H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-940-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L61-940-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5380
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	50.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4809	4738	4671
55	4322	4360	4482
65	3783	4126	4633
75	2949	4154	5370
85	1534	3867	5209

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2132.134	2132.134	2132.134	2132.134	2132.134
5	2132.134	2118.379	2109.536	2110.518	2108.553
10	2086.937	2076.129	2067.286	2063.356	2060.408
15	2013.246	2005.385	1995.560	1987.699	1985.734
20	1929.729	1916.956	1893.375	1888.462	1883.549
25	1807.893	1802.980	1775.469	1761.713	1752.870
30	1669.353	1661.493	1642.824	1621.208	1606.470
35	1513.128	1515.093	1491.511	1469.895	1461.052
40	1352.972	1357.885	1334.303	1319.565	1313.670
45	1199.694	1196.746	1182.008	1177.095	1165.305
50	1036.591	1039.538	1025.783	1037.573	1027.748
55	874.470	883.313	882.330	906.894	906.894
60	715.297	721.192	746.738	780.145	794.883
65	563.984	578.722	615.077	663.222	690.733
70	410.706	436.252	497.170	559.071	592.478
75	269.219	314.416	379.264	450.991	490.293
80	142.470	193.562	266.271	337.015	373.369
85	47.162	78.604	118.889	145.417	160.156
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	763.02	N.A.	14.20
0-30	1582.07	N.A.	29.40
0-40	2514.93	N.A.	46.70
0-60	4227.85	N.A.	78.60
0-80	5247.31	N.A.	97.50
0-90	5379.86	N.A.	100.00
10-90	5179.39	N.A.	96.30
20-40	1751.91	N.A.	32.60
20-50	2666.92	N.A.	49.60
40-70	2329.93	N.A.	43.30
60-80	1019.45	N.A.	18.90
70-80	402.45	N.A.	7.50
80-90	132.56	N.A.	2.50
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	5379.86	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	200.47
10-20	562.54
20-30	819.05
30-40	932.86
40-50	915.01
50-60	797.92
60-70	617.00
70-80	402.45
80-90	132.56
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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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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	16.8	18.4	17.2	18.7	19.0	17.2	18.8	17.5	19.1	19.4
	3H	18.4	19.9	18.8	20.2	20.6	19.4	20.9	19.8	21.2	21.6
	4H	19.0	20.4	19.4	20.7	21.1	20.5	21.9	20.9	22.2	22.6
	6H	19.4	20.6	19.8	21.0	21.4	21.5	22.8	21.9	23.2	23.6
	8H	19.5	20.7	19.9	21.1	21.5	21.9	23.1	22.3	23.5	23.9
	12H	19.5	20.7	19.9	21.1	21.5	22.2	23.3	22.6	23.7	24.2
4H	2H	17.5	18.8	17.9	19.2	19.6	17.8	19.2	18.2	19.5	19.9
	3H	19.3	20.5	19.8	20.9	21.3	20.3	21.4	20.7	21.8	22.2
	4H	20.1	21.1	20.5	21.5	22.0	21.5	22.6	22.0	23.0	23.4
	6H	20.6	21.5	21.0	22.0	22.4	22.7	23.7	23.2	24.1	24.6
	8H	20.7	21.6	21.2	22.0	22.5	23.2	24.1	23.6	24.5	25.0
	12H	20.8	21.6	21.3	22.1	22.5	23.5	24.3	24.0	24.8	25.2
8H	4H	20.6	21.5	21.0	21.9	22.4	21.8	22.7	22.3	23.2	23.6
	6H	21.3	22.0	21.8	22.5	23.0	23.2	24.0	23.7	24.4	24.9
	8H	21.5	22.1	22.0	22.6	23.1	23.8	24.4	24.3	25.0	25.4
	12H	21.6	22.2	22.1	22.7	23.3	24.2	24.8	24.7	25.3	25.8
12H	4H	20.7	21.5	21.2	22.0	22.4	21.9	22.7	22.3	23.1	23.6
	6H	21.4	22.1	22.0	22.6	23.1	23.3	24.0	23.8	24.4	24.9
	8H	21.7	22.3	22.2	22.8	23.4	23.9	24.5	24.4	25.0	25.5

