



IES INDOOR REPORT
PHOTOMETRIC FILENAME : GH4RA454UNIV10CSPF.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [ISSUE DATE]03/30/10
 [TEST]ITL64497
 [TEST LAB]INDEPENDENT TESTING LABORATORIES, INC.
 [MANUFACTURER]TECHNICAL CONSUMER PRODUCTS, INC.
 [LUMEN CATEGORY]GH4RA454UNIV10CSPF
 [LUMINAIRE]GREEN HI BAY REFLECTIVE ALUMINUM 4' 54W T5HO 4-LAMP W/10' CORD, QUICK SHIP
 [LAMP]4) 54-WATT T5HO LINEAR FLUORESCENTS
 [BALLAST]SYLVANIA QTP4X54T5HO/UNV PSN HT W
 [MOUNTING]SUSPENDED
 [OTHER]THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.
 [OTHER]TOTAL INPUT WATTS = 218.0 AT 120.0 VOLTS
 [OTHER]LUMEN TO CANDELA RATIO USED = 9.17

CHARACTERISTICS

Total Rated Lamp Lumens	17800 (4 lamps)
Total Luminaire Efficiency	92.5 %
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	218
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.26
Spacing Criteria (90-270)	0.88
Spacing Criteria (Diagonal)	1.06
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	22272	10823	9611
55	20698	9219	11591
65	17997	11089	12538
75	13645	10193	7398
85	3927	0	0

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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>
0.0	8690	8690	8690	8690	8690
2.5	8718	8687	8652	8599	8586
5.0	8682	8638	8515	8405	8348
7.5	8647	8559	8330	8105	8048
10.0	8568	8418	8035	7801	7695
12.5	8462	8198	7744	7365	7263
15.0	8365	8013	7457	7047	6946
17.5	8215	7792	7061	6730	6637
20.0	8074	7532	6787	6395	6241
22.5	7907	7272	6457	6016	5827
25.0	7731	6950	6179	5589	5359
27.5	7528	6642	5800	5113	4822
30.0	7290	6289	5447	4548	4266
32.5	7069	5990	5029	4072	3764
35.0	6805	5690	4531	3588	3314
37.5	6541	5342	4046	3156	3015
40.0	6241	5055	3557	2891	2706
42.5	5968	4667	3116	2574	2503
45.0	5659	4310	2750	2389	2442
47.5	5306	3958	2459	2327	2468
50.0	4971	3513	2186	2345	2512
52.5	4628	3125	1970	2362	2468
55.0	4266	2636	1900	2305	2389
57.5	3923	2243	1895	2217	2327
60.0	3517	1838	1860	2155	2239
62.5	3138	1543	1794	2067	2107
65.0	2733	1283	1684	1900	1904
67.5	2345	1080	1600	1684	1631
70.0	1966	1000	1437	1388	1313
72.5	1604	934	1234	1071	996
75.0	1269	842	948	771	688
77.5	908	740	648	450	317
80.0	608	560	348	145	97
82.5	326	326	71	9	0
85.0	123	71	0	0	0
87.5	9	0	0	0	0
90.0	0	0	0	0	0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	5808.17	32.6	35.3
0-40	8762.04	49.2	53.2
0-60	13681.7	76.9	83.1
0-90	16469.57	92.5	100
90-120	0	0	0
90-130	0	0	0
90-150	0	0	0
90-180	0	0	0
0-180	16469.57	92.5	100

Total Luminaire Efficiency = 92.5%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	799.84
10-20	2118.49
20-30	2889.85
30-40	2953.87
40-50	2632.18
50-60	2287.48
60-70	1772.93
70-80	919.33
80-90	95.61
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

