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## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C82.77-2002

**Prepared For**  
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**Catalog Number**  
**RP04**  
Order Number  
11199505  
Test Number  
1227103

Test Date

2016-03-30

Prepared By

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Approved By

Zachary Mooney, Senior Engineering Associate

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**Luminaire Description:** Pendant luminaire that can be hung at varying lengths and locations on bus bars within a modular architectural lighting system  
**Lamp:** One white LED array  
**Mounting:** Pendant  
**Ballast/Driver:** LTF / Model# - TA75WA24LED

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 2.25 in.  
Luminous Height: 2.375 in.

**Summary of Results**

Total Luminaire Output:	131.3 Lumens
Luminaire Efficacy:	33.2 lm/w
Maximum Candela:	86 Candela

**Test Conditions**

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.03470 A
Power:	3.960 W
Power Factor:	0.949
Frequency:	60 Hz
Current THD:	25.3 %

Laboratory results may not be representative of field performance  
Ballast factors have not been applied



## Distribution - Goniophotometer

### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	120.0 VAC	0.03470 A	3.960 W	0.949	60 Hz	25.3 %

### Summary of Results

#### Spacing Criteria

0-180: 1.00

90-270: 1.00

#### Total Lumen Output:

131.3 Lumens

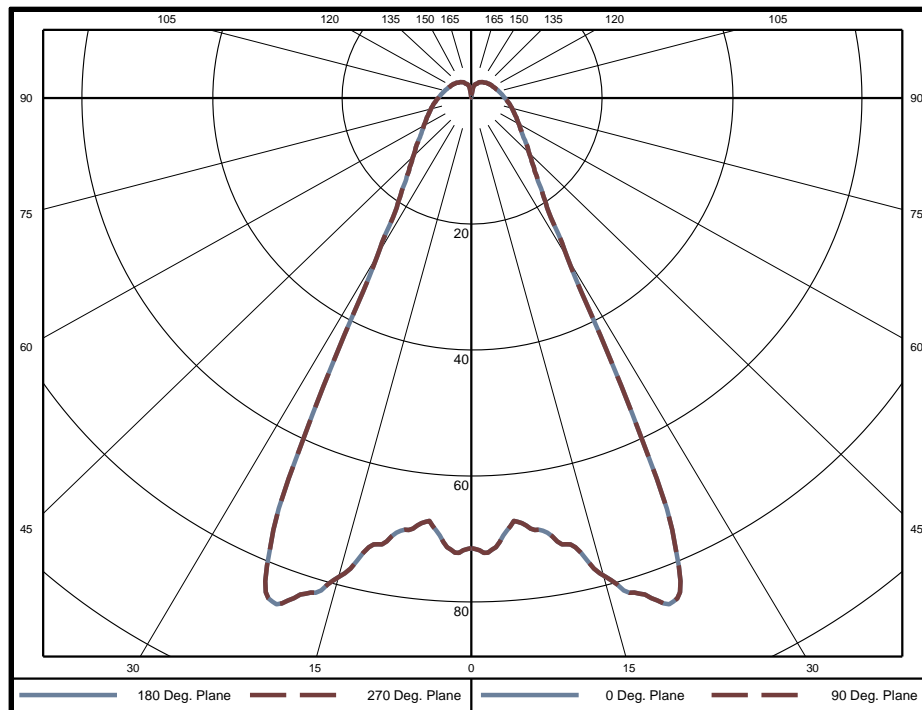
#### Luminaire Efficacy:

33.2 lm/w

#### Maximum Candela:

86 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.69	1.3%	60-65	3.87	2.9%	120-125	1.71	1.3%
5-10	4.93	3.8%	65-70	3.68	2.8%	125-130	1.55	1.2%
10-15	8.82	6.7%	70-75	3.49	2.7%	130-135	1.39	1.1%
15-20	13.57	10.3%	75-80	3.31	2.5%	135-140	1.23	0.9%
20-25	16.87	12.8%	80-85	3.11	2.4%	140-145	1.05	0.8%
25-30	11.01	8.4%	85-90	2.91	2.2%	145-150	0.89	0.7%
30-35	6.81	5.2%	90-95	2.71	2.1%	150-155	0.72	0.5%
35-40	5.62	4.3%	95-100	2.54	1.9%	155-160	0.54	0.4%
40-45	5.04	3.8%	100-105	2.36	1.8%	160-165	0.39	0.3%
45-50	4.68	3.6%	105-110	2.20	1.7%	165-170	0.25	0.2%
50-55	4.33	3.3%	110-115	2.02	1.5%	170-175	0.08	0.1%
55-60	4.08	3.1%	115-120	1.86	1.4%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	69	52.8%
0-60	87	66.6%
0-90	108	82.1%
90-180	23	17.9%



