



IES INDOOR REPORT

PHOTOMETRIC FILENAME : QUAD-20-LED35-MO-D9.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] Quad-20-LED35-MO-D9
 [TESTLAB] Intertek
 [ISSUE DATE] March 9, 2017
 [MANUFAC] Prudential Lighting

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3962
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	46
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	2.21 ft
Luminous Width (90-270)	2.21 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2363	2357	2347
55	2274	2263	2247
65	2154	2137	2124
75	1987	1962	1952
85	1717	1667	1689

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5
0.0	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848
2.5	1148.391	1148.682	1148.352	1147.960	1148.149	1147.960	1148.352	1148.682	1148.391	1148.682
5.0	1144.326	1144.352	1144.057	1143.956	1143.595	1143.956	1144.057	1144.352	1144.326	1144.352
7.5	1137.299	1137.369	1137.184	1137.017	1136.894	1137.017	1137.184	1137.369	1137.299	1137.369
10.0	1127.650	1127.821	1127.245	1127.095	1126.814	1127.095	1127.245	1127.821	1127.650	1127.821
12.5	1115.325	1115.704	1114.982	1114.793	1114.410	1114.793	1114.982	1115.704	1115.325	1115.704
15.0	1101.210	1101.012	1100.554	1099.974	1099.850	1099.974	1100.554	1101.012	1101.210	1101.012
17.5	1084.028	1084.068	1083.707	1082.673	1082.400	1082.673	1083.707	1084.068	1084.028	1084.068
20.0	1065.042	1064.738	1064.188	1063.335	1062.459	1063.335	1064.188	1064.738	1065.042	1064.738
22.5	1043.328	1043.178	1042.294	1040.974	1040.587	1040.974	1042.294	1043.178	1043.328	1043.178
25.0	1019.568	1019.348	1018.191	1017.188	1016.721	1017.188	1018.191	1019.348	1019.568	1019.348
27.5	993.573	993.128	991.575	990.383	989.595	990.383	991.575	993.128	993.573	993.128
30.0	964.792	964.735	963.428	962.069	961.123	962.069	963.428	964.735	964.792	964.735
32.5	934.661	934.600	932.980	931.454	931.370	931.454	932.980	934.600	934.661	934.600
35.0	903.368	902.849	901.107	898.990	899.210	898.990	901.107	902.849	903.368	902.849
37.5	869.880	869.044	867.064	865.000	865.119	865.000	867.064	869.044	869.880	869.044
40.0	835.006	833.593	831.670	829.409	828.696	829.409	831.670	833.593	835.006	833.593
42.5	797.012	796.567	794.050	792.009	791.692	792.009	794.050	796.567	797.012	796.567
45.0	757.843	758.292	755.907	753.073	752.558	753.073	755.907	758.292	757.843	758.292
47.5	717.781	718.054	715.682	713.007	712.334	713.007	715.682	718.054	717.781	718.054
50.0	676.588	676.390	674.181	671.911	670.573	671.911	674.181	676.390	676.588	676.390
52.5	634.423	634.018	631.976	629.442	628.126	629.442	631.976	634.018	634.423	634.018
55.0	591.422	591.096	588.654	586.001	584.588	586.001	588.654	591.096	591.422	591.096
57.5	546.792	546.995	544.408	541.671	540.571	541.671	544.408	546.995	546.792	546.995
60.0	502.154	502.414	499.985	497.178	496.628	497.178	499.985	502.414	502.154	502.414
62.5	457.503	457.125	454.788	452.764	451.827	452.764	454.788	457.125	457.503	457.125
65.0	412.834	411.638	409.644	407.277	407.062	407.277	409.644	411.638	412.834	411.638
67.5	367.484	366.766	364.351	362.226	362.102	362.226	364.351	366.766	367.484	366.766
70.0	321.812	321.389	318.586	316.954	317.170	316.954	318.586	321.389	321.812	321.389
72.5	277.037	276.404	273.830	272.439	272.703	272.439	273.830	276.404	277.037	276.404
75.0	233.235	232.214	230.248	228.945	229.148	228.945	230.248	232.214	233.235	232.214
77.5	190.269	188.936	186.872	186.212	186.151	186.212	186.872	188.936	190.269	188.936
80.0	147.844	146.771	144.619	144.236	144.153	144.236	144.619	146.771	147.844	146.771
82.5	106.476	106.388	104.060	103.726	104.623	103.726	104.060	106.388	106.476	106.388
85.0	67.866	67.584	65.872	66.075	66.770	66.075	65.872	67.584	67.866	67.584
87.5	32.204	32.292	29.713	30.136	30.404	30.136	29.713	32.292	32.204	32.292
90.0	32.459	33.493	29.080	15.536	3.881	15.536	29.080	33.493	32.459	33.493
92.5	44.057	40.977	30.910	17.811	8.153	17.811	30.910	40.977	44.057	40.977
95.0	44.224	41.664	32.688	20.904	14.568	20.904	32.688	41.664	44.224	41.664
97.5	49.210	46.596	37.242	25.287	19.928	25.287	37.242	46.596	49.210	46.596
100.0	55.141	52.369	42.979	30.760	26.972	30.760	42.979	52.369	55.141	52.369
102.5	61.503	58.916	48.783	36.718	34.201	36.718	48.783	58.916	61.503	58.916
105.0	68.416	65.789	54.956	43.388	40.894	43.388	54.956	65.789	68.416	65.789
107.5	74.791	71.641	61.336	50.428	48.690	50.428	61.336	71.641	74.791	71.641
110.0	80.692	77.695	68.235	57.847	56.703	57.847	68.235	77.695	80.692	77.695
112.5	86.728	84.088	75.007	65.670	62.194	65.670	75.007	84.088	86.728	84.088
115.0	93.997	91.230	82.557	73.009	72.512	73.009	82.557	91.230	93.997	91.230
117.5	101.658	98.868	90.257	81.224	80.159	81.224	90.257	98.868	101.658	98.868
120.0	109.133	107.048	97.794	89.197	87.045	89.197	97.794	107.048	109.133	107.048
122.5	116.789	114.638	106.216	98.894	94.926	98.894	106.216	114.638	116.789	114.638
125.0	124.150	122.175	114.514	106.410	105.464	106.410	114.514	122.175	124.150	122.175
127.5	132.277	130.077	122.395	114.092	111.285	114.092	122.395	130.077	132.277	130.077
130.0	140.061	138.019	131.072	122.870	120.067	122.870	131.072	138.019	140.061	138.019
132.5	147.985	145.697	140.276	130.530	130.231	130.530	140.276	145.697	147.985	145.697