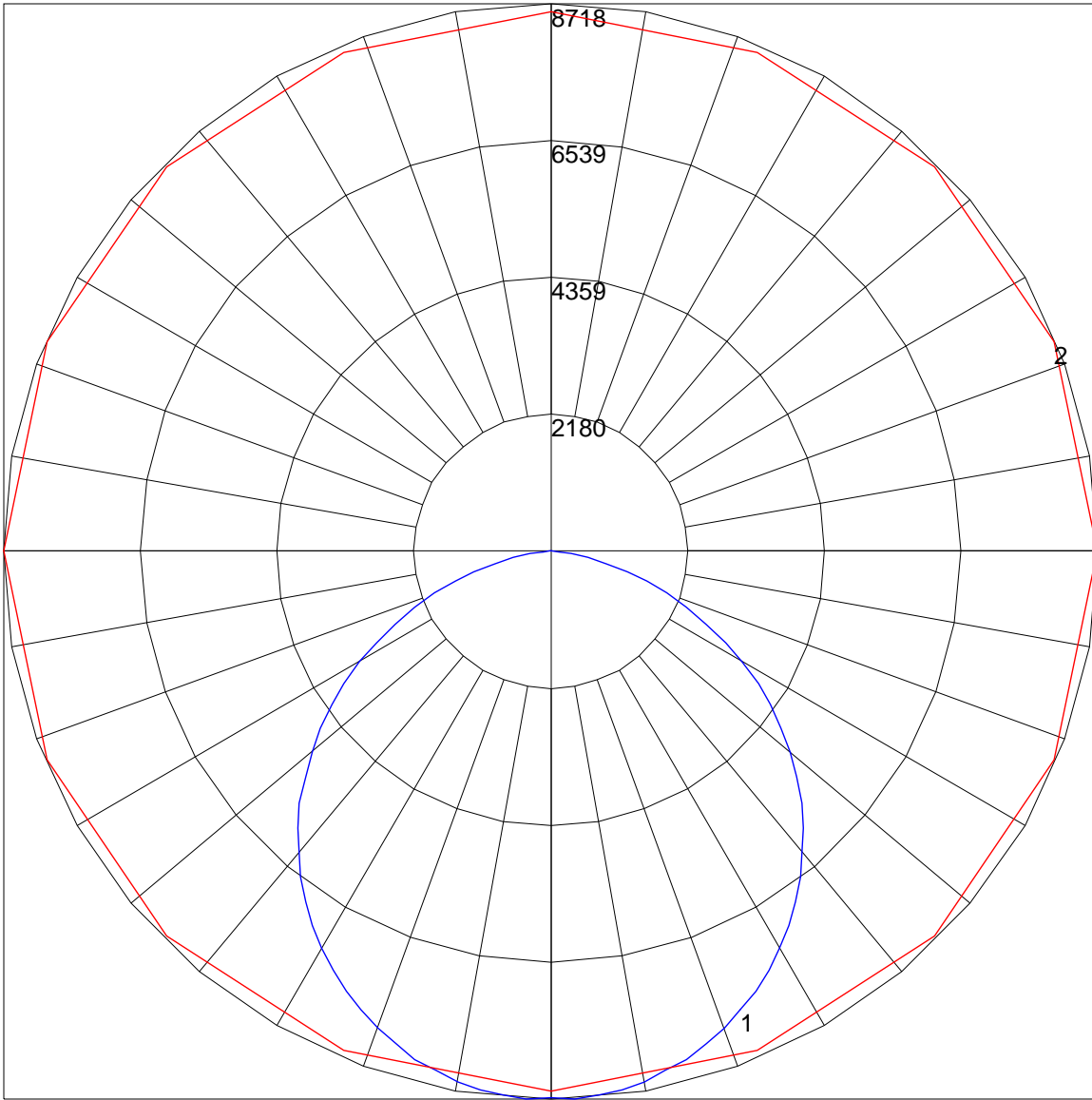
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	110	110	110	110	108	108	108	108	103	103	103	98	98	98	94	94	94	93
1	102	98	94	91		99	96	92	89	92	89	87	88	86	84	85	83	82	80
2	93	86	80	76		91	84	79	75	81	77	73	78	75	71	76	72	70	68
3	86	77	70	64		83	75	69	63	72	67	62	70	65	61	68	64	60	58
4	79	69	61	55		77	67	60	55	65	59	54	63	58	53	61	56	53	51
5	73	62	54	48		71	61	53	48	59	52	47	57	51	47	55	50	47	45
6	68	56	48	43		66	55	48	43	54	47	42	52	46	42	51	46	42	40
7	63	51	44	38		62	51	43	38	49	43	38	48	42	38	47	41	37	36
8	59	47	40	35		58	47	39	35	45	39	34	44	38	34	43	38	34	32
9	55	44	36	32		54	43	36	31	42	36	31	41	35	31	40	35	31	29
10	52	41	34	29		51	40	33	29	39	33	29	38	33	29	38	32	28	27

POLAR GRAPH



Maximum Candela = 8718 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.)