



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PS-L20-840-DIM-LW-OF-WH.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20339.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 13-MAY-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4"TALL HEATSINK 4"SQ FORMED HOUSING DOWNLIGHT

[MORE] 4"CAST SHALLOW WHITE FLUSH TRIM w/SOLITE LENS

[LUMCAT] 4PS-L20-840-DIM-LW-OF-WH

[LAMPCAT] BXRE-35E4000

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Office, Direct, Downlight

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2058
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	23.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.24
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	45739	70494	44162
55	32294	36267	31026
65	23865	23521	23291
75	16487	16299	16299
85	7233	6676	5564

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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>
<b>0</b>	1158.0	1158.0	1158.0	1158.0	1158.0
<b>5</b>	1157.5	1153.5	1151.5	1151.0	1151.0
<b>10</b>	1144.0	1137.5	1136.5	1132.5	1131.0
<b>15</b>	1116.0	1108.5	1110.5	1107.0	1107.0
<b>20</b>	1087.5	1080.0	1076.0	1079.5	1081.5
<b>25</b>	1043.5	1042.0	1046.0	1041.0	1032.5
<b>30</b>	937.0	962.5	989.0	955.5	910.5
<b>35</b>	741.5	815.5	882.0	804.5	720.5
<b>40</b>	521.5	581.5	716.0	592.5	490.0
<b>45</b>	333.5	378.0	514.0	381.0	322.0
<b>50</b>	245.5	262.5	327.5	265.0	239.0
<b>55</b>	191.0	195.5	214.5	199.5	183.5
<b>60</b>	140.0	144.0	148.0	144.0	140.5
<b>65</b>	104.0	102.0	102.5	105.5	101.5
<b>70</b>	71.0	71.0	68.0	71.5	69.5
<b>75</b>	44.0	44.5	43.5	43.0	43.5
<b>80</b>	23.5	23.5	23.0	21.5	23.0
<b>85</b>	6.5	5.0	6.0	5.0	5.0
<b>90</b>	0.0	0.0	0.0	0.0	0.0

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	423.12	N.A.	20.60
0-30	898.68	N.A.	43.70
0-40	1393.51	N.A.	67.70
0-60	1897.09	N.A.	92.20
0-80	2048.66	N.A.	99.60
0-90	2057.82	N.A.	100.00
10-90	1948.33	N.A.	94.70
20-40	970.39	N.A.	47.20
20-50	1291.68	N.A.	62.80
40-70	607.59	N.A.	29.50
60-80	151.57	N.A.	7.40
70-80	47.56	N.A.	2.30
80-90	9.17	N.A.	0.40
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	2057.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	109.49
10-20	313.63
20-30	475.56
30-40	494.83
40-50	321.29
50-60	182.30
60-70	104.01
70-80	47.56
80-90	9.17
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

