



IES INDOOR REPORT

PHOTOMETRIC FILENAME : P4020-LED35-MO-FWA-D9.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] P4020-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	5253
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	59
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)	2.04 ft (Diameter)
Luminous Width (90-270)	2.04 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	3663	3680	3694
55	3174	3206	3220
65	2578	2608	2630
75	1809	1834	1853
85	785	777	763

IES INDOOR REPORT
PHOTOMETRIC FILENAME : P4020-LED35-MO-FWA-D9.IES

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	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876
2.5	1582.056	1582.476	1583.120	1582.392	1582.504	1582.392	1583.120	1582.476	1582.056	1582.476
5.0	1576.190	1576.708	1576.694	1577.226	1576.792	1577.226	1576.694	1576.708	1576.190	1576.708
7.5	1567.104	1566.180	1566.642	1567.762	1567.720	1567.762	1566.642	1566.180	1567.104	1566.180
10.0	1552.978	1553.720	1553.482	1553.524	1554.630	1553.524	1553.482	1553.720	1552.978	1553.720
12.5	1536.444	1537.956	1536.822	1536.934	1537.326	1536.934	1536.822	1537.956	1536.444	1537.956
15.0	1515.696	1516.144	1516.690	1517.502	1516.578	1517.502	1516.690	1516.144	1515.696	1516.144
17.5	1491.476	1492.064	1492.932	1493.926	1493.324	1493.926	1492.932	1492.064	1491.476	1492.064
20.0	1464.694	1465.898	1466.766	1467.326	1466.472	1467.326	1466.766	1465.898	1464.694	1465.898
22.5	1433.964	1435.224	1437.618	1437.142	1436.904	1437.142	1437.618	1435.224	1433.964	1435.224
25.0	1401.162	1401.946	1403.220	1404.270	1405.110	1404.270	1403.220	1401.946	1401.162	1401.946
27.5	1363.670	1363.978	1366.680	1367.156	1368.822	1367.156	1366.680	1363.978	1363.670	1363.978
30.0	1321.978	1323.658	1326.444	1327.480	1327.942	1327.480	1326.444	1323.658	1321.978	1323.658
32.5	1281.406	1281.742	1284.822	1285.998	1286.922	1285.998	1284.822	1281.742	1281.406	1281.742
35.0	1236.704	1237.390	1241.464	1242.262	1243.074	1242.262	1241.464	1237.390	1236.704	1237.390
37.5	1190.532	1190.784	1194.298	1195.796	1197.504	1195.796	1194.298	1190.784	1190.532	1190.784
40.0	1139.390	1141.112	1144.962	1146.712	1147.510	1146.712	1144.962	1141.112	1139.390	1141.112
42.5	1088.178	1090.404	1092.910	1095.164	1095.682	1095.164	1092.910	1090.404	1088.178	1090.404
45.0	1034.530	1035.706	1039.290	1041.866	1043.280	1041.866	1039.290	1035.706	1034.530	1035.706
47.5	978.922	980.168	983.906	986.748	988.722	986.748	983.906	980.168	978.922	980.168
50.0	921.494	922.390	927.080	929.530	930.566	929.530	927.080	922.390	921.494	922.390
52.5	862.302	864.346	867.272	871.346	871.374	871.346	867.272	864.346	862.302	864.346
55.0	801.080	804.622	809.074	811.006	812.560	811.006	809.074	804.622	801.080	804.622
57.5	743.050	742.826	747.096	750.470	750.932	750.470	747.096	742.826	743.050	742.826
60.0	678.818	680.820	684.012	687.960	688.870	687.960	684.012	680.820	678.818	680.820
62.5	616.938	619.990	622.202	626.794	626.836	626.794	622.202	619.990	616.938	619.990
65.0	553.392	556.752	560.000	564.564	564.578	564.564	560.000	556.752	553.392	556.752
67.5	491.638	494.298	497.700	501.102	502.292	501.102	497.700	494.298	491.638	494.298
70.0	430.332	431.424	434.098	438.718	439.516	438.718	434.098	431.424	430.332	431.424
72.5	368.018	369.390	372.456	376.208	377.832	376.208	372.456	369.390	368.018	369.390
75.0	308.364	308.112	312.676	315.560	315.924	315.560	312.676	308.112	308.364	308.112
77.5	250.810	251.720	253.204	256.956	257.544	256.956	253.204	251.720	250.810	251.720
80.0	196.392	198.212	197.442	200.312	200.368	200.312	197.442	198.212	196.392	198.212
82.5	145.460	144.200	144.970	145.012	145.474	145.012	144.970	144.200	145.460	144.200
85.0	95.088	95.270	94.094	92.372	92.456	92.372	94.094	95.270	95.088	95.270
87.5	41.356	46.494	48.818	46.172	44.758	46.172	48.818	46.494	41.356	46.494
90.0	5.264	16.128	31.444	42.126	46.116	42.126	31.444	16.128	5.264	16.128
92.5	7.546	17.794	31.892	41.650	44.786	41.650	31.892	17.794	7.546	17.794
95.0	13.664	21.532	35.518	45.878	49.364	45.878	35.518	21.532	13.664	21.532
97.5	20.790	26.768	40.124	49.896	53.312	49.896	40.124	26.768	20.790	26.768
100.0	29.008	32.816	45.654	55.356	58.534	55.356	45.654	32.816	29.008	32.816
102.5	36.834	39.690	51.912	61.796	64.736	61.796	51.912	39.690	36.834	39.690
105.0	45.136	47.474	58.660	68.628	71.428	68.628	58.660	47.474	45.136	47.474
107.5	53.578	55.510	66.304	75.404	78.302	75.404	66.304	55.510	53.578	55.510
110.0	61.754	63.756	73.654	82.306	85.302	82.306	73.654	63.756	61.754	63.756
112.5	73.262	72.856	81.298	89.810	92.974	89.810	81.298	72.856	73.262	72.856
115.0	81.662	80.752	89.474	97.678	101.052	97.678	89.474	80.752	81.662	80.752
117.5	88.872	91.154	98.084	106.078	109.494	106.078	98.084	91.154	88.872	91.154
120.0	100.646	101.416	107.128	114.646	117.950	114.646	107.128	101.416	100.646	101.416
122.5	110.236	109.550	116.676	123.354	126.560	123.354	116.676	109.550	110.236	109.550
125.0	119.294	117.278	126.322	132.020	135.212	132.020	126.322	117.278	119.294	117.278
127.5	128.744	127.078	136.318	140.630	143.836	140.630	136.318	127.078	128.744	127.078
130.0	138.572	136.416	145.222	149.324	152.418	149.324	145.222	136.416	138.572	136.416
132.5	145.348	145.614	153.244	157.878	160.860	157.878	153.244	145.614	145.348	145.614

