



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BP-22-LS-8CS-DIM-UNV_20W_5000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20530
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2025-09-09
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2' ULTRA THIN SEAMLESS FLAT PANEL LIGHT
[MORE] .39" ALUMINUM FRAME w/DIFFUSE LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] BP-22-LS-8CS-DIM-UNV_20W_5000K_
[LAMPCAT] LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2482
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	20
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.80 ft
Luminous Width (90-270)	1.80 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2761	2734	2742
55	2635	2596	2615
65	2422	2405	2374
75	2064	1999	1992
85	1200	1072	1093

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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	873.777	873.777	873.777	873.777	873.777
5	874.341	872.085	870.392	869.264	868.136
10	863.059	860.803	859.110	856.854	856.290
15	845.008	842.752	839.931	838.803	838.239
20	819.060	817.368	815.111	812.855	812.855
25	786.907	785.215	782.394	781.266	781.266
30	746.856	742.908	744.036	741.215	741.215
35	697.780	694.396	694.960	694.396	694.396
40	646.448	644.756	644.756	643.628	642.500
45	589.475	589.475	583.834	583.834	585.526
50	523.476	524.040	521.784	518.400	519.528
55	456.350	452.965	449.580	452.965	452.965
60	381.325	380.761	379.069	378.505	377.941
65	309.122	307.430	306.865	306.865	302.917
70	232.405	234.098	231.277	227.893	227.893
75	161.330	157.381	156.253	156.253	155.689
80	87.998	89.690	87.998	87.998	86.306
85	31.589	31.589	28.205	28.205	28.769
90	0.000	0.000	0.564	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	320.06	N.A.	12.90
0-30	680.87	N.A.	27.40
0-40	1116.09	N.A.	45.00
0-60	1971.84	N.A.	79.40
0-80	2441.86	N.A.	98.40
0-90	2481.98	N.A.	100.00
10-90	2399.25	N.A.	96.70
20-40	796.03	N.A.	32.10
20-50	1247.69	N.A.	50.30
40-70	1158.72	N.A.	46.70
60-80	470.02	N.A.	18.90
70-80	167.04	N.A.	6.70
80-90	40.12	N.A.	1.60
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	2481.98	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	82.74
10-20	237.32
20-30	360.81
30-40	435.22
40-50	451.65
50-60	404.10
60-70	302.97
70-80	167.04
80-90	40.12
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	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	70
3	90	80	71	65	88	78	70	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	47	58	51	46	56	50	46	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24

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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	15.6	17.2	15.9	17.5	17.8	15.5	17.2	15.9	17.5	17.8
	3H	17.3	18.8	17.7	19.1	19.5	17.3	18.7	17.6	19.1	19.4
	4H	18.0	19.4	18.4	19.7	20.1	17.9	19.3	18.3	19.6	20.0
	6H	18.4	19.7	18.8	20.0	20.4	18.3	19.6	18.7	19.9	20.3
	8H	18.5	19.7	18.9	20.1	20.5	18.4	19.6	18.8	20.0	20.4
	12H	18.6	19.7	19.0	20.1	20.6	18.4	19.6	18.9	20.0	20.4

