



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] Quad-20-LED35-LO-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	2882
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	32
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	1719	1714	1707
55	1654	1646	1635
65	1567	1554	1545
75	1445	1427	1420
85	1249	1212	1229

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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	836.253	836.253	836.253	836.253	836.253	836.253	836.253	836.253	836.253	836.253
2.5	835.194	835.405	835.165	834.880	835.018	834.880	835.165	835.405	835.194	835.405
5.0	832.237	832.256	832.042	831.968	831.706	831.968	832.042	832.256	832.237	832.256
7.5	827.126	827.178	827.043	826.922	826.832	826.922	827.043	827.178	827.126	827.178
10.0	820.109	820.234	819.814	819.706	819.501	819.706	819.814	820.234	820.109	820.234
12.5	811.146	811.421	810.896	810.758	810.480	810.758	810.896	811.421	811.146	811.421
15.0	800.880	800.736	800.403	799.981	799.891	799.981	800.403	800.736	800.880	800.736
17.5	788.384	788.413	788.150	787.398	787.200	787.398	788.150	788.413	788.384	788.413
20.0	774.576	774.355	773.955	773.334	772.698	773.334	773.955	774.355	774.576	774.355
22.5	758.784	758.675	758.032	757.072	756.790	757.072	758.032	758.675	758.784	758.675
25.0	741.504	741.344	740.502	739.773	739.434	739.773	740.502	741.344	741.504	741.344
27.5	722.598	722.275	721.146	720.278	719.706	720.278	721.146	722.275	722.598	722.275
30.0	701.667	701.626	700.675	699.686	698.998	699.686	700.675	701.626	701.667	701.626
32.5	679.754	679.709	678.531	677.421	677.360	677.421	678.531	679.709	679.754	679.709
35.0	656.995	656.618	655.350	653.811	653.971	653.811	655.350	656.618	656.995	656.618
37.5	632.640	632.032	630.592	629.091	629.178	629.091	630.592	632.032	632.640	632.032
40.0	607.277	606.250	604.851	603.206	602.688	603.206	604.851	606.250	607.277	606.250
42.5	579.645	579.322	577.491	576.006	575.776	576.006	577.491	579.322	579.645	579.322
45.0	551.158	551.485	549.750	547.690	547.315	547.690	549.750	551.485	551.158	551.485
47.5	522.022	522.221	520.496	518.550	518.061	518.550	520.496	522.221	522.022	522.221
50.0	492.064	491.920	490.314	488.662	487.690	488.662	490.314	491.920	492.064	491.920
52.5	461.398	461.104	459.619	457.776	456.819	457.776	459.619	461.104	461.398	461.104
55.0	430.125	429.888	428.112	426.182	425.155	426.182	428.112	429.888	430.125	429.888
57.5	397.667	397.814	395.933	393.942	393.142	393.942	395.933	397.814	397.667	397.814
60.0	365.203	365.392	363.626	361.584	361.184	361.584	363.626	365.392	365.203	365.392
62.5	332.730	332.454	330.755	329.283	328.602	329.283	330.755	332.454	332.730	332.454
65.0	300.243	299.373	297.923	296.202	296.045	296.202	297.923	299.373	300.243	299.373
67.5	267.261	266.739	264.982	263.437	263.347	263.437	264.982	266.739	267.261	266.739
70.0	234.045	233.738	231.699	230.512	230.669	230.512	231.699	233.738	234.045	233.738
72.5	201.482	201.021	199.149	198.138	198.330	198.138	199.149	201.021	201.482	201.021
75.0	169.626	168.883	167.453	166.506	166.653	166.506	167.453	168.883	169.626	168.883
77.5	138.378	137.408	135.907	135.427	135.382	135.427	135.907	137.408	138.378	137.408
80.0	107.523	106.742	105.178	104.899	104.838	104.899	105.178	106.742	107.523	106.742
82.5	77.437	77.373	75.680	75.437	76.090	75.437	75.680	77.373	77.437	77.373
85.0	49.357	49.152	47.907	48.054	48.560	48.054	47.907	49.152	49.357	49.152
87.5	23.421	23.485	21.610	21.917	22.112	21.917	21.610	23.485	23.421	23.485
90.0	23.606	24.358	21.149	11.299	2.822	11.299	21.149	24.358	23.606	24.358
92.5	32.042	29.802	22.480	12.954	5.930	12.954	22.480	29.802	32.042	29.802
95.0	32.163	30.301	23.773	15.203	10.595	15.203	23.773	30.301	32.163	30.301
97.5	35.789	33.888	27.085	18.390	14.493	18.390	27.085	33.888	35.789	33.888
100.0	40.102	38.086	31.258	22.371	19.616	22.371	31.258	38.086	40.102	38.086
102.5	44.730	42.848	35.478	26.704	24.874	26.704	35.478	42.848	44.730	42.848
105.0	49.757	47.846	39.968	31.555	29.741	31.555	39.968	47.846	49.757	47.846
107.5	54.394	52.102	44.608	36.675	35.411	36.675	44.608	52.102	54.394	52.102
110.0	58.685	56.506	49.626	42.070	41.238	42.070	49.626	56.506	58.685	56.506
112.5	63.075	61.155	54.550	47.760	45.232	47.760	54.550	61.155	63.075	61.155
115.0	68.362	66.349	60.042	53.098	52.736	53.098	60.042	66.349	68.362	66.349
117.5	73.933	71.904	65.642	59.072	58.298	59.072	65.642	71.904	73.933	71.904
120.0	79.370	77.853	71.123	64.870	63.306	64.870	71.123	77.853	79.370	77.853
122.5	84.938	83.373	77.248	71.923	69.037	71.923	77.248	83.373	84.938	83.373
125.0	90.291	88.854	83.283	77.389	76.701	77.389	83.283	88.854	90.291	88.854
127.5	96.202	94.602	89.014	82.976	80.934	82.976	89.014	94.602	96.202	94.602
130.0	101.862	100.378	95.325	89.360	87.322	89.360	95.325	100.378	101.862	100.378
132.5	107.626	105.962	102.019	94.931	94.714	94.931	102.019	105.962	107.626	105.962