IES INDOOR REPORT
PHOTOMETRIC FILENAME : P4020-LED35-MO-FWA-D9.IES

CANDELA TABULATION - (Cont.)

135.0	152.208	156.450	160.860	166.096	168.938	166.096	160.860	156.450	152.208	156.450
137.5	164.108	165.578	168.448	173.936	176.708	173.936	168.448	165.578	164.108	165.578
140.0	174.594	174.006	176.694	181.524	184.184	181.524	176.694	174.006	174.594	174.006
142.5	185.206	181.146	184.674	188.888	191.352	188.888	184.674	181.146	185.206	181.146
145.0	192.668	187.110	192.192	195.874	198.100	195.874	192.192	187.110	192.668	187.110
147.5	195.790	194.754	198.702	202.398	204.414	202.398	198.702	194.754	195.790	194.754
150.0	202.384	203.322	204.526	208.474	210.238	208.474	204.526	203.322	202.384	203.322
152.5	211.666	210.406	210.378	214.130	215.670	214.130	210.378	210.406	211.666	210.406
155.0	217.462	214.942	216.146	219.380	220.794	219.380	216.146	214.942	217.462	214.942
157.5	221.592	219.996	221.424	224.112	225.484	224.112	221.424	219.996	221.592	219.996
160.0	226.912	225.316	226.128	228.270	229.586	228.270	226.128	225.316	226.912	225.316
162.5	232.022	230.146	230.468	232.078	233.170	232.078	230.468	230.146	232.022	230.146
165.0	236.502	234.444	234.220	235.424	236.306	235.424	234.220	234.444	236.502	234.444
167.5	240.380	238.126	237.594	238.322	238.938	238.322	237.594	238.126	240.380	238.126
170.0	243.698	241.164	240.198	240.646	241.234	240.646	240.198	241.164	243.698	241.164
172.5	246.274	243.586	242.382	242.424	242.928	242.424	242.382	243.586	246.274	243.586
175.0	247.996	245.308	243.852	243.656	243.992	243.656	243.852	245.308	247.996	245.308
177.5	249.116	246.344	244.706	244.440	244.804	244.440	244.706	246.344	249.116	246.344
180.0	245.924	245.924	245.924	245.924	245.924	245.924	245.924	245.924	245.924	245.924

