



IES INDOOR REPORT

PHOTOMETRIC FILENAME : SR(LED MODULE)_6-12V_4W.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [ISSUEDATE] 19 March 2020
 [TESTLAB] Spectra Lux
 [TEST] S2003191-R1
 [MANUFAC] BeLuce Canada Inc.
 [LUMINAIRE] SAMPLE #2296-4
 [LAMP] SR(LED Module) 6-12V 4W Clusters of Nichia NF2W757G LEDs c/w Integrated Driver @ 12.00VDC
 [BURNING] Axial (429 Luminaire Lumens)
 [REFLECTOR] None
 [LENS] Frosted Polycarbonate
 [HOUSING] Polymeric Model
 [NOMINAL COLOR] 5000 K
 [DRIVE CURRENT] 100 mA/LED
 [DISTRIBUTION] NEMA 4Hx4V

Note: Candela values converted from Type-B to Type-C

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	431
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	3.53
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.36
Spacing Criterion (90-270)	0.46
Spacing Criterion (Diagonal)	0.50
Basic Luminous Shape	Point
Luminous Length (0-180)	0.00 ft
Luminous Width (90-270)	0.00 ft
Luminous Height	0.00 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0.0</u>	<u>2.5</u>	<u>5.0</u>	<u>7.5</u>	<u>10.0</u>	<u>12.5</u>	<u>15.0</u>	<u>17.5</u>	<u>20.0</u>	<u>22.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1050	1049	1048	1047	1047	1046	1046	1046	1047	1047
5.0	904	902	901	900	900	901	902	903	905	908
7.5	748	746	745	745	746	747	749	753	757	758
10.0	602	600	600	601	602	605	609	610	613	616
12.5	475	474	473	474	476	479	481	484	488	493
15.0	370	369	369	370	372	373	376	379	384	385
17.5	285	284	285	286	287	289	292	294	296	298
20.0	219	218	218	219	220	223	226	226	227	229
22.5	167	166	166	167	169	171	172	173	174	175
25.0	128	127	127	127	129	130	131	132	133	134
27.5	99	98	98	98	99	100	101	102	102	103
30.0	76	76	77	77	78	78	78	78	79	80
32.5	60	60	60	61	62	62	62	62	62	63
35.0	48	48	48	49	50	50	50	50	50	50
37.5	39	39	40	41	41	40	40	40	40	40
40.0	35	34	33	34	34	33	33	33	34	34
42.5	28	28	28	28	28	28	29	28	28	29
45.0	25	24	24	24	24	24	25	25	25	25
47.5	22	21	22	22	21	22	22	22	22	21
50.0	20	19	20	20	19	20	19	19	19	20
52.5	18	18	18	18	18	18	18	18	17	17
55.0	16	15	15	16	16	16	16	16	16	16
57.5	13	12	12	12	13	13	13	13	14	14
60.0	8	10	9	9	9	9	10	10	11	11
62.5	4	5	4	5	5	5	6	6	7	8
65.0	2	2	1	1	2	2	3	3	3	3
67.5	1	1	1	0	0	0	1	1	1	2
70.0	0	1	1	0	1	1	1	0	0	1
72.5	1	0	1	0	1	0	0	1	1	1
75.0	2	0	1	1	0	0	1	1	1	1
77.5	0	1	0	1	1	1	0	1	1	0
80.0	1	1	1	1	0	0	1	1	1	1
82.5	1	0	0	2	1	0	0	1	1	0
85.0	1	1	1	1	1	1	1	1	1	1
87.5	1	0	1	1	1	1	1	1	1	1
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	<u>25.0</u>	<u>27.5</u>	<u>30.0</u>	<u>32.5</u>	<u>35.0</u>	<u>37.5</u>	<u>40.0</u>	<u>42.5</u>	<u>45.0</u>	<u>47.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1048	1049	1050	1052	1053	1055	1057	1059	1062	1064
5.0	911	914	918	920	923	926	929	933	938	942
7.5	761	764	768	773	778	784	790	798	801	810
10.0	621	626	631	634	637	640	644	649	655	661
12.5	497	498	501	504	508	513	516	520	525	530
15.0	387	390	393	395	398	402	407	413	415	418
17.5	300	302	304	306	310	313	316	319	323	326
20.0	230	231	233	235	238	241	243	246	249	252
22.5	175	176	178	181	183	184	186	188	191	194
25.0	134	135	137	139	140	141	143	145	147	149
27.5	103	104	105	107	108	108	110	111	113	114
30.0	80	81	82	83	83	84	85	86	87	88

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CANDELA TABULATION - (Cont.)

