



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] BPEN-PRO-LED35-HO
 [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	14773
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	125
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	106731	67655	61102
55	107057	59610	52812
65	109956	51324	44700
75	118415	42130	35828
85	156098	31574	25999

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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	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73
2.5	3993.30	3990.11	3998.23	3999.39	4000.84	4002.29	4011.28	4019.69	4026.65	4019.69
5.0	3981.70	3984.89	3992.72	4005.19	4002.29	3993.01	3990.69	4007.22	4006.06	4007.22
7.5	3983.15	3953.28	3975.03	3968.36	3962.56	3968.94	3979.67	3973.58	3959.95	3973.58
10.0	3941.39	3923.99	3927.76	3928.05	3935.30	3923.70	3943.42	3951.25	3923.70	3951.25
12.5	3893.25	3889.48	3881.07	3884.26	3894.41	3874.40	3892.96	3913.84	3876.72	3913.84
15.0	3836.12	3830.32	3824.23	3832.93	3836.70	3819.01	3841.34	3857.58	3821.04	3857.58
17.5	3769.13	3759.56	3754.34	3775.22	3765.07	3768.26	3791.75	3784.50	3758.40	3784.50
20.0	3690.54	3681.84	3686.77	3695.76	3689.96	3692.28	3725.05	3721.28	3683.00	3721.28
22.5	3603.54	3599.19	3604.41	3624.42	3616.59	3596.58	3639.21	3632.25	3598.90	3632.25
25.0	3515.09	3509.58	3487.54	3507.84	3542.35	3501.17	3537.71	3535.68	3509.29	3535.68
27.5	3409.53	3387.49	3388.36	3409.24	3414.17	3406.34	3439.40	3436.50	3435.63	3436.50
30.0	3313.25	3281.64	3280.48	3309.19	3308.03	3306.87	3336.16	3337.61	3338.77	3337.61
32.5	3204.50	3170.57	3169.70	3203.63	3201.31	3203.92	3244.23	3234.95	3229.15	3234.95
35.0	3098.07	3062.11	3068.78	3108.51	3098.65	3115.76	3129.97	3138.96	3115.47	3138.96
37.5	2984.39	2953.07	2952.49	2990.77	2986.13	3003.53	3023.83	3034.56	3007.59	3034.56
40.0	2874.19	2843.16	2846.35	2879.99	2890.14	2887.53	2919.43	2928.71	2905.22	2928.71
42.5	2764.86	2730.35	2737.60	2776.75	2772.69	2780.52	2815.03	2821.41	2803.14	2821.41
45.0	2656.11	2622.47	2626.82	2669.16	2668.00	2678.73	2710.63	2716.14	2709.18	2716.14
47.5	2547.94	2512.56	2523.58	2563.89	2563.31	2574.04	2605.94	2624.79	2612.03	2624.79
50.0	2440.93	2404.10	2412.22	2457.17	2460.36	2471.96	2503.57	2513.14	2506.76	2513.14
52.5	2330.44	2296.22	2307.53	2349.00	2352.77	2367.27	2398.88	2407.87	2397.14	2407.87
55.0	2220.53	2186.02	2199.07	2243.73	2244.31	2265.19	2289.55	2307.24	2294.77	2307.24
57.5	2109.17	2076.40	2085.39	2135.56	2137.88	2155.57	2180.51	2196.46	2197.04	2196.46