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	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876	1583.876
2.5	1583.120	1582.392	1582.504	1582.392	1583.120	1582.476	1582.056
5.0	1576.694	1577.226	1576.792	1577.226	1576.694	1576.708	1576.190
7.5	1566.642	1567.762	1567.720	1567.762	1566.642	1566.180	1567.104
10.0	1553.482	1553.524	1554.630	1553.524	1553.482	1553.720	1552.978
12.5	1536.822	1536.934	1537.326	1536.934	1536.822	1537.956	1536.444
15.0	1516.690	1517.502	1516.578	1517.502	1516.690	1516.144	1515.696
17.5	1492.932	1493.926	1493.324	1493.926	1492.932	1492.064	1491.476
20.0	1466.766	1467.326	1466.472	1467.326	1466.766	1465.898	1464.694
22.5	1437.618	1437.142	1436.904	1437.142	1437.618	1435.224	1433.964
25.0	1403.220	1404.270	1405.110	1404.270	1403.220	1401.946	1401.162
27.5	1366.680	1367.156	1368.822	1367.156	1366.680	1363.978	1363.670
30.0	1326.444	1327.480	1327.942	1327.480	1326.444	1323.658	1321.978
32.5	1284.822	1285.998	1286.922	1285.998	1284.822	1281.742	1281.406
35.0	1241.464	1242.262	1243.074	1242.262	1241.464	1237.390	1236.704
37.5	1194.298	1195.796	1197.504	1195.796	1194.298	1190.784	1190.532
40.0	1144.962	1146.712	1147.510	1146.712	1144.962	1141.112	1139.390
42.5	1092.910	1095.164	1095.682	1095.164	1092.910	1090.404	1088.178
45.0	1039.290	1041.866	1043.280	1041.866	1039.290	1035.706	1034.530
47.5	983.906	986.748	988.722	986.748	983.906	980.168	978.922
50.0	927.080	929.530	930.566	929.530	927.080	922.390	921.494
52.5	867.272	871.346	871.374	871.346	867.272	864.346	862.302
55.0	809.074	811.006	812.560	811.006	809.074	804.622	801.080
57.5	747.096	750.470	750.932	750.470	747.096	742.826	743.050
60.0	684.012	687.960	688.870	687.960	684.012	680.820	678.818
62.5	622.202	626.794	626.836	626.794	622.202	619.990	616.938
65.0	560.000	564.564	564.578	564.564	560.000	556.752	553.392
67.5	497.700	501.102	502.292	501.102	497.700	494.298	491.638
70.0	434.098	438.718	439.516	438.718	434.098	431.424	430.332
72.5	372.456	376.208	377.832	376.208	372.456	369.390	368.018
75.0	312.676	315.560	315.924	315.560	312.676	308.112	308.364
77.5	253.204	256.956	257.544	256.956	253.204	251.720	250.810
80.0	197.442	200.312	200.368	200.312	197.442	198.212	196.392

IES INDOOR REPORT
PHOTOMETRIC FILENAME : P4020-LED35-MO-FWA-D9.IES

CANDELA TABULATION - (Cont.)

