



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HZX-EX-Q1-60W-5000K-D120.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] HZX-EX-Q1-60W-5000K-D120
 [TESTLAB] EVERFINE
 [TESTDATE] 05 December 2023
 [ISSUEDATE] 2023-12-05 15:08:32
 [NEARFIELD]
 [LAMPPOSITION] 0,0
 [OTHER] EVERFINE GO-2000H_V1 SYSTEM
 [MANUFAC] BELUCE CANADA INC
 [LUMINAIRE] HZX-EX-Q1-60W-5000K-D120
 [LUMCAT] HZX-EX-Q1-60W-5000K-D120
 [LAMP] 8591 LUMENS
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_CERTIFICATION] CSA

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8591
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	60.4769
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.24 m (Diameter)
Luminous Width (90-270)	0.24 m (Diameter)
Luminous Height	0.00 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	70434	69850	69391
55	63961	63210	62703
65	52304	51504	50370
75	31484	30607	29486
85	8683	7919	6885

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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	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400
2.5	3420.950	3421.900	3422.100	3421.900	3420.250	3420.650	3419.600	3416.100	3415.700	3416.350
5.0	3407.600	3408.300	3409.400	3411.700	3409.100	3408.900	3410.000	3399.300	3400.700	3400.900
7.5	3371.700	3373.450	3376.050	3378.600	3375.000	3377.550	3379.350	3360.250	3363.150	3364.400
10.0	3308.900	3311.100	3314.200	3317.400	3313.700	3317.300	3320.600	3291.900	3297.400	3299.000
12.5	3251.150	3250.250	3252.250	3254.150	3248.950	3253.100	3254.050	3228.950	3231.500	3235.350
15.0	3200.700	3199.700	3198.900	3198.600	3194.700	3198.000	3194.800	3174.800	3174.700	3180.300
17.5	3149.750	3149.050	3146.850	3145.250	3141.700	3143.500	3141.900	3119.150	3121.300	3125.950
20.0	3096.400	3095.000	3092.100	3089.500	3087.500	3084.000	3086.400	3059.600	3064.900	3069.500
22.5	3038.200	3036.400	3033.200	3029.450	3029.150	3022.600	3028.150	2996.600	3003.250	3008.500
25.0	2975.900	2973.400	2969.000	2966.000	2965.700	2956.000	2964.400	2927.100	2935.700	2941.900
27.5	2899.250	2895.800	2890.600	2889.750	2890.550	2878.350	2888.900	2841.200	2851.000	2856.300
30.0	2800.400	2797.400	2791.200	2792.500	2792.600	2780.000	2789.500	2737.300	2745.200	2751.000
32.5	2700.000	2695.850	2689.400	2691.000	2689.550	2675.850	2685.150	2636.800	2645.600	2649.000
35.0	2605.800	2599.700	2593.900	2593.000	2591.600	2580.600	2585.900	2538.300	2547.200	2550.000
37.5	2507.100	2500.700	2495.000	2491.400	2489.900	2482.100	2485.550	2436.250	2444.250	2448.600
40.0	2405.400	2398.400	2391.600	2387.400	2383.400	2379.700	2379.400	2331.600	2340.000	2346.100
42.5	2296.550	2285.900	2279.650	2275.400	2266.500	2265.500	2264.100	2206.800	2218.550	2223.900
45.0	2161.100	2149.000	2143.200	2138.900	2129.100	2126.000	2124.400	2065.300	2075.100	2082.700