32.5	63	64	65	65	67	66	67	67	68	69
35.0	50	51	51	51	52	53	53	53	54	55
37.5	41	41	42	42	43	43	43	43	44	44
40.0	34	34	34	34	35	36	35	36	37	37
42.5	29	29	29	30	30	30	29	30	31	30
45.0	25	25	25	26	26	26	26	26	27	26
47.5	22	23	22	22	23	23	23	23	23	23
50.0	19	19	19	19	20	20	20	20	20	20
52.5	17	17	18	19	18	18	18	18	19	19
55.0	16	16	16	16	17	17	16	16	16	16
57.5	14	14	14	14	15	15	15	15	15	15
60.0	11	11	12	13	13	13	13	13	12	14
62.5	7	8	8	9	9	10	10	10	11	11
65.0	3	4	4	5	6	6	7	7	7	9
67.5	2	2	2	2	3	3	3	4	4	5
70.0	1	1	1	1	2	1	2	2	3	3
72.5	1	1	1	1	1	1	2	1	2	2
75.0	0	0	0	1	1	1	1	1	1	2
77.5	0	0	0	1	0	1	1	0	0	1
80.0	0	1	1	1	0	0	1	0	1	1
82.5	0	1	1	0	1	0	0	1	1	1
85.0	1	0	0	1	1	1	0	1	0	1
87.5	1	1	0	0	1	0	0	1	1	1
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles
Angles

	<u>50.0</u>	<u>52.5</u>	<u>55.0</u>	<u>57.5</u>	<u>60.0</u>	<u>62.5</u>	<u>65.0</u>	<u>67.5</u>	<u>70.0</u>	<u>72.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1067	1070	1073	1076	1079	1083	1087	1091	1095	1099
5.0	948	953	959	966	973	977	982	988	993	999
7.5	810	815	820	826	833	839	847	855	867	870
10.0	667	673	679	685	694	699	705	712	720	728
12.5	535	541	546	552	558	564	571	577	583	590
15.0	423	427	432	436	441	447	452	459	465	471
17.5	330	334	338	342	348	350	357	360	365	370
20.0	255	258	262	266	269	272	276	279	283	287
22.5	196	199	202	205	207	209	212	215	217	220
25.0	151	152	153	156	158	160	161	164	166	169
27.5	115	117	118	119	122	123	124	125	127	129
30.0	89	90	91	92	94	96	97	97	99	100
32.5	71	72	72	72	73	74	75	75	77	78
35.0	56	56	56	57	58	59	59	59	60	61
37.5	45	45	45	46	46	47	48	48	48	49
40.0	37	37	37	38	38	39	40	39	39	40
42.5	31	31	32	32	32	32	32	33	32	33
45.0	26	27	27	27	27	28	28	28	28	28
47.5	23	23	23	23	23	24	25	24	25	24
50.0	20	21	21	21	20	21	21	22	22	22
52.5	19	18	18	19	19	19	19	20	19	19
55.0	16	16	16	17	17	17	17	17	17	17
57.5	15	15	15	15	15	15	16	15	16	16
60.0	13	13	13	14	13	14	14	13	15	14
62.5	11	12	12	12	12	12	13	12	13	13
65.0	9	10	10	10	10	11	11	11	12	12
67.5	6	7	8	8	9	10	10	10	10	10

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CANDELA TABULATION - (Cont.)

