



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BPEN-PRO-LED35-LO.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] BPEN-PRO-LED35-LO
 [TESTLAB] IN TERTEK
 [ISSUEDATE] 8-13-18
 [MANUFAC] PRUDENTIAL
 [_TOTALLUMINAIRELUMENS] 5093.7

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5043
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	38
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.13 ft
Luminous Width (90-270)	0.17 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	36436	23096	20859
55	36547	20350	18029
65	37537	17521	15260
75	40424	14382	12231
85	53289	10779	8875

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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	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863
2.5	1363.230	1362.141	1364.913	1365.309	1365.804	1366.299	1369.368	1372.239	1374.615	1372.239
5.0	1359.270	1360.359	1363.032	1367.289	1366.299	1363.131	1362.339	1367.982	1367.586	1367.982
7.5	1359.765	1349.568	1356.993	1354.716	1352.736	1354.914	1358.577	1356.498	1351.845	1356.498
10.0	1345.509	1339.569	1340.856	1340.955	1343.430	1339.470	1346.202	1348.875	1339.470	1348.875
12.5	1329.075	1327.788	1324.917	1326.006	1329.471	1322.640	1328.976	1336.104	1323.432	1336.104
15.0	1309.572	1307.592	1305.513	1308.483	1309.770	1303.731	1311.354	1316.898	1304.424	1316.898
17.5	1286.703	1283.436	1281.654	1288.782	1285.317	1286.406	1294.425	1291.950	1283.040	1291.950
20.0	1259.874	1256.904	1258.587	1261.656	1259.676	1260.468	1271.655	1270.368	1257.300	1270.368
22.5	1230.174	1228.689	1230.471	1237.302	1234.629	1227.798	1242.351	1239.975	1228.590	1239.975
25.0	1199.979	1198.098	1190.574	1197.504	1209.285	1195.227	1207.701	1207.008	1197.999	1207.008
27.5	1163.943	1156.419	1156.716	1163.844	1165.527	1162.854	1174.140	1173.150	1172.853	1173.150
30.0	1131.075	1120.284	1119.888	1129.689	1129.293	1128.897	1138.896	1139.391	1139.787	1139.391
32.5	1093.950	1082.367	1082.070	1093.653	1092.861	1093.752	1107.513	1104.345	1102.365	1104.345
35.0	1057.617	1045.341	1047.618	1061.181	1057.815	1063.656	1068.507	1071.576	1063.557	1071.576
37.5	1018.809	1008.117	1007.919	1020.987	1019.403	1025.343	1032.273	1035.936	1026.729	1035.936
40.0	981.189	970.596	971.685	983.169	986.634	985.743	996.633	999.801	991.782	999.801
42.5	943.866	932.085	934.560	947.925	946.539	949.212	960.993	963.171	956.934	963.171
45.0	906.741	895.257	896.742	911.196	910.800	914.463	925.353	927.234	924.858	927.234
47.5	869.814	857.736	861.498	875.259	875.061	878.724	889.614	896.049	891.693	896.049
50.0	833.283	820.710	823.482	838.827	839.916	843.876	854.667	857.934	855.756	857.934
52.5	795.564	783.882	787.743	801.900	803.187	808.137	818.928	821.997	818.334	821.997