60.0	1987.66	1960.11	1974.61	2019.85	2023.91	2041.31	2072.34	2090.32	2076.98	2090.32
62.5	1871.37	1841.50	1856.87	1903.56	1907.33	1925.60	1954.60	1970.55	1957.21	1970.55
65.0	1755.66	1725.21	1736.52	1788.72	1789.59	1805.25	1836.57	1853.97	1839.76	1853.97
67.5	1636.76	1603.70	1620.52	1669.24	1672.72	1684.90	1717.38	1733.04	1724.05	1733.04
70.0	1514.67	1482.48	1500.17	1548.02	1554.69	1559.62	1594.42	1612.98	1599.64	1612.98
72.5	1386.78	1358.65	1376.05	1429.70	1429.41	1435.79	1471.75	1484.22	1470.88	1484.22
75.0	1267.88	1237.43	1253.38	1307.90	1302.68	1310.80	1344.73	1358.65	1340.96	1358.65
77.5	1152.46	1116.50	1131.29	1185.81	1179.43	1183.78	1223.51	1233.37	1218.29	1233.37
80.0	1026.02	997.60	1012.97	1069.81	1056.47	1060.53	1103.45	1112.15	1089.82	1112.15
82.5	913.21	883.05	894.65	949.17	941.05	937.86	982.81	990.93	968.02	990.93
85.0	799.53	769.37	781.84	834.04	820.99	815.48	866.23	869.71	837.52	869.71
87.5	673.09	621.18	626.98	680.05	661.78	637.13	674.83	671.35	629.30	671.35
90.0	427.75	389.18	394.11	448.05	427.46	403.97	443.12	435.00	396.72	435.00
92.5	390.92	358.73	361.92	416.44	394.98	376.13	412.38	406.29	370.62	406.29
95.0	447.18	417.02	416.15	458.49	430.36	424.56	484.01	497.35	484.88	497.35
97.5	458.20	417.60	423.98	469.51	467.19	431.23	458.20	464.00	451.53	464.00
100.0	380.19	363.95	380.77	444.28	439.64	411.22	418.47	398.17	360.76	398.17
102.5	341.04	334.95	359.89	416.15	410.06	390.63	396.43	368.01	318.13	368.01
105.0	333.21	322.19	342.78	398.17	392.08	370.91	384.54	353.80	308.85	353.80
107.5	331.18	311.17	333.50	382.80	374.97	362.21	374.10	341.33	314.94	341.33
110.0	328.86	313.49	320.45	364.53	351.48	349.74	357.86	327.41	314.36	327.41
112.5	314.65	297.83	299.57	336.98	324.51	326.54	334.37	302.76	298.99	302.76
115.0	288.84	282.17	284.49	303.92	299.57	295.80	295.80	279.27	278.11	279.27
117.5	278.98	265.64	262.16	280.43	276.95	266.22	265.35	261.58	260.13	261.58
120.0	270.28	254.62	243.89	263.32	256.65	243.02	249.40	247.37	244.18	247.37
122.5	248.82	238.67	223.88	251.43	234.90	219.24	236.35	229.39	234.03	229.39
125.0	237.22	228.81	213.44	234.61	217.21	200.97	221.56	216.34	215.76	216.34
127.5	227.07	213.73	200.97	224.46	200.97	185.31	208.80	201.84	205.32	201.84
130.0	215.47	201.26	190.24	213.73	188.21	174.00	197.49	191.11	199.52	191.11
132.5	204.45	194.30	186.47	196.62	177.77	167.04	185.02	182.41	190.24	182.41

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CANDELA TABULATION - (Cont.)

