



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L30-840-DIM-UNV-OW-OF-CS_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20685.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 20 APRIL 2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4" RND RECESSED LED CAST HOUSING DOWNLIGHT

[MORE] OPEN SEMI-SPEC SPUN ALUMINUM REFLECTOR (WIDE)

[LUMCAT] 4DR-TL-L30-840-DIM-UNV-OW-OF-CS

[LAMPCAT] V13 BXRE-35E2000

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3014
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	28
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.37 ft (Diameter)
Luminous Width (90-270)	0.37 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9139	9139	9139
55	2817	2817	2817
65	348	348	348
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0	2586.695
5	2663.867
10	2743.897
15	2801.062
20	2925.394
25	3188.351
30	2498.090
35	438.738
40	114.329
45	62.881
50	32.870
55	15.720
60	7.146
65	1.429
70	1.429
75	0.000
80	0.000
85	0.000
90	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1057.09	N.A.	35.10
0-30	2417.93	N.A.	80.20
0-40	2942.67	N.A.	97.60
0-60	3010.68	N.A.	99.90
0-80	3013.86	N.A.	100.00
0-90	3013.86	N.A.	100.00
10-90	2757.64	N.A.	91.50
20-40	1885.59	N.A.	62.60
20-50	1937.75	N.A.	64.30
40-70	70.82	N.A.	2.30
60-80	3.18	N.A.	0.10
70-80	0.37	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	3013.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	256.22
10-20	800.86
20-30	1360.84
30-40	524.74
40-50	52.16
50-60	15.85
60-70	2.81
70-80	0.37
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

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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	114	111	109	106	111	109	107	105	105	103	102	101	100	98	98	97	96	94
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	86	83	82
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	81	78	77
5	93	85	79	75	92	84	79	75	82	78	74	81	77	74	79	76	73	72
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63
8	80	71	65	61	79	70	65	61	69	64	61	68	64	60	67	63	60	59
9	76	67	61	57	75	66	61	57	66	60	57	65	60	57	64	60	57	55
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52

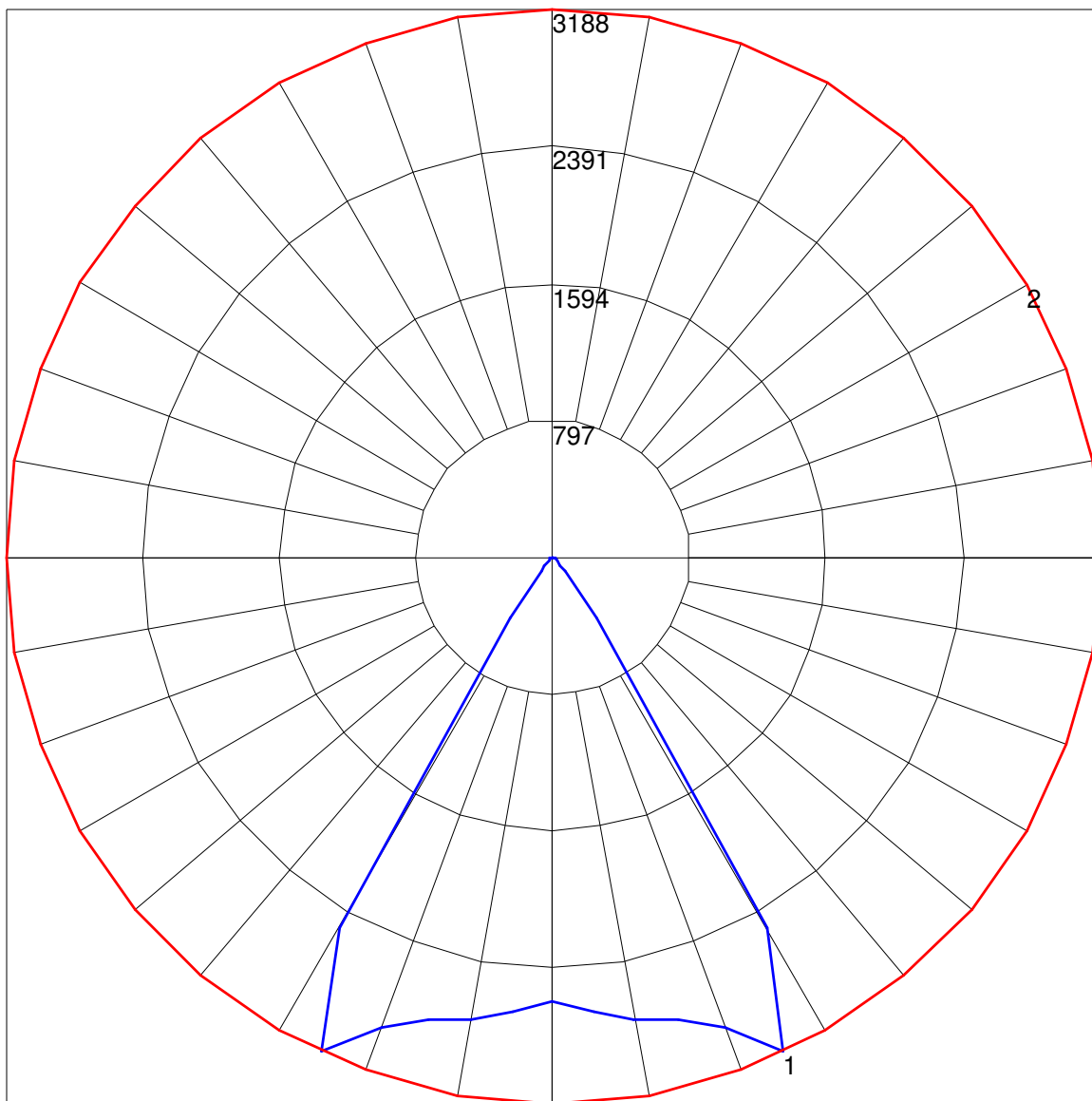
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UGR TABLE - CORRECTED

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	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	3H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	12H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
4H	2H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	3H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	12H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
8H	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	12H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
12H	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8

Maximum UGR = 3.8

POLAR GRAPH



Maximum Candela = 3188.351 Located At Horizontal Angle = 0, Vertical Angle = 25
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)