UGR Viewed Endwise

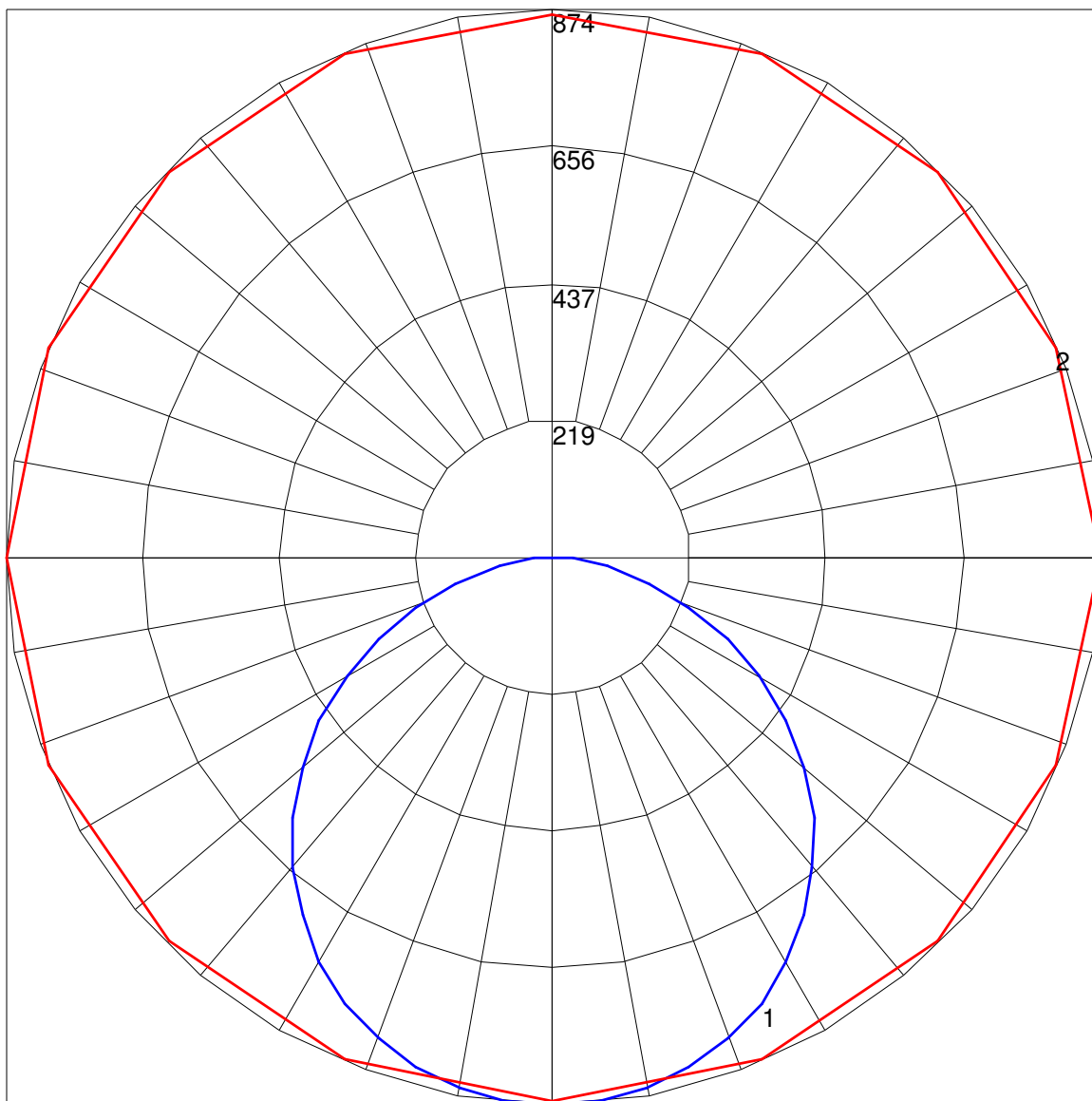
4H	2H	16.2	17.6	16.6	17.9	18.3	16.2	17.6	16.6	17.9	18.3
	3H	18.2	19.3	18.6	19.7	20.1	18.1	19.3	18.5	19.7	20.1
	4H	18.9	20.0	19.3	20.4	20.8	18.8	19.9	19.3	20.3	20.7
	6H	19.4	20.4	19.9	20.8	21.3	19.4	20.3	19.8	20.7	21.2
	8H	19.6	20.5	20.1	20.9	21.4	19.5	20.4	20.0	20.8	21.3
	12H	19.7	20.5	20.2	21.0	21.4	19.6	20.4	20.1	20.9	21.3

8H	4H	19.2	20.1	19.7	20.5	21.0	19.1	20.0	19.6	20.4	20.9
	6H	19.8	20.6	20.3	21.0	21.5	19.7	20.5	20.2	21.0	21.4
	8H	20.1	20.7	20.6	21.2	21.7	20.0	20.6	20.5	21.1	21.6
	12H	20.2	20.8	20.7	21.3	21.8	20.1	20.7	20.6	21.2	21.7

12H	4H	19.2	20.0	19.7	20.5	20.9	19.2	19.9	19.6	20.4	20.9
	6H	19.9	20.5	20.4	21.0	21.5	19.8	20.5	20.3	20.9	21.5
	8H	20.2	20.7	20.7	21.2	21.8	20.1	20.6	20.6	21.1	21.7

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 874.341 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)