82.5	144.970	145.012	145.474	145.012	144.970	144.200	145.460
85.0	94.094	92.372	92.456	92.372	94.094	95.270	95.088
87.5	48.818	46.172	44.758	46.172	48.818	46.494	41.356
90.0	31.444	42.126	46.116	42.126	31.444	16.128	5.264
92.5	31.892	41.650	44.786	41.650	31.892	17.794	7.546
95.0	35.518	45.878	49.364	45.878	35.518	21.532	13.664
97.5	40.124	49.896	53.312	49.896	40.124	26.768	20.790
100.0	45.654	55.356	58.534	55.356	45.654	32.816	29.008
102.5	51.912	61.796	64.736	61.796	51.912	39.690	36.834
105.0	58.660	68.628	71.428	68.628	58.660	47.474	45.136
107.5	66.304	75.404	78.302	75.404	66.304	55.510	53.578
110.0	73.654	82.306	85.302	82.306	73.654	63.756	61.754
112.5	81.298	89.810	92.974	89.810	81.298	72.856	73.262
115.0	89.474	97.678	101.052	97.678	89.474	80.752	81.662
117.5	98.084	106.078	109.494	106.078	98.084	91.154	88.872
120.0	107.128	114.646	117.950	114.646	107.128	101.416	100.646
122.5	116.676	123.354	126.560	123.354	116.676	109.550	110.236
125.0	126.322	132.020	135.212	132.020	126.322	117.278	119.294
127.5	136.318	140.630	143.836	140.630	136.318	127.078	128.744
130.0	145.222	149.324	152.418	149.324	145.222	136.416	138.572
132.5	153.244	157.878	160.860	157.878	153.244	145.614	145.348
135.0	160.860	166.096	168.938	166.096	160.860	156.450	152.208
137.5	168.448	173.936	176.708	173.936	168.448	165.578	164.108
140.0	176.694	181.524	184.184	181.524	176.694	174.006	174.594
142.5	184.674	188.888	191.352	188.888	184.674	181.146	185.206
145.0	192.192	195.874	198.100	195.874	192.192	187.110	192.668
147.5	198.702	202.398	204.414	202.398	198.702	194.754	195.790
150.0	204.526	208.474	210.238	208.474	204.526	203.322	202.384
152.5	210.378	214.130	215.670	214.130	210.378	210.406	211.666
155.0	216.146	219.380	220.794	219.380	216.146	214.942	217.462
157.5	221.424	224.112	225.484	224.112	221.424	219.996	221.592
160.0	226.128	228.270	229.586	228.270	226.128	225.316	226.912
162.5	230.468	232.078	233.170	232.078	230.468	230.146	232.022
165.0	234.220	235.424	236.306	235.424	234.220	234.444	236.502
167.5	237.594	238.322	238.938	238.322	237.594	238.126	240.380
170.0	240.198	240.646	241.234	240.646	240.198	241.164	243.698
172.5	242.382	242.424	242.928	242.424	242.382	243.586	246.274
175.0	243.852	243.656	243.992	243.656	243.852	245.308	247.996
177.5	244.706	244.440	244.804	244.440	244.706	246.344	249.116
180.0	245.924	245.924	245.924	245.924	245.924	245.924	245.924

IES INDOOR REPORT
PHOTOMETRIC FILENAME : P4020-LED35-MO-FWA-D9.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	577.72	N.A.	11.00
0-30	1224.00	N.A.	23.30
0-40	1999.65	N.A.	38.10
0-60	3522.7	N.A.	67.10
0-80	4408.09	N.A.	83.90
0-90	4516.59	N.A.	86.00
10-90	4366.82	N.A.	83.10
20-40	1421.93	N.A.	27.10
20-50	2223.19	N.A.	42.30
40-70	2077.29	N.A.	39.50
60-80	885.39	N.A.	16.90
70-80	331.15	N.A.	6.30
80-90	108.50	N.A.	2.10
90-110	99.40	N.A.	1.90
90-120	188.75	N.A.	3.60
90-130	301.46	N.A.	5.70
90-150	546.26	N.A.	10.40
90-180	736.02	N.A.	14.00
110-180	636.62	N.A.	12.10
0-180	5252.6	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	149.77
10-20	427.95
20-30	646.28
30-40	775.65
40-50	801.26
50-60	721.80
60-70	554.23
70-80	331.15
80-90	108.50
90-100	37.64
100-110	61.76
110-120	89.35
120-130	112.71
130-140	124.34
140-150	120.46
150-160	100.17
160-170	66.33
170-180	23.25

