



IES INDOOR REPORT
PHOTOMETRIC FILENAME : LIT-CRN-850-X.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L072111015
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUE DATE] 9/7/2021
 [MANUFAC] LUX DYNAMICS
 [LUMCAT] LiT-CRN-850-U10
 [LUMINAIRE] LED LUMINAIRE
 [BALLASTCAT] OSRAM OPTOTRONIC OTI85/120-277/2A3 DIM L HB
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 277VAC
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9864
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	76.91
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.83 ft
Luminous Width (90-270)	2.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5960	6219	5701
55	5747	6259	5477
65	5962	6195	5667
75	6104	5871	5591
85	6304	5011	4895

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CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0	3413	3413	3413	3413	3413	3413	3413	3413	3413	3413
5	3419	3415	3412	3411	3414	3411	3409	3409	3404	3399
10	3393	3394	3389	3388	3389	3385	3381	3381	3377	3369
15	3340	3339	3336	3333	3331	3327	3321	3319	3313	3309
20	3248	3248	3243	3240	3237	3229	3222	3218	3212	3206
25	3121	3115	3106	3094	3080	3064	3048	3033	3020	3015
30	2917	2907	2888	2868	2853	2835	2823	2810	2801	2794
35	2622	2628	2642	2645	2635	2622	2612	2602	2593	2587
40	2351	2357	2376	2396	2412	2411	2404	2398	2389	2386
45	2094	2103	2123	2144	2170	2197	2197	2195	2189	2185
50	1858	1864	1883	1907	1934	1973	1992	1996	1992	1989
55	1638	1645	1662	1686	1709	1736	1774	1788	1786	1784
60	1443	1444	1452	1466	1482	1505	1536	1563	1565	1560
65	1252	1252	1250	1243	1243	1251	1268	1294	1305	1301
70	1037	1033	1022	1011	1001	997	999	1017	1032	1029
75	785	784	781	779	763	747	738	740	754	755
80	531	530	528	524	518	506	486	474	474	471
85	273	272	271	269	264	257	247	232	221	217
90	29	30	31	33	35	38	39	37	31	27
95	13	13	13	13	14	14	14	14	15	15
100	13	13	13	13	13	14	14	15	17	16
105	12	12	12	13	13	13	18	24	18	14
110	11	11	11	11	12	20	30	29	17	15
115	10	10	10	12	23	36	38	30	18	14
120	9	11	16	34	42	45	41	30	18	14
125	22	32	46	50	52	51	43	31	19	15
130	91	81	69	67	65	57	44	34	20	16
135	119	120	119	110	97	79	58	47	33	29
140	143	141	138	134	126	111	103	94	81	80
145	157	155	153	148	134	126	118	108	96	96
150	164	163	158	149	142	135	129	120	113	113
155	164	161	157	150	145	141	134	126	122	120
160	153	152	151	148	144	138	132	127	122	120
165	140	139	138	135	130	125	121	118	116	115
170	123	121	117	114	111	110	109	107	107	106
175	86	88	91	91	92	92	92	92	93	92
180	78	78	78	78	78	78	78	78	78	78

Vert. Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0	3413	3413	3413	3413	3413	3413	3413	3413	3413	3413
5	3392	3395	3400	3398	3396	3396	3396	3400	3402	3401
10	3363	3369	3372	3374	3370	3368	3368	3370	3370	3367
15	3302	3304	3308	3310	3308	3306	3305	3306	3302	3295
20	3198	3202	3207	3209	3208	3205	3202	3200	3195	3188
25	3008	3015	3026	3038	3044	3048	3052	3056	3050	3042
30	2787	2789	2793	2799	2803	2813	2825	2838	2836	2825
35	2580	2578	2576	2574	2572	2569	2559	2542	2532	2542
40	2382	2374	2365	2357	2344	2321	2288	2263	2250	2255
45	2183	2173	2155	2136	2106	2065	2033	2014	2003	2000
50	1988	1973	1947	1912	1863	1825	1801	1786	1769	1770
55	1781	1764	1730	1680	1638	1615	1593	1572	1561	1562
60	1558	1537	1494	1447	1422	1402	1392	1381	1376	1370

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CANDELA TABULATION - (Cont.)