135.0	190.53	189.08	179.22	187.05	173.42	165.30	177.77	185.02	195.17	185.02
137.5	194.01	186.47	176.32	179.80	167.91	162.98	170.23	185.31	190.24	185.31
140.0	202.13	186.76	171.97	181.54	165.88	157.47	181.54	184.15	182.70	184.15
142.5	194.59	175.74	164.43	179.22	157.18	150.80	185.89	175.16	174.87	175.16
145.0	184.73	163.56	156.60	171.68	147.03	142.10	176.03	165.88	165.88	165.88
147.5	167.04	152.54	145.58	160.37	135.72	133.69	163.56	157.47	152.25	157.47
150.0	151.09	140.36	137.46	144.42	127.31	127.31	152.25	142.97	142.10	142.97
152.5	139.78	127.31	127.31	134.56	114.26	120.35	136.88	134.85	131.08	134.85
155.0	128.76	117.16	117.16	116.58	107.30	112.52	123.83	120.93	122.38	120.93
157.5	113.97	104.40	104.11	109.04	94.83	98.89	112.52	109.62	112.23	109.62
160.0	101.21	89.61	95.70	96.57	83.81	90.48	99.76	95.41	94.83	95.41
162.5	85.55	80.33	83.23	81.49	74.24	80.33	86.13	87.00	82.94	87.00
165.0	75.98	68.44	72.21	69.60	67.28	70.47	74.53	72.79	71.34	72.79
167.5	62.35	57.42	57.71	60.32	55.97	59.74	60.32	62.64	60.90	62.64
170.0	49.30	52.78	49.01	50.17	47.27	50.17	50.46	53.65	48.72	53.65
172.5	40.89	36.54	40.31	39.44	36.83	41.76	38.57	39.15	42.92	39.15
175.0	32.19	31.61	30.16	32.77	28.42	32.77	32.77	31.32	34.80	31.32
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73	4012.73
2.5	4011.28	4002.29	4000.84	3999.39	3998.23	3990.11	3993.30
5.0	3990.69	3993.01	4002.29	4005.19	3992.72	3984.89	3981.70
7.5	3979.67	3968.94	3962.56	3968.36	3975.03	3953.28	3983.15
10.0	3943.42	3923.70	3935.30	3928.05	3927.76	3923.99	3941.39
12.5	3892.96	3874.40	3894.41	3884.26	3881.07	3889.48	3893.25
15.0	3841.34	3819.01	3836.70	3832.93	3824.23	3830.32	3836.12
17.5	3791.75	3768.26	3765.07	3775.22	3754.34	3759.56	3769.13
20.0	3725.05	3692.28	3689.96	3695.76	3686.77	3681.84	3690.54
22.5	3639.21	3596.58	3616.59	3624.42	3604.41	3599.19	3603.54
25.0	3537.71	3501.17	3542.35	3507.84	3487.54	3509.58	3515.09
27.5	3439.40	3406.34	3414.17	3409.24	3388.36	3387.49	3409.53
30.0	3336.16	3306.87	3308.03	3309.19	3280.48	3281.64	3313.25
32.5	3244.23	3203.92	3201.31	3203.63	3169.70	3170.57	3204.50
