



IES INDOOR REPORT
PHOTOMETRIC FILENAME : EL4SA632UNIHEL.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [ISSUE DATE]12/20/07
 [TEST]ITL59600
 [TEST LAB]INDEPENDENT TESTING LABORATORIES, INC.
 [MANUFACTURER]TECHNICAL CONSUMER PRODUCTS
 [LUMINAIRE]EL4SA632UNIHEL
 [LUMINAIRE]ELITE MIRO4 4' 32w T8 4-LAMP HBF WITH LENS
 [LAMP](6) 32-WATT T-8 LINEAR FLUORESCENTS
 [BALLAST]TWO GE GE-332-MAX-H-42T
 [MOUNTING]SUSPENDED
 [OTHER]THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.
 [OTHER]TOTAL INPUT WATTS= 216 AT 120.0 VOLTS
 [OTHER]LUMEN TO CANDELA RATIO USED= 9.17

CHARACTERISTICS

Total Rated Lamp Lumens	17700 (6 lamps)
Total Luminaire Efficiency	68.6 %
Luminaire Efficacy Rating (LER)	56
Total Luminaire Watts	216
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.20
Spacing Criteria (90-270)	1.12
Spacing Criteria (Diagonal)	1.24
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.40 ft
Luminous Height	0.15 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6794	7009	6744
55	4651	4906	5465
65	4131	3202	4200
75	3176	2452	3295
85	1772	2265	2671

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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	5614.84	5614.84	5614.84	5614.84	5614.84
2.5	5608.76	5608.76	5585.28	5565.29	5561.81
5.0	5575.72	5575.72	5541.81	5514.86	5507.9
7.5	5534.86	5520.94	5480.95	5447.04	5433.13
10.0	5467.04	5454.00	5402.7	5355.75	5332.28
12.5	5400.09	5375.75	5301.85	5254.03	5237.51
15.0	5311.41	5271.41	5193.17	5146.22	5122.74
17.5	5203.6	5162.73	5072.31	5021.02	4987.11
20.0	5081.88	5038.4	4940.16	4872.34	4845.39
22.5	4947.11	4893.21	4794.96	4714.1	4683.67
25.0	4811.48	4737.58	4622.81	4551.52	4514.13
27.5	4635.85	4571.52	4440.23	4365.46	4325.46
30.0	4447.19	4382.85	4250.69	4176.79	4122.02
32.5	4243.74	4169.83	4037.68	3980.3	3926.39
35.0	3987.25	3942.91	3838.58	3794.24	3743.81
37.5	3696.86	3682.95	3612.52	3585.57	3548.18
40.0	3406.47	3416.03	3372.56	3358.65	3324.74
42.5	3020.43	3111.73	3105.64	3105.64	3041.3
45.0	2588.32	2777.86	2838.72	2824.81	2743.95
47.5	2196.21	2459.65	2547.46	2550.94	2473.56
50.0	1871.9	2108.39	2240.55	2267.5	2264.02
52.5	1649.33	1804.09	1956.24	2017.1	2074.48
55.0	1459.79	1540.65	1676.28	1780.61	1878.86
57.5	1304.16	1307.64	1439.79	1544.13	1621.51
60.0	1182.44	1105.06	1212.87	1318.07	1405.88
62.5	1081.58	936.39	1017.24	1138.97	1250.25
65.0	979.86	787.71	858.14	979.86	1135.49
67.5	872.05	669.47	712.94	851.18	1006.81
70.0	757.28	553.83	614.69	723.37	865.09
72.5	601.65	466.02	523.40	614.69	743.37
75.0	486.89	399.07	456.46	526.88	621.65
77.5	385.16	341.69	395.60	449.50	533.84
80.0	290.39	290.39	344.30	385.16	446.02
82.5	202.58	226.05	290.39	313.87	358.21
85.0	114.77	155.63	223.45	250.40	270.40
87.5	20.00	94.77	159.11	189.54	202.58
90.0	13.91	65.21	134.76	160.85	173.02
92.5	10.43	45.21	116.50	141.72	150.41
95.0	12.17	30.43	86.94	119.98	125.20
97.5	13.91	28.69	60.86	94.77	100.86
100.0	14.78	27.82	49.56	70.42	79.99
102.5	16.52	26.95	46.95	60.86	65.21
105.0	16.52	26.08	44.34	58.25	63.47
107.5	17.39	26.95	43.47	57.38	62.60
110.0	19.13	27.82	42.60	55.64	59.99
112.5	20.00	29.56	40.86	52.17	57.38
115.0	20.00	30.43	38.26	49.56	53.04
117.5	20.87	31.30	39.12	46.95	50.43
120.0	20.87	32.17	39.12	44.34	46.95
122.5	21.74	33.04	39.99	44.34	44.34
125.0	21.74	32.17	40.86	46.08	46.08
127.5	22.61	33.04	41.73	46.95	46.95
130.0	22.61	33.04	43.47	46.08	46.95
132.5	22.61	33.91	43.47	46.95	46.95

