



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] P4018-LED35-SO-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	3583
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	47
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	3774	3779	3782
55	3201	3206	3207
65	2535	2542	2548
75	1723	1748	1803
85	643	836	1021

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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>
<b>0.0</b>	864.252	864.252	864.252	864.252	864.252	864.252	864.252	864.252	864.252	864.252
<b>2.5</b>	863.379	863.298	863.521	863.582	863.968	863.582	863.521	863.298	863.379	863.298
<b>5.0</b>	860.172	860.476	860.700	860.781	860.862	860.781	860.700	860.476	860.172	860.476
<b>7.5</b>	855.340	855.259	855.584	856.721	857.492	856.721	855.584	855.259	855.340	855.259
<b>10.0</b>	847.748	847.890	848.378	848.520	849.738	848.520	848.378	847.890	847.748	847.890
<b>12.5</b>	838.451	839.080	840.887	839.385	839.527	839.385	840.887	839.080	838.451	839.080
<b>15.0</b>	827.306	827.529	828.443	828.788	828.544	828.788	828.443	827.529	827.306	827.529
<b>17.5</b>	814.497	814.720	815.492	815.593	815.796	815.593	815.492	814.720	814.497	814.720
<b>20.0</b>	800.003	800.267	801.058	801.221	801.119	801.221	801.058	800.267	800.003	800.267
<b>22.5</b>	783.925	785.914	784.940	784.737	785.772	784.737	784.940	785.914	783.925	785.914
<b>25.0</b>	765.411	765.817	766.629	766.366	767.117	766.366	766.629	765.817	765.411	765.817
<b>27.5</b>	745.375	746.269	746.269	746.228	746.248	746.228	746.269	746.269	745.375	746.269
<b>30.0</b>	723.614	723.776	725.644	724.466	724.142	724.466	725.644	723.776	723.614	723.776
<b>32.5</b>	700.675	701.040	701.243	701.446	701.223	701.446	701.243	701.040	700.675	701.040
<b>35.0</b>	676.599	676.497	677.167	677.208	677.492	677.208	677.167	676.497	676.599	676.497
<b>37.5</b>	651.244	651.955	651.569	651.874	652.807	651.874	651.569	651.955	651.244	651.955
<b>40.0</b>	624.083	624.489	624.956	625.301	626.519	625.301	624.956	624.489	624.083	624.489
<b>42.5</b>	596.211	596.292	596.921	597.287	598.018	597.287	596.921	596.292	596.211	596.292
<b>45.0</b>	566.959	567.080	567.730	567.994	568.116	567.994	567.730	567.080	566.959	567.080
<b>47.5</b>	536.610	537.016	537.625	537.788	538.336	537.788	537.625	537.016	536.610	537.016
<b>50.0</b>	505.693	506.383	506.729	507.033	507.926	507.033	506.729	506.383	505.693	506.383
<b>52.5</b>	474.188	474.756	474.898	475.426	476.015	475.426	474.898	474.756	474.188	474.756
<b>55.0</b>	441.890	442.256	442.581	442.865	442.723	442.865	442.581	442.256	441.890	442.256
<b>57.5</b>	408.659	409.167	409.573	409.654	409.207	409.654	409.573	409.167	408.659	409.167
