



LTL NUMBER: 18937

DATE: 05-03-2010

PREPARED FOR: SPECTRUM LIGHTING

CATALOG NUMBER: LAMP/LED/18W/3K/22D/120V

LUMINAIRE: CAST ALUMINUM HOUSING, FROSTED PATTERNED PLASTIC ENCLOSURE.

LAMP: ONE VBU PAR38 LED REPLACEMENT LAMP WITH ONE WHITE LED

LED POWER SUPPLY: INTERNAL

ELECTRICAL VALUES: 120.0VAC, 0.1386A, 15.68W, PF=0.942

NOTE: THIS TEST WAS PERFORMED USING THE CALIBRATED

PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY. *

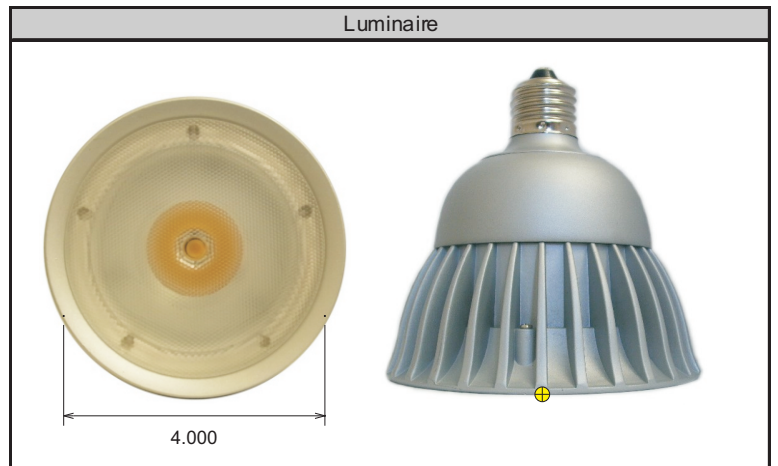
Candela Distribution

Table with 18 columns (0, 22.5, 45, 67.5, 90, 112.5, 135, 157.5, 180, 202.5, 225, 247.5, 270, 292.5, 315, 337.5, Flux) and 19 rows of candela distribution data.

Zonal Lumen Summary

Table with 4 columns (Zone, Lumens, % of Lamp, % of Luminaire) and 7 rows of zonal lumen summary data.

Total lumen Output: 552.7 Lumens
Luminaire efficacy: 35.2 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0.36



Approved By: MG

*DATA WAS ACQUIRED USING THE CALIBRATED PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY. A UDT MODEL #211 PHOTODETECTOR AND UDT MODEL #S370 OPTOMETER COMBINATION WERE USED AS A STANDARD. A SPECTRAL MISMATCH CORRECTION FACTOR WAS EMPLOYED BASED ON THE SPECTRAL RESPONSIVITY OF THE PHOTODETECTOR AND THE SPECTRAL POWER DISTRIBUTION OF THE TEST SUBJECT.

TESTING WAS PERFORMED IN ACCORDANCE WITH IES LM-79-08.

TEST ANGULAR INCREMENTS AND REPORT FORMATTING WAS BASED ON IES LM-41-98 AND LM-46-04.



Candela Tabulation (5 degree Vertical Increments)

	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	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788	2788
5	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426
10	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525
15	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743
20	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
25	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155
30	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
35	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
40	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
45	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
50	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
55	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
60	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
65	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
70	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
75	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
80	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
85	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	62.7	45-50	6.2	90-95	0.0	135-140	0.0
5-10	139.0	50-55	5.1	95-100	0.0	140-145	0.0
10-15	128.5	55-60	4.3	100-105	0.0	145-150	0.0
15-20	80.9	60-65	3.7	105-110	0.0	150-155	0.0
20-25	46.9	65-70	3.3	110-115	0.0	155-160	0.0
25-30	27.9	70-75	3.2	115-120	0.0	160-165	0.0
30-35	16.8	75-80	3.0	120-125	0.0	165-170	0.0
35-40	11.1	80-85	1.8	125-130	0.0	170-175	0.0
40-45	8.0	85-90	0.1	130-135	0.0	175-180	0.0



Utilization of Lumens - Zonal Cavity Method												
Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **											
0	674	674	674	674	658	658	658	658	642.7	642.7	642.7	642.7
1	646.2	631.2	617.9	606	632.1	618.8	606.9	596.2	618.8	607	596.4	586.8
2	620.5	595.4	574.9	557.8	608.2	585.7	567.1	551.5	596.5	576.5	559.7	545.4
3	597.2	565.3	541.1	522	586.4	557.7	535.5	517.8	576.1	550.3	530	513.6
4	575.9	539.6	513.5	493.9	566.4	533.5	509.4	491	557.4	527.5	505.3	488.1
5	556.3	517.3	490.5	471	548	512.3	487.3	468.9	540.1	507.5	484.3	466.9
6	538.4	497.6	470.8	451.8	531	493.5	468.4	450.3	524	489.6	466	448.9
7	521.8	480.1	453.6	435.3	515.2	476.7	451.7	434.2	509	473.4	449.9	433.1
8	506.4	464.3	438.4	420.8	500.6	461.5	436.9	420	495	458.7	435.4	419.2
9	492.1	450	424.7	407.9	486.9	447.6	423.5	407.3	482	445.2	422.3	406.6
10	478.9	437	412.4	396.2	474.2	434.9	411.4	395.7	469.7	432.9	410.4	395.3

Ceiling Cavity Reflectance	50				30			10			0	
Wall Reflectance	70	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	614.1	614.1	614.1	614.1	588	588	588	564	564	564	552.7	
1	594	584.9	576.5	568.8	564.5	558	551.9	545.8	540.7	536.1	526.5	
2	575	559	545.4	533.6	543	532	522.4	528.1	519.4	511.6	503.2	
3	557.3	536.4	519.5	505.6	523.6	509.6	497.9	511.7	500.2	490.5	482.8	
4	540.9	516.4	497.5	482.6	506	490.1	477.2	496.3	483	471.9	464.8	
5	525.6	498.4	478.3	463	489.9	472.7	459.1	482	467.2	455.4	448.7	
6	511.2	482.1	461.4	446	475	457	443.2	468.5	452.8	440.4	434.2	
7	497.6	467.1	446.2	431	461.3	442.8	428.9	455.8	439.4	426.9	420.9	
8	484.9	453.4	432.5	417.6	448.5	429.7	416	443.8	427	414.5	408.7	
9	472.8	440.8	420	405.4	436.6	417.7	404.2	432.6	415.5	403	397.5	
10	461.5	429	408.5	394.3	425.4	406.7	393.4	422	404.9	392.5	387.2	

Average Luminance Table (cd/m²)

	0	45	90
0	343896	343896	343896
45	3120	3120	3120
55	2211	2211	2211
65	2048	2048	2048
75	2875	2875	2875
85	2200	2200	2200

THIS TEST WAS CONDUCTED USING PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IES PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE DATA FOR OTHER BALLAST/LAMP COMBINATIONS MAY PRODUCE ERRONEOUS RESULTS. 2) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT WHERE THE AMBIENT TEMPERATURE WAS HELD AT 25°C ±1°C. FIELD PERFORMANCE MAY DIFFER PARTICULARLY IN REGARDS TO CHANGE IN LUMINOUS OUTPUT AS A RESULT OF DIFFERENCE IN AMBIENT TEMPERATURE AND METHOD OF MOUNTING THE LUMINAIRE.