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CANDELA TABULATION - (Cont.)

135.0	23.47	34.78	46.95	48.69	48.69
137.5	22.61	34.78	48.69	48.69	49.56
140.0	24.34	34.78	51.30	52.17	51.30
142.5	26.08	34.78	53.04	54.77	53.04
145.0	26.95	34.78	53.91	57.38	55.64
147.5	26.95	34.78	53.04	57.38	56.51
150.0	29.56	35.65	51.30	59.99	59.12
152.5	29.56	34.78	46.95	59.12	58.25
155.0	30.43	35.65	43.47	59.12	59.12
157.5	30.43	34.78	39.12	52.17	55.64
160.0	31.30	34.78	38.26	46.08	49.56
162.5	31.30	33.91	36.52	39.99	42.60
165.0	32.17	33.91	36.52	39.12	38.26
167.5	32.17	33.91	36.52	38.26	37.39
170.0	33.04	33.91	35.65	38.26	34.78
172.5	33.04	33.91	34.78	34.78	32.17
175.0	32.17	33.04	33.91	32.17	30.43
177.5	32.17	33.04	33.04	30.43	29.56
180.0	31.30	31.30	31.30	31.30	31.30

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	4125.91	23.3	34
0-40	6530.5	36.9	53.8
0-60	10167.78	57.4	83.7
0-90	11844.16	66.9	97.5
90-120	170.47	1	1.4
90-130	204.84	1.2	1.7
90-150	265.79	1.5	2.2
90-180	300.14	1.7	2.5
0-180	12144.3	68.6	100

Total Luminaire Efficiency = 68.6%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	524.8
10-20	1466.53
20-30	2134.58
30-40	2404.58
40-50	2138.8
50-60	1498.49
60-70	922.84
70-80	521.43
80-90	232.11
90-100	85.76
100-110	45.81
110-120	38.9
120-130	34.37
130-140	31.92
140-150	29.02
150-160	20.71
160-170	10.44
170-180	3.21