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CANDELA TABULATION - (Cont.)

135.0	113.162	111.370	107.373	100.819	100.541	100.819	107.373	111.370	113.162	111.370
137.5	118.195	116.470	112.557	107.011	105.088	107.011	112.557	116.470	118.195	116.470
140.0	123.520	121.510	117.670	114.339	110.880	114.339	117.670	121.510	123.520	121.510
142.5	127.952	126.426	122.598	120.259	118.237	120.259	122.598	126.426	127.952	126.426
145.0	132.768	130.931	128.080	124.848	124.627	124.848	128.080	130.931	132.768	130.931
147.5	136.758	135.341	132.829	129.613	128.896	129.613	132.829	135.341	136.758	135.341
150.0	141.104	139.411	137.024	133.910	133.280	133.910	137.024	139.411	141.104	139.411
152.5	144.688	143.411	140.813	138.778	137.126	138.778	140.813	143.411	144.688	143.411
155.0	148.506	146.957	144.848	142.954	142.202	142.954	144.848	146.957	148.506	146.957
157.5	151.568	150.413	148.285	146.429	146.278	146.429	148.285	150.413	151.568	150.413
160.0	154.202	153.434	151.629	149.734	149.421	149.734	151.629	153.434	154.202	153.434
162.5	156.800	156.038	154.912	153.264	152.816	153.264	154.912	156.038	156.800	156.038
165.0	159.018	158.378	157.213	156.064	155.885	156.064	157.213	158.378	159.018	158.378
167.5	160.749	160.330	159.501	158.630	158.989	158.630	159.501	160.330	160.749	160.330
170.0	162.310	162.048	161.248	160.387	160.858	160.387	161.248	162.048	162.310	162.048
172.5	163.398	163.213	162.794	162.173	162.125	162.173	162.794	163.213	163.398	163.213
175.0	164.349	164.237	163.677	163.507	163.814	163.507	163.677	164.237	164.349	164.237
177.5	164.861	164.672	164.464	164.170	164.227	164.170	164.464	164.672	164.861	164.672
180.0	164.579	164.579	164.579	164.579	164.579	164.579	164.579	164.579	164.579	164.579

