



IES INDOOR REPORT

PHOTOMETRIC FILENAME : P4018-LED35-MO-FWA-D9.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] P4018-LED35-MO-FWA -D9
 [TESTLAB] Intertek
 [ISSUE DATE] November 22, 2017
 [MANUFAC] Prudential Ltg

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3177
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	42
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	Circular w/ Sides
Luminous Length (0-180)	1.42 ft (Diameter)
Luminous Width (90-270)	1.42 ft (Diameter)
Luminous Height	0.50 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3347	3351	3353
55	2839	2843	2844
65	2248	2254	2259
75	1528	1550	1599
85	570	741	905

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	766.332	766.332	766.332	766.332	766.332	766.332	766.332	766.332	766.332	766.332
2.5	765.558	765.486	765.684	765.738	766.080	765.738	765.684	765.486	765.558	765.486
5.0	762.714	762.984	763.182	763.254	763.326	763.254	763.182	762.984	762.714	762.984
7.5	758.430	758.358	758.646	759.654	760.338	759.654	758.646	758.358	758.430	758.358
10.0	751.698	751.824	752.256	752.382	753.462	752.382	752.256	751.824	751.698	751.824
12.5	743.454	744.012	745.614	744.282	744.408	744.282	745.614	744.012	743.454	744.012
15.0	733.572	733.770	734.580	734.886	734.670	734.886	734.580	733.770	733.572	733.770
17.5	722.214	722.412	723.096	723.186	723.366	723.186	723.096	722.412	722.214	722.412
20.0	709.362	709.596	710.298	710.442	710.352	710.442	710.298	709.596	709.362	709.596
22.5	695.106	696.870	696.006	695.826	696.744	695.826	696.006	696.870	695.106	696.870
25.0	678.690	679.050	679.770	679.536	680.202	679.536	679.770	679.050	678.690	679.050
27.5	660.924	661.716	661.716	661.680	661.698	661.680	661.716	661.716	660.924	661.716
30.0	641.628	641.772	643.428	642.384	642.096	642.384	643.428	641.772	641.628	641.772
32.5	621.288	621.612	621.792	621.972	621.774	621.972	621.792	621.612	621.288	621.612
35.0	599.940	599.850	600.444	600.480	600.732	600.480	600.444	599.850	599.940	599.850
37.5	577.458	578.088	577.746	578.016	578.844	578.016	577.746	578.088	577.458	578.088
40.0	553.374	553.734	554.148	554.454	555.534	554.454	554.148	553.734	553.374	553.734
42.5	528.660	528.732	529.290	529.614	530.262	529.614	529.290	528.732	528.660	528.732
45.0	502.722	502.830	503.406	503.640	503.748	503.640	503.406	502.830	502.722	502.830
47.5	475.812	476.172	476.712	476.856	477.342	476.856	476.712	476.172	475.812	476.172
50.0	448.398	449.010	449.316	449.586	450.378	449.586	449.316	449.010	448.398	449.010
52.5	420.462	420.966	421.092	421.560	422.082	421.560	421.092	420.966	420.462	420.966
55.0	391.824	392.148	392.436	392.688	392.562	392.688	392.436	392.148	391.824	392.148
57.5	362.358	362.808	363.168	363.240	362.844	363.240	363.168	362.808	362.358	362.808
60.0	332.694	333.090	333.702	333.666	333.702	333.666	333.702	333.090	332.694	333.090
62.5	303.030	303.480	303.966	304.092	304.488	304.092	303.966	303.480	303.030	303.480
65.0	273.456	273.924	274.194	274.608	274.806	274.608	274.194	273.924	273.456	273.924
67.5	243.666	244.152	244.440	245.160	244.782	245.160	244.440	244.152	243.666	244.152
70.0	213.696	214.326	215.010	216.018	215.874	216.018	215.010	214.326	213.696	214.326
72.5	184.176	184.842	185.904	187.650	188.442	187.650	185.904	184.842	184.176	184.842
75.0	155.196	155.880	157.446	160.380	162.360	160.380	157.446	155.880	155.196	155.880
77.5	126.846	127.584	130.122	134.874	137.232	134.874	130.122	127.584	126.846	127.584
80.0	98.802	100.044	104.976	112.086	114.066	112.086	104.976	100.044	98.802	100.044
82.5	71.316	73.746	81.810	89.730	93.096	89.730	81.810	73.746	71.316	73.746
85.0	44.694	47.898	58.122	68.670	70.974	68.670	58.122	47.898	44.694	47.898
87.5	19.224	25.146	39.366	57.060	65.448	57.060	39.366	25.146	19.224	25.146
90.0	9.396	9.882	13.662	18.414	20.520	18.414	13.662	9.882	9.396	9.882
92.5	24.192	24.786	32.940	42.894	47.142	42.894	32.940	24.786	24.192	24.786
95.0	30.636	31.698	39.798	49.716	54.126	49.716	39.798	31.698	30.636	31.698
97.5	37.764	39.654	47.520	57.168	61.542	57.168	47.520	39.654	37.764	39.654
100.0	45.666	48.312	55.944	65.178	69.480	65.178	55.944	48.312	45.666	48.312
102.5	54.342	57.474	65.052	73.710	77.886	73.710	65.052	57.474	54.342	57.474
105.0	63.684	67.194	74.646	82.764	86.832	82.764	74.646	67.194	63.684	67.194
107.5	73.602	77.346	84.672	92.322	96.210	92.322	84.672	77.346	73.602	77.346
110.0	84.024	87.840	95.040	102.294	106.002	102.294	95.040	87.840	84.024	87.840
112.5	94.878	100.080	105.786	112.662	116.154	112.662	105.786	100.080	94.878	100.080
115.0	106.218	109.998	116.928	123.498	126.702	123.498	116.928	109.998	106.218	109.998
117.5	118.026	121.842	128.484	134.766	137.700	134.766	128.484	121.842	118.026	121.842
120.0	129.996	133.776	140.112	146.214	148.896	146.214	140.112	133.776	129.996	133.776
122.5	142.002	145.674	151.830	157.734	160.452	157.734	151.830	145.674	142.002	145.674
125.0	154.080	157.626	163.710	169.452	172.134	169.452	163.710	157.626	154.080	157.626
127.5	166.194	170.226	176.256	181.332	183.870	181.332	176.256	170.226	166.194	170.226
130.0	178.452	184.680	188.244	193.230	195.714	193.230	188.244	184.680	178.452	184.680
132.5	190.746	194.292	199.836	205.020	207.540	205.020	199.836	194.292	190.746	194.292