35.0	3129.97	3115.76	3098.65	3108.51	3068.78	3062.11	3098.07
37.5	3023.83	3003.53	2986.13	2990.77	2952.49	2953.07	2984.39
40.0	2919.43	2887.53	2890.14	2879.99	2846.35	2843.16	2874.19
42.5	2815.03	2780.52	2772.69	2776.75	2737.60	2730.35	2764.86
45.0	2710.63	2678.73	2668.00	2669.16	2626.82	2622.47	2656.11
47.5	2605.94	2574.04	2563.31	2563.89	2523.58	2512.56	2547.94
50.0	2503.57	2471.96	2460.36	2457.17	2412.22	2404.10	2440.93
52.5	2398.88	2367.27	2352.77	2349.00	2307.53	2296.22	2330.44
55.0	2289.55	2265.19	2244.31	2243.73	2199.07	2186.02	2220.53
57.5	2180.51	2155.57	2137.88	2135.56	2085.39	2076.40	2109.17
60.0	2072.34	2041.31	2023.91	2019.85	1974.61	1960.11	1987.66
62.5	1954.60	1925.60	1907.33	1903.56	1856.87	1841.50	1871.37
65.0	1836.57	1805.25	1789.59	1788.72	1736.52	1725.21	1755.66
67.5	1717.38	1684.90	1672.72	1669.24	1620.52	1603.70	1636.76
70.0	1594.42	1559.62	1554.69	1548.02	1500.17	1482.48	1514.67
72.5	1471.75	1435.79	1429.41	1429.70	1376.05	1358.65	1386.78
75.0	1344.73	1310.80	1302.68	1307.90	1253.38	1237.43	1267.88
77.5	1223.51	1183.78	1179.43	1185.81	1131.29	1116.50	1152.46
80.0	1103.45	1060.53	1056.47	1069.81	1012.97	997.60	1026.02

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82.5	982.81	937.86	941.05	949.17	894.65	883.05	913.21
85.0	866.23	815.48	820.99	834.04	781.84	769.37	799.53
87.5	674.83	637.13	661.78	680.05	626.98	621.18	673.09
90.0	443.12	403.97	427.46	448.05	394.11	389.18	427.75
92.5	412.38	376.13	394.98	416.44	361.92	358.73	390.92
95.0	484.01	424.56	430.36	458.49	416.15	417.02	447.18
97.5	458.20	431.23	467.19	469.51	423.98	417.60	458.20
100.0	418.47	411.22	439.64	444.28	380.77	363.95	380.19
102.5	396.43	390.63	410.06	416.15	359.89	334.95	341.04
105.0	384.54	370.91	392.08	398.17	342.78	322.19	333.21
107.5	374.10	362.21	374.97	382.80	333.50	311.17	331.18
110.0	357.86	349.74	351.48	364.53	320.45	313.49	328.86
112.5	334.37	326.54	324.51	336.98	299.57	297.83	314.65
115.0	295.80	295.80	299.57	303.92	284.49	282.17	288.84
117.5	265.35	266.22	276.95	280.43	262.16	265.64	278.98
120.0	249.40	243.02	256.65	263.32	243.89	254.62	270.28
122.5	236.35	219.24	234.90	251.43	223.88	238.67	248.82