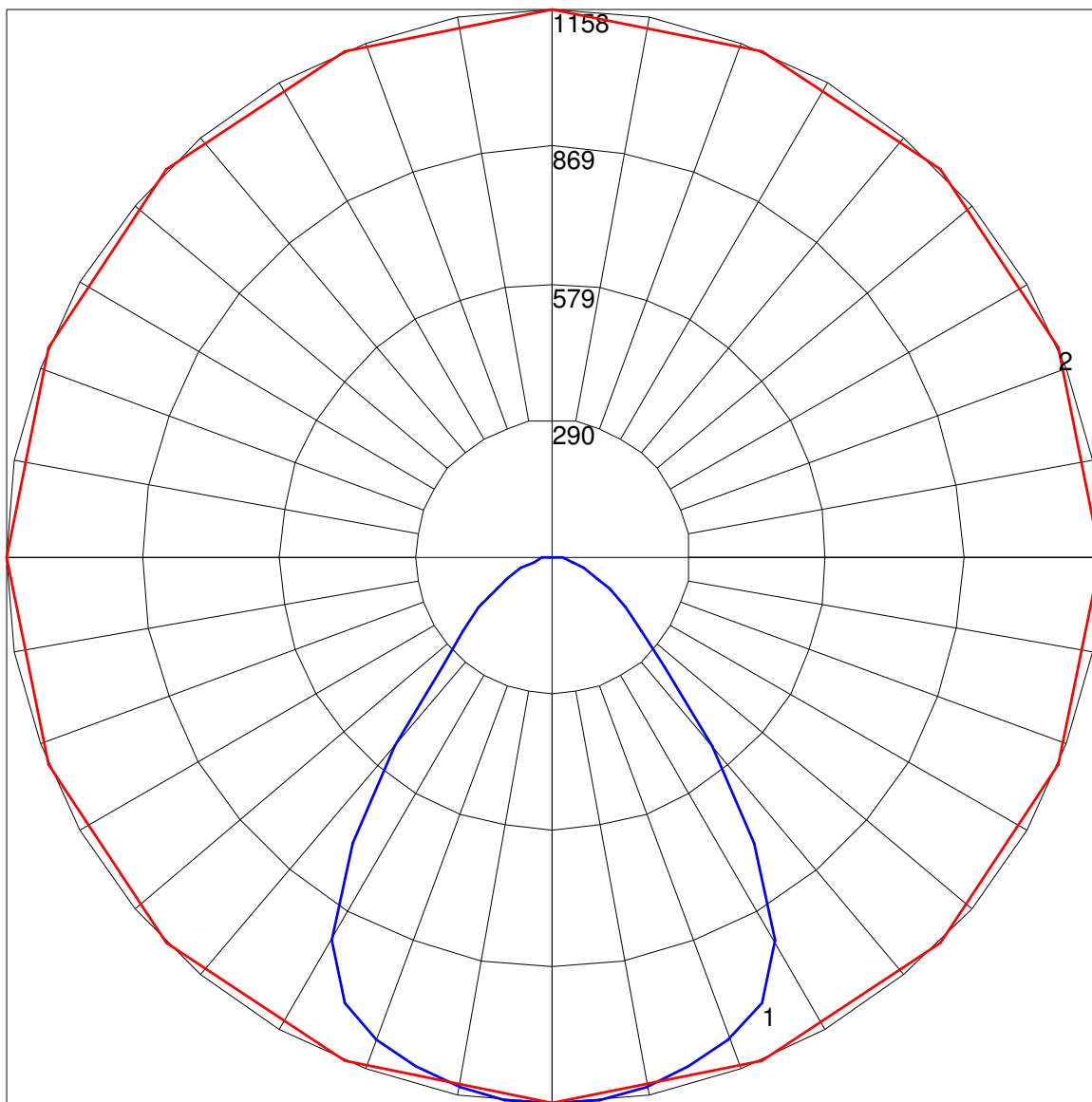
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	155	155	155	155	151	151	151	151	145	145	145	138	138	138	133	133	133	130
1	145	140	136	132	142	137	133	130	132	129	126	127	124	122	122	120	119	116
2	135	126	119	114	132	124	118	112	120	114	110	116	111	107	112	108	105	103
3	125	114	106	99	122	112	105	98	109	102	96	105	100	95	102	97	93	91
4	117	104	94	87	114	102	93	87	99	92	86	96	90	85	94	88	83	81
5	109	95	85	78	106	93	84	77	91	83	77	88	81	76	86	80	75	73
6	102	87	77	70	99	86	76	70	83	75	69	81	74	68	80	73	68	66
7	95	80	70	63	93	79	70	63	77	69	63	75	68	62	74	67	62	59
8	89	74	64	57	87	73	64	57	71	63	57	70	62	57	68	62	56	54
9	84	68	59	53	82	68	59	52	66	58	52	65	57	52	64	57	52	50
10	79	64	54	48	77	63	54	48	62	54	48	61	53	48	60	53	48	46

POLAR GRAPH



Maximum Candela = 1158 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.)