H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-8-L60-835-(L50)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20990.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 21-SEPT-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 96 INCH LENSED LED SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[MORE] EVERLINE #D21CC80UNVPW-C
[LUMCAT] 76R-8-L60-835-(L50)-DIM-UNV
[LAMPCAT] HLMX 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4720
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	157
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4182	3803	3863
55	3592	3305	3435
65	2925	2749	2974
75	2326	2345	2570
85	1204	2137	2392

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1524.182	1524.182	1524.182	1524.182	1524.182
5	1536.961	1516.809	1512.877	1512.877	1508.454
10	1508.945	1491.742	1492.725	1496.657	1491.742
15	1458.319	1445.049	1455.862	1467.658	1466.184
20	1392.948	1387.541	1405.236	1426.863	1427.846
25	1302.510	1308.408	1340.356	1368.864	1376.237
30	1207.156	1217.478	1263.189	1300.052	1314.306
35	1088.210	1112.294	1172.750	1220.919	1237.630
40	974.670	1000.721	1073.465	1140.802	1156.530
45	839.996	877.842	966.315	1039.059	1058.719
50	714.169	760.862	857.690	937.807	959.434
55	589.816	635.526	746.608	829.674	855.233
60	471.853	523.461	637.492	714.169	743.168
65	358.313	412.871	524.444	622.256	643.391
70	264.434	312.602	429.582	524.444	549.512
75	179.402	232.977	351.432	436.464	455.141
80	99.777	165.148	281.145	358.313	384.855
85	35.389	111.573	223.147	294.908	317.026
90	0.000	73.727	173.996	244.282	258.536
95	0.000	47.185	137.132	200.046	221.672
100	0.000	31.457	105.184	165.640	182.843
105	0.000	21.135	83.066	133.692	152.861
110	0.000	9.830	65.863	109.607	127.793
115	0.000	6.390	52.592	92.404	105.184
120	0.000	0.000	41.779	75.693	88.964
125	0.000	0.000	32.440	60.456	70.778
130	0.000	0.000	25.559	47.677	56.524
135	0.000	0.000	20.644	36.863	45.219
140	0.000	0.000	10.813	28.016	34.406
145	0.000	0.000	3.932	21.627	25.067
150	0.000	0.000	0.000	18.677	21.135
155	0.000	0.000	0.000	17.694	18.677
160	0.000	0.000	0.000	10.322	17.203
165	0.000	0.000	0.000	3.441	5.898
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	555.39	N.A.	11.80
0-30	1172.46	N.A.	24.80
0-40	1903.23	N.A.	40.30
0-60	3300.78	N.A.	69.90
0-80	4169.61	N.A.	88.30
0-90	4393.15	N.A.	93.10
10-90	4249.07	N.A.	90.00
20-40	1347.83	N.A.	28.60
20-50	2088.41	N.A.	44.20
40-70	1910.03	N.A.	40.50
60-80	868.83	N.A.	18.40
70-80	356.35	N.A.	7.60
80-90	223.55	N.A.	4.70
90-110	220.99	N.A.	4.70
90-120	271.92	N.A.	5.80
90-130	301.18	N.A.	6.40
90-150	323.07	N.A.	6.80
90-180	326.67	N.A.	6.90
110-180	105.67	N.A.	2.20
0-180	4719.82	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	144.09
10-20	411.31
20-30	617.07
30-40	730.77
40-50	740.57
50-60	656.98
60-70	512.48
70-80	356.35
80-90	223.55
90-100	136.81
100-110	84.19
110-120	50.93
120-130	29.26
130-140	15.48
140-150	6.40
150-160	2.99
160-170	0.62
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	96	92	102	98	93	90	92	89	85	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	88	77	68	61	84	74	67	60	70	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45
5	74	61	51	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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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	13.9	15.4	14.3	15.8	16.3	16.9	18.4	17.4	18.9	19.4
	3H	15.1	16.4	15.6	16.9	17.4	19.2	20.6	19.7	21.0	21.6
	4H	15.4	16.8	16.0	17.2	17.8	20.3	21.6	20.8	22.1	22.6
	6H	15.7	16.9	16.2	17.4	17.9	21.4	22.6	21.9	23.1	23.7
	8H	15.7	16.9	16.3	17.4	18.0	22.0	23.2	22.5	23.7	24.2
	12H	15.7	16.8	16.3	17.4	17.9	22.7	23.8	23.2	24.3	24.9
4H	2H	14.8	16.1	15.3	16.6	17.1	17.2	18.5	17.7	19.0	19.6
	3H	16.3	17.4	16.8	17.9	18.5	19.8	20.9	20.3	21.4	21.9
	4H	16.8	17.8	17.3	18.3	18.9	21.0	22.0	21.5	22.6	23.1
	6H	17.1	18.0	17.7	18.5	19.2	22.3	23.2	22.9	23.8	24.4
	8H	17.2	18.0	17.7	18.6	19.2	23.0	23.9	23.6	24.4	25.0
	12H	17.2	18.0	17.8	18.6	19.2	23.8	24.6	24.4	25.2	25.8
8H	4H	17.5	18.4	18.1	18.9	19.5	21.2	22.0	21.7	22.6	23.2
	6H	18.0	18.7	18.6	19.3	20.0	22.7	23.4	23.3	24.0	24.6
	8H	18.2	18.8	18.8	19.4	20.1	23.5	24.1	24.1	24.7	25.4
	12H	18.3	18.9	18.9	19.5	20.2	24.5	25.0	25.1	25.6	26.3
12H	4H	17.7	18.5	18.3	19.1	19.7	21.2	21.9	21.7	22.5	23.1
	6H	18.4	19.0	19.0	19.6	20.3	22.7	23.3	23.3	23.9	24.6
	8H	18.6	19.2	19.2	19.8	20.5	23.6	24.1	24.2	24.8	25.5