65	1297	1268	1224	1197	1188	1189	1193	1192	1190	1179
70	1019	987	960	953	956	962	967	967	965	962
75	739	713	706	711	719	723	722	722	719	712
80	457	452	462	469	471	471	470	468	465	460
85	214	220	223	223	222	220	218	216	212	208
90	30	31	30	28	27	26	25	24	24	24
95	15	16	16	16	16	16	16	16	16	16
100	18	15	15	15	15	15	15	15	15	16
105	20	21	14	13	14	14	14	14	15	15
110	20	23	21	15	12	12	13	13	13	14
115	20	27	27	23	17	12	12	12	12	12
120	20	29	32	28	25	22	14	12	11	14
125	21	29	35	37	33	32	32	29	25	40
130	23	29	39	47	48	49	60	74	86	82
135	37	47	61	77	88	99	108	112	114	113
140	88	96	104	113	117	124	132	138	138	136
145	102	111	118	126	132	140	148	154	157	153
150	113	119	124	132	136	144	150	159	158	155
155	119	123	125	128	133	134	137	143	144	142
160	118	120	121	124	124	126	128	128	128	125
165	115	113	111	111	112	111	110	112	113	110
170	106	105	104	103	103	102	102	101	98	96
175	92	92	91	90	90	89	87	85	83	81
180	78	78	78	78	78	78	78	78	78	78

Vert. Horizontal Angles
Angles

	100	105	110	115	120	125	130	135	140	145
0	3413	3413	3413	3413	3413	3413	3413	3413	3413	3413
5	3403	3402	3404	3405	3406	3405	3406	3411	3412	3413
10	3366	3364	3362	3362	3360	3358	3359	3363	3366	3366
15	3292	3286	3282	3280	3277	3273	3273	3271	3278	3279
20	3184	3177	3168	3163	3156	3149	3147	3147	3149	3149
25	3027	3011	2992	2974	2960	2948	2942	2939	2939	2941
30	2803	2773	2753	2741	2730	2724	2714	2711	2709	2708
35	2549	2542	2530	2528	2527	2522	2512	2507	2504	2499
40	2279	2308	2317	2324	2327	2321	2310	2306	2301	2293
45	2016	2050	2096	2115	2121	2121	2113	2108	2100	2090
50	1782	1806	1855	1897	1915	1919	1913	1907	1902	1886
55	1571	1585	1613	1654	1692	1706	1703	1701	1691	1673
60	1369	1374	1387	1411	1454	1475	1480	1475	1463	1447
65	1168	1157	1151	1156	1181	1213	1224	1218	1207	1177
70	951	934	920	910	918	941	953	950	938	910
75	706	698	685	670	658	664	682	687	670	645
80	455	449	441	431	416	404	408	409	397	394
85	204	200	195	190	183	175	168	166	161	167
90	24	24	25	26	26	27	26	25	24	22
95	16	16	17	17	17	17	17	17	17	17
100	16	16	16	16	17	19	21	21	23	18
105	15	15	16	16	22	29	26	22	29	29
110	14	14	15	24	35	35	28	23	30	38
115	13	15	30	41	42	38	29	23	30	43
120	23	41	47	50	48	41	30	22	29	43
125	51	54	57	57	51	43	33	26	28	38
130	76	71	70	63	56	47	37	29	31	39
135	112	109	99	90	78	66	54	46	49	60

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140	133	127	120	112	103	94	83	77	77	83
145	146	140	133	124	115	106	93	85	83	88
150	152	143	137	128	120	110	101	97	96	101
155	142	134	130	126	120	112	106	104	104	110
160	121	121	124	120	115	111	111	112	112	114
165	108	105	102	96	94	103	100	98	96	99
170	93	88	83	77	75	73	71	71	79	81
175	80	79	78	76	76	74	67	67	65	65
180	78	78	78	78	78	78	78	78	78	78