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CANDELA TABULATION - (Cont.)

135.0	155.597	153.133	147.638	138.626	138.244	138.626	147.638	153.133	155.597	153.133
137.5	162.518	160.147	154.766	147.140	144.496	147.140	154.766	160.147	162.518	160.147
140.0	169.840	167.077	161.797	157.216	152.460	157.216	161.797	167.077	169.840	167.077
142.5	175.934	173.835	168.573	165.356	162.576	165.356	168.573	173.835	175.934	173.835
145.0	182.556	180.030	176.110	171.666	171.362	171.666	176.110	180.030	182.556	180.030
147.5	188.043	186.094	182.640	178.218	177.232	178.218	182.640	186.094	188.043	186.094
150.0	194.018	191.690	188.408	184.127	183.260	184.127	188.408	191.690	194.018	191.690
152.5	198.946	197.190	193.618	190.819	188.549	190.819	193.618	197.190	198.946	197.190
155.0	204.195	202.066	199.166	196.561	195.527	196.561	199.166	202.066	204.195	202.066
157.5	208.406	206.818	203.892	201.340	201.133	201.340	203.892	206.818	208.406	206.818
160.0	212.027	210.971	208.490	205.885	205.454	205.885	208.490	210.971	212.027	210.971
162.5	215.600	214.553	213.004	210.738	210.122	210.738	213.004	214.553	215.600	214.553
165.0	218.649	217.769	216.168	214.588	214.342	214.588	216.168	217.769	218.649	217.769
167.5	221.030	220.453	219.314	218.117	218.610	218.117	219.314	220.453	221.030	220.453
170.0	223.177	222.816	221.716	220.532	221.179	220.532	221.716	222.816	223.177	222.816
172.5	224.673	224.418	223.841	222.988	222.922	222.988	223.841	224.418	224.673	224.418
175.0	225.980	225.826	225.056	224.822	225.245	224.822	225.056	225.826	225.980	225.826
177.5	226.684	226.424	226.138	225.733	225.812	225.733	226.138	226.424	226.684	226.424
180.0	226.296	226.296	226.296	226.296	226.296	226.296	226.296	226.296	226.296	226.296