55.0	758.043	746.262	750.717	765.963	766.161	773.289	781.605	787.644	783.387	787.644
57.5	720.027	708.840	711.909	729.036	729.828	735.867	744.381	749.826	750.024	749.826
60.0	678.546	669.141	674.091	689.535	690.921	696.861	707.454	713.592	709.038	713.592
62.5	638.847	628.650	633.897	649.836	651.123	657.360	667.260	672.705	668.151	672.705
65.0	599.346	588.951	592.812	610.632	610.929	616.275	626.967	632.907	628.056	632.907
67.5	558.756	547.470	553.212	569.844	571.032	575.190	586.278	591.624	588.555	591.624
70.0	517.077	506.088	512.127	528.462	530.739	532.422	544.302	550.638	546.084	550.638
72.5	473.418	463.815	469.755	488.070	487.971	490.149	502.425	506.682	502.128	506.682
75.0	432.828	422.433	427.878	446.490	444.708	447.480	459.063	463.815	457.776	463.815
77.5	393.426	381.150	386.199	404.811	402.633	404.118	417.681	421.047	415.899	421.047
80.0	350.262	340.560	345.807	365.211	360.657	362.043	376.695	379.665	372.042	379.665
82.5	311.751	301.455	305.415	324.027	321.255	320.166	335.511	338.283	330.462	338.283
85.0	272.943	262.647	266.904	284.724	280.269	278.388	295.713	296.901	285.912	296.901
87.5	229.779	212.058	214.038	232.155	225.918	217.503	230.373	229.185	214.830	229.185
90.0	146.025	132.858	134.541	152.955	145.926	137.907	151.272	148.500	135.432	148.500
92.5	133.452	122.463	123.552	142.164	134.838	128.403	140.778	138.699	126.522	138.699
95.0	152.658	142.362	142.065	156.519	146.916	144.936	165.231	169.785	165.528	169.785
97.5	156.420	142.560	144.738	160.281	159.489	147.213	156.420	158.400	154.143	158.400
100.0	129.789	124.245	129.987	151.668	150.084	140.382	142.857	135.927	123.156	135.927
102.5	116.424	114.345	122.859	142.065	139.986	133.353	135.333	125.631	108.603	125.631
105.0	113.751	109.989	117.018	135.927	133.848	126.621	131.274	120.780	105.435	120.780
107.5	113.058	106.227	113.850	130.680	128.007	123.651	127.710	116.523	107.514	116.523
110.0	112.266	107.019	109.395	124.443	119.988	119.394	122.166	111.771	107.316	111.771
112.5	107.415	101.673	102.267	115.038	110.781	111.474	114.147	103.356	102.069	103.356
115.0	98.604	96.327	97.119	103.752	102.267	100.980	100.980	95.337	94.941	95.337
117.5	95.238	90.684	89.496	95.733	94.545	90.882	90.585	89.298	88.803	89.298
120.0	92.268	86.922	83.259	89.892	87.615	82.962	85.140	84.447	83.358	84.447
122.5	84.942	81.477	76.428	85.833	80.190	74.844	80.685	78.309	79.893	78.309
125.0	80.982	78.111	72.864	80.091	74.151	68.607	75.636	73.854	73.656	73.854
127.5	77.517	72.963	68.607	76.626	68.607	63.261	71.280	68.904	70.092	68.904
130.0	73.557	68.706	64.944	72.963	64.251	59.400	67.419	65.241	68.112	65.241
132.5	69.795	66.330	63.657	67.122	60.687	57.024	63.162	62.271	64.944	62.271