**Candela Tabulation**  
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46	71.46
	5	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22	68.22
	10	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63
	15	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66	78.66
	20	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38	85.38
	25	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65	66.65
	30	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09
	35	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17	19.17
	40	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91	14.91
	45	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46
	50	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72
	55	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32	9.32
	60	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39
	65	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61
	70	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95
	75	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42
	80	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97
	85	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
	90	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
	95	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79
	100	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53
	105	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
	110	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07
	115	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
	120	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74
	125	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64
	130	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55
	135	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37
	140	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21
	145	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09
	150	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93
	155	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77
	160	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
	165	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26
	170	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
	175	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	180	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13

**Average Luminance (cd/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	#VALUE!	#VALUE!
	45	#VALUE!	#VALUE!
	55	#VALUE!	#VALUE!
	65	#VALUE!	#VALUE!
	75	#VALUE!	#VALUE!
	85	#VALUE!	#VALUE!



### Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	151	151	151	151	144	144	144	144	133	133	133	122	122	122	112	112	112	108
1	138	132	126	121	132	126	122	117	117	113	109	108	105	102	99	97	95	91
2	127	117	109	103	122	113	106	100	105	99	94	97	92	88	90	86	83	79
3	118	106	96	89	113	102	94	87	95	88	82	88	83	78	82	78	74	70
4	110	96	86	79	105	93	84	77	87	79	73	81	75	70	76	71	67	63
5	103	88	78	70	98	85	76	69	80	72	66	75	69	63	71	65	61	58
6	96	81	71	64	92	79	69	63	74	66	60	70	63	58	66	60	56	53
7	90	75	65	58	87	73	64	57	69	61	55	65	58	53	62	56	51	49
8	85	70	60	53	82	68	59	53	64	57	51	61	54	49	58	52	48	45
9	80	65	56	49	77	63	55	49	60	53	47	57	51	46	55	49	45	42
10	76	61	52	46	73	59	51	45	57	49	44	54	47	43	52	46	42	39

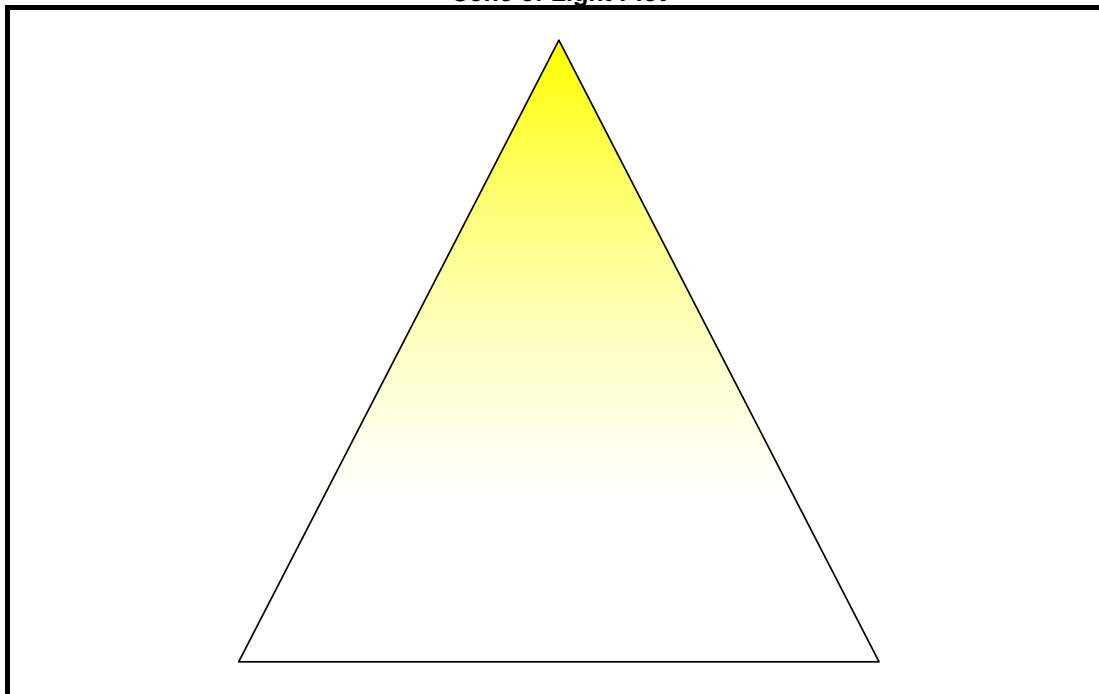
### Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	4.47	4.01
6.00	1.98	6.01
8.00	1.12	8.02
10.0	0.715	10.0
12.0	0.496	12.0
14.0	0.365	14.0
16.0	0.279	16.0