Maximum UGR = 25.8

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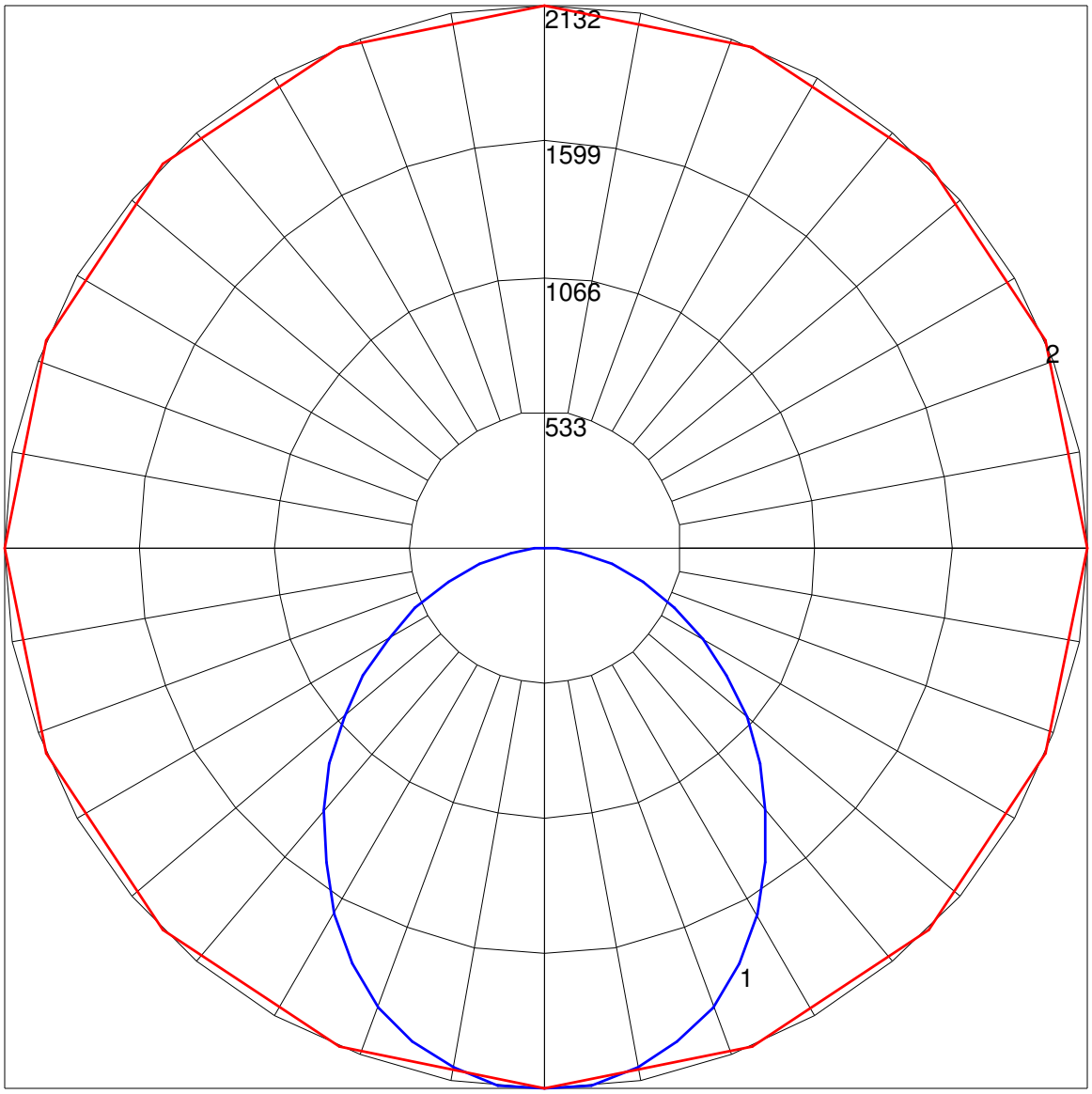
POLAR GRAPH



Maximum Candela = 2132.134 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.)

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