H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-835-W-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19477.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 16 AUGUST 2021
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 24x18" LED HIGHBAY
[MORE] LUMINAIRE WITH NO DIFFUSER/OPEN BOTTOM
[LUMCAT] GP2-L230-835-W-DIM-UNV
[LAMPCAT] D5638D192C2560A8N50
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	22983
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	187
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.88 ft
Luminous Width (90-270)	1.18 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	37970	38466	38684
55	36342	37063	37482
65	32829	34183	29072
75	24944	21338	18253
85	10267	10432	9935

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	7986.790	7986.790	7986.790	7986.790	7986.790
5	8012.458	7990.739	7970.994	7922.619	7934.466
10	7944.339	7919.658	7906.823	7861.410	7862.398
15	7781.444	7749.852	7769.597	7740.967	7727.145
20	7570.174	7539.569	7568.199	7545.493	7542.531
25	7264.129	7278.937	7302.631	7283.874	7301.644
30	6925.505	6954.135	6997.573	6965.982	7006.458
35	6514.812	6578.983	6588.855	6602.676	6657.962
40	6060.680	6091.285	6113.004	6190.996	6215.677
45	5509.799	5550.276	5581.868	5650.975	5613.460
50	4919.428	4950.033	5014.204	5050.732	5034.936
55	4277.721	4324.121	4362.624	4403.101	4411.986
60	3584.677	3632.064	3694.261	3711.044	3747.572
65	2847.207	2887.684	2964.689	2812.653	2521.417
70	2077.158	2128.494	2104.801	1735.572	1737.546
75	1324.879	1413.731	1133.354	1136.316	969.472
80	670.338	620.975	484.736	510.404	466.966
85	183.627	221.142	186.589	188.563	177.704
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2948.01	N.A.	12.80
0-30	6308.76	N.A.	27.40
0-40	10428.25	N.A.	45.40
0-60	18628.54	N.A.	81.10
0-80	22728.54	N.A.	98.90
0-90	22982.92	N.A.	100.00
10-90	22224.78	N.A.	96.70
20-40	7480.24	N.A.	32.50
20-50	11788.91	N.A.	51.30
40-70	11000.67	N.A.	47.90
60-80	4100.00	N.A.	17.80
70-80	1299.62	N.A.	5.70
80-90	254.38	N.A.	1.10
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	22982.92	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	758.14
10-20	2189.87
20-30	3360.75
30-40	4119.49
40-50	4308.67
50-60	3891.62
60-70	2800.38
70-80	1299.62
80-90	254.38
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	105	101	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	31	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					UGR Viewed Endwise				
X=2H	Y=2H	24.8	26.4	25.2	26.7	27.1	25.0	26.6	25.3	26.9	27.2
	3H	26.4	27.9	26.8	28.2	28.6	26.2	27.6	26.6	28.0	28.3
	4H	27.0	28.4	27.4	28.7	29.1	26.5	27.9	26.9	28.2	28.6
	6H	27.3	28.6	27.7	28.9	29.3	26.7	28.0	27.1	28.3	28.7
	8H	27.3	28.6	27.8	29.0	29.4	26.7	27.9	27.1	28.3	28.7
	12H	27.4	28.5	27.8	28.9	29.4	26.7	27.9	27.2	28.3	28.7
4H	2H	25.5	26.8	25.9	27.2	27.6	25.6	27.0	26.0	27.3	27.7
	3H	27.3	28.4	27.7	28.8	29.2	27.0	28.1	27.4	28.5	28.9
	4H	27.9	29.0	28.4	29.4	29.8	27.4	28.5	27.8	28.9	29.3
	6H	28.3	29.2	28.8	29.7	30.1	27.7	28.6	28.1	29.0	29.5
	8H	28.4	29.3	28.9	29.7	30.2	27.7	28.6	28.2	29.0	29.5
	12H	28.5	29.2	28.9	29.7	30.2	27.8	28.5	28.2	29.0	29.4
8H	4H	28.1	28.9	28.5	29.4	29.8	27.6	28.5	28.1	28.9	29.4
	6H	28.5	29.2	29.0	29.7	30.2	27.9	28.6	28.4	29.1	29.6
	8H	28.7	29.3	29.2	29.8	30.3	28.0	28.6	28.5	29.1	29.6
	12H	28.7	29.3	29.2	29.8	30.3	28.1	28.6	28.6	29.1	29.7
12H	4H	28.1	28.8	28.6	29.3	29.8	27.6	28.4	28.1	28.9	29.3
	6H	28.5	29.2	29.1	29.6	30.2	27.9	28.6	28.5	29.0	29.6
	8H	28.7	29.2	29.2	29.7	30.3	28.0	28.6	28.5	29.1	29.6