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CANDELA TABULATION - (Cont.)

135.0	65.043	64.548	61.182	63.855	59.202	56.430	60.687	63.162	66.627	63.162
137.5	66.231	63.657	60.192	61.380	57.321	55.638	58.113	63.261	64.944	63.261
140.0	69.003	63.756	58.707	61.974	56.628	53.757	61.974	62.865	62.370	62.865
142.5	66.429	59.994	56.133	61.182	53.658	51.480	63.459	59.796	59.697	59.796
145.0	63.063	55.836	53.460	58.608	50.193	48.510	60.093	56.628	56.628	56.628
147.5	57.024	52.074	49.698	54.747	46.332	45.639	55.836	53.757	51.975	53.757
150.0	51.579	47.916	46.926	49.302	43.461	43.461	51.975	48.807	48.510	48.807
152.5	47.718	43.461	43.461	45.936	39.006	41.085	46.728	46.035	44.748	46.035
155.0	43.956	39.996	39.996	39.798	36.630	38.412	42.273	41.283	41.778	41.283
157.5	38.907	35.640	35.541	37.224	32.373	33.759	38.412	37.422	38.313	37.422
160.0	34.551	30.591	32.670	32.967	28.611	30.888	34.056	32.571	32.373	32.571
162.5	29.205	27.423	28.413	27.819	25.344	27.423	29.403	29.700	28.314	29.700
165.0	25.938	23.364	24.651	23.760	22.968	24.057	25.443	24.849	24.354	24.849
167.5	21.285	19.602	19.701	20.592	19.107	20.394	20.592	21.384	20.790	21.384
170.0	16.830	18.018	16.731	17.127	16.137	17.127	17.226	18.315	16.632	18.315
172.5	13.959	12.474	13.761	13.464	12.573	14.256	13.167	13.365	14.652	13.365
175.0	10.989	10.791	10.296	11.187	9.702	11.187	11.187	10.692	11.880	10.692
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863	1369.863
2.5	1369.368	1366.299	1365.804	1365.309	1364.913	1362.141	1363.230
5.0	1362.339	1363.131	1366.299	1367.289	1363.032	1360.359	1359.270
7.5	1358.577	1354.914	1352.736	1354.716	1356.993	1349.568	1359.765
10.0	1346.202	1339.470	1343.430	1340.955	1340.856	1339.569	1345.509
12.5	1328.976	1322.640	1329.471	1326.006	1324.917	1327.788	1329.075
15.0	1311.354	1303.731	1309.770	1308.483	1305.513	1307.592	1309.572
17.5	1294.425	1286.406	1285.317	1288.782	1281.654	1283.436	1286.703
20.0	1271.655	1260.468	1259.676	1261.656	1258.587	1256.904	1259.874
22.5	1242.351	1227.798	1234.629	1237.302	1230.471	1228.689	1230.174
25.0	1207.701	1195.227	1209.285	1197.504	1190.574	1198.098	1199.979
27.5	1174.140	1162.854	1165.527	1163.844	1156.716	1156.419	1163.943
30.0	1138.896	1128.897	1129.293	1129.689	1119.888	1120.284	1131.075
32.5	1107.513	1093.752	1092.861	1093.653	1082.070	1082.367	1093.950
35.0	1068.507	1063.656	1057.815	1061.181	1047.618	1045.341	1057.617
37.5	1032.273	1025.343	1019.403	1020.987	1007.919	1008.117	1018.809
40.0	996.633	985.743	986.634	983.169	971.685	970.596	981.189
42.5	960.993	949.212	946.539	947.925	934.560	932.085	943.866
45.0	925.353	914.463	910.800	911.196	896.742	895.257	906.741
47.5	889.614	878.724	875.061	875.259	861.498	857.736	869.814
50.0	854.667	843.876	839.916	838.827	823.482	820.710	833.283
52.5	818.928	808.137	803.187	801.900	787.743	783.882	795.564
55.0	781.605	773.289	766.161	765.963	750.717	746.262	758.043
57.5	744.381	735.867	729.828	729.036	711.909	708.840	720.027
60.0	707.454	696.861	690.921	689.535	674.091	669.141	678.546
62.5	667.260	657.360	651.123	649.836	633.897	628.650	638.847
65.0	626.967	616.275	610.929	610.632	592.812	588.951	599.346
67.5	586.278	575.190	571.032	569.844	553.212	547.470	558.756
70.0	544.302	532.422	530.739	528.462	512.127	506.088	517.077
72.5	502.425	490.149	487.971	488.070	469.755	463.815	473.418
75.0	459.063	447.480	444.708	446.490	427.878	422.433	432.828
77.5	417.681	404.118	402.633	404.811	386.199	381.150	393.426
80.0	376.695	362.043	360.657	365.211	345.807	340.560	350.262

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CANDELA TABULATION - (Cont.)