Vert. Angles **Horizontal Angles**

	225.0	247.5	270.0	292.5	315.0	337.5	360.0
0.0	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848	1149.848
2.5	1148.352	1147.960	1148.149	1147.960	1148.352	1148.682	1148.391
5.0	1144.057	1143.956	1143.595	1143.956	1144.057	1144.352	1144.326
7.5	1137.184	1137.017	1136.894	1137.017	1137.184	1137.369	1137.299
10.0	1127.245	1127.095	1126.814	1127.095	1127.245	1127.821	1127.650
12.5	1114.982	1114.793	1114.410	1114.793	1114.982	1115.704	1115.325
15.0	1100.554	1099.974	1099.850	1099.974	1100.554	1101.012	1101.210
17.5	1083.707	1082.673	1082.400	1082.673	1083.707	1084.068	1084.028
20.0	1064.188	1063.335	1062.459	1063.335	1064.188	1064.738	1065.042
22.5	1042.294	1040.974	1040.587	1040.974	1042.294	1043.178	1043.328
25.0	1018.191	1017.188	1016.721	1017.188	1018.191	1019.348	1019.568
27.5	991.575	990.383	989.595	990.383	991.575	993.128	993.573
30.0	963.428	962.069	961.123	962.069	963.428	964.735	964.792
32.5	932.980	931.454	931.370	931.454	932.980	934.600	934.661
35.0	901.107	898.990	899.210	898.990	901.107	902.849	903.368
37.5	867.064	865.000	865.119	865.000	867.064	869.044	869.880
40.0	831.670	829.409	828.696	829.409	831.670	833.593	835.006
42.5	794.050	792.009	791.692	792.009	794.050	796.567	797.012
45.0	755.907	753.073	752.558	753.073	755.907	758.292	757.843
47.5	715.682	713.007	712.334	713.007	715.682	718.054	717.781
50.0	674.181	671.911	670.573	671.911	674.181	676.390	676.588
52.5	631.976	629.442	628.126	629.442	631.976	634.018	634.423
55.0	588.654	586.001	584.588	586.001	588.654	591.096	591.422
57.5	544.408	541.671	540.571	541.671	544.408	546.995	546.792
60.0	499.985	497.178	496.628	497.178	499.985	502.414	502.154
62.5	454.788	452.764	451.827	452.764	454.788	457.125	457.503
65.0	409.644	407.277	407.062	407.277	409.644	411.638	412.834
67.5	364.351	362.226	362.102	362.226	364.351	366.766	367.484
70.0	318.586	316.954	317.170	316.954	318.586	321.389	321.812
72.5	273.830	272.439	272.703	272.439	273.830	276.404	277.037
75.0	230.248	228.945	229.148	228.945	230.248	232.214	233.235
77.5	186.872	186.212	186.151	186.212	186.872	188.936	190.269
80.0	144.619	144.236	144.153	144.236	144.619	146.771	147.844

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CANDELA TABULATION - (Cont.)

