



IES INDOOR REPORT

PHOTOMETRIC FILENAME : RNDX-2-L45-840-FXA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 18645.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 14 APRIL 2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 8-28 LED 11"ARRAYS 26"DIA SURFACE LUMINAIRE w/WHITE REFL
 [MORE] WHITE FROST ACRYLIC 26"DIA CONVEX LENS & INTERNAL ACRYLIC
 [MORE] LIGHT SEAL RING
 [LUMCAT] RNDX-2-L45-840-FXA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4666
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	45.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	2.17 ft (Diameter)
Luminous Width (90-270)	2.17 ft (Diameter)
Luminous Height	0.48 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3520	3434	3459
55	3019	2978	2998
65	2458	2450	2458
75	1735	1746	1683
85	840	795	825

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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	1618.740	1618.740	1618.740	1618.740	1618.740
5	1628.206	1618.740	1616.847	1609.274	1609.274
10	1605.487	1601.700	1597.914	1590.341	1590.341
15	1573.302	1571.408	1567.622	1563.835	1561.942
20	1520.290	1518.397	1516.504	1508.931	1514.610
25	1455.919	1461.599	1450.239	1452.133	1452.133
30	1385.869	1389.655	1376.402	1383.975	1380.189
35	1293.099	1293.099	1289.312	1287.419	1281.739
40	1194.649	1187.076	1183.289	1181.396	1179.503
45	1094.306	1075.373	1067.800	1069.694	1075.373
50	975.030	969.351	946.631	956.098	957.991
55	833.036	850.075	821.676	831.142	827.356
60	692.934	711.867	691.041	698.614	700.507
65	571.765	569.872	569.872	571.765	571.765
70	448.703	437.344	444.917	435.450	439.237
75	316.175	310.495	318.068	301.029	306.709
80	202.579	202.579	196.899	193.113	195.006
85	106.023	107.916	100.343	104.129	104.129
90	43.545	41.652	47.332	45.438	49.225

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	595.40	N.A.	12.80
0-30	1266.00	N.A.	27.10
0-40	2072.33	N.A.	44.40
0-60	3645.79	N.A.	78.10
0-80	4542.85	N.A.	97.40
0-90	4665.92	N.A.	100.00
10-90	4512.31	N.A.	96.70
20-40	1476.93	N.A.	31.70
20-50	2306.24	N.A.	49.40
40-70	2138.35	N.A.	45.80
60-80	897.05	N.A.	19.20
70-80	332.17	N.A.	7.10
80-90	123.07	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	4665.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.60
10-20	441.80
20-30	670.60
30-40	806.33
40-50	829.31
50-60	744.15
60-70	564.88
70-80	332.17
80-90	123.07
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	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	75	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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UGR TABLE - CORRECTED