70.0	3	4	5	6	6	7	7	8	8	8
72.5	2	3	3	3	4	5	6	6	6	7
75.0	1	2	2	2	2	3	4	4	5	6
77.5	1	2	1	2	1	2	2	2	3	4
80.0	1	1	1	1	1	1	1	2	2	2
82.5	0	1	1	1	1	0	1	1	0	1
85.0	1	1	1	0	0	0	1	1	0	1
87.5	1	1	1	1	1	1	0	1	1	1
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles
Angles

	<u>75.0</u>	<u>77.5</u>	<u>80.0</u>	<u>82.5</u>	<u>85.0</u>	<u>87.5</u>	<u>90.0</u>	<u>92.5</u>	<u>95.0</u>	<u>97.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1103	1107	1112	1116	1121	1125	1130	1132	1135	1137
5.0	1006	1012	1019	1026	1034	1042	1050	1054	1058	1063
7.5	876	883	890	898	907	916	926	931	937	943
10.0	737	744	750	757	766	775	785	790	797	805
12.5	598	606	613	619	626	634	643	649	656	664
15.0	477	483	490	495	500	506	514	519	525	533
17.5	375	380	385	390	394	399	405	409	414	421
20.0	291	295	298	302	305	308	313	317	322	328
22.5	223	227	229	232	235	237	241	244	249	253
25.0	172	174	176	178	180	182	185	187	191	194
27.5	131	133	134	136	138	139	142	143	145	148
30.0	101	102	103	104	105	107	109	109	111	114
32.5	79	79	80	82	82	83	84	85	86	88
35.0	62	62	63	64	64	65	66	67	68	70
37.5	50	50	51	51	51	51	52	53	54	55
40.0	41	40	41	42	42	41	42	43	44	44
42.5	34	34	34	35	36	35	36	36	37	37
45.0	28	29	29	29	30	30	30	30	31	31
47.5	25	26	26	26	26	26	27	26	27	27
50.0	22	22	22	23	23	23	23	24	24	24
52.5	19	19	20	20	20	20	20	20	20	21
55.0	18	18	18	18	19	18	19	18	19	19
57.5	16	16	16	16	16	17	18	17	17	17
60.0	15	15	15	15	15	16	15	16	16	15
62.5	13	13	13	14	13	14	13	14	14	14
65.0	11	10	12	12	12	13	12	12	13	13
67.5	10	10	11	10	11	11	11	11	12	12
70.0	8	9	9	9	10	9	10	10	11	11
72.5	6	8	7	8	8	8	9	9	9	10
75.0	6	7	7	7	6	7	8	7	8	8
77.5	4	5	5	5	5	6	6	6	6	7
80.0	3	3	3	3	3	5	5	5	6	5
82.5	2	1	2	2	2	3	4	3	4	4
85.0	1	1	1	1	1	2	2	3	4	4
87.5	0	1	0	0	1	0	1	2	2	3
90.0	0	0	0	0	0	0	1	2	2	2

Vert. Horizontal Angles
Angles

	<u>100.0</u>	<u>102.5</u>	<u>105.0</u>	<u>107.5</u>	<u>110.0</u>	<u>112.5</u>	<u>115.0</u>	<u>117.5</u>	<u>120.0</u>	<u>122.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1140	1142	1145	1147	1150	1153	1155	1158	1161	1163

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CANDELA TABULATION - (Cont.)