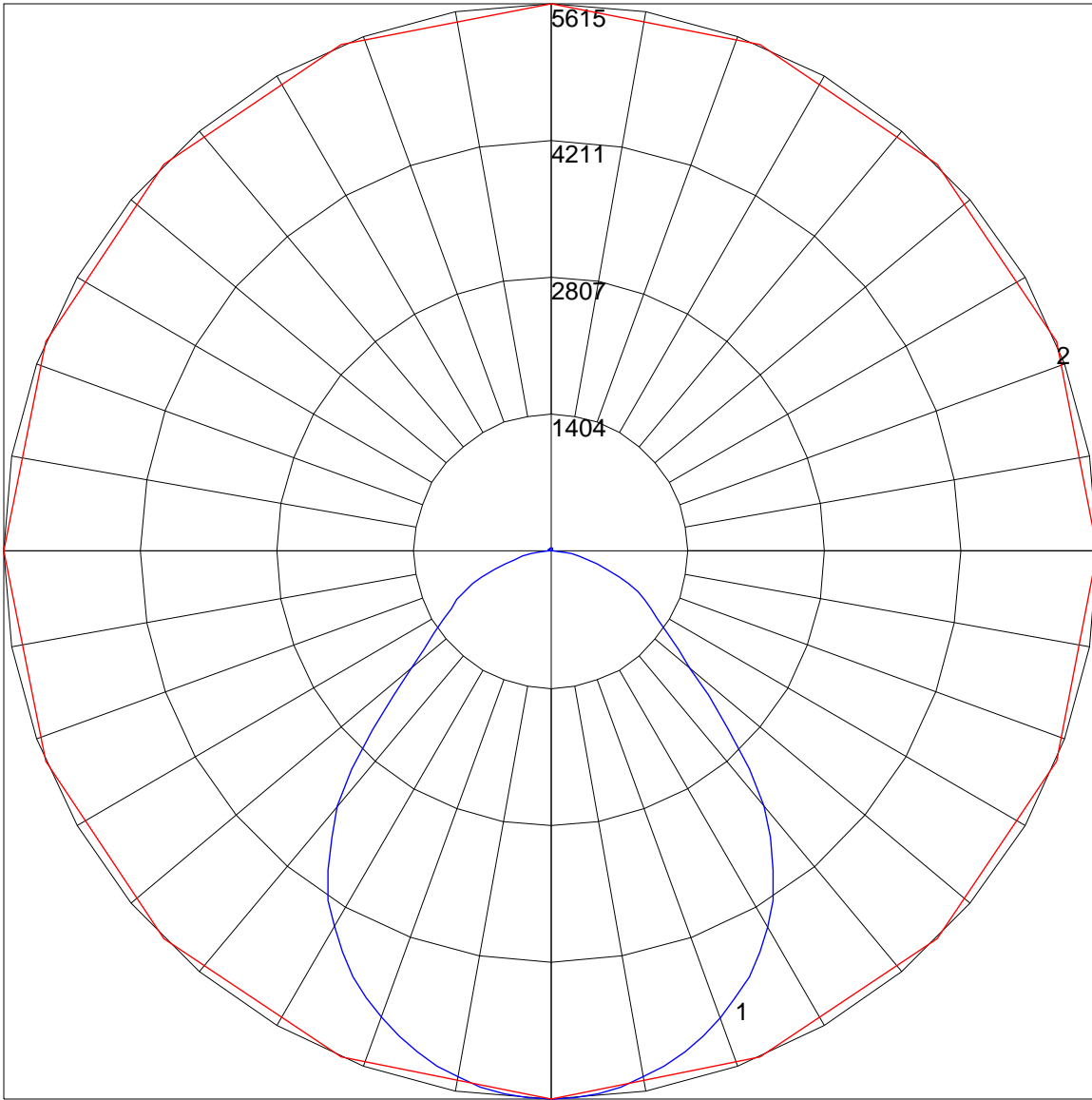
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	81	81	81	81	79	79	79	79	75	75	75	72	72	72	68	68	68	67	67
1	75	72	69	67	73	70	68	66	67	65	63	64	63	61	61	60	59	58	58
2	69	64	60	56	67	62	59	55	60	57	54	57	55	52	55	53	51	49	49
3	63	57	52	48	62	56	51	47	53	50	46	51	48	45	50	47	44	43	43
4	59	51	46	41	57	50	45	41	48	44	40	46	43	40	45	42	39	37	37
5	54	46	40	36	53	45	40	36	44	39	35	42	38	35	41	37	34	33	33
6	50	42	36	32	49	41	36	32	40	35	31	39	34	31	37	34	31	29	29
7	47	38	33	29	46	38	32	29	36	32	28	35	31	28	34	31	28	26	26
8	44	35	30	26	43	35	29	26	34	29	25	33	28	25	32	28	25	24	24
9	41	32	27	23	40	32	27	23	31	26	23	30	26	23	29	26	23	22	22
10	39	30	25	21	38	30	25	21	29	24	21	28	24	21	27	24	21	20	20

POLAR GRAPH



Maximum Candela = 5614.84 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)