



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L21-9DW-DIM-UNV-OW-OF-CS_3000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 20310.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 06-23-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC -CARTHAGE, MO
 [LUMINAIRE] GEN7 V13 LED 4"SHORT HEATSINK 4"SQ CAST HOUSING DOWLIGHT
 [MORE] WHITE MIXING CHAMBER & 4"SEMI-SPEC TRIM w/FROST FILM
 [LUMCAT] 4DS-L21-9DW-DIM-UNV-OW-OF-CS-3000k
 [LAMPCAT] BXRE-35E2000
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1805
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	48
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.84
Spacing Criterion (90-270)	0.82
Spacing Criterion (Diagonal)	0.86
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	19616	25370	19747
55	4030	5320	3547
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 4DS-L21-9DW-DIM-UNV-OW-OF-CS_3000K.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	2319.897	2319.897	2319.897	2319.897	2319.897
5	2254.105	2245.523	2233.127	2233.127	2221.685
10	2060.541	2034.797	2007.145	2006.191	2004.284
15	1836.466	1782.116	1717.277	1741.115	1797.372
20	1608.576	1517.039	1449.340	1496.062	1564.715
25	1320.615	1258.637	1200.473	1224.311	1302.499
30	900.116	928.722	968.769	937.303	911.558
35	502.501	577.829	713.228	579.736	473.896
40	241.239	289.868	413.825	296.543	248.867
45	143.027	144.934	184.982	137.306	143.980
50	80.095	77.235	72.467	73.420	72.467
55	23.838	29.559	31.466	28.605	20.977
60	0.954	2.861	9.535	2.861	0.000
65	0.000	0.000	0.000	0.000	0.000
70	0.000	0.000	0.000	0.000	0.000
75	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DS-L21-9DW-DIM-UNV-OW-OF-CS_3000K.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	701.32	N.A.	38.90
0-30	1267.28	N.A.	70.20
0-40	1642.17	N.A.	91.00
0-60	1803.8	N.A.	99.90
0-80	1804.76	N.A.	100.00
0-90	1804.76	N.A.	100.00
10-90	1597.97	N.A.	88.50
20-40	940.84	N.A.	52.10
20-50	1072.73	N.A.	59.40
40-70	162.60	N.A.	9.00
60-80	0.96	N.A.	0.10
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
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	1804.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	206.79
10-20	494.53
20-30	565.95
30-40	374.89
40-50	131.89
50-60	29.75
60-70	0.96
70-80	0.00
80-90	0.00
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DS-L21-9DW-DIM-UNV-OW-OF-CS_3000K.IES

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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	90	89	87
3	102	96	91	87	100	95	90	86	92	88	85	90	86	84	87	85	82	81
4	97	90	84	80	95	89	83	80	86	82	79	84	81	78	83	79	77	75
5	92	84	78	74	91	83	78	74	81	77	73	80	75	72	78	74	72	70
6	88	79	73	69	86	78	72	68	77	72	68	75	71	67	74	70	67	65
7	83	74	68	64	82	73	68	64	72	67	63	71	66	63	70	66	63	61
8	79	70	64	60	78	69	64	60	68	63	59	67	62	59	66	62	59	57
9	76	66	60	56	74	65	60	56	64	59	56	64	59	56	63	58	55	54
10	72	62	57	53	71	62	56	53	61	56	52	60	56	52	60	55	52	51