5.0	1068	1073	1079	1084	1091	1097	1104	1111	1118	1121
7.5	951	959	967	977	986	991	996	1003	1010	1017
10.0	814	824	833	839	846	854	862	872	883	888
12.5	674	682	688	696	705	715	722	727	734	742
15.0	541	547	554	562	570	576	582	590	597	601
17.5	426	432	438	444	449	456	462	466	474	477
20.0	332	337	343	347	352	356	359	363	368	373
22.5	257	262	265	268	272	275	278	281	286	290
25.0	198	201	203	206	209	212	215	218	221	223
27.5	152	153	156	158	160	162	164	167	170	172
30.0	116	118	119	122	123	125	127	129	131	131
32.5	89	91	93	94	94	96	99	100	101	102
35.0	71	72	73	74	74	75	77	79	79	80
37.5	56	57	58	59	59	60	61	61	62	63
40.0	45	46	47	47	48	48	49	49	49	50
42.5	38	38	38	39	40	40	40	41	41	42
45.0	31	32	32	33	33	33	33	34	33	34
47.5	27	28	28	28	28	28	29	29	29	30
50.0	24	25	25	25	25	24	25	25	26	27
52.5	22	22	22	22	22	22	22	23	23	23
55.0	19	19	19	20	19	20	19	20	21	20
57.5	17	17	18	17	17	18	18	18	18	19
60.0	16	16	16	16	16	16	16	16	16	16
62.5	15	15	15	15	15	15	15	15	15	15
65.0	13	14	13	14	14	14	13	14	14	12
67.5	12	12	12	12	12	13	12	13	13	12
70.0	10	11	11	11	11	11	11	11	12	11
72.5	9	10	9	10	10	9	10	10	11	10
75.0	8	9	9	9	8	9	9	8	8	9
77.5	7	7	7	7	7	7	7	8	8	8
80.0	6	7	7	6	6	7	6	6	6	6
82.5	5	5	5	5	4	4	5	5	5	5
85.0	3	4	3	3	3	4	3	3	4	3
87.5	3	3	2	2	2	2	2	2	3	2
90.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	Horizontal Angles									
	<u>125.0</u>	<u>127.5</u>	<u>130.0</u>	<u>132.5</u>	<u>135.0</u>	<u>137.5</u>	<u>140.0</u>	<u>142.5</u>	<u>145.0</u>	<u>147.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1166	1169	1171	1174	1177	1179	1182	1185	1187	1189
5.0	1125	1128	1132	1137	1141	1146	1152	1157	1163	1169
7.5	1026	1034	1044	1052	1058	1067	1068	1072	1076	1081
10.0	895	902	910	918	926	932	940	945	951	957
12.5	751	759	764	771	777	785	792	803	805	809
15.0	608	615	622	629	634	643	645	651	657	663
17.5	484	489	494	500	505	510	514	518	523	526
20.0	378	382	386	391	395	399	402	406	409	412
22.5	293	295	297	303	307	310	312	315	318	321
25.0	225	229	231	233	235	239	241	242	245	247
27.5	174	177	179	180	182	184	185	186	189	190
30.0	134	136	138	140	141	142	143	143	144	145
32.5	103	104	106	107	109	110	110	110	110	111
35.0	80	81	82	83	84	85	85	86	85	85
37.5	63	64	65	65	65	66	67	67	67	67
40.0	51	51	52	53	52	52	52	53	54	54

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CANDELA TABULATION - (Cont.)

42.5	42	42	43	42	42	42	42	43	43	43
45.0	35	35	35	35	36	36	36	36	36	36
47.5	30	30	30	30	30	31	31	30	30	31
50.0	26	26	26	26	26	26	26	26	26	26
52.5	22	23	23	23	23	23	23	23	23	24
55.0	20	20	20	21	20	20	20	21	21	21
57.5	19	18	18	19	19	19	19	19	19	19
60.0	16	17	17	17	17	17	17	17	17	17
62.5	15	16	16	15	15	16	15	16	16	16
65.0	13	14	14	14	14	14	14	14	14	14
67.5	12	13	13	12	13	13	12	13	13	13
70.0	11	12	11	11	11	12	11	11	11	12
72.5	10	10	10	10	10	10	10	10	10	10
75.0	8	9	10	10	9	10	10	9	9	9
77.5	7	8	7	8	8	8	8	8	8	8
80.0	7	6	6	6	6	7	7	7	7	7
82.5	5	5	5	5	5	5	5	5	5	5
85.0	4	4	3	3	3	3	4	3	4	4
87.5	3	3	2	2	2	2	2	2	2	2
90.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	Horizontal Angles									
	<u>150.0</u>	<u>152.5</u>	<u>155.0</u>	<u>157.5</u>	<u>160.0</u>	<u>162.5</u>	<u>165.0</u>	<u>167.5</u>	<u>170.0</u>	<u>172.5</u>
0.0	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
2.5	1192	1194	1196	1199	1201	1203	1207	1208	1209	1211
5.0	1175	1177	1179	1181	1183	1186	1188	1191	1193	1196
7.5	1086	1092	1098	1105	1115	1115	1116	1117	1119	1120
10.0	965	968	973	978	984	991	1001	999	999	996
12.5	814	820	826	831	834	839	845	852	853	852
15.0	669	671	675	679	686	687	690	695	702	700
17.5	531	535	539	541	544	547	549	552	556	559
20.0	414	418	422	426	426	427	430	431	433	437
22.5	322	324	327	329	331	331	332	333	334	337
25.0	249	248	251	253	254	255	255	255	256	258
27.5	191	192	193	194	194	194	194	194	195	195
30.0	146	147	147	147	148	148	149	148	148	148
32.5	112	112	112	113	113	114	114	113	113	113
35.0	86	86	86	86	87	88	87	87	87	88
37.5	67	67	67	67	68	68	68	68	68	67
40.0	54	53	53	53	54	54	54	54	54	53
42.5	43	43	44	43	44	44	44	43	43	43
45.0	35	35	36	36	36	36	36	36	36	36
47.5	31	30	30	31	31	31	31	31	31	31
50.0	27	26	26	27	27	26	26	26	27	26
52.5	24	24	23	24	24	24	23	24	23	24
55.0	21	21	22	22	21	21	21	21	21	21
57.5	19	19	19	19	19	19	19	19	19	19
60.0	17	17	17	17	18	17	18	17	17	17
62.5	16	16	16	16	17	16	16	17	17	16
65.0	15	14	14	14	15	14	14	15	14	14
67.5	13	13	13	13	13	13	13	13	13	13
70.0	12	11	11	12	12	12	12	12	12	12
72.5	11	11	10	10	10	10	10	10	10	10
75.0	9	9	9	9	9	9	9	9	9	9
77.5	8	8	8	8	8	8	8	7	8	9

