137	1130	1105	1128	1103	1114
175.00	1131	1210	1127	1197	1176	1138	1139	1111	1172	1169
180.00	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170

Candel a Di stri buti on (conti nued):

	100.00	110.00	120.00	130.00	140.00	150.00	160.00	170.00	180.00	190.00
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.00	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.040	0.020	0.000
35.00	0.000	0.010	0.010	0.170	0.330	0.370	0.100	0.120	0.090	0.000
45.00	0.000	0.050	0.130	0.200	0.420	0.890	0.550	0.240	0.090	0.220
55.00	0.000	0.040	0.440	1.07	1.22	1.29	1.28	0.570	0.140	0.400
65.00	0.000	0.130	0.280	0.760	1.09	1.72	1.23	0.710	0.170	0.810
75.00	0.040	0.220	0.850	0.950	1.06	2.33	2.10	1.47	0.500	1.26
85.00	0.060	0.160	0.510	1.30	1.09	1.81	3.23	4.12	1.26	3.67
90.00	1.11	1.79	1.84	3.16	2.63	3.26	5.98	7.51	7.76	7.18
95.00	15.0	13.9	13.6	13.1	10.6	12.9	13.3	37.0	83.7	37.5
105.00	36.4	31.3	29.1	29.5	37.9	51.8	105	190	236	189
115.00	89.9	93.7	103	123	165	242	308	398	417	399
125.00	240	250	288	334	399	458	550	598	602	594
135.00	494	513	538	565	620	698	757	767	770	787
145.00	703	736	791	813	853	879	931	909	921	911
155.00	952	950	965	988	1024	1024	1019	1020	1064	1038
165.00	1126	1107	1128	1113	1098	1117	1120	1153	1092	1127
175.00	1122	1138	1118	1118	1180	1149	1146	1176	1203	1137
180.00	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170

Candel a Di stri buti on (conti nued):

	200.00	210.00	220.00	230.00	240.00	250.00	260.00	270.00	280.00	290.00
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.00	0.000	0.100	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000
35.00	0.040	0.430	0.210	0.060	0.000	0.080	0.000	0.000	0.030	0.000
45.00	0.390	0.850	0.460	0.390	0.140	0.000	0.000	0.000	0.000	0.050
55.00	0.860	1.03	0.870	0.750	0.270	0.190	0.000	0.000	0.000	0.050
65.00	1.21	1.52	1.07	0.610	0.450	0.050	0.000	0.000	0.000	0.100
75.00	2.14	1.78	1.35	0.880	0.550	0.250	0.000	0.000	0.000	0.050
85.00	3.18	1.88	1.04	0.600	0.220	0.230	0.000	0.000	0.000	0.120
90.00	5.40	2.97	2.69	2.59	1.95	1.82	2.02	2.14	1.31	1.41
95.00	12.9	11.5	11.5	13.1	11.9	13.6	16.9	22.6	17.0	14.1

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105.00	103	54.4	38.5	29.9	28.3	31.5	37.9	43.3	36.4	29.8
115.00	314	236	166	118	99.9	97.4	87.1	89.0	87.7	93.7
125.00	543	461	400	335	289	253	233	224	231	252
135.00	747	693	634	568	536	517	499	484	505	517
145.00	919	887	846	799	769	729	713	711	731	745
155.00	1025	1051	1013	1005	974	937	967	936	949	963
165.00	1110	1115	1123	1105	1103	1110	1125	1095	1090	1111
175.00	1105	1185	1134	1154	1142	1094	1163	1166	1182	1166
180.00	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170

Candel a Di stri buti on (conti nued):

