

Quick Step Checklist - Code 33 Lighting

Project: _____ Date: _____

Completed by: _____ Fixture Make and Model: _____

Instructions: Complete this Checklist and include in all Code 33 prescriptive and custom applications. Fixture and installation must comply with all requirements to ensure a high quality, low glare system and to qualify for incentives.

- Step 1: Each 4ft section must include two T8 or T5 standard output lamps or**
 - o one (1) T8 or T5 high output lamps.
 - o Yes or No _____

- Step 2: Fixtures are specifically designed for pendant installation.**
 - o Yes or No _____

- Step 3: Fixture efficiency must be greater than or equal to 80%.**
 - o Also known as "luminaire efficiency" _____
 - o Write in efficiency; attach test report and fixture cut sheet to document this.

- Step 4: Ceiling must a flat unobstructed surface with a white finish.**
 - o Yes or No _____

- Step 5: The fixture downlight component must not exceed 30%** _____
 - o Write in % downlight; attach test report and fixture cut sheet to document this
 - The % uplight and downlight can be found in the "Zonal Lumen Summary" in fixture test reports and cut sheets. In the example shown in Figure 1, the downlight component is 13.41% and the uplight is 69.62%. The total fixture efficiency equals 83.03%.
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Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	308	5.14	6.19
0-40	467	7.80	9.39
0-60	707	11.79	14.19
0-90	804	13.41	16.15
40-90	336	5.61	6.76
60-90	97	1.63	1.96
90-180	4177	69.62	83.85
0-180	4981	83.03	100.00

% downlight can be found in "% Lamp" column and the "0-90" zone.
% uplight can be found in the "90-180" zone.

Figure 1

- Step 6: Fixtures with downlight component must incorporate glare limiting**
 - features such as louvers or perforated shields. _____
(Yes or No)

- Step 7: Pendant length must be at least 16 inches.** _____
 - Write in approximate pendant length.

- Step 8: System must be designed to achieve a Lighting Power Density**
 - Approximately 20% below Code. See Table 2 below _____
 - Write in LPD calculated specific to the space or check the applicable configuration in Table 1.

Table 1

Code 33 LDP Estimator

Note: The following typical fixture configurations and layouts have been determined to yield an approximate LPD of no more than 1.1 W per square foot. Other fixture configurations and layouts may be eligible for incentives and should follow the “Six Step Guide”.

Type of System	Row Spacing for	
	16-20" Pendant Length	21-30" Pendant Length
T8 Systems		
1F32T8 lamp per 4 ft. of Fixture	7-11 ft.	9-12 ft.
2F32T8 per 4 ft. Section	9-12 ft.	10-13 ft.
1F32SuperT8 per 4 ft. Section	7-11 ft.	9-12 ft.
2F32SuperT8 per 4 ft. Section	9-12 ft.	10-13 ft.
T5 Systems		
1F28T5 per 4 ft. Section	8-10 ft.	9-13 ft.
2F28T5 per 4 ft. Section	10-12 ft.	11-13 ft.
1F54T5HO per 4 ft. Section	11-12 ft.	11-14 ft.

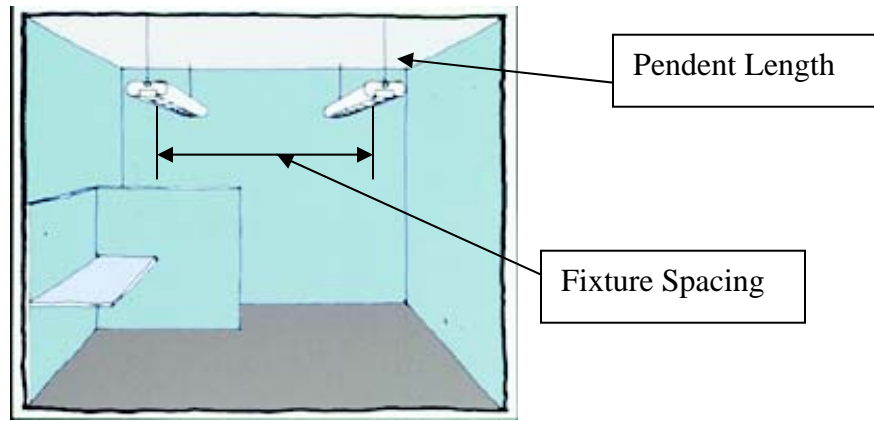


Table 2

LIGHTING POWER DENSITY TABLE

Lighting Power Densities Using the Building Area Method		
Building Type (A)	NH Energy Code (B)	Program Accepted (C)
Automotive Facility	1.5	1.2
Convention Center	1.4	1.1
Court House	1.4	1.1
Dining: Bar Lounge/Leisure	1.5	1.2
Dining: Cafeteria/Fast Food	1.8	1.4
Dining: Family	1.9	1.5
Dormitory	1.5	1.2
Exercise Center	1.4	1.1
Gymnasium	1.7	1.4
Hospital/Health Care	1.6	1.3
Hotel	1.7	1.4
Library	1.5	1.2
Manufacturing Facility	2.2	1.8
Motel	2.0	1.6
Motion Picture Theater	1.6	1.3
Multi-Family	1.0	0.8
Museum	1.6	1.3
Office	1.3	1.0
Parking Garage	0.3	0.2
Penitentiary	1.2	1.0
Performing Arts Theater	1.5	1.2
Police/Fire Station	1.3	1.0
Post Office	1.6	1.3
Religious Building	2.2	1.8
Retail	1.9	1.5
School/University	1.5	1.2
Sports Arena	1.5	1.2
Town Hall	1.4	1.1
Transportation	1.2	1.0
Warehouse	1.2	1.0
Workshop	1.7	1.4

Lighting Power Densities Using the Space-by-Space Method		
Space Type (A)	NH Energy Code (B)	Program Accepted (C)
Active Storage	1.3	1.0
Atrium – First Three Floors	1.3	1.0
Atrium – Each Additional Floor	0.2	0.2
Audience/Sitting Area	0.5	0.4
Classroom/Lecture/Training	1.6	1.3
Conference/Meeting/Multipurpose	1.5	1.2
Corridor/Transition	0.7	0.6
Dining Area	1.4	1.1
Electrical/Mechanical	1.3	1.0
Food Preparation	2.2	1.8
Inactive Storage	0.3	0.2
Lobby	1.8	1.4
Lounge/Recreation	1.4	1.1
Office – Enclosed	1.5	1.2
Office – Open Plan	1.3	1.0
Restrooms	1.0	0.8
Stairs – Active	0.9	0.7

Note: The presented list includes the most common space types. Please consult the New Hampshire Energy Code for more space types of and the allowed lighting power densities. For these spaces, determine the program accepted lighting power density by multiplying the code allowed lighting power density by 0.8.