82.5	104.060	103.726	104.623	103.726	104.060	106.388	106.476
85.0	65.872	66.075	66.770	66.075	65.872	67.584	67.866
87.5	29.713	30.136	30.404	30.136	29.713	32.292	32.204
90.0	29.080	15.536	3.881	15.536	29.080	33.493	32.459
92.5	30.910	17.811	8.153	17.811	30.910	40.977	44.057
95.0	32.688	20.904	14.568	20.904	32.688	41.664	44.224
97.5	37.242	25.287	19.928	25.287	37.242	46.596	49.210
100.0	42.979	30.760	26.972	30.760	42.979	52.369	55.141
102.5	48.783	36.718	34.201	36.718	48.783	58.916	61.503
105.0	54.956	43.388	40.894	43.388	54.956	65.789	68.416
107.5	61.336	50.428	48.690	50.428	61.336	71.641	74.791
110.0	68.235	57.847	56.703	57.847	68.235	77.695	80.692
112.5	75.007	65.670	62.194	65.670	75.007	84.088	86.728
115.0	82.557	73.009	72.512	73.009	82.557	91.230	93.997
117.5	90.257	81.224	80.159	81.224	90.257	98.868	101.658
120.0	97.794	89.197	87.045	89.197	97.794	107.048	109.133
122.5	106.216	98.894	94.926	98.894	106.216	114.638	116.789
125.0	114.514	106.410	105.464	106.410	114.514	122.175	124.150
127.5	122.395	114.092	111.285	114.092	122.395	130.077	132.277
130.0	131.072	122.870	120.067	122.870	131.072	138.019	140.061
132.5	140.276	130.530	130.231	130.530	140.276	145.697	147.985
135.0	147.638	138.626	138.244	138.626	147.638	153.133	155.597
137.5	154.766	147.140	144.496	147.140	154.766	160.147	162.518
140.0	161.797	157.216	152.460	157.216	161.797	167.077	169.840
142.5	168.573	165.356	162.576	165.356	168.573	173.835	175.934
145.0	176.110	171.666	171.362	171.666	176.110	180.030	182.556
147.5	182.640	178.218	177.232	178.218	182.640	186.094	188.043
150.0	188.408	184.127	183.260	184.127	188.408	191.690	194.018
152.5	193.618	190.819	188.549	190.819	193.618	197.190	198.946
155.0	199.166	196.561	195.527	196.561	199.166	202.066	204.195
157.5	203.892	201.340	201.133	201.340	203.892	206.818	208.406
160.0	208.490	205.885	205.454	205.885	208.490	210.971	212.027
162.5	213.004	210.738	210.122	210.738	213.004	214.553	215.600
165.0	216.168	214.588	214.342	214.588	216.168	217.769	218.649
167.5	219.314	218.117	218.610	218.117	219.314	220.453	221.030
170.0	221.716	220.532	221.179	220.532	221.716	222.816	223.177
172.5	223.841	222.988	222.922	222.988	223.841	224.418	224.673
175.0	225.056	224.822	225.245	224.822	225.056	225.826	225.980
177.5	226.138	225.733	225.812	225.733	226.138	226.424	226.684
180.0	226.296	226.296	226.296	226.296	226.296	226.296	226.296

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	419.20	N.A.	10.60
0-30	888.30	N.A.	22.40
0-40	1451.86	N.A.	36.60
0-60	2560.39	N.A.	64.60
0-80	3209.77	N.A.	81.00
0-90	3287.94	N.A.	83.00
10-90	3179.26	N.A.	80.20
20-40	1032.66	N.A.	26.10
20-50	1615.34	N.A.	40.80
40-70	1513.97	N.A.	38.20
60-80	649.37	N.A.	16.40
70-80	243.93	N.A.	6.20
80-90	78.17	N.A.	2.00
90-110	92.98	N.A.	2.30
90-120	174.85	N.A.	4.40
90-130	277.13	N.A.	7.00
90-150	500.23	N.A.	12.60
90-180	674.45	N.A.	17.00
110-180	581.47	N.A.	14.70
0-180	3962.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	108.68
10-20	310.52
20-30	469.10
30-40	563.56
40-50	582.68
50-60	525.85
60-70	405.44
70-80	243.93
80-90	78.17
90-100	35.16
100-110	57.82
110-120	81.87
120-130	102.28
130-140	113.04
140-150	110.06
150-160	91.81
160-170	61.01
170-180	21.39

