



**IES INDOOR REPORT
PHOTOMETRIC FILENAME : PL4WA454UNIV.IES**

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]BALLABS TEST NO. 14140.0
 [ISSUE]DATE] 10/4/2008
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [MANUFAC] TECHNICAL CONSUMER PRODUCTS
 [LUMCAT] PL4WA454UNIV
 [LUMINAIRE] POLAR BAY ENCLOSED & GASKETTED WHITE REFL. 4' 54W T5HO 4-LAMP
 [LAMP] (4) 54-WATT T5HO LINEAR FLUORESCENT
 [BALLAST] (1) UNIVERSAL BALLAST #B454IUNV-E WATTS=241 REFL=86%
 [_ MOUNTING] SUSPENDED
 [OTHER] THE 0 PLANE IS PARALLEL WITH THE LAMPS
 [OTHER] TOTAL INPUT WATTS = 241 AT 120.0 VOLTS

CHARACTERISTICS

Total Rated Lamp Lumens	17800 (4 lamps)
Total Luminaire Efficiency	92.8 %
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	241
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.30
Spacing Criteria (90-270)	1.50
Spacing Criteria (Diagonal)	1.54
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.23 ft
Luminous Width (90-270)	1.13 ft
Luminous Height	0.25 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8086	8874	9209
55	7277	8576	10465
65	5901	9033	11056
75	3860	8576	10687
85	1785	8712	12009

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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	4036.77	4036.77	4036.77	4036.77	4036.77
5	4064.92	4094.89	4099.43	4110.33	4119.41
10	4158.46	4163.91	4196.61	4224.76	4230.21
15	4108.52	4142.12	4213.86	4279.25	4296.5
20	3927.79	3982.28	4103.07	4202.96	4235.66
25	3833.34	3916.89	4093.08	4235.66	4279.25
30	3470.99	3591.77	3823.35	3999.54	4059.48
35	3300.25	3465.54	3745.25	3955.04	4021.33
40	2958.79	3174.02	3514.58	3718.01	3789.75
45	2679.07	2986.94	3328.41	3531.83	3520.94
50	2348.5	2684.52	3041.43	3365.64	3504.59
55	2002.49	2393.00	2794.41	3316.6	3498.23
60	1644.68	2056.98	2573.73	3195.81	3350.2
65	1243.27	1660.12	2409.35	2931.54	3052.33
70	880.01	1297.76	2166.87	2557.38	2661.82
75	539.45	1034.39	1710.97	2134.18	2238.61
80	263.37	752.86	1297.76	1760.01	1929.84
85	115.34	494.95	1099.78	1522.98	1639.23
90	65.39	385.06	939.95	1187.87	1253.26
95	27.24	203.43	363.26	473.15	505.85
100	0.00	87.18	169.83	285.16	324.21
105	0.00	76.29	103.53	137.13	153.48
110	0.00	65.39	87.18	108.98	120.79
115	0.00	65.39	76.29	93.54	103.53
120	0.00	29.97	93.54	93.54	103.53
125	0.00	0.00	115.34	103.53	98.99
130	0.00	0.00	93.54	131.68	137.13
135	0.00	0.00	49.04	98.99	59.94
140	0.00	0.00	0.00	93.54	108.98
145	0.00	0.00	0.00	65.39	76.29
150	0.00	0.00	0.00	54.49	65.39
155	0.00	0.00	0.00	43.59	43.59
160	0.00	0.00	0.00	0.00	32.69
165	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	3429.39	19.3	20.8
0-40	5727.29	32.2	34.7
0-60	10737.67	60.3	65
0-90	15755.37	88.5	95.4
90-120	635.69	3.6	3.8
90-130	697.29	3.9	4.2
90-150	753.73	4.2	4.6
90-180	761.03	4.3	4.6
0-180	16516.41	92.8	100

Total Luminaire Efficiency = 92.8%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	393.97
10-20	1182.74
20-30	1852.68
30-40	2297.9
40-50	2498.38
50-60	2512
60-70	2255.91
70-80	1666.45
80-90	1095.35
90-100	443.15
100-110	120.21
110-120	72.33
120-130	61.6
130-140	38.92
140-150	17.51
150-160	6.97
160-170	.34
170-180	0