	300.00	310.00	320.00	330.00	340.00	350.00	360.00
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.00	0.000	0.090	0.080	0.030	0.140	0.020	0.000
35.00	0.090	0.030	0.200	0.030	0.190	0.030	0.100
45.00	0.000	0.160	0.450	0.310	0.300	0.110	0.030
55.00	0.100	0.350	0.220	0.440	0.460	0.250	0.150
65.00	0.160	0.390	0.600	0.440	0.700	0.430	0.220
75.00	0.100	0.350	0.540	0.790	0.710	0.690	0.660
85.00	0.260	0.380	0.630	1.43	2.24	3.01	1.13
90.00	2.04	1.72	2.45	2.95	4.03	6.68	8.17
95.00	12.8	11.3	11.6	11.0	13.5	41.1	85.5
105.00	28.3	27.9	37.3	54.8	104	191	240
115.00	101	118	168	236	317	399	424
125.00	286	348	398	464	545	606	601
135.00	542	570	627	706	763	790	787
145.00	775	825	856	898	926	939	925
155.00	961	1004	1026	1057	1038	1048	1057
165.00	1122	1106	1124	1139	1087	1114	1108
175.00	1119	1152	1126	1192	1134	1147	1131
180.00	1170	1170	1170	1170	1170	1170	1170

Zonal Cone	Lumens Between	Lumens
0.0	0.0- 2.5	0.00
5.0	2.5- 10.0	0.00
15.0	10.0- 20.0	0.00
25.0	20.0- 30.0	0.01
35.0	30.0- 40.0	0.06
45.0	40.0- 50.0	0.16
55.0	50.0- 60.0	0.36
65.0	60.0- 70.0	0.48
75.0	70.0- 80.0	0.75
85.0	80.0- 87.5	0.93
90.0	87.5- 92.5	1.80
95.0	92.5-100.0	16.70
105.0	100.0-110.0	76.69
115.0	110.0-120.0	195.96
125.0	120.0-130.0	353.15
135.0	130.0-140.0	483.94
145.0	140.0-150.0	519.61
155.0	150.0-160.0	463.42
165.0	160.0-170.0	315.73
175.0	170.0-177.5	102.94
180.0	177.5-180.0	7.00

Zonal Lumen Summary

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Zone	Lumens	%Lamp	%Fixt
0- 30	0	0.0	0.0
0- 40	0	0.0	0.0
0- 60	1	0.0	0.0
0- 90	4	0.1	0.1
90-120	290	10.0	11.4
90-130	643	22.2	25.3
90-150	1647	56.8	64.8
90-180	2536	87.4	99.9
0-180	2540	87.6	100.0

Total Luminaire Optical Efficiency = 87.6%

Luminaire Spacing Criterion:

0 deg	90 deg	180 deg	270 deg
11.23	11.23	11.23	11.23

Average Luminaire Luminance (cd/m²):

	0	45	90	135	180
0	0.00	0.00	0.00	0.00	0.00
45	0.40	1.54	0.00	2.51	1.20
50	1.30	1.97	0.00	5.98	1.66
55	2.39	2.44	0.00	9.64	2.23
60	3.32	2.59	0.00	9.00	2.78
65	4.56	2.77	0.00	8.39	3.52
70	10.87	4.10	0.00	9.21	8.28
75	20.40	5.64	0.00	10.21	15.45
80	37.28	6.54	0.00	12.04	36.66
85	73.05	7.65	0.00	14.29	81.45

Coefficients of Utilization - Zonal Cavity Method:

pfc = 0.20

pcc pw RCR	.8				.7				.5			.3			.1			0
	.7	.5	.3	.1	.7	.5	.3	.1	.5	.3	.1	.5	.3	.1	.5	.3	.1	
0	83	83	83	83	71	71	71	71	48	48	48	28	28	28	9	9	9	0
1	75	72	69	66	64	61	59	57	42	40	39	24	23	23	7	7	7	0
2	69	63	58	54	58	54	50	46	37	34	32	21	20	19	6	6	6	0
3	62	55	49	44	53	47	42	38	32	29	27	18	17	16	6	5	5	0
4	57	48	42	37	48	41	36	32	28	25	23	16	14	13	5	4	4	0
5	52	43	36	31	44	37	31	27	25	22	19	14	13	11	4	4	3	0
6	48	38	31	27	40	33	27	23	22	19	16	13	11	9	4	3	3	0
7	44	34	28	23	37	29	24	20	20	17	14	11	10	8	3	3	2	0
8	40	30	24	20	34	26	21	17	18	15	12	10	8	7	3	2	2	0
9	37	27	21	17	32	24	19	15	16	13	11	9	7	6	3	2	2	0
10	35	25	19	15	29	21	17	13	15	11	9	8	7	5	2	2	1	0