



IES INDOOR REPORT

PHOTOMETRIC FILENAME : ABP22-FS1-UNV-20W-4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-14549
[TESTLAB] LSI INDUSTRIES, INC.
[TESTDATE] 12/14/23
[ISSUEDATE] 12/19/23
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] ABP22-FS1-UNV-20W-4000K
[TEST PROCEDURE] IESNA LM-79-19
[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
[FACTORED] SCALED FROM ORIGINAL TEST DATA
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] INDOOR
[SEARCH_COLORTEMP] 4000

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2652
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	20
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.36
Spacing Criterion (90-270)	1.36
Spacing Criterion (Diagonal)	1.46
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	2.00 ft
Luminous Width (90-270)	2.00 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2331	2334	2338
55	2320	2320	2315
65	2246	2239	2227
75	2161	2088	1994
85	2067	1851	1697

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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	819	819	819	819	819
2.5	820	820	820	821	821
5.0	820	820	820	821	821
7.5	819	820	820	820	820
10.0	817	817	818	818	818
12.5	814	814	814	814	815
15.0	809	809	809	810	810
17.5	802	803	804	804	804
20.0	794	794	795	795	795
22.5	785	785	786	786	786
25.0	774	774	774	774	774
27.5	761	761	761	761	761
30.0	745	745	745	745	745
32.5	729	728	729	729	729
35.0	709	709	710	711	711
37.5	686	688	688	689	689
40.0	664	664	666	667	666
42.5	640	640	640	641	642
45.0	613	614	614	615	615
47.5	587	587	587	587	586
50.0	557	558	557	557	557
52.5	527	528	527	526	525
55.0	495	495	495	494	494
57.5	462	461	461	460	459
60.0	428	426	426	425	424
62.5	390	391	390	389	387
65.0	353	354	352	350	350
67.5	317	317	315	311	309
70.0	281	281	278	272	269
72.5	244	243	239	234	230
75.0	208	208	201	195	192
77.5	172	171	165	158	155
80.0	137	135	129	123	120
82.5	99	98	94	89	87
85.0	67	65	60	56	55
87.5	37	35	31	27	25
90.0	0	0	0	0	0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	307.03	N.A.	11.60
0-30	663.97	N.A.	25.00
0-40	1107.78	N.A.	41.80
0-60	2023.07	N.A.	76.30
0-80	2583.87	N.A.	97.40
0-90	2651.74	N.A.	100.00
10-90	2573.51	N.A.	97.00
20-40	800.75	N.A.	30.20
20-50	1274.54	N.A.	48.10
40-70	1263.41	N.A.	47.60
60-80	560.79	N.A.	21.10
70-80	212.68	N.A.	8.00
80-90	67.87	N.A.	2.60
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2651.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	78.23
10-20	228.80
20-30	356.94
30-40	443.80
40-50	473.79
50-60	441.51
60-70	348.11
70-80	212.68
80-90	67.87
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	102	102	102	100
1	108	103	99	94	105	101	97	93	96	93	90	93	90	87	89	87	85	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	73	70	68
3	89	78	69	63	86	76	68	62	73	67	61	70	65	60	68	63	59	57
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	29	25	36	29	24	35	29	24	23

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UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	15.2	16.9	15.6	17.2	17.5	UGR Viewed Endwise			
	3H	17.2	18.7	17.6	19.0	19.4	15.2	16.9	15.6	17.2
	4H	18.0	19.4	18.4	19.8	20.1	17.1	18.6	17.5	18.9
	6H	18.6	20.0	19.0	20.3	20.7	17.8	19.3	18.2	19.6
	8H	18.9	20.2	19.3	20.5	20.9	18.4	19.7	18.8	20.1
	12H	19.1	20.3	19.5	20.7	21.1	18.6	19.8	19.0	20.2