47.5	2023.150	2012.600	2007.250	2001.150	1994.200	1988.500	1988.050	1930.250	1938.750	1947.250
50.0	1888.900	1881.500	1872.300	1866.800	1860.500	1855.000	1853.100	1796.200	1804.400	1811.300
52.5	1751.800	1746.750	1733.050	1728.500	1721.850	1714.650	1715.350	1646.600	1657.200	1665.100
55.0	1591.900	1585.900	1573.200	1570.500	1560.600	1554.200	1553.100	1486.400	1495.600	1505.100
57.5	1436.100	1431.400	1420.850	1414.950	1405.900	1397.900	1398.850	1332.400	1343.450	1351.200
60.0	1287.000	1280.800	1268.000	1261.100	1253.800	1243.200	1245.600	1173.100	1185.100	1195.200
62.5	1118.750	1113.700	1103.200	1095.200	1083.500	1074.850	1075.550	1010.065	1021.770	1027.560
65.0	959.160	954.960	944.490	936.010	923.700	918.750	916.320	847.590	858.870	866.950
67.5	795.140	787.215	779.860	771.310	761.085	754.805	751.660	687.735	698.420	708.090
70.0	637.670	631.960	625.030	617.190	606.370	598.550	597.170	536.850	547.290	552.910
72.5	490.975	484.970	478.385	474.630	462.660	455.325	455.275	398.730	413.205	414.150
75.0	353.590	351.580	343.740	341.110	331.150	322.330	324.590	271.660	286.830	289.840
77.5	235.600	231.990	227.865	225.210	217.200	211.915	212.100	173.130	179.880	187.370
80.0	144.460	135.800	135.740	130.040	124.310	122.460	121.630	96.887	100.310	103.990
82.5	75.908	69.547	69.726	64.930	62.181	60.480	60.317	45.309	46.178	49.987
85.0	32.839	31.101	29.948	28.952	26.039	26.439	25.063	20.574	20.034	21.571
87.5	17.403	16.831	16.672	16.024	14.303	14.212	13.623	9.056	9.535	10.637
90.0	4.912	4.126	4.207	4.131	3.343	3.337	3.382	3.637	3.664	3.574
92.5	4.390	4.437	4.428	4.466	3.837	3.778	3.854	4.042	4.054	3.959
95.0	4.876	4.943	4.919	5.009	4.383	4.360	4.417	4.641	4.633	4.537
97.5	5.492	5.574	5.544	5.640	5.014	5.000	5.054	5.306	5.301	5.205
100.0	6.169	6.266	6.226	6.316	5.709	5.685	5.750	6.032	6.029	5.916
102.5	6.887	6.980	6.958	7.051	6.444	6.423	6.490	6.787	6.775	6.665
105.0	7.652	7.745	7.730	7.826	7.226	7.201	7.269	7.580	7.578	7.456
107.5	8.451	8.556	8.532	8.633	8.028	8.015	8.076	8.412	8.393	8.284
110.0	9.278	9.383	9.371	9.462	8.871	8.849	8.919	9.271	9.254	9.120
112.5	10.125	10.227	10.215	10.313	9.736	9.711	9.786	10.138	10.120	9.998
115.0	10.979	11.090	11.079	11.173	10.591	10.565	10.636	11.011	10.999	10.871
117.5	11.858	11.964	11.956	12.054	11.476	11.458	11.528	11.903	11.903	11.768
120.0	12.723	12.839	12.832	12.926	12.358	12.340	12.413	12.788	12.790	12.662
122.5	13.609	13.712	13.696	13.795	13.237	13.202	13.283	13.671	13.680	13.550
125.0	14.467	14.569	14.548	14.638	14.107	14.062	14.143	14.538	14.562	14.422
127.5	15.328	15.431	15.406	15.501	14.961	14.914	15.004	15.394	15.427	15.277
130.0	16.204	16.298	16.263	16.372	15.823	15.773	15.853	16.240	16.309	16.137
132.5	17.073	17.164	17.117	17.233	16.681	16.626	16.705	17.087	17.147	17.000

