



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : BIO-PSTD-FLSH-LED3-MO-04-AWL-D1R.IES

### DESCRIPTION INFORMATION (From Photometric File)

[IESNA:]LM-63-2002

[TEST:]32216

[TESTLAB:]LIGHTING SCIENCES, INC.

[ISSUE DATE:] 9/27/2013

[MANUFACTURER:]PRUDENTIAL LIGHTING

[LUMEN CATEGORY:]BIO-STD-FLSH-LED3-MO-04-AWL-D1R

[LUMINAIRE:]WITH WHITE INTERIOR AND PRISMATIC PLASTIC FLAT LENS

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2288
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	28
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.96
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.58
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10153	12078	5376
55	7995	9010	5093
65	6227	6754	4389
75	4414	4803	3284
85	1946	2295	1651

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**CANDELA TABULATION**

	<b>0.0</b>	<b>22.5</b>	<b>45.0</b>	<b>67.5</b>	<b>90.0</b>	<b>112.5</b>	<b>135.0</b>	<b>157.5</b>	<b>180.0</b>	<b>202.5</b>
<b>0.0</b>	662.499	662.499	662.499	662.499	662.499	662.499	662.499	662.499	662.499	662.499
<b>2.5</b>	721.662	718.933	706.799	684.685	662.642	633.491	613.962	597.591	590.699	597.591
<b>5.0</b>	792.026	783.266	754.331	708.666	661.063	607.500	569.877	542.736	532.469	542.736
<b>7.5</b>	873.016	854.276	804.016	732.216	658.119	582.226	529.022	494.846	483.214	494.846
<b>10.0</b>	977.054	943.093	859.231	755.623	654.385	557.527	492.835	453.345	440.062	453.345
<b>12.5</b>	1117.280	1059.553	925.071	778.384	649.072	532.756	458.443	416.081	401.362	416.081
<b>15.0</b>	1296.564	1208.897	1001.682	801.073	642.754	508.200	426.492	381.761	366.467	381.761
<b>17.5</b>	1493.727	1380.929	1094.663	823.043	636.292	484.937	396.192	350.169	335.450	350.169
<b>20.0</b>	1662.098	1550.665	1203.296	847.455	627.317	459.807	367.903	322.382	309.027	322.382
<b>22.5</b>	1761.039	1682.130	1323.992	870.072	617.121	436.329	342.342	298.832	287.128	298.832
<b>25.0</b>	1747.756	1740.504	1444.688	896.567	605.992	413.640	319.438	279.230	269.322	279.230
<b>27.5</b>	1679.402	1716.451	1535.371	924.497	594.360	391.741	298.473	262.860	254.675	262.860
<b>30.0</b>	1552.890	1620.454	1582.831	952.930	580.072	369.914	279.733	249.290	242.684	249.290
<b>32.5</b>	1416.255	1488.917	1579.672	980.142	565.066	348.661	262.860	237.514	231.770	237.514
<b>35.0</b>	1291.610	1355.153	1527.258	1005.703	548.696	327.982	248.356	226.816	221.216	226.816
<b>37.5</b>	1177.664	1229.934	1428.317	1026.166	530.602	308.955	235.217	216.621	210.087	216.621
<b>40.0</b>	1072.620	1115.341	1303.098	1036.720	511.001	290.862	223.370	206.497	198.312	206.497
<b>42.5</b>	974.182	1010.800	1173.212	1033.417	489.604	273.630	211.954	195.440	185.747	195.440
<b>45.0</b>	881.273	912.219	1048.352	1011.806	466.628	256.829	201.184	183.736	172.679	183.736
<b>47.5</b>	793.964	820.530	933.472	976.983	442.144	240.530	190.342	171.674	160.042	171.674
<b>50.0</b>	712.615	733.868	826.777	923.563	415.794	224.375	179.859	159.252	147.764	159.252
<b>52.5</b>	635.717	653.165	727.119	853.846	388.151	208.866	168.515	146.975	136.492	146.975
<b>55.0</b>	562.912	577.272	634.353	771.994	358.569	193.142	156.883	134.984	125.865	134.984
<b>57.5</b>	494.630	507.698	551.496	685.834	327.049	177.274	144.749	123.568	115.239	123.568
<b>60.0</b>	432.380	444.155	478.116	598.668	294.236	161.047	131.897	112.080	104.756	112.080
<b>62.5</b>	375.945	385.638	411.199	513.657	260.849	144.390	118.757	100.592	94.130	100.592
<b>65.0</b>	323.028	330.926	350.384	432.380	227.678	127.804	106.049	89.247	83.719	89.247
<b>67.5</b>	272.122	278.728	293.518	356.272	195.224	111.793	93.196	78.118	73.523	78.118
<b>70.0</b>	223.801	230.334	241.607	287.918	163.560	95.781	80.201	67.205	63.328	67.205
<b>72.5</b>	179.859	185.962	194.793	228.324	132.974	79.698	66.918	56.507	53.347	56.507
<b>75.0</b>	140.225	145.467	152.575	176.125	104.325	63.687	53.706	45.737	43.224	45.737
<b>77.5</b>	104.254	108.562	114.234	130.676	78.262	48.250	41.070	35.182	33.387	35.182
<b>80.0</b>	72.087	75.318	79.483	90.612	54.999	33.961	29.366	25.274	24.197	25.274
<b>82.5</b>	43.583	45.880	49.183	56.148	34.536	21.468	18.955	16.514	15.940	16.514
<b>85.0</b>	20.822	22.330	24.556	28.720	17.663	11.201	10.267	9.190	8.831	9.190
<b>87.5</b>	5.959	6.677	7.754	9.908	5.888	3.662	3.590	3.662	3.590	3.662
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. Angles**      **Horizontal Angles**