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CANDELA TABULATION - (Cont.)

135.0	202.788	206.244	211.590	216.486	218.988	216.486	211.590	206.244	202.788	206.244
137.5	214.542	218.538	223.074	227.646	230.076	227.646	223.074	218.538	214.542	218.538
140.0	226.134	231.642	234.396	238.716	240.768	238.716	234.396	231.642	226.134	231.642
142.5	238.392	243.792	245.394	249.786	251.244	249.786	245.394	243.792	238.392	243.792
145.0	251.262	252.810	256.122	259.866	261.288	259.866	256.122	252.810	251.262	252.810
147.5	262.584	263.052	267.156	269.298	270.756	269.298	267.156	263.052	262.584	263.052
150.0	269.856	274.374	277.578	278.262	279.720	278.262	277.578	274.374	269.856	274.374
152.5	278.586	282.186	285.282	286.938	288.162	286.938	285.282	282.186	278.586	282.186
155.0	287.604	290.160	293.184	294.948	296.010	294.948	293.184	290.160	287.604	290.160
157.5	295.830	298.278	301.032	302.382	303.174	302.382	301.032	298.278	295.830	298.278
160.0	303.408	305.658	308.034	308.952	309.636	308.952	308.034	305.658	303.408	305.658
162.5	310.050	312.282	314.388	314.910	315.396	314.910	314.388	312.282	310.050	312.282
165.0	316.206	318.150	319.986	320.184	320.634	320.184	319.986	318.150	316.206	318.150
167.5	321.444	323.280	324.900	324.756	325.008	324.756	324.900	323.280	321.444	323.280
170.0	325.746	327.456	328.842	328.482	328.572	328.482	328.842	327.456	325.746	327.456
172.5	329.130	330.786	331.920	331.344	331.308	331.344	331.920	330.786	329.130	330.786
175.0	331.578	333.072	334.116	333.342	333.252	333.342	334.116	333.072	331.578	333.072
177.5	332.946	334.458	335.412	334.620	334.584	334.620	335.412	334.458	332.946	334.458
180.0	335.034	335.034	335.034	335.034	335.034	335.034	335.034	335.034	335.034	335.034