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CANDELA TABULATION - (Cont.)

135.0	17.915	18.010	17.954	18.074	17.521	17.468	17.530	17.907	17.966	17.815
137.5	18.765	18.852	18.812	18.938	18.318	18.262	18.335	18.745	18.794	18.653
140.0	19.603	19.681	19.657	19.777	19.164	19.105	19.186	19.567	19.615	19.507
142.5	20.428	20.516	20.483	20.607	20.000	19.936	20.003	20.389	20.440	20.315
145.0	21.225	21.296	21.284	21.401	20.762	20.686	20.767	21.140	21.186	21.087
147.5	21.956	22.032	22.024	22.123	21.477	21.419	21.490	21.833	21.897	21.783
150.0	22.682	22.744	22.741	22.843	22.151	22.090	22.152	22.483	22.550	22.433
152.5	23.361	23.436	23.408	23.535	22.846	22.770	22.815	23.114	23.192	23.081
155.0	24.019	24.084	24.064	24.184	23.516	23.394	23.443	23.690	23.789	23.677
157.5	24.640	24.699	24.669	24.791	24.106	23.975	24.004	24.234	24.321	24.238
160.0	25.212	25.267	25.236	25.339	25.137	24.494	24.529	24.701	24.785	24.722
162.5	25.710	25.733	25.746	25.835	25.683	24.975	25.015	25.145	25.231	25.162
165.0	26.165	26.191	26.219	26.320	26.134	25.454	25.494	25.563	25.653	25.598
167.5	26.550	26.587	26.650	26.746	26.626	26.008	26.039	26.059	26.146	26.128
170.0	26.889	26.968	26.998	27.115	26.930	26.503	26.528	26.531	26.581	26.602
172.5	27.177	27.262	27.278	27.368	27.082	26.968	27.010	26.980	27.032	27.071
175.0	27.382	27.450	27.498	27.530	27.398	27.311	27.410	27.338	27.375	27.405
177.5	27.529	27.594	27.619	27.628	27.605	27.580	27.674	27.570	27.609	27.613
180.0	27.000	27.000	27.000	27.000	27.000	27.000	27.000	27.000	27.000	27.000

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	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400	3421.400
2.5	3417.200	3417.450	3417.000	3417.650	3417.000	3421.300	3420.950
5.0	3401.800	3401.200	3399.200	3401.000	3399.300	3408.600	3407.600
7.5	3364.200	3364.050	3361.050	3359.650	3354.500	3374.750	3371.700
10.0	3300.700	3299.000	3294.500	3295.100	3291.500	3314.400	3308.900
12.5	3236.800	3237.800	3233.300	3233.600	3235.350	3255.850	3251.150
15.0	3182.100	3184.100	3180.600	3180.800	3183.200	3203.800	3200.700
17.5	3128.750	3128.850	3128.550	3130.900	3131.800	3154.400	3149.750
20.0	3073.100	3071.000	3071.000	3074.300	3077.000	3102.300	3096.400
22.5	3013.350	3009.700	3011.450	3013.400	3016.550	3045.850	3038.200
25.0	2947.100	2942.100	2945.100	2946.300	2949.800	2983.800	2975.900
27.5	2860.600	2857.600	2860.900	2860.150	2864.950	2906.800	2899.250
30.0	2754.300	2756.900	2760.500	2761.100	2765.500	2810.000	2800.400
32.5	2653.750	2658.600	2663.750	2666.650	2669.450	2712.300	2700.000
35.0	2556.000	2561.500	2569.100	2571.000	2573.300	2616.700	2605.800
37.5	2456.150	2461.500	2466.750	2472.200	2473.000	2516.800	2507.100
40.0	2352.100	2356.700	2362.900	2371.000	2369.600	2415.000	2405.400
42.5	2229.950	2233.600	2243.300	2251.000	2246.050	2304.400	2296.550
45.0	2086.600	2091.300	2101.200	2112.700	2108.900	2167.400	2161.100
47.5	1950.850	1956.000	1968.750	1978.200	1976.050	2029.650	2023.150
50.0	1816.100	1822.100	1837.100	1841.900	1842.200	1899.200	1888.900
52.5	1673.600	1679.700	1693.100	1697.500	1699.250	1762.550	1751.800
55.0	1513.100	1518.000	1532.700	1538.600	1539.500	1605.600	1591.900
57.5	1359.650	1365.800	1376.700	1385.900	1388.300	1448.950	1436.100
60.0	1205.300	1212.300	1223.000	1230.700	1232.800	1297.300	1287.000
62.5	1038.950	1044.400	1056.400	1066.150	1066.850	1132.250	1118.750
65.0	878.920	886.960	893.550	907.110	906.910	972.650	959.160
67.5	717.995	722.785	734.955	745.305	740.430	808.160	795.140
70.0	564.620	569.220	581.490	587.620	589.140	651.650	637.670
72.5	426.695	427.465	437.510	449.535	445.365	505.940	490.975
75.0	297.480	298.860	306.780	317.590	313.310	371.620	353.590
77.5	189.225	194.640	203.715	203.815	207.735	246.365	235.600
80.0	106.200	109.090	116.210	115.480	119.680	146.110	144.460

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CANDELA TABULATION - (Cont.)