82.5	335.511	320.166	321.255	324.027	305.415	301.455	311.751
85.0	295.713	278.388	280.269	284.724	266.904	262.647	272.943
87.5	230.373	217.503	225.918	232.155	214.038	212.058	229.779
90.0	151.272	137.907	145.926	152.955	134.541	132.858	146.025
92.5	140.778	128.403	134.838	142.164	123.552	122.463	133.452
95.0	165.231	144.936	146.916	156.519	142.065	142.362	152.658
97.5	156.420	147.213	159.489	160.281	144.738	142.560	156.420
100.0	142.857	140.382	150.084	151.668	129.987	124.245	129.789
102.5	135.333	133.353	139.986	142.065	122.859	114.345	116.424
105.0	131.274	126.621	133.848	135.927	117.018	109.989	113.751
107.5	127.710	123.651	128.007	130.680	113.850	106.227	113.058
110.0	122.166	119.394	119.988	124.443	109.395	107.019	112.266
112.5	114.147	111.474	110.781	115.038	102.267	101.673	107.415
115.0	100.980	100.980	102.267	103.752	97.119	96.327	98.604
117.5	90.585	90.882	94.545	95.733	89.496	90.684	95.238
120.0	85.140	82.962	87.615	89.892	83.259	86.922	92.268
122.5	80.685	74.844	80.190	85.833	76.428	81.477	84.942
125.0	75.636	68.607	74.151	80.091	72.864	78.111	80.982
127.5	71.280	63.261	68.607	76.626	68.607	72.963	77.517
130.0	67.419	59.400	64.251	72.963	64.944	68.706	73.557
132.5	63.162	57.024	60.687	67.122	63.657	66.330	69.795
135.0	60.687	56.430	59.202	63.855	61.182	64.548	65.043
137.5	58.113	55.638	57.321	61.380	60.192	63.657	66.231
140.0	61.974	53.757	56.628	61.974	58.707	63.756	69.003
142.5	63.459	51.480	53.658	61.182	56.133	59.994	66.429
145.0	60.093	48.510	50.193	58.608	53.460	55.836	63.063
147.5	55.836	45.639	46.332	54.747	49.698	52.074	57.024
150.0	51.975	43.461	43.461	49.302	46.926	47.916	51.579
152.5	46.728	41.085	39.006	45.936	43.461	43.461	47.718
155.0	42.273	38.412	36.630	39.798	39.996	39.996	43.956
157.5	38.412	33.759	32.373	37.224	35.541	35.640	38.907
160.0	34.056	30.888	28.611	32.967	32.670	30.591	34.551
162.5	29.403	27.423	25.344	27.819	28.413	27.423	29.205
165.0	25.443	24.057	22.968	23.760	24.651	23.364	25.938
167.5	20.592	20.394	19.107	20.592	19.701	19.602	21.285
170.0	17.226	17.127	16.137	17.127	16.731	18.018	16.830
172.5	13.167	14.256	12.573	13.464	13.761	12.474	13.959
175.0	11.187	11.187	9.702	11.187	10.296	10.791	10.989
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	498.69	N.A.	9.90
0-30	1051.81	N.A.	20.90
0-40	1714.85	N.A.	34.00
0-60	3106.99	N.A.	61.60
0-80	4182.88	N.A.	82.90
0-90	4476.31	N.A.	88.80
10-90	4346.82	N.A.	86.20
20-40	1216.16	N.A.	24.10
20-50	1921.29	N.A.	38.10
40-70	1997.91	N.A.	39.60
60-80	1075.89	N.A.	21.30
70-80	470.13	N.A.	9.30
80-90	293.43	N.A.	5.80
90-110	289.72	N.A.	5.70
90-120	389.05	N.A.	7.70
90-130	456.95	N.A.	9.10
90-150	540.02	N.A.	10.70
90-180	566.97	N.A.	11.20
110-180	277.25	N.A.	5.50
0-180	5043.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	129.49
10-20	369.19
20-30	553.13
30-40	663.03
40-50	705.13
50-60	687.01
60-70	605.77
70-80	470.13
80-90	293.43
90-100	158.03
100-110	131.68
110-120	99.34
120-130	67.89
130-140	48.40
140-150	34.68
150-160	18.74
160-170	7.11
170-180	1.10