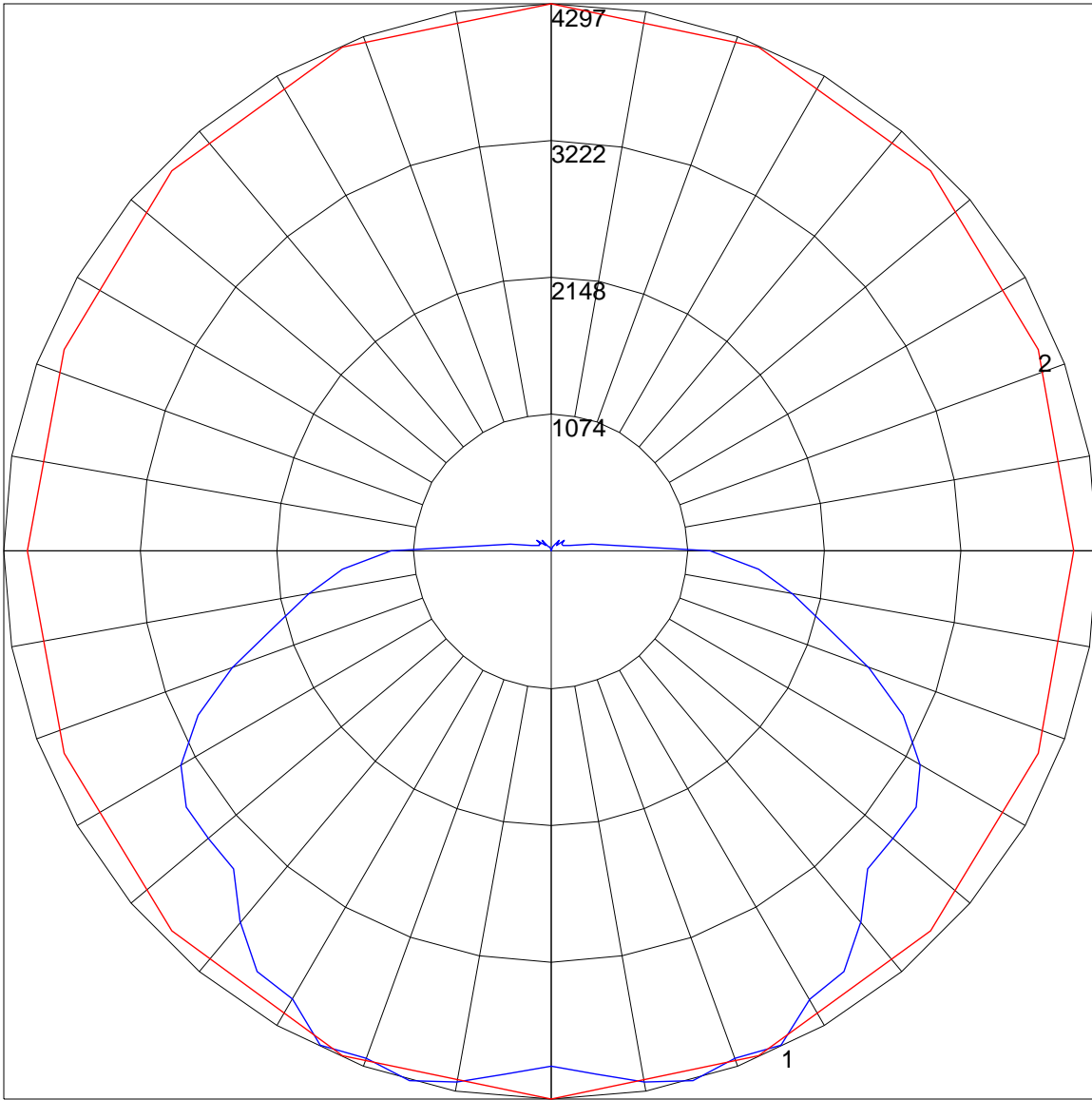
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	109	109	109	109	106	106	106	106	101	101	101	96	96	96	91	91	91	89
1	97	92	87	83	94	89	85	81	84	81	77	80	77	74	76	73	71	69
2	88	79	71	65	85	76	70	64	72	67	62	69	64	60	65	61	58	55
3	79	68	60	53	76	66	58	52	63	56	51	60	54	49	57	52	48	45
4	72	60	51	44	69	58	50	43	55	48	42	53	46	41	50	45	40	38
5	66	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	35	32
6	61	48	39	32	59	46	38	32	44	37	31	42	36	31	40	35	30	28
7	56	43	34	28	54	42	34	28	40	33	27	38	32	27	37	31	26	24
8	52	39	31	25	50	38	30	25	37	29	24	35	29	24	34	28	24	22
9	49	36	28	22	47	35	27	22	34	27	22	32	26	21	31	25	21	19
10	46	33	25	20	44	32	25	20	31	24	20	30	24	19	29	23	19	17

POLAR GRAPH



Maximum Candela = 4296.5 Located At Horizontal Angle = 90, Vertical Angle = 15
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)