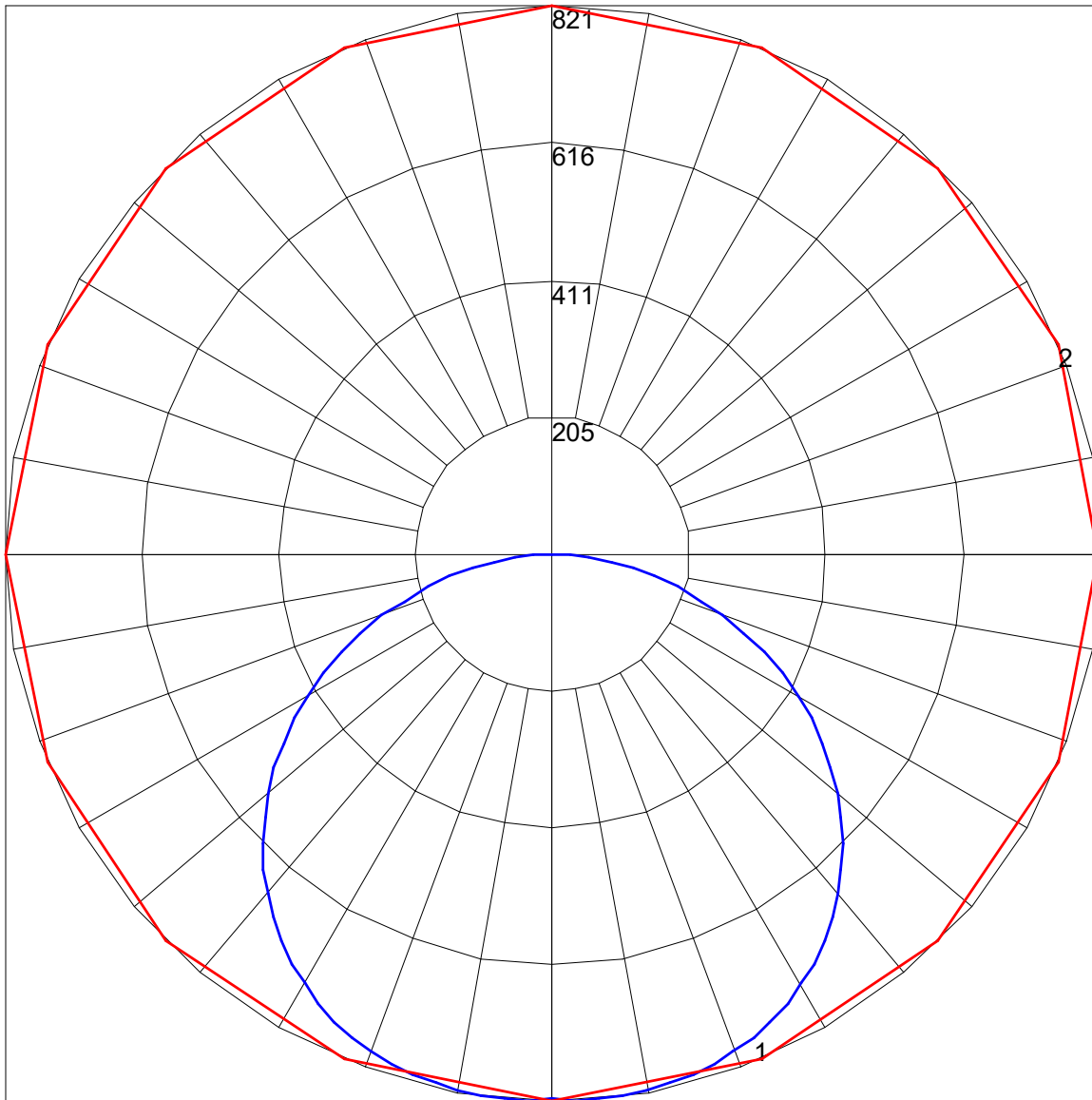
4H	2H	15.9	17.3	16.3	17.7	18.1	18.7	19.9	19.1	20.3
	3H	18.1	19.3	18.5	19.7	20.1	15.9	17.3	16.3	17.7
	4H	19.0	20.1	19.5	20.6	21.0	17.1	18.6	17.5	18.9
	6H	19.8	20.8	20.3	21.2	21.7	17.8	19.3	18.2	19.6
	8H	20.1	21.0	20.6	21.5	21.9	18.4	19.7	18.8	20.1
	12H	20.4	21.2	20.9	21.7	22.1	18.6	19.8	19.0	20.2

8H	4H	19.4	20.3	19.8	20.7	21.2	18.7	19.9	19.1	20.3
	6H	20.3	21.1	20.8	21.6	22.1	15.9	17.3	16.3	17.7
	8H	20.7	21.4	21.2	21.9	22.4	17.1	18.6	17.5	18.9
	12H	21.1	21.7	21.6	22.2	22.7	17.8	19.3	18.2	19.6

12H	4H	19.5	20.3	19.9	20.7	21.2	18.4	19.7	18.8	20.1
	6H	20.4	21.1	20.9	21.6	22.1	18.6	19.8	19.0	20.2
	8H	20.9	21.5	21.4	22.0	22.5	18.7	19.9	19.1	20.3

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 821 Located At Horizontal Angle = 67.5, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)