Vert. Angles **Horizontal Angles**

	225.0	247.5	270.0	292.5	315.0	337.5	360.0
0.0	836.253	836.253	836.253	836.253	836.253	836.253	836.253
2.5	835.165	834.880	835.018	834.880	835.165	835.405	835.194
5.0	832.042	831.968	831.706	831.968	832.042	832.256	832.237
7.5	827.043	826.922	826.832	826.922	827.043	827.178	827.126
10.0	819.814	819.706	819.501	819.706	819.814	820.234	820.109
12.5	810.896	810.758	810.480	810.758	810.896	811.421	811.146
15.0	800.403	799.981	799.891	799.981	800.403	800.736	800.880
17.5	788.150	787.398	787.200	787.398	788.150	788.413	788.384
20.0	773.955	773.334	772.698	773.334	773.955	774.355	774.576
22.5	758.032	757.072	756.790	757.072	758.032	758.675	758.784
25.0	740.502	739.773	739.434	739.773	740.502	741.344	741.504
27.5	721.146	720.278	719.706	720.278	721.146	722.275	722.598
30.0	700.675	699.686	698.998	699.686	700.675	701.626	701.667
32.5	678.531	677.421	677.360	677.421	678.531	679.709	679.754
35.0	655.350	653.811	653.971	653.811	655.350	656.618	656.995
37.5	630.592	629.091	629.178	629.091	630.592	632.032	632.640
40.0	604.851	603.206	602.688	603.206	604.851	606.250	607.277
42.5	577.491	576.006	575.776	576.006	577.491	579.322	579.645
45.0	549.750	547.690	547.315	547.690	549.750	551.485	551.158
47.5	520.496	518.550	518.061	518.550	520.496	522.221	522.022
50.0	490.314	488.662	487.690	488.662	490.314	491.920	492.064
52.5	459.619	457.776	456.819	457.776	459.619	461.104	461.398
55.0	428.112	426.182	425.155	426.182	428.112	429.888	430.125
57.5	395.933	393.942	393.142	393.942	395.933	397.814	397.667
60.0	363.626	361.584	361.184	361.584	363.626	365.392	365.203
62.5	330.755	329.283	328.602	329.283	330.755	332.454	332.730
65.0	297.923	296.202	296.045	296.202	297.923	299.373	300.243
67.5	264.982	263.437	263.347	263.437	264.982	266.739	267.261
70.0	231.699	230.512	230.669	230.512	231.699	233.738	234.045
72.5	199.149	198.138	198.330	198.138	199.149	201.021	201.482
75.0	167.453	166.506	166.653	166.506	167.453	168.883	169.626
77.5	135.907	135.427	135.382	135.427	135.907	137.408	138.378
80.0	105.178	104.899	104.838	104.899	105.178	106.742	107.523

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CANDELA TABULATION - (Cont.)