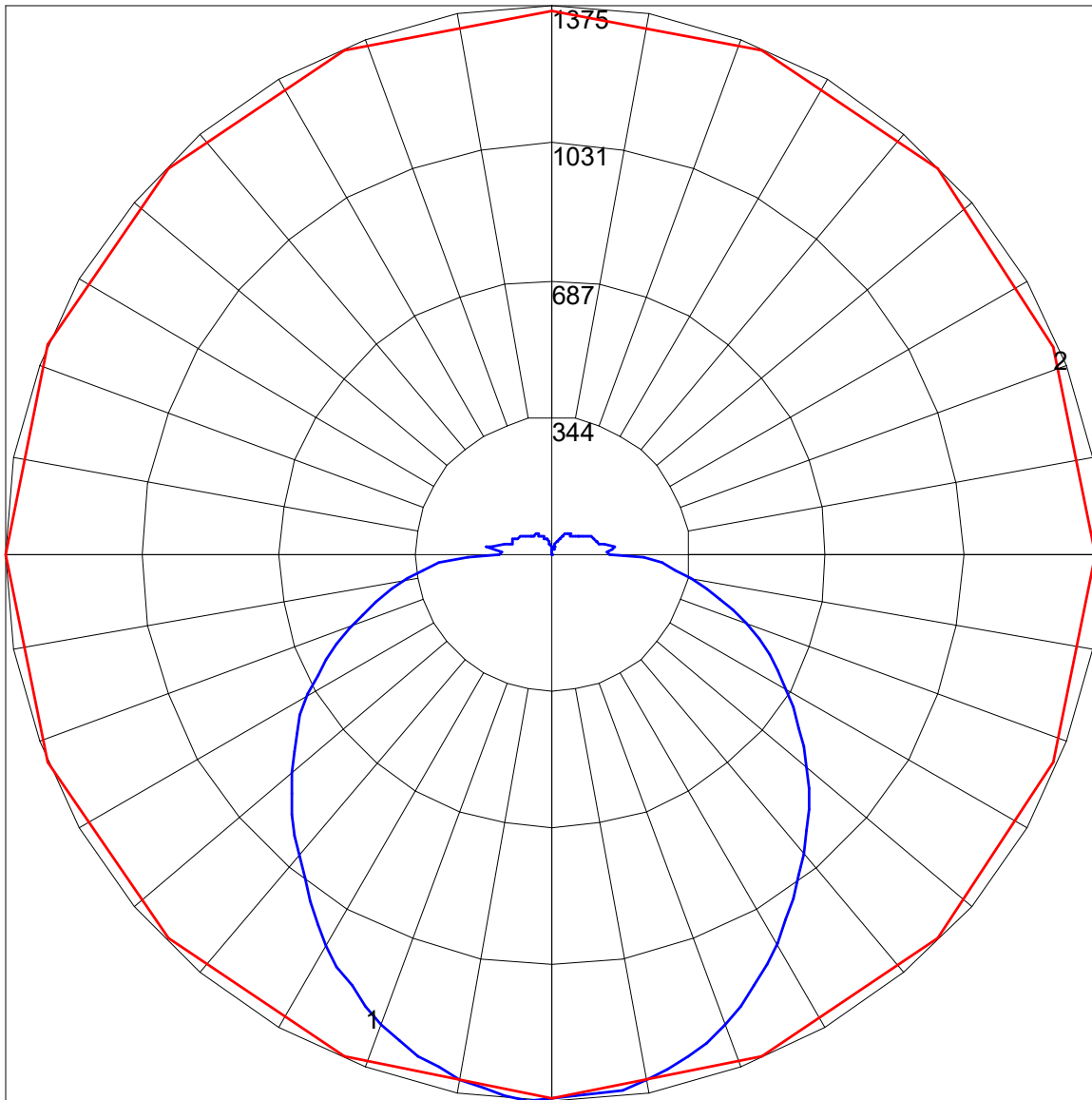
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	89	100	95	90	86	88	85	81	83	80	77	77	75	73	70
2	94	84	77	70	90	82	75	69	76	70	65	71	66	62	66	63	59	56
3	85	73	65	58	81	71	63	56	66	60	54	62	56	52	58	53	49	46
4	77	65	55	48	74	63	54	47	59	51	45	55	49	44	51	46	42	39
5	71	58	48	41	68	56	47	40	52	45	39	49	43	37	46	41	36	34
6	65	52	42	36	63	50	41	35	47	40	34	44	38	33	42	36	32	29
7	61	47	38	31	58	45	37	31	43	35	30	40	34	29	38	32	28	26
8	56	43	34	28	54	41	33	27	39	32	27	37	30	26	35	29	25	23
9	53	39	31	25	51	38	30	25	36	29	24	34	28	23	32	27	22	20
10	49	36	28	23	47	35	27	22	33	26	22	32	25	21	30	24	20	19

POLAR GRAPH



Maximum Candela = 1374.615 Located At Horizontal Angle = 180, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)