

Project Number
17.01922



Date
7/17/2017

LAB 6
Sphere

Test Sample Description

Catalog Number: P81083130K
Description: J-BOX RETROFIT W/T24

Photometry

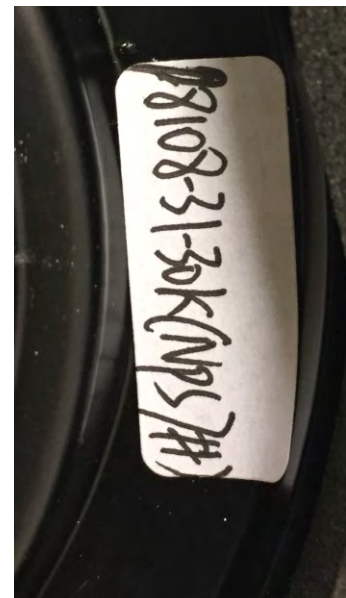
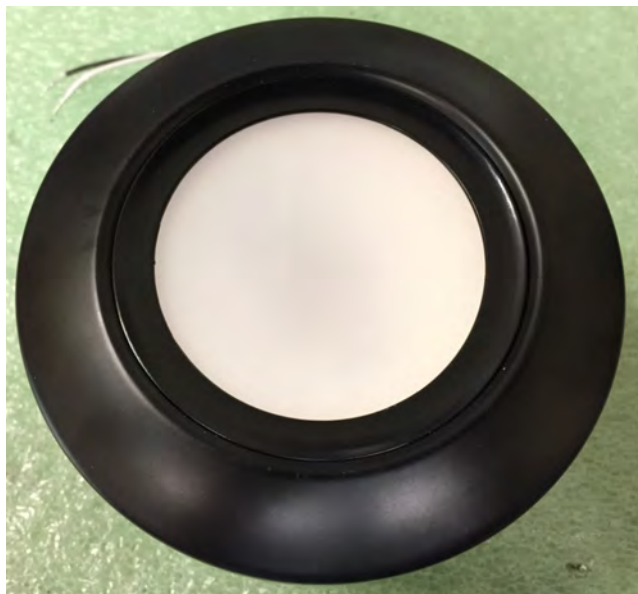
Test Method: IES LM-79-08 § 10
Preburn Time: 4:00
Time To Stabilize: 1:40
Total Operating Time: 6:00

Input Voltage (Volts): 120.1
Input Current (Amps): 0.101
Input Wattage (Watts): 12.0
Ambient Temp (°C): 24.2

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 4:00
Time To Stabilize: 1:17
Total Operating Time: 5:17

Input Voltage (Volts): 120.0
Input Current (Amps): 0.100
Input Wattage (Watts): 11.9
Ambient Temp (°C): 24.2



Hubbell Lighting, Inc.

701 Millennium Boulevard
Greenville, SC 29607
www.hubbellighting.com

Checked (sphere): B. LEE
Checked (photometry): M. ELLMANN
Approved: D. BLACK



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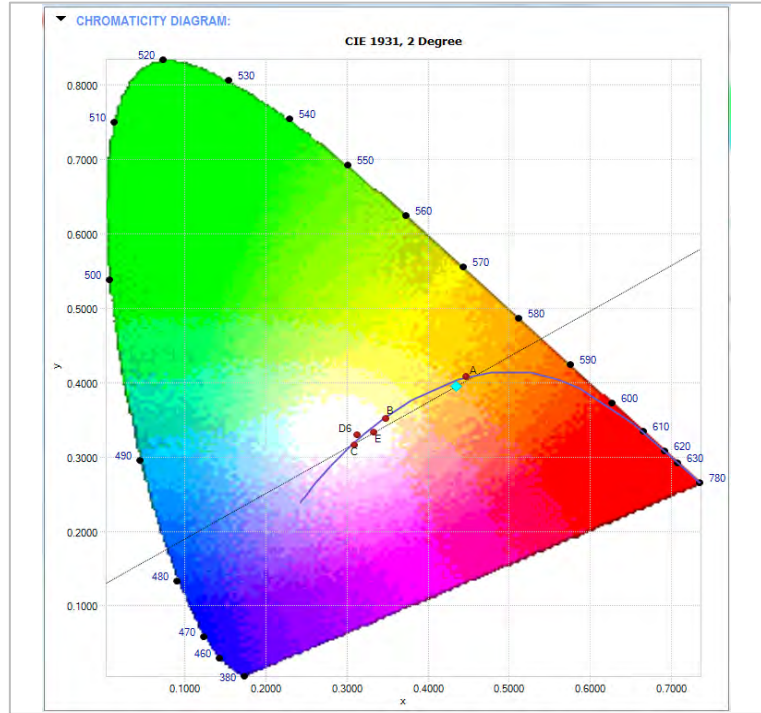