	<b>225.0</b>	<b>247.5</b>	<b>270.0</b>	<b>292.5</b>	<b>315.0</b>	<b>337.5</b>	<b>360.0</b>
<b>0.0</b>	662.499	662.499	662.499	662.499	662.499	662.499	662.499
<b>2.5</b>	613.962	633.491	662.642	684.685	706.799	718.933	721.662
<b>5.0</b>	569.877	607.500	661.063	708.666	754.331	783.266	792.026
<b>7.5</b>	529.022	582.226	658.119	732.216	804.016	854.276	873.016
<b>10.0</b>	492.835	557.527	654.385	755.623	859.231	943.093	977.054
<b>12.5</b>	458.443	532.756	649.072	778.384	925.071	1059.553	1117.280
<b>15.0</b>	426.492	508.200	642.754	801.073	1001.682	1208.897	1296.564
<b>17.5</b>	396.192	484.937	636.292	823.043	1094.663	1380.929	1493.727
<b>20.0</b>	367.903	459.807	627.317	847.455	1203.296	1550.665	1662.098
<b>22.5</b>	342.342	436.329	617.121	870.072	1323.992	1682.130	1761.039
<b>25.0</b>	319.438	413.640	605.992	896.567	1444.688	1740.504	1747.756
<b>27.5</b>	298.473	391.741	594.360	924.497	1535.371	1716.451	1679.402
<b>30.0</b>	279.733	369.914	580.072	952.930	1582.831	1620.454	1552.890

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**CANDELA TABULATION - (Cont.)**

<b>32.5</b>	262.860	348.661	565.066	980.142	1579.672	1488.917	1416.255
<b>35.0</b>	248.356	327.982	548.696	1005.703	1527.258	1355.153	1291.610
<b>37.5</b>	235.217	308.955	530.602	1026.166	1428.317	1229.934	1177.664
<b>40.0</b>	223.370	290.862	511.001	1036.720	1303.098	1115.341	1072.620
<b>42.5</b>	211.954	273.630	489.604	1033.417	1173.212	1010.800	974.182
<b>45.0</b>	201.184	256.829	466.628	1011.806	1048.352	912.219	881.273
<b>47.5</b>	190.342	240.530	442.144	976.983	933.472	820.530	793.964
<b>50.0</b>	179.859	224.375	415.794	923.563	826.777	733.868	712.615
<b>52.5</b>	168.515	208.866	388.151	853.846	727.119	653.165	635.717
<b>55.0</b>	156.883	193.142	358.569	771.994	634.353	577.272	562.912
<b>57.5</b>	144.749	177.274	327.049	685.834	551.496	507.698	494.630
<b>60.0</b>	131.897	161.047	294.236	598.668	478.116	444.155	432.380
<b>62.5</b>	118.757	144.390	260.849	513.657	411.199	385.638	375.945
<b>65.0</b>	106.049	127.804	227.678	432.380	350.384	330.926	323.028
<b>67.5</b>	93.196	111.793	195.224	356.272	293.518	278.728	272.122
<b>70.0</b>	80.201	95.781	163.560	287.918	241.607	230.334	223.801
<b>72.5</b>	66.918	79.698	132.974	228.324	194.793	185.962	179.859
<b>75.0</b>	53.706	63.687	104.325	176.125	152.575	145.467	140.225
<b>77.5</b>	41.070	48.250	78.262	130.676	114.234	108.562	104.254
<b>80.0</b>	29.366	33.961	54.999	90.612	79.483	75.318	72.087
<b>82.5</b>	18.955	21.468	34.536	56.148	49.183	45.880	43.583
<b>85.0</b>	10.267	11.201	17.663	28.720	24.556	22.330	20.822
<b>87.5</b>	3.590	3.662	5.888	9.908	7.754	6.677	5.959
<b>90.0</b>	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	272.28	N.A.	11.90
0-30	655.07	N.A.	28.60
0-40	1122.01	N.A.	49.00
0-60	1921.37	N.A.	84.00
0-80	2265.39	N.A.	99.00
0-90	2288.35	N.A.	100.00
10-90	2224.71	N.A.	97.20
20-40	849.73	N.A.	37.10
20-50	1294.03	N.A.	56.50
40-70	1031.6	N.A.	45.10
60-80	344.02	N.A.	15.00
70-80	111.78	N.A.	4.90
80-90	22.96	N.A.	1.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2288.35	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	63.64
10-20	208.64
20-30	382.79
30-40	466.94
40-50	444.30
50-60	355.06
60-70	232.24
70-80	111.78
80-90	22.96
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