Vert. Horizontal Angles
Angles

	150	155	160	165	170	175	180
0	3413	3413	3413	3413	3413	3413	3413
5	3412	3411	3414	3412	3411	3411	3411
10	3366	3366	3369	3368	3366	3366	3366
15	3279	3279	3282	3282	3279	3278	3278
20	3152	3155	3157	3157	3155	3154	3153
25	2947	2955	2966	2975	2986	2992	2994
30	2710	2712	2720	2733	2743	2752	2756
35	2494	2492	2492	2488	2475	2460	2450
40	2286	2280	2265	2235	2206	2184	2181
45	2078	2061	2028	1988	1960	1945	1936
50	1870	1834	1788	1758	1735	1725	1718
55	1644	1603	1567	1546	1534	1519	1516
60	1407	1374	1355	1345	1336	1334	1334
65	1145	1128	1122	1129	1139	1146	1149
70	890	889	897	909	922	924	921
75	644	653	668	675	680	682	683
80	405	415	422	426	428	430	429
85	171	174	175	175	175	175	175
90	19	18	17	17	16	16	16
95	17	17	17	17	17	17	17
100	16	16	16	16	16	16	16
105	19	15	15	15	15	15	15
110	35	22	14	14	14	14	14
115	46	39	29	16	12	12	12
120	53	53	45	38	24	13	11
125	52	59	56	50	47	41	35
130	52	65	69	71	73	82	86
135	73	91	105	111	108	104	108
140	91	101	113	123	130	131	131
145	97	105	117	135	147	151	157
150	109	118	128	136	148	159	165
155	117	122	127	134	143	150	155
160	113	114	118	123	126	131	133
165	101	104	104	106	107	110	112
170	82	84	86	88	88	89	89
175	68	71	73	72	72	73	73
180	78	78	78	78	78	78	78

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1254.22	N.A.	12.70
0-30	2638.63	N.A.	26.80
0-40	4237.25	N.A.	43.00
0-60	7339.54	N.A.	74.40
0-80	9278.58	N.A.	94.10
0-90	9523.01	N.A.	96.50
10-90	9199.06	N.A.	93.30
20-40	2983.03	N.A.	30.20
20-50	4602.00	N.A.	46.70
40-70	4293.57	N.A.	43.50
60-80	1939.04	N.A.	19.70
70-80	747.76	N.A.	7.60
80-90	244.43	N.A.	2.50
90-110	38.54	N.A.	0.40
90-120	62.12	N.A.	0.60
90-130	98.86	N.A.	1.00
90-150	240.68	N.A.	2.40
90-180	340.93	N.A.	3.50
110-180	302.39	N.A.	3.10
0-180	9863.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	323.94
10-20	930.27
20-30	1384.41
30-40	1598.62
40-50	1618.96
50-60	1483.33
60-70	1191.28
70-80	747.76
80-90	244.43
90-100	20.15
100-110	18.39
110-120	23.59
120-130	36.73
130-140	64.45
140-150	77.38
150-160	60.23
160-170	31.78
170-180	8.24

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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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	108	103	98	94	104	100	96	92	95	92	89	91	88	85	86	84	82	80
2	98	89	82	76	95	87	81	75	83	78	73	79	75	71	76	72	69	66
3	89	78	70	63	86	76	69	63	73	66	61	70	64	60	67	62	58	56
4	81	69	60	54	79	68	59	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	72	61	52	46	58	51	45	56	49	44	54	48	43	41
6	69	56	47	40	67	55	46	40	52	45	39	50	44	39	49	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	36	31	41	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