<b>60.0</b>	375.205	375.651	376.342	376.301	376.342	376.301	376.342	375.651	375.205	375.651
<b>62.5</b>	341.750	342.258	342.806	342.948	343.395	342.948	342.806	342.258	341.750	342.258
<b>65.0</b>	308.398	308.925	309.230	309.697	309.920	309.697	309.230	308.925	308.398	308.925
<b>67.5</b>	274.801	275.349	275.674	276.486	276.060	276.486	275.674	275.349	274.801	275.349
<b>70.0</b>	241.002	241.712	242.483	243.620	243.458	243.620	242.483	241.712	241.002	241.712
<b>72.5</b>	207.710	208.461	209.658	211.627	212.521	211.627	209.658	208.461	207.710	208.461
<b>75.0</b>	175.027	175.798	177.564	180.873	183.106	180.873	177.564	175.798	175.027	175.798
<b>77.5</b>	143.054	143.886	146.749	152.108	154.767	152.108	146.749	143.886	143.054	143.886
<b>80.0</b>	111.427	112.827	118.390	126.408	128.641	126.408	118.390	112.827	111.427	112.827
<b>82.5</b>	80.429	83.169	92.263	101.195	104.992	101.195	92.263	83.169	80.429	83.169
<b>85.0</b>	50.405	54.018	65.549	77.444	80.043	77.444	65.549	54.018	50.405	54.018
<b>87.5</b>	21.680	28.359	44.396	64.351	73.811	64.351	44.396	28.359	21.680	28.359
<b>90.0</b>	10.597	11.145	15.408	20.767	23.142	20.767	15.408	11.145	10.597	11.145
<b>92.5</b>	27.283	27.953	37.149	48.375	53.166	48.375	37.149	27.953	27.283	27.953
<b>95.0</b>	34.551	35.748	44.883	56.069	61.042	56.069	44.883	35.748	34.551	35.748
<b>97.5</b>	42.589	44.721	53.592	64.473	69.406	64.473	53.592	44.721	42.589	44.721
<b>100.0</b>	51.501	54.485	63.092	73.506	78.358	73.506	63.092	54.485	51.501	54.485
<b>102.5</b>	61.286	64.818	73.364	83.128	87.838	83.128	73.364	64.818	61.286	64.818
<b>105.0</b>	71.821	75.780	84.184	93.339	97.927	93.339	84.184	75.780	71.821	75.780
<b>107.5</b>	83.007	87.229	95.491	104.119	108.503	104.119	95.491	87.229	83.007	87.229
<b>110.0</b>	94.760	99.064	107.184	115.365	119.547	115.365	107.184	99.064	94.760	99.064
<b>112.5</b>	107.001	112.868	119.303	127.058	130.996	127.058	119.303	112.868	107.001	112.868
<b>115.0</b>	119.790	124.053	131.869	139.278	142.892	139.278	131.869	124.053	119.790	124.053
<b>117.5</b>	133.107	137.411	144.901	151.986	155.295	151.986	144.901	137.411	133.107	137.411
<b>120.0</b>	146.607	150.870	158.015	164.897	167.922	164.897	158.015	150.870	146.607	150.870
<b>122.5</b>	160.147	164.288	171.230	177.889	180.954	177.889	171.230	164.288	160.147	164.288
<b>125.0</b>	173.768	177.767	184.628	191.104	194.129	191.104	184.628	177.767	173.768	177.767
<b>127.5</b>	187.430	191.977	198.778	204.502	207.364	204.502	198.778	191.977	187.430	191.977
<b>130.0</b>	201.254	208.278	212.297	217.920	220.722	217.920	212.297	208.278	201.254	208.278
<b>132.5</b>	215.119	219.118	225.371	231.217	234.059	231.217	225.371	219.118	215.119	219.118