82.5	75.680	75.437	76.090	75.437	75.680	77.373	77.437
85.0	47.907	48.054	48.560	48.054	47.907	49.152	49.357
87.5	21.610	21.917	22.112	21.917	21.610	23.485	23.421
90.0	21.149	11.299	2.822	11.299	21.149	24.358	23.606
92.5	22.480	12.954	5.930	12.954	22.480	29.802	32.042
95.0	23.773	15.203	10.595	15.203	23.773	30.301	32.163
97.5	27.085	18.390	14.493	18.390	27.085	33.888	35.789
100.0	31.258	22.371	19.616	22.371	31.258	38.086	40.102
102.5	35.478	26.704	24.874	26.704	35.478	42.848	44.730
105.0	39.968	31.555	29.741	31.555	39.968	47.846	49.757
107.5	44.608	36.675	35.411	36.675	44.608	52.102	54.394
110.0	49.626	42.070	41.238	42.070	49.626	56.506	58.685
112.5	54.550	47.760	45.232	47.760	54.550	61.155	63.075
115.0	60.042	53.098	52.736	53.098	60.042	66.349	68.362
117.5	65.642	59.072	58.298	59.072	65.642	71.904	73.933
120.0	71.123	64.870	63.306	64.870	71.123	77.853	79.370
122.5	77.248	71.923	69.037	71.923	77.248	83.373	84.938
125.0	83.283	77.389	76.701	77.389	83.283	88.854	90.291
127.5	89.014	82.976	80.934	82.976	89.014	94.602	96.202
130.0	95.325	89.360	87.322	89.360	95.325	100.378	101.862
132.5	102.019	94.931	94.714	94.931	102.019	105.962	107.626
135.0	107.373	100.819	100.541	100.819	107.373	111.370	113.162
137.5	112.557	107.011	105.088	107.011	112.557	116.470	118.195
140.0	117.670	114.339	110.880	114.339	117.670	121.510	123.520
142.5	122.598	120.259	118.237	120.259	122.598	126.426	127.952
145.0	128.080	124.848	124.627	124.848	128.080	130.931	132.768
147.5	132.829	129.613	128.896	129.613	132.829	135.341	136.758
150.0	137.024	133.910	133.280	133.910	137.024	139.411	141.104
152.5	140.813	138.778	137.126	138.778	140.813	143.411	144.688
155.0	144.848	142.954	142.202	142.954	144.848	146.957	148.506
157.5	148.285	146.429	146.278	146.429	148.285	150.413	151.568
160.0	151.629	149.734	149.421	149.734	151.629	153.434	154.202
162.5	154.912	153.264	152.816	153.264	154.912	156.038	156.800
165.0	157.213	156.064	155.885	156.064	157.213	158.378	159.018
167.5	159.501	158.630	158.989	158.630	159.501	160.330	160.749
170.0	161.248	160.387	160.858	160.387	161.248	162.048	162.310
172.5	162.794	162.173	162.125	162.173	162.794	163.213	163.398
175.0	163.677	163.507	163.814	163.507	163.677	164.237	164.349
177.5	164.464	164.170	164.227	164.170	164.464	164.672	164.861
180.0	164.579	164.579	164.579	164.579	164.579	164.579	164.579

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	304.88	N.A.	10.60
0-30	646.04	N.A.	22.40
0-40	1055.9	N.A.	36.60
0-60	1862.1	N.A.	64.60
0-80	2334.37	N.A.	81.00
0-90	2391.23	N.A.	83.00
10-90	2312.19	N.A.	80.20
20-40	751.02	N.A.	26.10
20-50	1174.79	N.A.	40.80
40-70	1101.07	N.A.	38.20
60-80	472.27	N.A.	16.40
70-80	177.40	N.A.	6.20
80-90	56.85	N.A.	2.00
90-110	67.62	N.A.	2.30
90-120	127.16	N.A.	4.40
90-130	201.55	N.A.	7.00
90-150	363.80	N.A.	12.60
90-180	490.51	N.A.	17.00
110-180	422.89	N.A.	14.70
0-180	2881.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	79.04
10-20	225.84
20-30	341.16
30-40	409.86
40-50	423.77
50-60	382.44
60-70	294.87
70-80	177.40
80-90	56.85
90-100	25.57
100-110	42.05
110-120	59.55
120-130	74.38
130-140	82.21
140-150	80.04
150-160	66.77
160-170	44.37
170-180	15.56

