

# TOMAR Electronics, Inc.

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : TLB96NNNPGR1 SERIES NARROW ANGLE NORMAL EFFICACY 480VAC.IES

## DESCRIPTION INFORMATION (From Photometric File)

[IESNA]LM-63-2002

[TEST]17760-G

[TESTLAB]Cree Inc. - Durham Technology Center

[ISSUEDATE] 5/ 8/2015

[MANUFAC]Tomar Electronics - High Bay

[LUMCAT]TLB96NNNPGR1

[LUMINAIRE]8 x Metalized Reflector Arrays with 12 LEDs Each and Clear Flat Glass Lens

[LAMP]96 x Cree LED

[LAMP]Cree X-Lamp XT-E. LUMINAIRE OUTPUT = 28532 LM

[OTHER]Tested at 480 VAC at 60Hz and 323.4 Watts

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	28566
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	323
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.36
Spacing Criterion (Diagonal)	1.56
Basic Luminous Shape	Circular
Luminous Length (0-180)	1.75 ft (Diameter)
Luminous Width (90-270)	1.75 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	64857	62563	62670
55	32484	32319	32951
65	21393	21537	21128
75	10105	10399	10131
85	1857	1770	1903

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0.0</b>	10696.0	10696.0	10696.0	10696.0	10696.0
<b>2.5</b>	10714.1	10696.5	10718.2	10715.0	10719.7
<b>5.0</b>	10708.4	10681.7	10710.0	10702.7	10714.0
<b>7.5</b>	10655.0	10643.3	10639.2	10637.8	10640.2
<b>10.0</b>	10557.9	10530.4	10529.5	10519.1	10527.0
<b>12.5</b>	10090.2	10117.7	10072.7	10071.0	10049.0
<b>15.0</b>	9407.2	9428.7	9388.0	9366.9	9365.9
<b>17.5</b>	8716.1	8758.4	8723.2	8727.5	8775.5
<b>20.0</b>	8409.6	8478.1	8392.0	8469.8	8548.9
<b>22.5</b>	8574.2	8571.8	8494.8	8652.8	8703.3
<b>25.0</b>	8859.2	8888.5	8753.0	8917.7	8895.9
<b>27.5</b>	9013.8	9260.7	8866.2	9169.4	8970.9
<b>30.0</b>	9013.1	9457.3	8894.2	9450.8	9009.2
<b>32.5</b>	8953.7	9656.2	8880.9	9630.8	9210.2
<b>35.0</b>	9083.4	9806.0	8959.2	9817.6	9551.2
<b>37.5</b>	9507.9	10309.4	9303.1	10276.8	9918.5
<b>40.0</b>	10150.5	11432.1	9846.3	11231.6	10245.6
<b>42.5</b>	10529.7	12244.3	10229.2	12030.3	10359.2
<b>45.0</b>	10257.5	11891.8	9894.7	11809.1	9911.7
<b>47.5</b>	8835.4	10185.5	8613.7	10179.9	8440.8
<b>50.0</b>	6708.5	7580.5	6624.5	7791.1	6688.4
<b>52.5</b>	5093.2	5452.8	5013.3	5519.4	5153.2
<b>55.0</b>	4167.4	4144.7	4146.2	4187.8	4227.3
<b>57.5</b>	3709.4	3488.0	3707.6	3515.0	3740.6
<b>60.0</b>	3196.2	3046.2	3170.8	3079.0	3156.4
<b>62.5</b>	2543.4	2613.6	2554.4	2637.6	2515.8
<b>65.0</b>	2022.2	2190.2	2035.8	2203.6	1997.1
<b>67.5</b>	1594.5	1712.1	1585.2	1728.5	1570.3
<b>70.0</b>	1159.2	1233.4	1138.5	1252.6	1130.6
<b>72.5</b>	803.0	888.8	798.3	896.5	798.2
<b>75.0</b>	585.0	617.3	602.0	617.6	586.5
<b>77.5</b>	460.9	429.8	476.3	436.5	462.2
<b>80.0</b>	329.7	232.0	319.5	249.9	318.6
<b>82.5</b>	139.6	106.6	138.1	115.1	142.4
<b>85.0</b>	36.2	32.3	34.5	29.8	37.1
<b>87.5</b>	5.6	6.6	5.8	7.1	6.2
<b>90.0</b>	1.3	1.3	1.2	1.2	0.9

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Zone	Lumens	%Lamp	%Fixt
0-20	3654.57	N.A.	12.80
0-30	7756.44	N.A.	27.20
0-40	13839.52	N.A.	48.40
0-60	25690.67	N.A.	89.90
0-80	28482.94	N.A.	99.70
0-90	28566.08	N.A.	100.00
10-90	27550.16	N.A.	96.40
20-40	10184.95	N.A.	35.70
20-50	17986.32	N.A.	63.00
40-70	13948.67	N.A.	48.80
60-80	2792.27	N.A.	9.80
70-80	694.75	N.A.	2.40
80-90	83.14	N.A.	0.30
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	28566.08	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1015.92
10-20	2638.64
20-30	4101.88
30-40	6083.08
40-50	7801.36
50-60	4049.79
60-70	2097.51
70-80	694.75
80-90	83.14
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**