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	766.332	766.332	766.332	766.332	766.332	766.332	766.332
2.5	765.684	765.738	766.080	765.738	765.684	765.486	765.558
5.0	763.182	763.254	763.326	763.254	763.182	762.984	762.714
7.5	758.646	759.654	760.338	759.654	758.646	758.358	758.430
10.0	752.256	752.382	753.462	752.382	752.256	751.824	751.698
12.5	745.614	744.282	744.408	744.282	745.614	744.012	743.454
15.0	734.580	734.886	734.670	734.886	734.580	733.770	733.572
17.5	723.096	723.186	723.366	723.186	723.096	722.412	722.214
20.0	710.298	710.442	710.352	710.442	710.298	709.596	709.362
22.5	696.006	695.826	696.744	695.826	696.006	696.870	695.106
25.0	679.770	679.536	680.202	679.536	679.770	679.050	678.690
27.5	661.716	661.680	661.698	661.680	661.716	661.716	660.924
30.0	643.428	642.384	642.096	642.384	643.428	641.772	641.628
32.5	621.792	621.972	621.774	621.972	621.792	621.612	621.288
35.0	600.444	600.480	600.732	600.480	600.444	599.850	599.940
37.5	577.746	578.016	578.844	578.016	577.746	578.088	577.458
40.0	554.148	554.454	555.534	554.454	554.148	553.734	553.374
42.5	529.290	529.614	530.262	529.614	529.290	528.732	528.660
45.0	503.406	503.640	503.748	503.640	503.406	502.830	502.722
47.5	476.712	476.856	477.342	476.856	476.712	476.172	475.812
50.0	449.316	449.586	450.378	449.586	449.316	449.010	448.398
52.5	421.092	421.560	422.082	421.560	421.092	420.966	420.462
55.0	392.436	392.688	392.562	392.688	392.436	392.148	391.824
57.5	363.168	363.240	362.844	363.240	363.168	362.808	362.358
60.0	333.702	333.666	333.702	333.666	333.702	333.090	332.694
62.5	303.966	304.092	304.488	304.092	303.966	303.480	303.030
65.0	274.194	274.608	274.806	274.608	274.194	273.924	273.456
67.5	244.440	245.160	244.782	245.160	244.440	244.152	243.666
70.0	215.010	216.018	215.874	216.018	215.010	214.326	213.696
72.5	185.904	187.650	188.442	187.650	185.904	184.842	184.176
75.0	157.446	160.380	162.360	160.380	157.446	155.880	155.196
77.5	130.122	134.874	137.232	134.874	130.122	127.584	126.846
80.0	104.976	112.086	114.066	112.086	104.976	100.044	98.802

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CANDELA TABULATION - (Cont.)