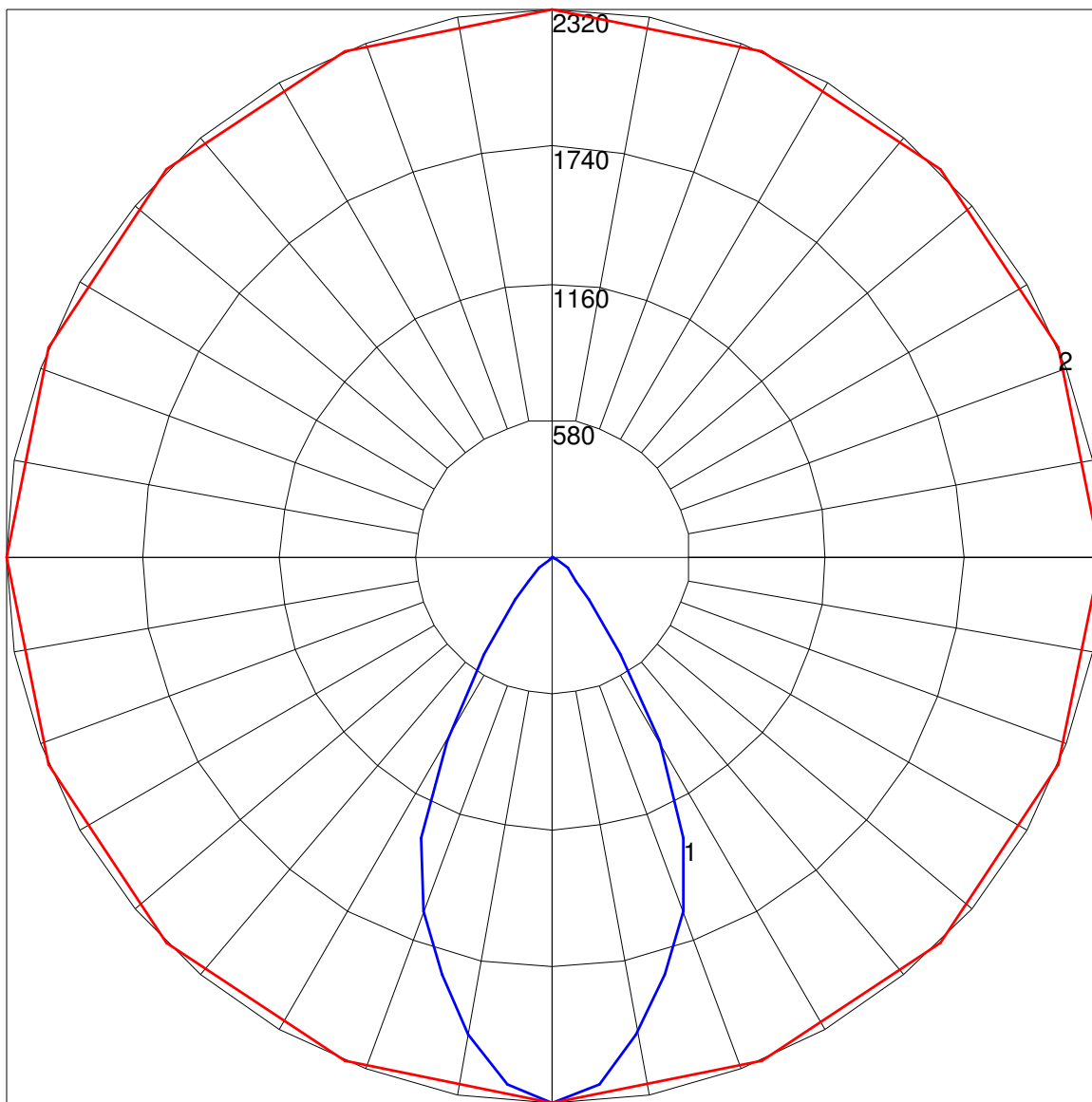
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DS-L21-9DW-DIM-UNV-OW-OF-CS_3000K.IES

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	5.9	6.9	6.3	7.2	7.5	5.6	6.6	5.9	6.9	7.2
	3H	5.7	6.6	6.1	6.9	7.3	5.4	6.3	5.8	6.6	7.0
	4H	5.6	6.4	6.0	6.8	7.2	5.3	6.1	5.7	6.4	6.8
	6H	5.5	6.3	5.9	6.6	7.0	5.2	5.9	5.6	6.3	6.7
	8H	5.5	6.2	5.9	6.5	7.0	5.1	5.8	5.6	6.2	6.6
	12H	5.4	6.1	5.8	6.4	6.9	5.1	5.7	5.5	6.1	6.5
4H	2H	5.6	6.4	6.0	6.8	7.2	5.3	6.1	5.7	6.4	6.8
	3H	5.4	6.1	5.8	6.5	6.9	5.1	5.7	5.5	6.1	6.5
	4H	5.3	5.9	5.7	6.3	6.8	5.0	5.5	5.4	6.0	6.4
	6H	5.2	5.7	5.7	6.1	6.6	4.9	5.3	5.3	5.8	6.3
	8H	5.1	5.6	5.6	6.0	6.5	4.8	5.2	5.3	5.7	6.2
	12H	5.0	5.4	5.5	5.9	6.4	4.7	5.1	5.2	5.6	6.1
8H	4H	5.1	5.6	5.6	6.0	6.5	4.8	5.2	5.3	5.7	6.2
	6H	5.0	5.4	5.5	5.9	6.3	4.6	5.0	5.1	5.5	6.0
	8H	4.9	5.2	5.4	5.8	6.3	4.6	4.9	5.1	5.4	5.9
	12H	4.9	5.1	5.4	5.6	6.2	4.5	4.8	5.0	5.3	5.9
12H	4H	5.0	5.4	5.5	5.9	6.4	4.7	5.1	5.2	5.6	6.1
	6H	4.9	5.2	5.4	5.7	6.3	4.6	4.9	5.1	5.4	5.9
	8H	4.9	5.1	5.4	5.6	6.2	4.5	4.8	5.0	5.3	5.9

Maximum UGR = 7.5

POLAR GRAPH



Maximum Candela = 2319.897 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.)