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

80.0	6	6	7	7	7	6	6	6	7	6
82.5	5	5	5	6	6	6	5	5	5	5
85.0	4	4	4	4	3	4	4	3	4	4
87.5	2	2	2	2	2	3	2	3	2	2
90.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	Horizontal Angles		
	<u>175.0</u>	<u>177.5</u>	<u>180.0</u>
0.0	1161	1161	1161
2.5	1212	1214	1215
5.0	1198	1201	1204
7.5	1123	1127	1131
10.0	1000	1004	1008
12.5	850	854	858
15.0	696	699	703
17.5	553	556	558
20.0	431	432	434
22.5	334	335	336
25.0	256	257	257
27.5	194	195	196
30.0	148	149	149
32.5	113	113	112
35.0	87	86	87
37.5	67	67	67
40.0	53	53	54
42.5	44	44	43
45.0	36	36	36
47.5	30	31	33
50.0	27	27	26
52.5	24	23	23
55.0	21	21	21
57.5	19	19	19
60.0	17	18	17
62.5	16	16	17
65.0	15	15	16
67.5	13	14	14
70.0	11	12	12
72.5	10	10	11
75.0	10	10	9
77.5	8	8	8
80.0	7	8	7
82.5	6	5	4
85.0	4	3	4
87.5	2	3	3
90.0	2	2	2

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	236.83	N.A.	55.00
0-30	326.69	N.A.	75.80
0-40	370.93	N.A.	86.10
0-60	411.83	N.A.	95.60
0-80	428.53	N.A.	99.40
0-90	430.98	N.A.	100.00
10-90	339.47	N.A.	78.80
20-40	134.10	N.A.	31.10
20-50	158.38	N.A.	36.70
40-70	51.62	N.A.	12.00
60-80	16.70	N.A.	3.90
70-80	5.98	N.A.	1.40
80-90	2.45	N.A.	0.60
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	430.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.52
10-20	145.31
20-30	89.86
30-40	44.24
40-50	24.28
50-60	16.63
60-70	10.71
70-80	5.98
80-90	2.45
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