82.5	81.810	89.730	93.096	89.730	81.810	73.746	71.316
85.0	58.122	68.670	70.974	68.670	58.122	47.898	44.694
87.5	39.366	57.060	65.448	57.060	39.366	25.146	19.224
90.0	13.662	18.414	20.520	18.414	13.662	9.882	9.396
92.5	32.940	42.894	47.142	42.894	32.940	24.786	24.192
95.0	39.798	49.716	54.126	49.716	39.798	31.698	30.636
97.5	47.520	57.168	61.542	57.168	47.520	39.654	37.764
100.0	55.944	65.178	69.480	65.178	55.944	48.312	45.666
102.5	65.052	73.710	77.886	73.710	65.052	57.474	54.342
105.0	74.646	82.764	86.832	82.764	74.646	67.194	63.684
107.5	84.672	92.322	96.210	92.322	84.672	77.346	73.602
110.0	95.040	102.294	106.002	102.294	95.040	87.840	84.024
112.5	105.786	112.662	116.154	112.662	105.786	100.080	94.878
115.0	116.928	123.498	126.702	123.498	116.928	109.998	106.218
117.5	128.484	134.766	137.700	134.766	128.484	121.842	118.026
120.0	140.112	146.214	148.896	146.214	140.112	133.776	129.996
122.5	151.830	157.734	160.452	157.734	151.830	145.674	142.002
125.0	163.710	169.452	172.134	169.452	163.710	157.626	154.080
127.5	176.256	181.332	183.870	181.332	176.256	170.226	166.194
130.0	188.244	193.230	195.714	193.230	188.244	184.680	178.452
132.5	199.836	205.020	207.540	205.020	199.836	194.292	190.746
135.0	211.590	216.486	218.988	216.486	211.590	206.244	202.788
137.5	223.074	227.646	230.076	227.646	223.074	218.538	214.542
140.0	234.396	238.716	240.768	238.716	234.396	231.642	226.134
142.5	245.394	249.786	251.244	249.786	245.394	243.792	238.392
145.0	256.122	259.866	261.288	259.866	256.122	252.810	251.262
147.5	267.156	269.298	270.756	269.298	267.156	263.052	262.584
150.0	277.578	278.262	279.720	278.262	277.578	274.374	269.856
152.5	285.282	286.938	288.162	286.938	285.282	282.186	278.586
155.0	293.184	294.948	296.010	294.948	293.184	290.160	287.604
157.5	301.032	302.382	303.174	302.382	301.032	298.278	295.830
160.0	308.034	308.952	309.636	308.952	308.034	305.658	303.408
162.5	314.388	314.910	315.396	314.910	314.388	312.282	310.050
165.0	319.986	320.184	320.634	320.184	319.986	318.150	316.206
167.5	324.900	324.756	325.008	324.756	324.900	323.280	321.444
170.0	328.842	328.482	328.572	328.482	328.842	327.456	325.746
172.5	331.920	331.344	331.308	331.344	331.920	330.786	329.130
175.0	334.116	333.342	333.252	333.342	334.116	333.072	331.578
177.5	335.412	334.620	334.584	334.620	335.412	334.458	332.946
180.0	335.034	335.034	335.034	335.034	335.034	335.034	335.034

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	279.74	N.A.	8.80
0-30	592.80	N.A.	18.70
0-40	968.37	N.A.	30.50
0-60	1707.27	N.A.	53.70
0-80	2146.44	N.A.	67.60
0-90	2212.08	N.A.	69.60
10-90	2139.57	N.A.	67.30
20-40	688.64	N.A.	21.70
20-50	1076.86	N.A.	33.90
40-70	1010.31	N.A.	31.80
60-80	439.18	N.A.	13.80
70-80	167.76	N.A.	5.30
80-90	65.63	N.A.	2.10
90-110	122.84	N.A.	3.90
90-120	238.80	N.A.	7.50
90-130	385.28	N.A.	12.10
90-150	708.76	N.A.	22.30
90-180	965.27	N.A.	30.40
110-180	842.43	N.A.	26.50
0-180	3177.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	72.51
10-20	207.22
20-30	313.06
30-40	375.57
40-50	388.22
50-60	350.67
60-70	271.42
70-80	167.76
80-90	65.63
90-100	43.31
100-110	79.53
110-120	115.96
120-130	146.47
130-140	163.15
140-150	160.34
150-160	134.85
160-170	90.02
170-180	31.64