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**CANDELA TABULATION - (Cont.)**

135.0	228.700	232.597	238.626	244.148	246.970	244.148	238.626	232.597	228.700	232.597
137.5	241.956	246.462	251.578	256.734	259.475	256.734	251.578	246.462	241.956	246.462
140.0	255.029	261.241	264.347	269.219	271.533	269.219	264.347	261.241	255.029	261.241
142.5	268.853	274.943	276.750	281.703	283.347	281.703	276.750	274.943	268.853	274.943
145.0	283.368	285.113	288.849	293.071	294.675	293.071	288.849	285.113	283.368	285.113
147.5	296.136	296.664	301.293	303.708	305.353	303.708	301.293	296.664	296.136	296.664
150.0	304.338	309.433	313.046	313.818	315.462	313.818	313.046	309.433	304.338	309.433
152.5	314.183	318.243	321.735	323.602	324.983	323.602	321.735	318.243	314.183	318.243
155.0	324.353	327.236	330.646	332.636	333.833	332.636	330.646	327.236	324.353	327.236
157.5	333.630	336.391	339.497	341.020	341.913	341.020	339.497	336.391	333.630	336.391
160.0	342.177	344.714	347.394	348.429	349.201	348.429	347.394	344.714	342.177	344.714
162.5	349.667	352.185	354.560	355.148	355.697	355.148	354.560	352.185	349.667	352.185
165.0	356.610	358.802	360.873	361.096	361.604	361.096	360.873	358.802	356.610	358.802
167.5	362.517	364.588	366.415	366.253	366.537	366.253	366.415	364.588	362.517	364.588
170.0	367.369	369.298	370.861	370.455	370.556	370.455	370.861	369.298	367.369	369.298
172.5	371.185	373.053	374.332	373.682	373.642	373.682	374.332	373.053	371.185	373.053
175.0	373.946	375.631	376.809	375.936	375.834	375.936	376.809	375.631	373.946	375.631
177.5	375.489	377.194	378.270	377.377	377.336	377.377	378.270	377.194	375.489	377.194
180.0	377.844	377.844	377.844	377.844	377.844	377.844	377.844	377.844	377.844	377.844

**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	864.252	864.252	864.252	864.252	864.252	864.252	864.252
2.5	863.521	863.582	863.968	863.582	863.521	863.298	863.379
5.0	860.700	860.781	860.862	860.781	860.700	860.476	860.172
7.5	855.584	856.721	857.492	856.721	855.584	855.259	855.340
10.0	848.378	848.520	849.738	848.520	848.378	847.890	847.748
12.5	840.887	839.385	839.527	839.385	840.887	839.080	838.451
15.0	828.443	828.788	828.544	828.788	828.443	827.529	827.306
17.5	815.492	815.593	815.796	815.593	815.492	814.720	814.497
20.0	801.058	801.221	801.119	801.221	801.058	800.267	800.003
22.5	784.940	784.737	785.772	784.737	784.940	785.914	783.925
25.0	766.629	766.366	767.117	766.366	766.629	765.817	765.411
27.5	746.269	746.228	746.248	746.228	746.269	746.269	745.375
30.0	725.644	724.466	724.142	724.466	725.644	723.776	723.614
32.5	701.243	701.446	701.223	701.446	701.243	701.040	700.675
35.0	677.167	677.208	677.492	677.208	677.167	676.497	676.599
37.5	651.569	651.874	652.807	651.874	651.569	651.955	651.244
40.0	624.956	625.301	626.519	625.301	624.956	624.489	624.083
42.5	596.921	597.287	598.018	597.287	596.921	596.292	596.211
45.0	567.730	567.994	568.116	567.994	567.730	567.080	566.959
47.5	537.625	537.788	538.336	537.788	537.625	537.016	536.610
50.0	506.729	507.033	507.926	507.033	506.729	506.383	505.693
52.5	474.898	475.426	476.015	475.426	474.898	474.756	474.188
55.0	442.581	442.865	442.723	442.865	442.581	442.256	441.890
57.5	409.573	409.654	409.207	409.654	409.573	409.167	408.659
60.0	376.342	376.301	376.342	376.301	376.342	375.651	375.205
62.5	342.806	342.948	343.395	342.948	342.806	342.258	341.750
65.0	309.230	309.697	309.920	309.697	309.230	308.925	308.398
67.5	275.674	276.486	276.060	276.486	275.674	275.349	274.801
70.0	242.483	243.620	243.458	243.620	242.483	241.712	241.002
72.5	209.658	211.627	212.521	211.627	209.658	208.461	207.710
75.0	177.564	180.873	183.106	180.873	177.564	175.798	175.027
77.5	146.749	152.108	154.767	152.108	146.749	143.886	143.054
80.0	118.390	126.408	128.641	126.408	118.390	112.827	111.427

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**CANDELA TABULATION - (Cont.)**