Maximum UGR = 30.3

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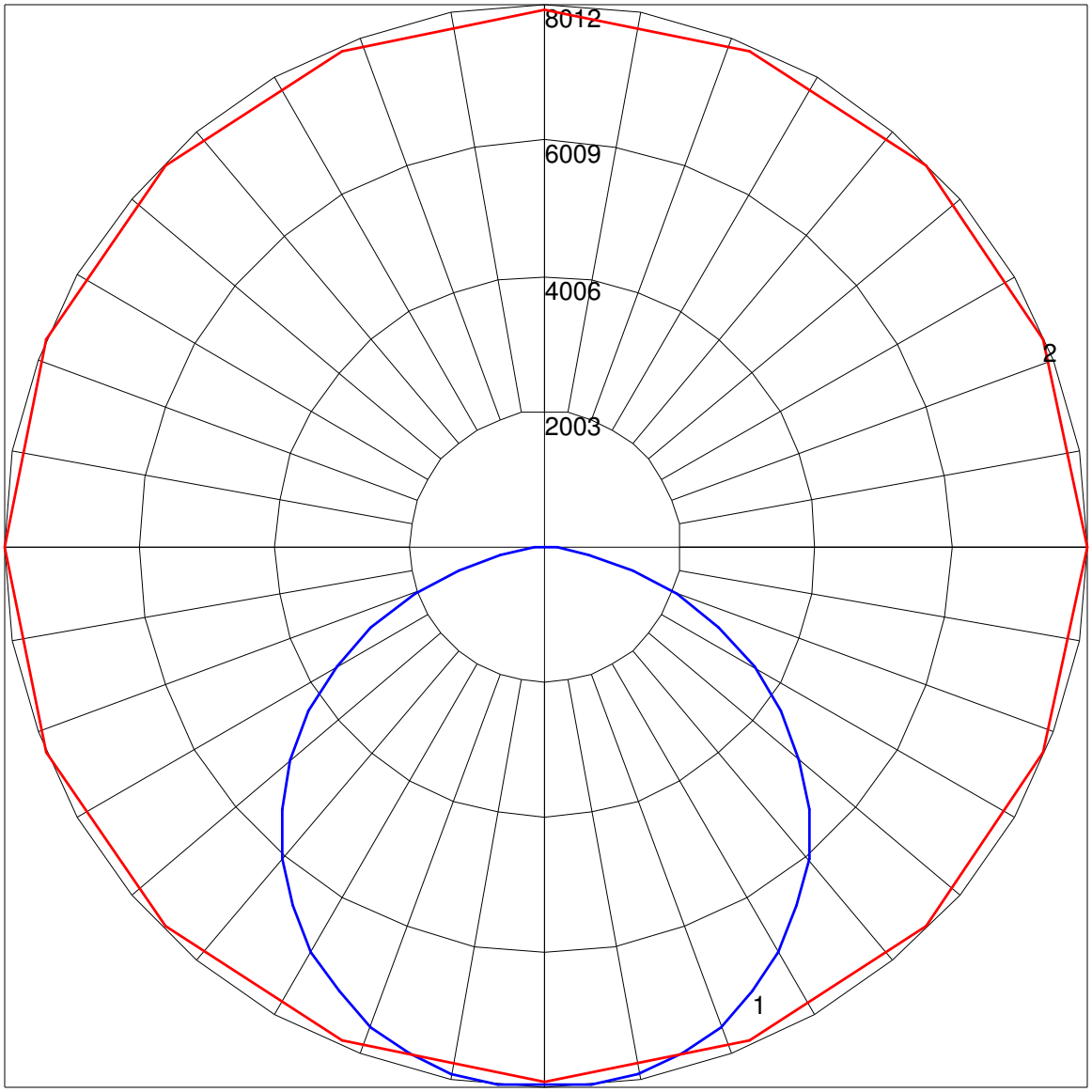
POLAR GRAPH



Maximum Candela = 8012.458 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.)

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