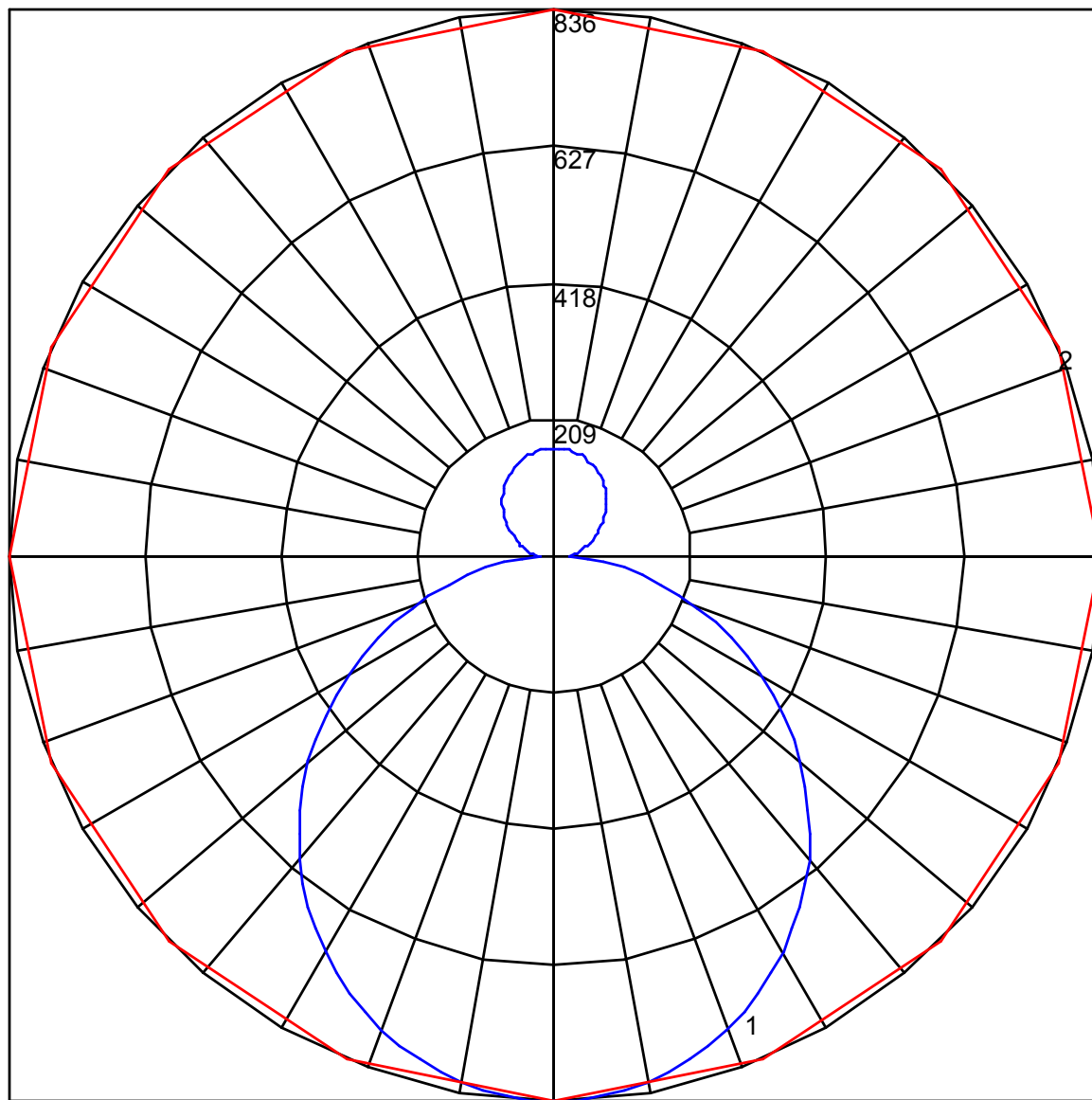
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	50	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	36	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 = 836.253 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.)