Lamp Cat#: 757DRT-V1
 Lamp Desc: 20 - Nichia 3000K LEDs
 Driver Desc: N/A

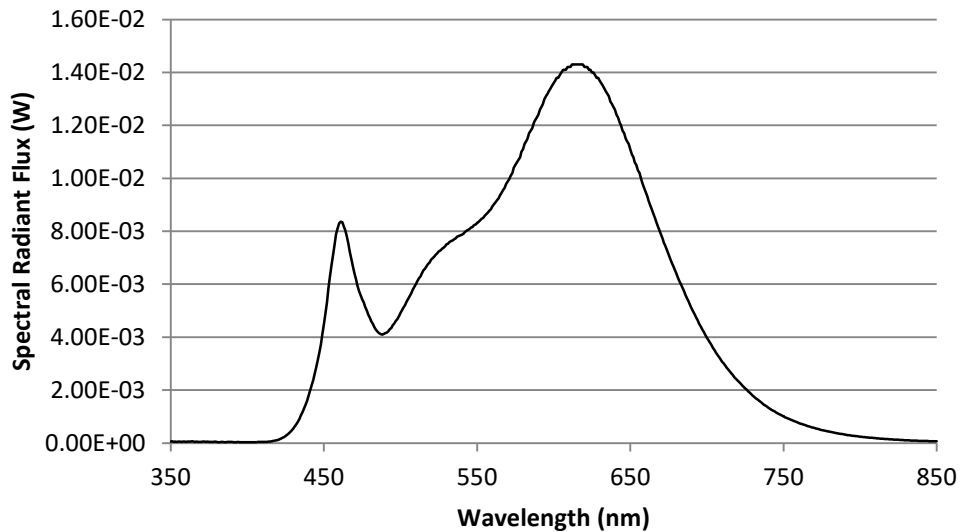
Efficacy: 58.1 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	2.39	watts
$\Phi(v)$	691	lumens
$\Phi(v')$	1015	lm'
Chrom x	0.4351	
Chrom y	0.3957	
Chrom u	0.253	
Chrom v	0.3452	
Duv	0.0033	
Chrom u'	0.253	
Chrom v'	0.5178	
CCT	2961	K
Purity	49.4	%
λ (dom)	584.2	nm
FWHM	150.7	nm
λ (peak)	614.7	nm
λ (center)	599.3	nm
λ (centroid)	591.5	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.003108233	
Correlation	0.0054	
R1	94.9	
R2	98.6	
R3	93.9	
R4	91.3	
R5	94.7	
R6	94.0	
R7	87.0	
R8	77.9	
R9	55.9	
R10	98.8	
R11	93.5	
R12	81.0	
R13	97.4	
R14	97.7	



Spectral Distribution of Radiant Flux



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LUMINAIRE: J-BOX RETROFIT W/T24