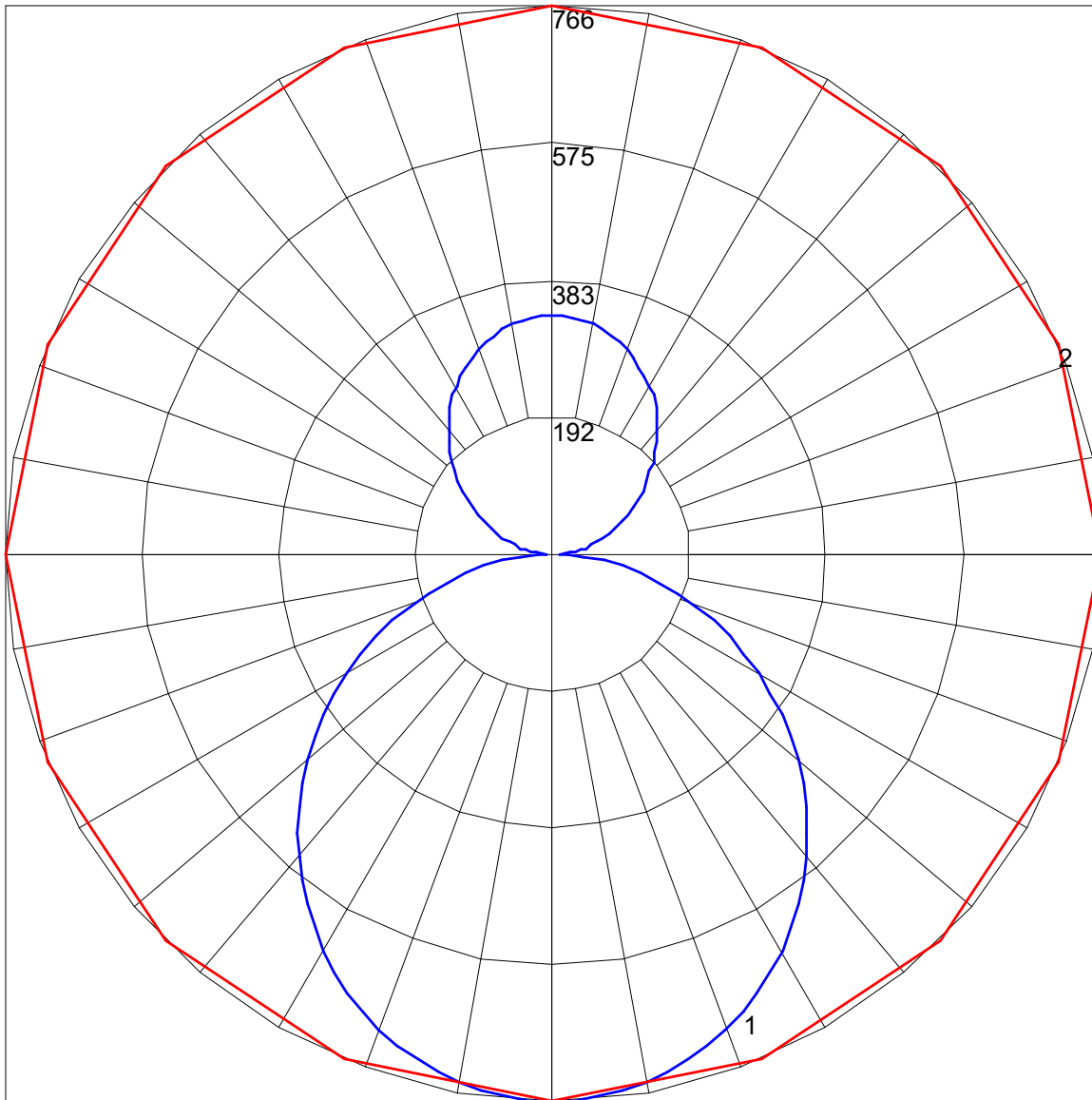
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	102	97	93	89	96	92	88	85	82	79	76	73	71	69	65	63	62	57
2	92	84	78	72	87	80	74	69	71	67	63	64	60	57	57	54	51	48
3	84	74	66	60	79	70	63	57	63	57	52	56	52	48	50	46	43	40
4	77	65	57	50	72	62	54	48	56	49	45	50	45	41	44	40	37	34
5	71	58	50	43	66	55	47	42	50	43	38	45	39	35	40	36	32	29
6	65	52	44	38	61	50	42	36	45	38	33	40	35	31	36	32	28	26
7	60	47	39	33	57	45	37	32	41	34	30	37	31	27	33	29	25	23
8	56	43	35	29	53	41	33	28	37	31	26	34	28	24	30	26	22	20
9	52	39	31	26	49	37	30	25	34	28	24	31	26	22	28	23	20	18
10	49	36	29	23	46	34	27	23	31	25	21	29	23	20	26	22	18	16

POLAR GRAPH



Maximum Candela = 766.332 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.)