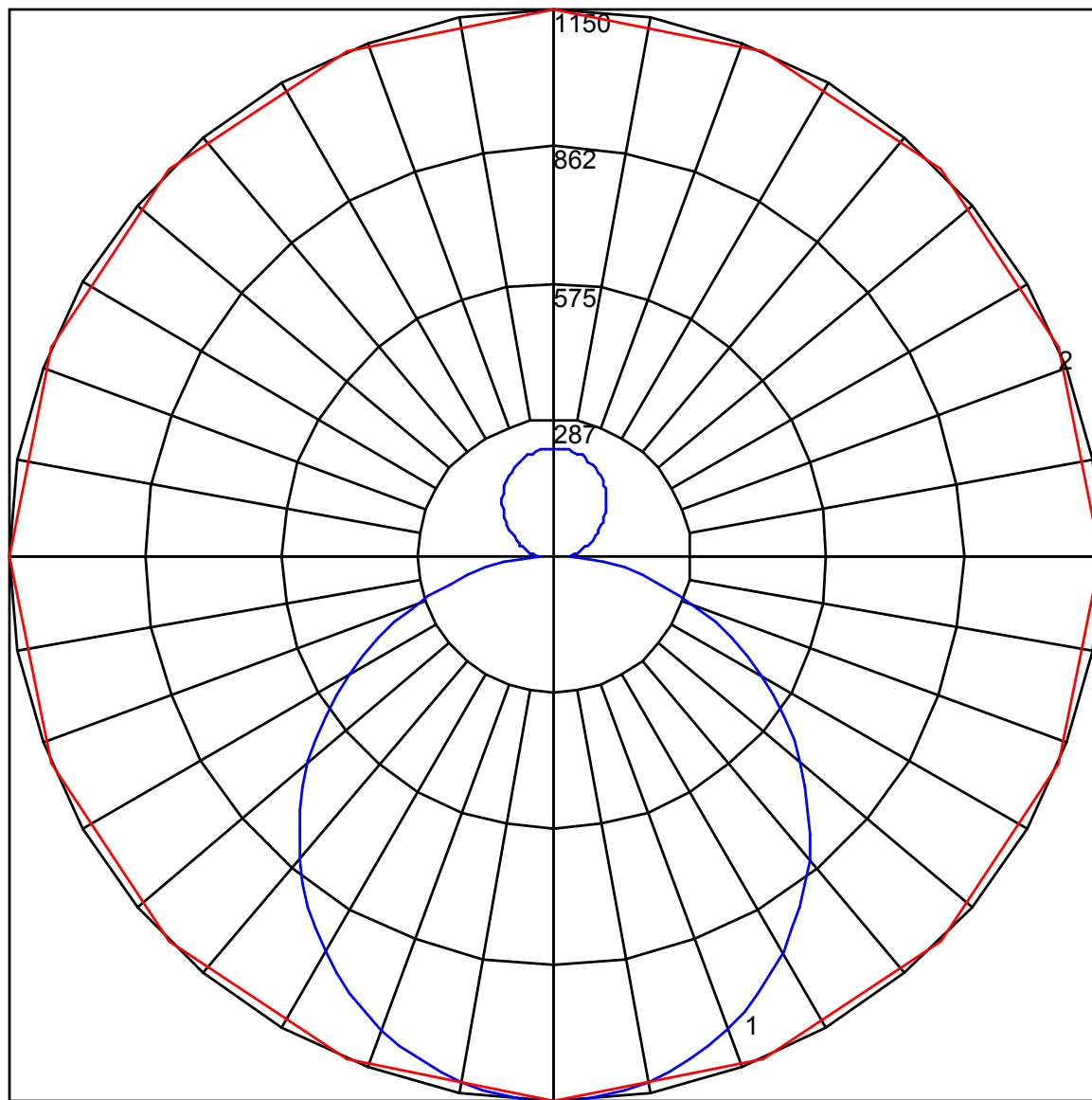
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	115	115	115	115	110	110	110	110	102	102	102	94	94	94	86	86	86	83
1	105	100	96	92	100	96	92	89	89	86	83	82	80	77	76	74	72	69
2	95	87	80	75	91	84	78	72	77	72	68	72	68	64	66	63	60	57
3	87	76	68	62	83	73	66	60	68	62	57	63	58	54	58	54	51	48
4	79	67	59	52	76	65	57	51	60	54	48	56	51	46	52	47	44	41
5	73	60	51	45	69	58	50	44	54	47	42	50	44	40	47	42	38	35
6	67	54	45	39	64	52	44	38	49	42	37	45	39	35	42	37	33	31
7	62	49	40	34	59	47	39	34	44	37	32	41	35	31	39	33	30	27
8	58	45	36	30	55	43	35	30	40	34	29	38	32	28	35	30	26	24
9	54	41	33	27	52	40	32	27	37	30	26	35	29	25	33	28	24	22
10	50	38	30	25	48	36	29	24	34	28	23	32	27	22	30	25	22	20

POLAR GRAPH



Maximum Candela = 1149.848 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)