LAMP CAT. NO.: 757DRT-V1

LAMP: 20- 3000K Nichia LEDs

REFRACTOR: SABIC POLYCARBONATE

MOUNTING: Ceiling

REFRACTOR: solite Type IV

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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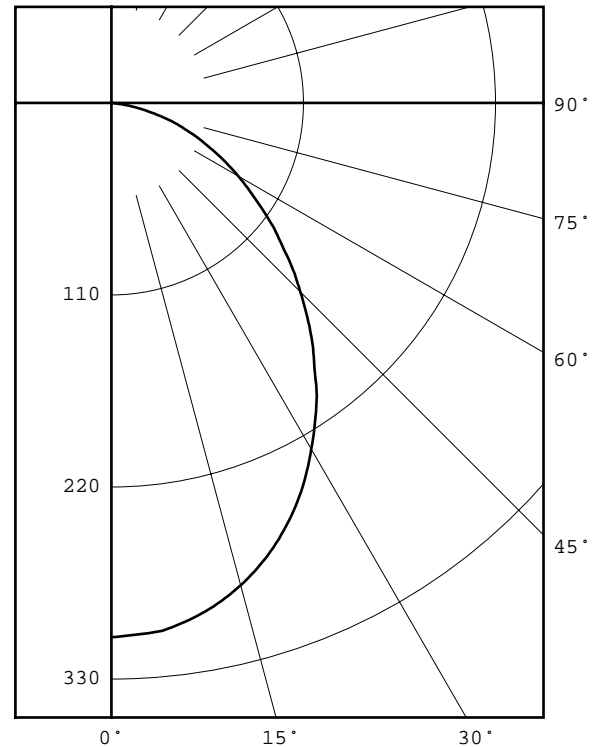
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DEG	CANDELA	LUMENS
0	306	
5	304	29
15	286	80
25	252	116
35	205	128
45	153	118
55	105	94
65	64	64
75	29	31
85	1	4
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	225	33.9
0- 40	353	53.2
0- 60	565	85.2
0- 90	663	100.0
90-180	0	0.0
0-180	663	100.0

EFFICACY = 55.3 lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.13
LUMINOUS DIAMETER: 3.000

LUMINANCE DATA IN CANDELA/SQ M	
ANGLE	AVERAGE
IN DEG	
45	47447.
55	40142.
65	33207.
75	24570.
85	2516.





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CANDELA DISTRIBUTION

0.0	306
2.5	305
5.0	304
7.5	301
10.0	297
12.5	292
15.0	286
17.5	279
20.0	271
22.5	262
25.0	252
27.5	241
30.0	229
32.5	217
35.0	205
37.5	191
40.0	179
42.5	166
45.0	153
47.5	141
50.0	128
52.5	117
55.0	105
57.5	94
60.0	84
62.5	74
65.0	64
67.5	55
70.0	46
72.5	38
75.0	29
77.5	20
80.0	13
82.5	6
85.0	1
87.5	0
90.0	0



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0-	5	7
5-	10	21
10-	15	35
15-	20	46
20-	25	55
25-	30	61
30-	35	64
35-	40	64
40-	45	61
45-	50	57
50-	55	51
55-	60	44
60-	65	36
65-	70	28
70-	75	20
75-	80	11
80-	85	4
85-	90	0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0-	10	29
10-	20	80
20-	30	116
30-	40	128
40-	50	118
50-	60	94
60-	70	64
70-	80	31
80-	90	4



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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	119	119	119	119	119	116	116	116	116	111	111	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	99	107	104	100	97	99	97	94	96	93	91	92	90	89	87	87	87
2	101	94	87	82	82	99	92	86	81	88	84	79	85	81	78	82	79	76	74	74	74
3	93	83	76	70	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64	64	64
4	86	74	66	60	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55	55	55
5	79	67	59	52	52	77	66	58	52	64	57	52	62	56	51	60	55	51	49	49	49
6	73	61	52	46	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43	43	43
7	68	55	47	41	41	67	55	47	41	53	46	41	52	45	41	50	45	40	38	38	38
8	64	51	43	37	37	62	50	42	37	49	42	37	48	41	37	47	41	36	35	35	35
9	60	47	39	34	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31	31	31
10	56	43	36	31	31	55	43	36	31	42	35	31	41	35	30	40	34	30	29	29	29

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

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Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-38

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 25889.0 Lumens

Calibration Date: 09/02/2016

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27076V	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	11/7/2017

Sphere Calibration

Calibration Lamp: EIKO 28V75W/E10

Lamp Number: SCL-1400-J136

Calibration Current: 2.679 Amps

Total Luminous Flux: 1427 Lumens

Test Equipment Used - Color & SPD; THD & Power Factor

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>3-Meter Sphere</i>	Labsphere / LMS-3M	N/A	Calibrated Weekly
<i>Thermometer</i>	National Instruments / USB TC01	1912751	11/2/2017
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	11/1/2017
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	031159372	10/31/2017
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	12/1/2017
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

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