82.5	92.263	101.195	104.992	101.195	92.263	83.169	80.429
85.0	65.549	77.444	80.043	77.444	65.549	54.018	50.405
87.5	44.396	64.351	73.811	64.351	44.396	28.359	21.680
90.0	15.408	20.767	23.142	20.767	15.408	11.145	10.597
92.5	37.149	48.375	53.166	48.375	37.149	27.953	27.283
95.0	44.883	56.069	61.042	56.069	44.883	35.748	34.551
97.5	53.592	64.473	69.406	64.473	53.592	44.721	42.589
100.0	63.092	73.506	78.358	73.506	63.092	54.485	51.501
102.5	73.364	83.128	87.838	83.128	73.364	64.818	61.286
105.0	84.184	93.339	97.927	93.339	84.184	75.780	71.821
107.5	95.491	104.119	108.503	104.119	95.491	87.229	83.007
110.0	107.184	115.365	119.547	115.365	107.184	99.064	94.760
112.5	119.303	127.058	130.996	127.058	119.303	112.868	107.001
115.0	131.869	139.278	142.892	139.278	131.869	124.053	119.790
117.5	144.901	151.986	155.295	151.986	144.901	137.411	133.107
120.0	158.015	164.897	167.922	164.897	158.015	150.870	146.607
122.5	171.230	177.889	180.954	177.889	171.230	164.288	160.147
125.0	184.628	191.104	194.129	191.104	184.628	177.767	173.768
127.5	198.778	204.502	207.364	204.502	198.778	191.977	187.430
130.0	212.297	217.920	220.722	217.920	212.297	208.278	201.254
132.5	225.371	231.217	234.059	231.217	225.371	219.118	215.119
135.0	238.626	244.148	246.970	244.148	238.626	232.597	228.700
137.5	251.578	256.734	259.475	256.734	251.578	246.462	241.956
140.0	264.347	269.219	271.533	269.219	264.347	261.241	255.029
142.5	276.750	281.703	283.347	281.703	276.750	274.943	268.853
145.0	288.849	293.071	294.675	293.071	288.849	285.113	283.368
147.5	301.293	303.708	305.353	303.708	301.293	296.664	296.136
150.0	313.046	313.818	315.462	313.818	313.046	309.433	304.338
152.5	321.735	323.602	324.983	323.602	321.735	318.243	314.183
155.0	330.646	332.636	333.833	332.636	330.646	327.236	324.353
157.5	339.497	341.020	341.913	341.020	339.497	336.391	333.630
160.0	347.394	348.429	349.201	348.429	347.394	344.714	342.177
162.5	354.560	355.148	355.697	355.148	354.560	352.185	349.667
165.0	360.873	361.096	361.604	361.096	360.873	358.802	356.610
167.5	366.415	366.253	366.537	366.253	366.415	364.588	362.517
170.0	370.861	370.455	370.556	370.455	370.861	369.298	367.369
172.5	374.332	373.682	373.642	373.682	374.332	373.053	371.185
175.0	376.809	375.936	375.834	375.936	376.809	375.631	373.946
177.5	378.270	377.377	377.336	377.377	378.270	377.194	375.489
180.0	377.844	377.844	377.844	377.844	377.844	377.844	377.844

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	315.48	N.A.	8.80
0-30	668.54	N.A.	18.70
0-40	1092.11	N.A.	30.50
0-60	1925.42	N.A.	53.70
0-80	2420.71	N.A.	67.60
0-90	2494.73	N.A.	69.60
10-90	2412.95	N.A.	67.30
20-40	776.63	N.A.	21.70
20-50	1214.46	N.A.	33.90
40-70	1139.41	N.A.	31.80
60-80	495.29	N.A.	13.80
70-80	189.20	N.A.	5.30
80-90	74.02	N.A.	2.10
90-110	138.54	N.A.	3.90
90-120	269.32	N.A.	7.50
90-130	434.51	N.A.	12.10
90-150	799.33	N.A.	22.30
90-180	1088.61	N.A.	30.40
110-180	950.08	N.A.	26.50
0-180	3583.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	81.78
10-20	233.70
20-30	353.06
30-40	423.56
40-50	437.83
50-60	395.48
60-70	306.10
70-80	189.20
80-90	74.02
90-100	48.85
100-110	89.69
110-120	130.78
120-130	165.19
130-140	184.00
140-150	180.82
150-160	152.08
160-170	101.52
170-180	35.69