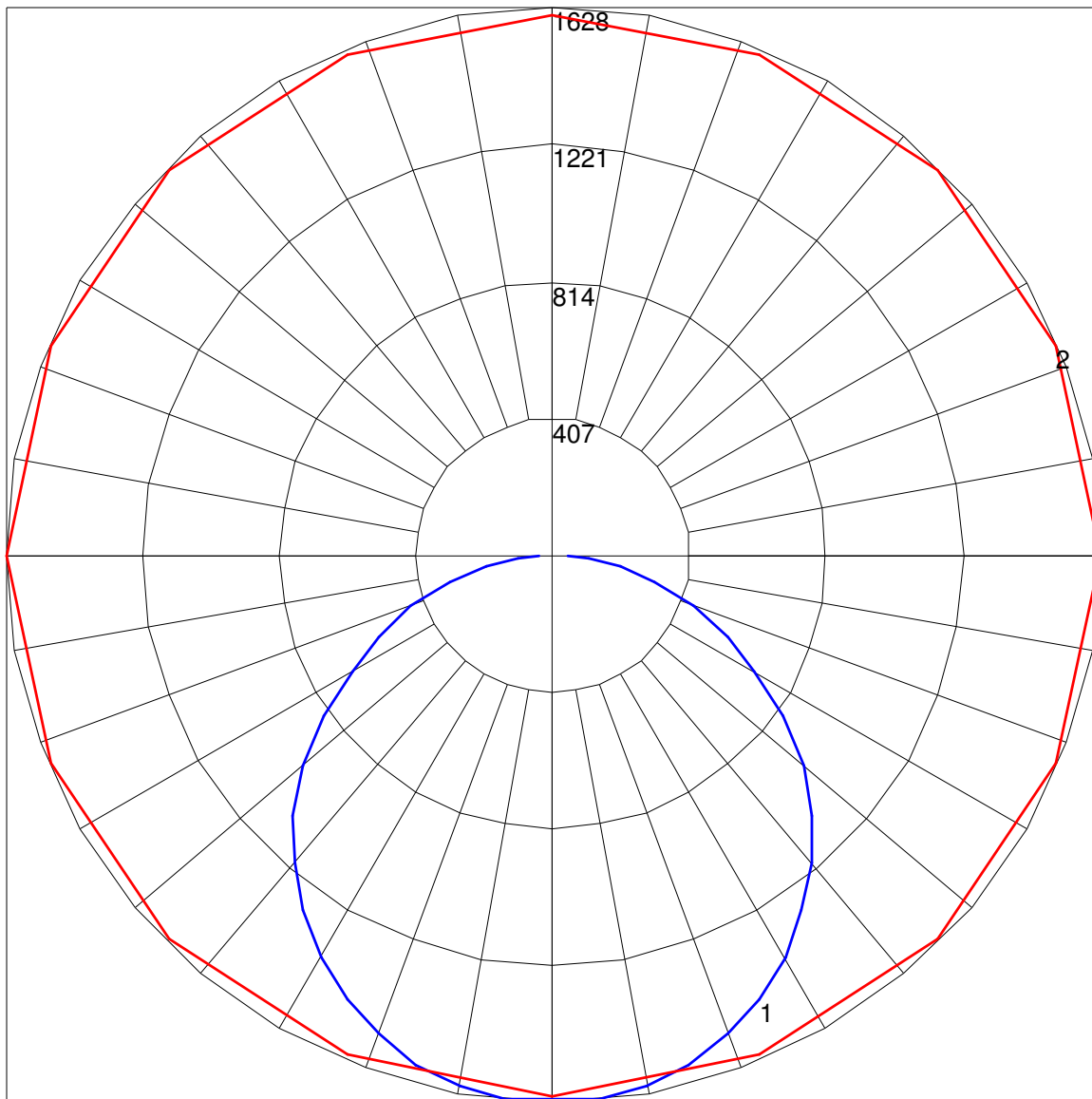
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.1	16.8	15.5	17.1	17.4	15.0	16.6	15.4	17.0	17.3
	3H	16.7	18.2	17.1	18.5	18.9	16.6	18.1	17.0	18.4	18.8
	4H	17.3	18.7	17.7	19.0	19.4	17.2	18.6	17.6	18.9	19.3
	6H	17.7	19.0	18.1	19.3	19.7	17.5	18.8	17.9	19.2	19.6
	8H	17.8	19.0	18.2	19.4	19.8	17.7	18.9	18.1	19.3	19.7
	12H	17.9	19.1	18.3	19.4	19.9	17.7	18.9	18.1	19.3	19.7
4H	2H	15.6	17.0	16.0	17.4	17.8	15.5	16.9	15.9	17.3	17.7
	3H	17.4	18.6	17.8	19.0	19.4	17.3	18.5	17.7	18.9	19.3
	4H	18.1	19.2	18.5	19.6	20.0	18.0	19.1	18.4	19.5	19.9
	6H	18.6	19.5	19.0	20.0	20.4	18.5	19.4	18.9	19.9	20.3
	8H	18.7	19.6	19.2	20.1	20.5	18.6	19.5	19.1	20.0	20.4
	12H	18.9	19.7	19.4	20.2	20.6	18.8	19.5	19.2	20.0	20.5
8H	4H	18.3	19.2	18.8	19.6	20.1	18.2	19.1	18.7	19.5	20.0
	6H	18.9	19.7	19.4	20.1	20.6	18.8	19.5	19.3	20.0	20.5
	8H	19.1	19.8	19.7	20.3	20.8	19.0	19.7	19.5	20.2	20.7
	12H	19.3	19.9	19.8	20.4	21.0	19.2	19.8	19.7	20.3	20.8
12H	4H	18.3	19.1	18.8	19.6	20.1	18.3	19.0	18.7	19.5	20.0
	6H	19.0	19.6	19.5	20.1	20.6	18.8	19.5	19.4	20.0	20.5
	8H	19.2	19.8	19.7	20.3	20.9	19.1	19.7	19.6	20.2	20.7

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 1628.206 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.)