### Beam and Field Information

CIE Type:	Semi-Direct
Center Beam Intensity:	71.46 Candela
Central Cone Intensity:	71 Candela
Beam Flux:	54.0 Lumens
Beam Angle (0-180):	56.8 Degrees
Beam Angle (90-270):	56.8 Degrees
Field Angle (0-180):	136.7 Degrees
Field Angle (90-270):	136.7 Degrees

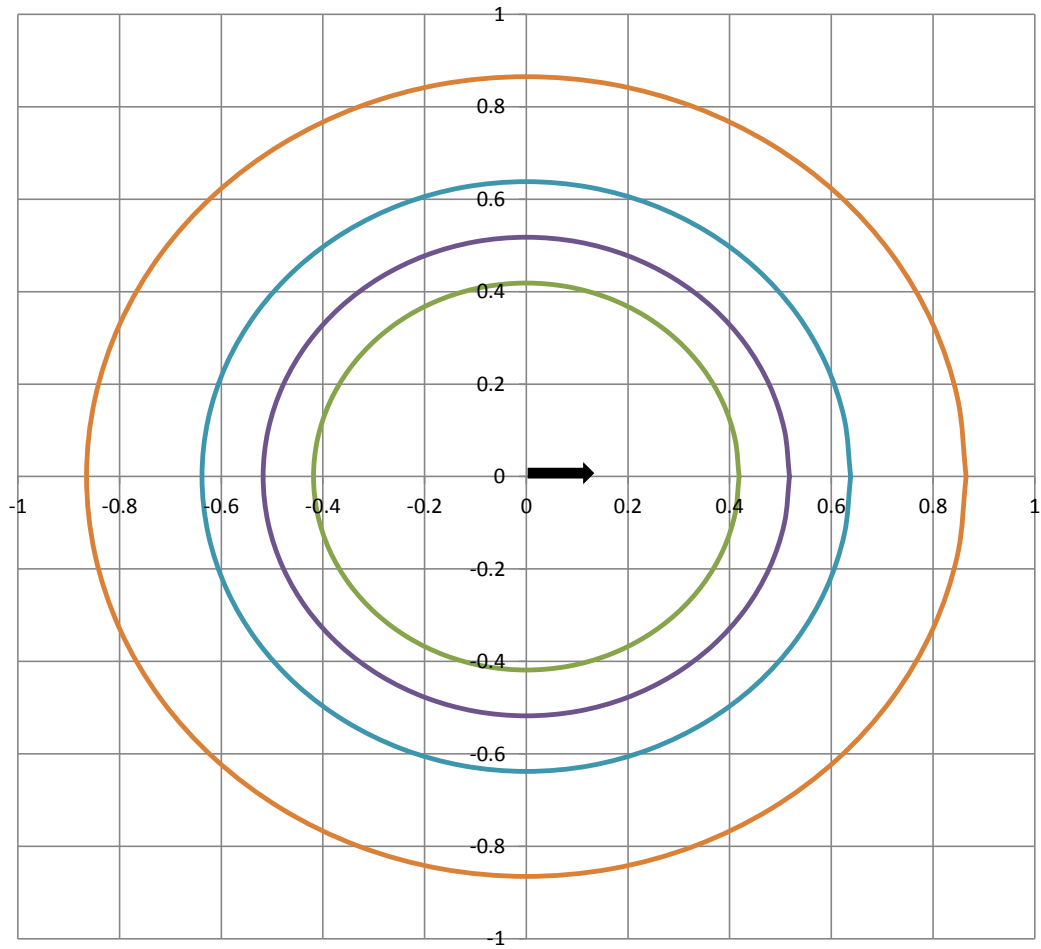
### Cone of Light Plot





## ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

5 fc    2 fc    1 fc    0.5 fc    0.2 fc    0.1 fc