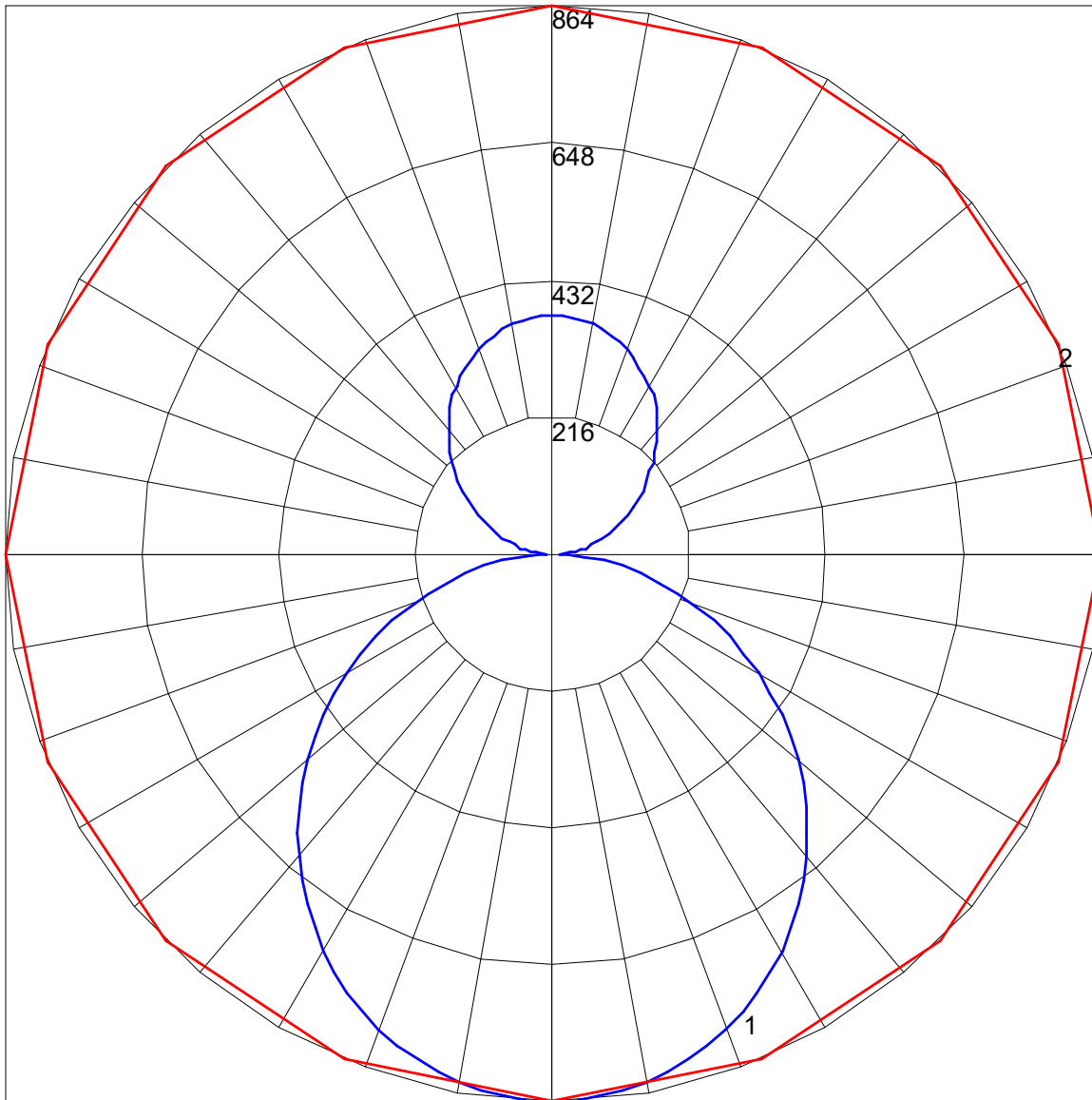
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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 = 864.252 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.)