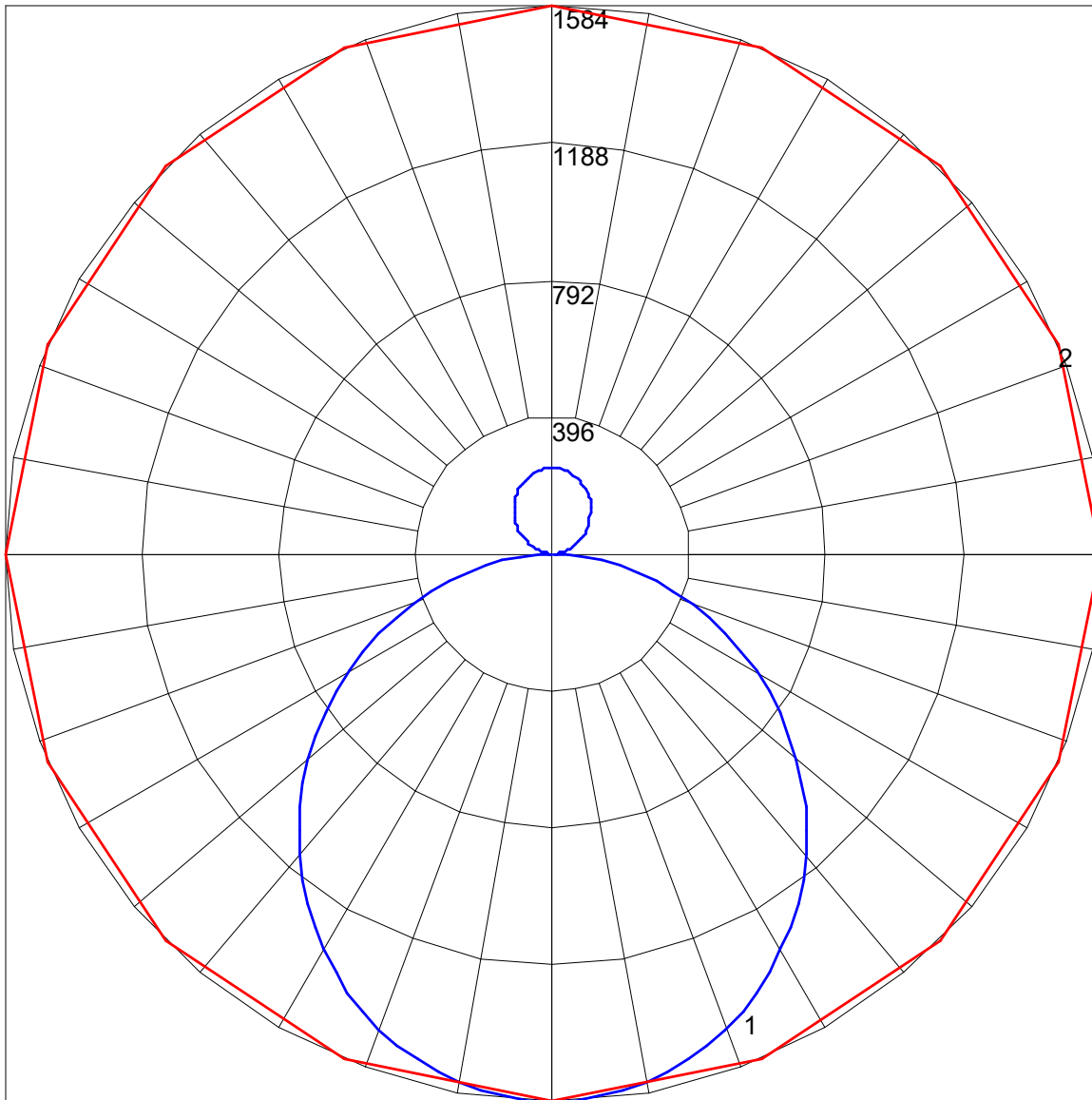
IES INDOOR REPORT
PHOTOMETRIC FILENAME : P4020-LED35-MO-FWA-D9.IES

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	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	105	101	96	92	101	97	93	90	90	87	84	84	81	79	78	76	74	71
2	96	88	81	75	92	84	78	73	79	74	69	73	69	66	68	65	62	59
3	87	77	69	62	84	74	67	61	69	63	58	65	60	55	60	56	53	50
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	54	49	45	42
5	73	61	52	45	70	59	50	44	55	48	43	52	46	41	48	43	39	37
6	68	54	46	39	65	53	45	39	50	42	37	47	40	36	44	39	34	32
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25
9	54	41	33	28	52	40	32	27	38	31	26	36	30	25	34	29	25	23
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21

POLAR GRAPH



Maximum Candela = 1583.876 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.)