82.5	49.649	52.368	57.415	56.585	59.714	77.004	75.908
85.0	20.699	22.330	23.547	24.445	24.792	34.073	32.839
87.5	10.655	11.639	13.233	13.500	14.063	17.909	17.403
90.0	3.614	3.517	4.144	4.105	4.147	5.438	4.912
92.5	3.964	3.874	4.584	4.604	4.566	4.407	4.390
95.0	4.546	4.467	5.150	5.183	5.122	4.894	4.876
97.5	5.204	5.123	5.792	5.815	5.767	5.504	5.492
100.0	5.923	5.827	6.478	6.505	6.456	6.172	6.169
102.5	6.667	6.570	7.227	7.262	7.191	6.889	6.887
105.0	7.461	7.359	8.006	8.039	7.973	7.645	7.652
107.5	8.283	8.178	8.824	8.851	8.790	8.445	8.451
110.0	9.134	9.027	9.667	9.689	9.618	9.282	9.278
112.5	10.001	9.905	10.513	10.533	10.460	10.113	10.125
115.0	10.871	10.776	11.389	11.412	11.337	10.965	10.979
117.5	11.772	11.670	12.261	12.283	12.209	11.839	11.858
120.0	12.654	12.570	13.148	13.152	13.089	12.718	12.723
122.5	13.542	13.424	14.015	14.026	13.944	13.587	13.609
125.0	14.401	14.294	14.862	14.878	14.800	14.446	14.467
127.5	15.268	15.153	15.734	15.741	15.660	15.311	15.328
130.0	16.127	16.020	16.617	16.608	16.515	16.184	16.204
132.5	16.979	16.864	17.489	17.474	17.385	17.046	17.073
135.0	17.810	17.710	18.343	18.321	18.218	17.889	17.915
137.5	18.624	18.543	19.203	19.169	19.075	18.748	18.765
140.0	19.465	19.363	20.035	20.010	19.907	19.587	19.603
142.5	20.278	20.185	20.878	20.819	20.724	20.424	20.428
145.0	21.037	20.903	21.649	21.595	21.514	21.218	21.225
147.5	21.727	21.595	22.373	22.311	22.240	21.962	21.956
150.0	22.419	22.312	23.080	23.023	22.955	22.689	22.682
152.5	23.057	22.945	23.754	23.698	23.631	23.382	23.361
155.0	23.682	23.573	24.399	24.340	24.282	24.034	24.019
157.5	24.224	24.117	24.997	24.964	24.884	24.670	24.640
160.0	24.734	24.623	25.549	25.533	25.437	25.248	25.212
162.5	25.176	25.094	26.065	26.011	25.936	25.755	25.710
165.0	25.632	25.546	26.507	26.453	26.381	26.238	26.165
167.5	26.142	26.047	26.866	26.823	26.775	26.673	26.550
170.0	26.600	26.493	27.155	27.147	27.092	27.046	26.889
172.5	27.076	26.912	27.359	27.372	27.367	27.343	27.177
175.0	27.446	27.272	27.525	27.553	27.560	27.521	27.382
177.5	27.676	27.525	27.616	27.655	27.662	27.623	27.529
180.0	27.000	27.000	27.000	27.000	27.000	27.000	27.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1223.12	N.A.	14.20
0-30	2582.02	N.A.	30.10
0-40	4194.96	N.A.	48.80
0-60	7209.46	N.A.	83.90
0-80	8461.7	N.A.	98.50
0-90	8505.62	N.A.	99.00
10-90	8183.76	N.A.	95.30
20-40	2971.84	N.A.	34.60
20-50	4604.67	N.A.	53.60
40-70	3914.82	N.A.	45.60
60-80	1252.24	N.A.	14.60
70-80	351.92	N.A.	4.10
80-90	43.92	N.A.	0.50
90-110	13.35	N.A.	0.20
90-120	24.24	N.A.	0.30
90-130	37.20	N.A.	0.40
90-150	64.27	N.A.	0.70
90-180	85.21	N.A.	1.00
110-180	71.86	N.A.	0.80
0-180	8590.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	321.86
10-20	901.26
20-30	1358.9
30-40	1612.95
40-50	1632.83
50-60	1381.67
60-70	900.32
70-80	351.92
80-90	43.92
90-100	5.28
100-110	8.06
110-120	10.89
120-130	12.96
130-140	13.83
140-150	13.24
150-160	11.01
160-170	7.33
170-180	2.60