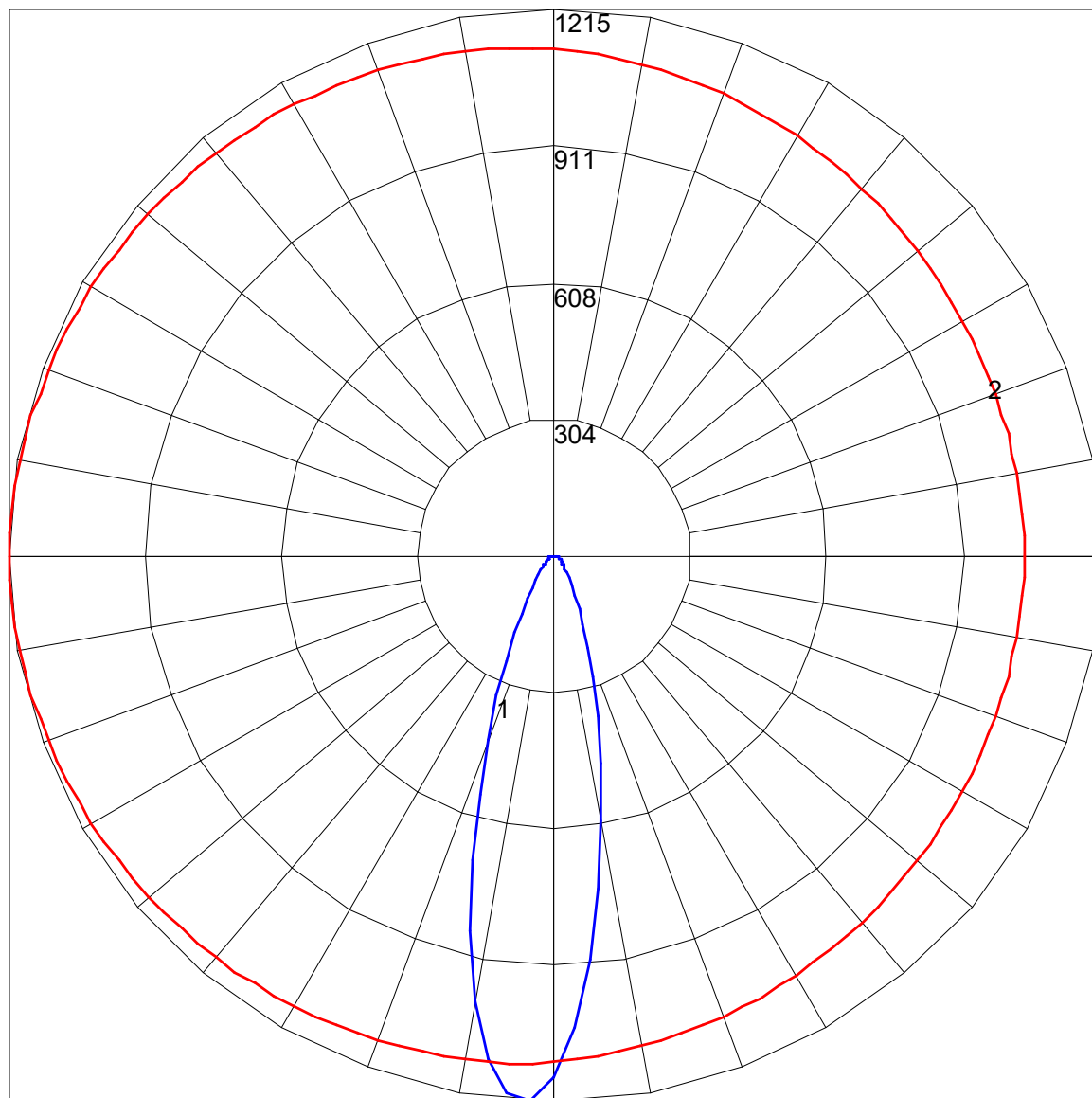
IES INDOOR REPORT
PHOTOMETRIC FILENAME : SR(LED MODULE)_6-12V_4W.IES

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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	100
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	82
4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	78	77
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	73
6	90	82	76	72	89	81	76	72	79	75	71	78	74	71	77	73	70	69
7	86	78	72	68	85	77	72	68	76	71	68	75	70	67	74	70	67	66
8	83	74	69	65	82	74	68	65	73	68	64	72	67	64	71	67	64	63
9	80	71	66	62	79	70	65	62	70	65	62	69	64	61	68	64	61	60
10	77	68	63	59	76	68	63	59	67	62	59	66	62	59	65	61	59	57

POLAR GRAPH



Maximum Candela = 1215 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.)