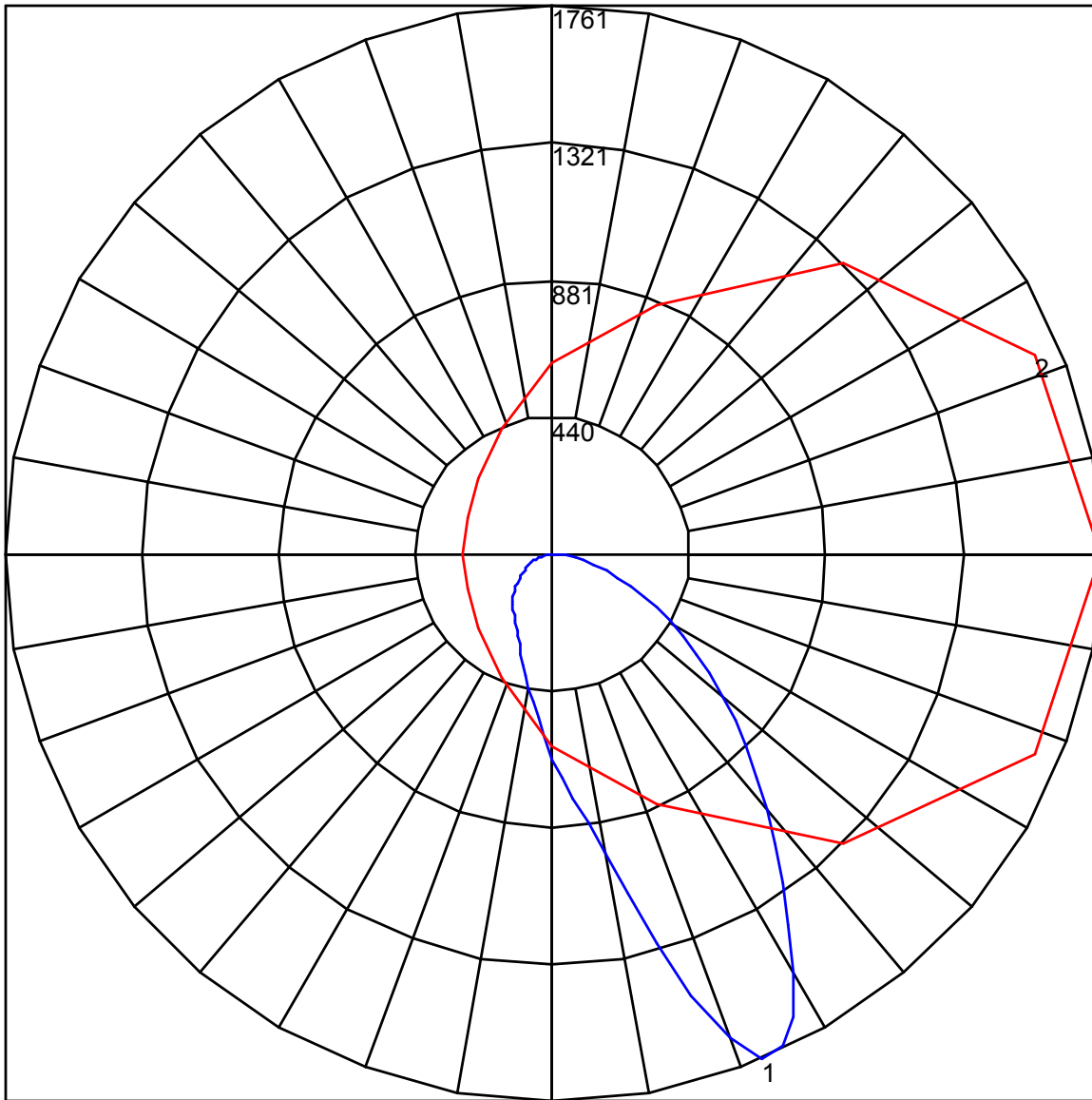
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	56	64	59	55	53
5	77	65	56	50	75	64	55	49	62	54	49	60	53	48	58	52	48	46
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	33	27	39	32	27	38	32	27	37	31	27	25

POLAR GRAPH



Maximum Candela = 1761.039 Located At Horizontal Angle = 0, Vertical Angle = 22.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (22.5) (Through Max. Cd.)