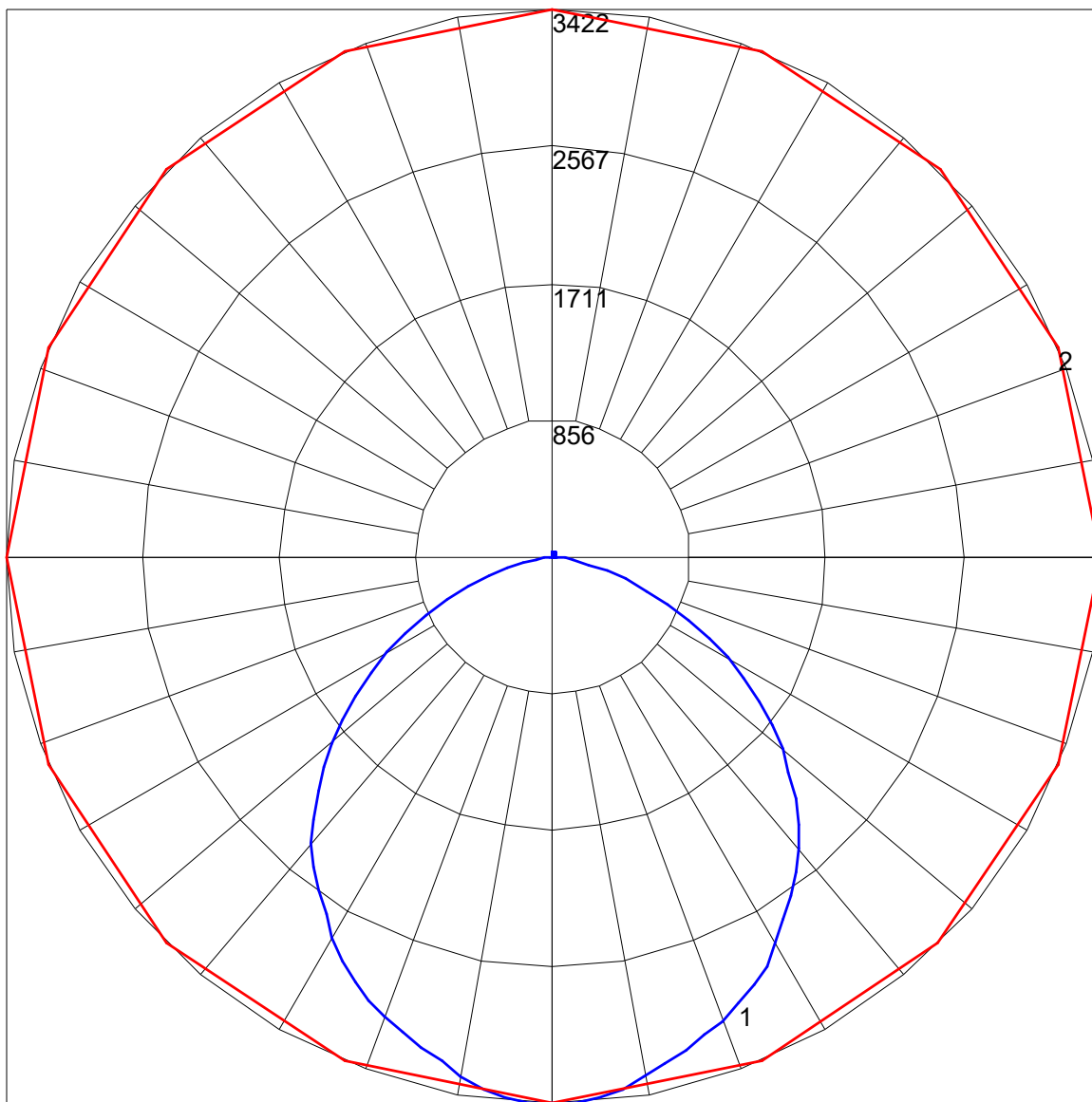
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	101	101	101	99
1	110	105	102	98	107	103	100	96	99	96	93	95	92	90	91	89	87	85
2	100	93	87	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	68	77	71	66	74	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	50	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	44	38	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

POLAR GRAPH



Maximum Candela = 3422.1 Located At Horizontal Angle = 45, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)