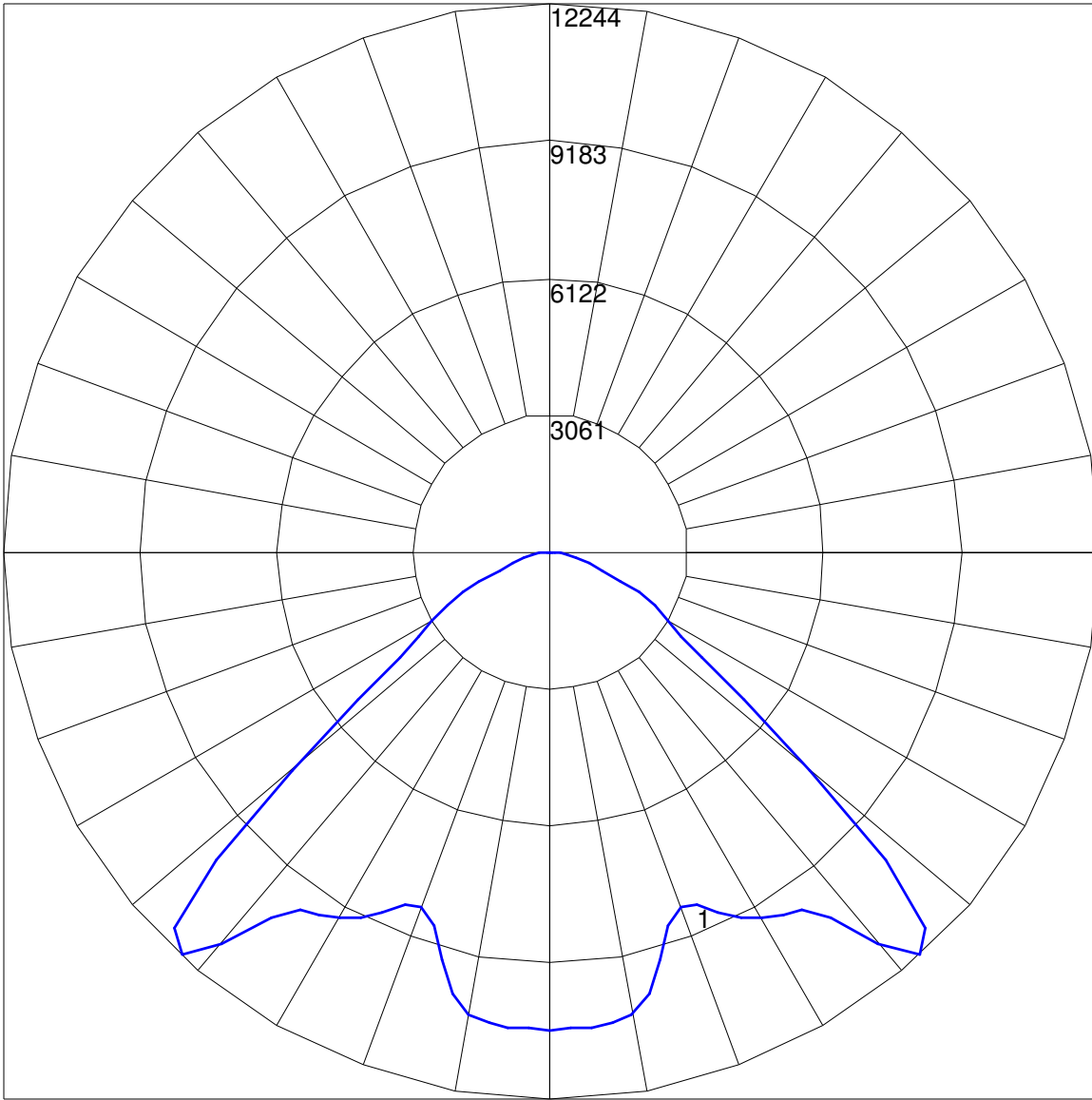
Effective Floor Cavity Reflectance 0.20

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	110	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	93	84	76	70	91	82	75	70	79	73	68	76	72	67	74	70	66	64
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	67	54	46	40	66	53	45	40	52	45	39	51	44	39	49	43	39	37
8	62	49	41	35	61	49	41	35	47	40	35	46	40	35	45	39	35	33
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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POLAR GRAPH



Maximum Candela = 12244.3 Located At Horizontal Angle = 22.5, Vertical Angle = 42.5  
# 1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)