



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GH4RA432UNIH10CSPF.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [ISSUE DATE]03/31/10  
 [TEST]ITL64496  
 [TEST LAB]INDEPENDENT TESTING LABORATORIES, INC.  
 [MANUFACTURER]TECHNICAL CONSUMER PRODUCTS, INC.  
 [LUMEN CATEGORY]GH4RA432UNIH210CSPF  
 [LUMINAIRE]GREEN HI BAY REFLECTIVE ALUMINUM 4' 32W T8 4-LAMP HBF W/10' CORD, QUICK SHIP  
 [LAMP]4) 32-WATT T-8 LINEAR FLUORESCENTS  
 [BALLAST]ADVANCE IOP-4P32HL-90C-G  
 [MOUNTING]SUSPENDED  
 [OTHER]THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.  
 [OTHER]TOTAL INPUT WATTS = 139.7 AT 120.0 VOLTS  
 [OTHER]LUMEN TO CANDELA RATIO USED = 9.17

**CHARACTERISTICS**

Total Rated Lamp Lumens	11800 (4 lamps)
Total Luminaire Efficiency	93.4 %
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	140
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.26
Spacing Criteria (90-270)	1.06
Spacing Criteria (Diagonal)	1.22
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.01 ft
Luminous Width (90-270)	0.96 ft
Luminous Height	0.00 ft



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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	12425	9473	8521
55	11693	8122	7943
65	10417	7283	6756
75	8140	5473	4538
85	3001	894	224

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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>
<b>0.0</b>	4826	4826	4826	4826	4826
<b>2.5</b>	4840	4829	4814	4797	4796
<b>5.0</b>	4823	4815	4790	4766	4759
<b>7.5</b>	4795	4780	4745	4705	4694
<b>10.0</b>	4748	4732	4677	4625	4602
<b>12.5</b>	4699	4671	4593	4522	4508
<b>15.0</b>	4637	4601	4499	4418	4392
<b>17.5</b>	4565	4520	4386	4292	4277
<b>20.0</b>	4486	4413	4269	4184	4151
<b>22.5</b>	4382	4312	4127	4032	3925
<b>25.0</b>	4292	4189	4021	3798	3692
<b>27.5</b>	4176	4057	3872	3557	3462
<b>30.0</b>	4057	3913	3658	3326	3295
<b>32.5</b>	3930	3769	3442	3177	3099
<b>35.0</b>	3782	3621	3197	2978	2872
<b>37.5</b>	3640	3443	2992	2753	2660
<b>40.0</b>	3481	3298	2817	2546	2485
<b>42.5</b>	3317	3111	2599	2374	2319
<b>45.0</b>	3157	2926	2407	2217	2165
<b>47.5</b>	2978	2702	2185	2058	2024
<b>50.0</b>	2800	2455	2019	1908	1899
<b>52.5</b>	2588	2229	1841	1788	1768
<b>55.0</b>	2410	1997	1674	1645	1637
<b>57.5</b>	2221	1817	1534	1510	1485
<b>60.0</b>	1994	1575	1396	1357	1336
<b>62.5</b>	1786	1387	1259	1212	1181
<b>65.0</b>	1582	1195	1106	1069	1026
<b>67.5</b>	1373	1026	963	899	873
<b>70.0</b>	1151	869	803	752	707
<b>72.5</b>	955	721	660	593	558
<b>75.0</b>	757	591	509	452	422
<b>77.5</b>	556	461	365	314	270
<b>80.0</b>	389	316	235	172	146
<b>82.5</b>	218	193	103	75	54
<b>85.0</b>	94	70	28	13	7
<b>87.5</b>	17	8	0	0	0
<b>90.0</b>	0	0	0	0	0

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-30	3560.53	30.2	32.3
0-40	5611.5	47.6	50.9
0-60	9221.72	78.2	83.7
0-90	11023.9	93.4	100
90-120	0	0	0
90-130	0	0	0
90-150	0	0	0
90-180	0	0	0
0-180	11023.9	93.4	100

Total Luminaire Efficiency = 93.4%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	453.64
10-20	1269.86
20-30	1837.04
30-40	2050.97
40-50	1964.57
50-60	1645.65
60-70	1155.91
70-80	566.13
80-90	80.14
90-100	0
100-110	0
110-120	0
120-130	0
130-140	0
140-150	0
150-160	0
160-170	0
170-180	0