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UGR TABLE - CORRECTED

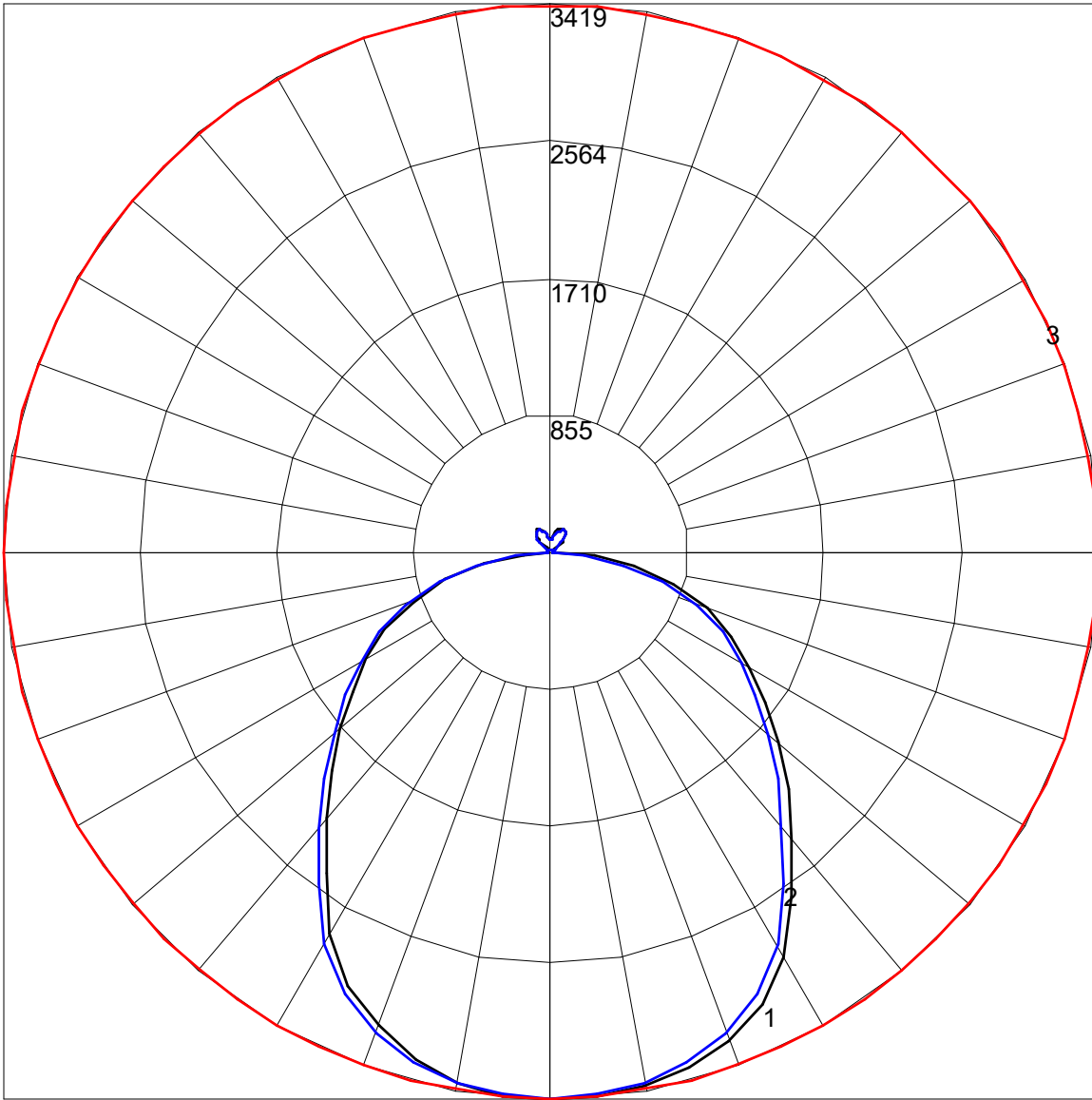
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	18.2	19.8	18.6	20.2	20.6	17.8	19.4	18.3	19.8	20.2
	3H	20.3	21.8	20.8	22.1	22.6	19.9	21.4	20.4	21.8	22.2
	4H	21.2	22.6	21.7	23.0	23.4	20.8	22.1	21.2	22.5	23.0
	6H	22.0	23.2	22.4	23.6	24.1	21.5	22.7	21.9	23.1	23.6
	8H	22.2	23.4	22.7	23.9	24.4	21.7	22.9	22.1	23.3	23.8
	12H	22.5	23.6	22.9	24.1	24.6	21.9	23.0	22.3	23.4	23.9
4H	2H	19.0	20.3	19.4	20.8	21.2	18.7	20.0	19.1	20.4	20.9
	3H	21.3	22.4	21.7	22.9	23.3	20.9	22.0	21.4	22.5	23.0
	4H	22.3	23.3	22.8	23.8	24.3	21.8	22.9	22.3	23.4	23.9
	6H	23.2	24.1	23.7	24.6	25.1	22.7	23.6	23.2	24.1	24.6
	8H	23.5	24.4	24.0	24.9	25.4	23.0	23.8	23.5	24.3	24.8
	12H	23.8	24.6	24.4	25.1	25.7	23.2	24.0	23.7	24.5	25.0
8H	4H	22.7	23.5	23.2	24.0	24.5	22.2	23.1	22.7	23.6	24.1
	6H	23.7	24.4	24.2	24.9	25.5	23.2	23.9	23.7	24.4	25.0
	8H	24.1	24.8	24.7	25.3	25.9	23.5	24.2	24.1	24.7	25.3
	12H	24.6	25.1	25.1	25.7	26.3	23.9	24.4	24.4	25.0	25.6
12H	4H	22.7	23.5	23.2	24.0	24.5	22.3	23.0	22.8	23.6	24.1
	6H	23.8	24.4	24.3	24.9	25.5	23.3	23.9	23.8	24.4	25.0
	8H	24.3	24.8	24.8	25.4	26.0	23.7	24.3	24.2	24.8	25.4

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 3419 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180)
2 - Vertical Plane Through Horizontal Angles (90 - 270)
3 - Horizontal Cone Through Vertical Angle (0)