125.0	221.56	200.97	217.21	234.61	213.44	228.81	237.22
127.5	208.80	185.31	200.97	224.46	200.97	213.73	227.07
130.0	197.49	174.00	188.21	213.73	190.24	201.26	215.47
132.5	185.02	167.04	177.77	196.62	186.47	194.30	204.45
135.0	177.77	165.30	173.42	187.05	179.22	189.08	190.53
137.5	170.23	162.98	167.91	179.80	176.32	186.47	194.01
140.0	181.54	157.47	165.88	181.54	171.97	186.76	202.13
142.5	185.89	150.80	157.18	179.22	164.43	175.74	194.59
145.0	176.03	142.10	147.03	171.68	156.60	163.56	184.73
147.5	163.56	133.69	135.72	160.37	145.58	152.54	167.04
150.0	152.25	127.31	127.31	144.42	137.46	140.36	151.09
152.5	136.88	120.35	114.26	134.56	127.31	127.31	139.78
155.0	123.83	112.52	107.30	116.58	117.16	117.16	128.76
157.5	112.52	98.89	94.83	109.04	104.11	104.40	113.97
160.0	99.76	90.48	83.81	96.57	95.70	89.61	101.21
162.5	86.13	80.33	74.24	81.49	83.23	80.33	85.55
165.0	74.53	70.47	67.28	69.60	72.21	68.44	75.98
167.5	60.32	59.74	55.97	60.32	57.71	57.42	62.35
170.0	50.46	50.17	47.27	50.17	49.01	52.78	49.30
172.5	38.57	41.76	36.83	39.44	40.31	36.54	40.89
175.0	32.77	32.77	28.42	32.77	30.16	31.61	32.19
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1460.8	N.A.	9.90
0-30	3081.07	N.A.	20.90
0-40	5023.29	N.A.	34.00
0-60	9101.28	N.A.	61.60
0-80	12252.88	N.A.	82.90
0-90	13112.44	N.A.	88.80
10-90	12733.11	N.A.	86.20
20-40	3562.49	N.A.	24.10
20-50	5628.03	N.A.	38.10
40-70	5852.45	N.A.	39.60
60-80	3151.6	N.A.	21.30
70-80	1377.14	N.A.	9.30
80-90	859.55	N.A.	5.80
90-110	848.66	N.A.	5.70
90-120	1139.65	N.A.	7.70
90-130	1338.53	N.A.	9.10
90-150	1581.89	N.A.	10.70
90-180	1660.82	N.A.	11.20
110-180	812.16	N.A.	5.50
0-180	14773.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	379.32
10-20	1081.48
20-30	1620.27
30-40	1942.22
40-50	2065.54
50-60	2012.45
60-70	1774.47
70-80	1377.14
80-90	859.55
90-100	462.92
100-110	385.74
110-120	290.99
120-130	198.88
130-140	141.77
140-150	101.58
150-160	54.90
160-170	20.81
170-180	3.21

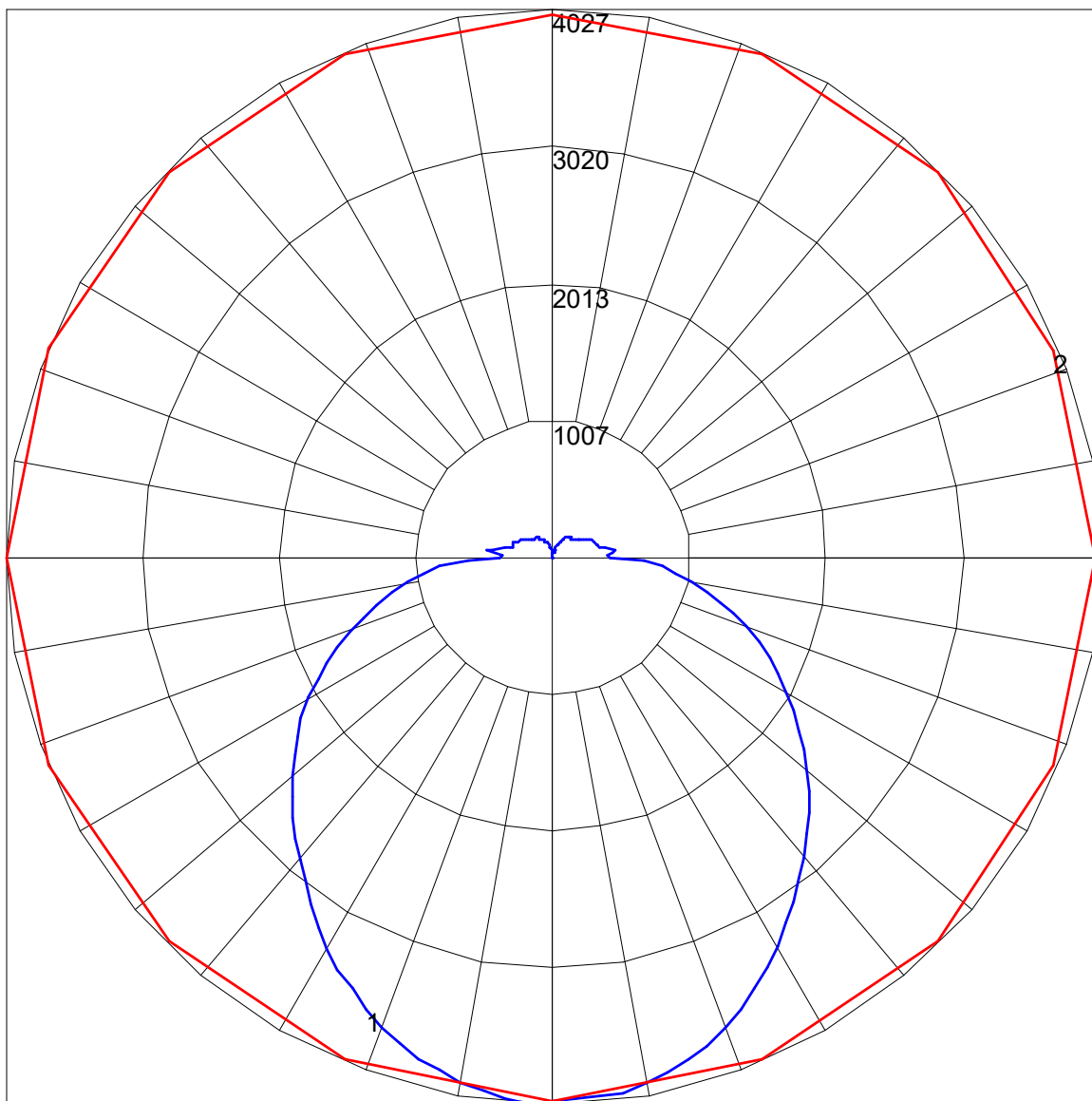
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 = 4026.65 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.)