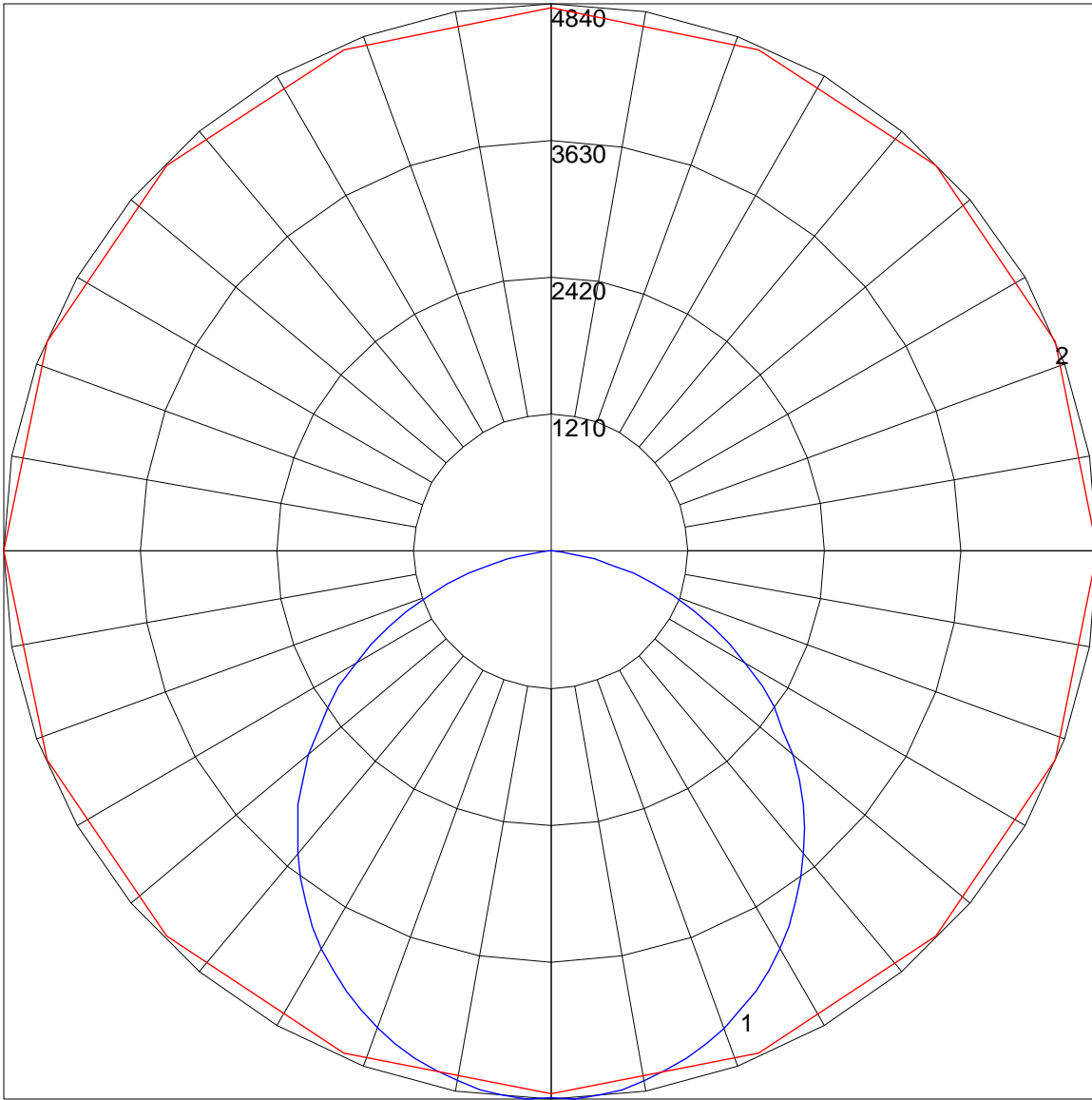
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	111	111	111	111	109	109	109	109	104	104	104	99	99	99	95	95	95	93
1	103	99	95	92	100	96	93	90	92	90	87	89	87	85	86	84	82	80
2	94	87	81	76	92	85	80	75	82	77	73	79	75	72	76	73	70	68
3	86	77	70	64	84	75	69	63	73	67	62	70	65	61	68	64	60	58
4	79	69	61	55	77	67	60	54	65	59	54	63	57	53	61	56	52	50
5	73	62	54	48	71	61	53	47	59	52	47	57	51	46	55	50	46	44
6	68	56	48	42	66	55	47	42	53	46	41	52	46	41	50	45	41	39
7	63	51	43	37	61	50	43	37	49	42	37	47	41	37	46	41	36	35
8	59	47	39	34	57	46	39	33	45	38	33	44	37	33	42	37	33	31
9	55	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28
10	52	40	32	28	50	39	32	28	38	32	28	37	32	27	37	31	27	26

POLAR GRAPH



Maximum Candela = 4840 Located At Horizontal Angle = 0, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)