Maximum UGR = 26.3

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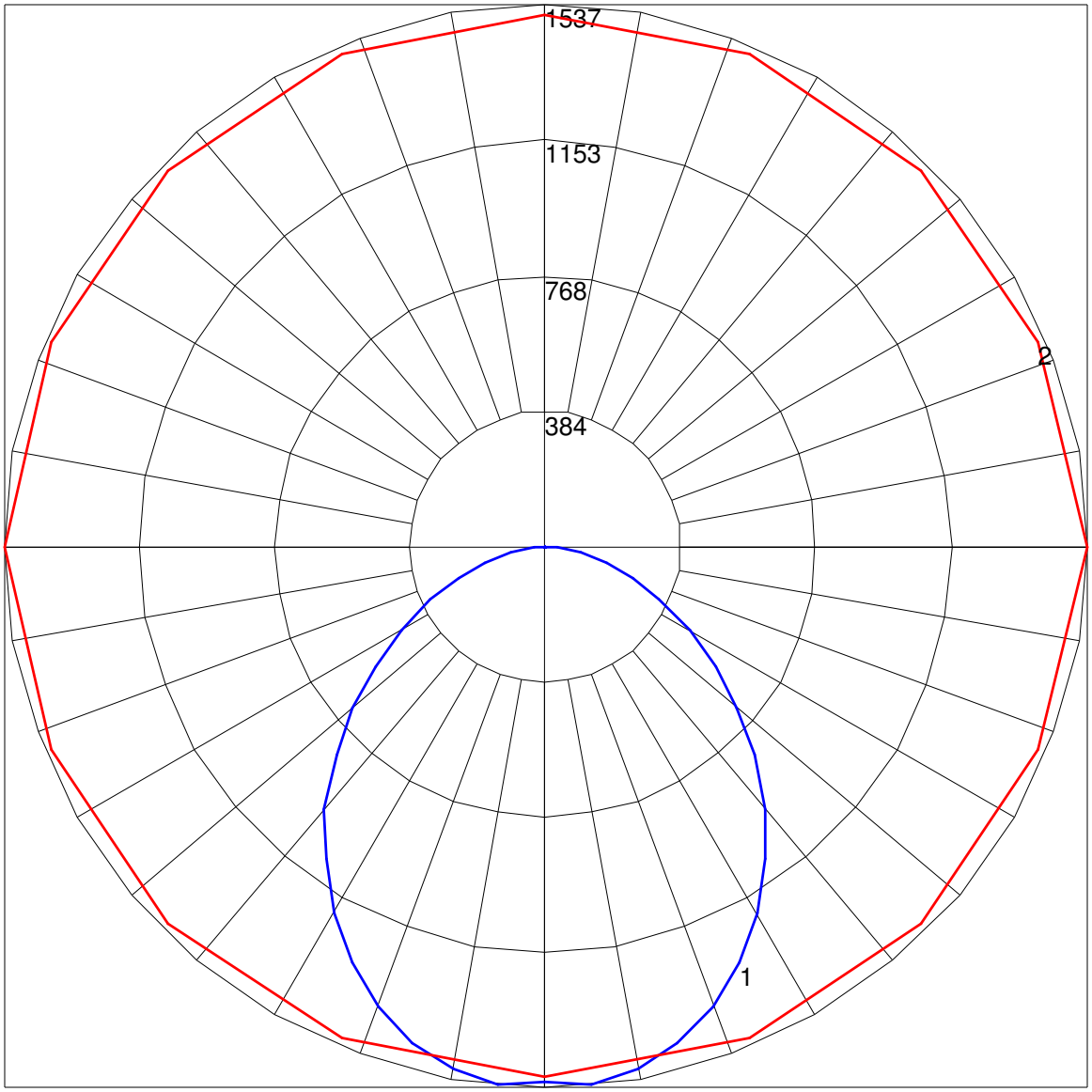
POLAR GRAPH



Maximum Candela = 1536.961 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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