

Project Number
17.01921



Date
7/17/2017

LAB 6
Sphere

Test Sample Description

Catalog Number: P81082030K
Description: J-BOX RETROFIT W/T24

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 0:45
Time To Stabilize: 1:00
Total Operating Time: 3:20

Input Voltage (Volts): 120.2
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: 3:00
Time To Stabilize: 1:09
Total Operating Time: 4:09

Input Voltage (Volts): 120.0
Input Current (Amps): 0.100
Input Wattage (Watts): 11.9
Ambient Temp (°C): 24.1



Hubbell Lighting, Inc.

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

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



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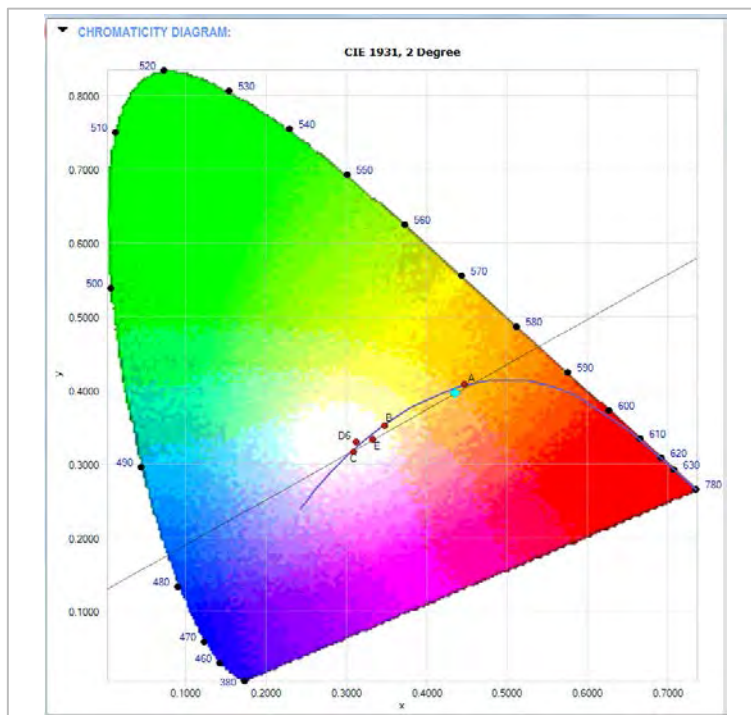


Lamp Cat#: 757DRT-V1
 Lamp Desc: 20 - Nichia 3000K LEDs
 Driver Desc: N/A

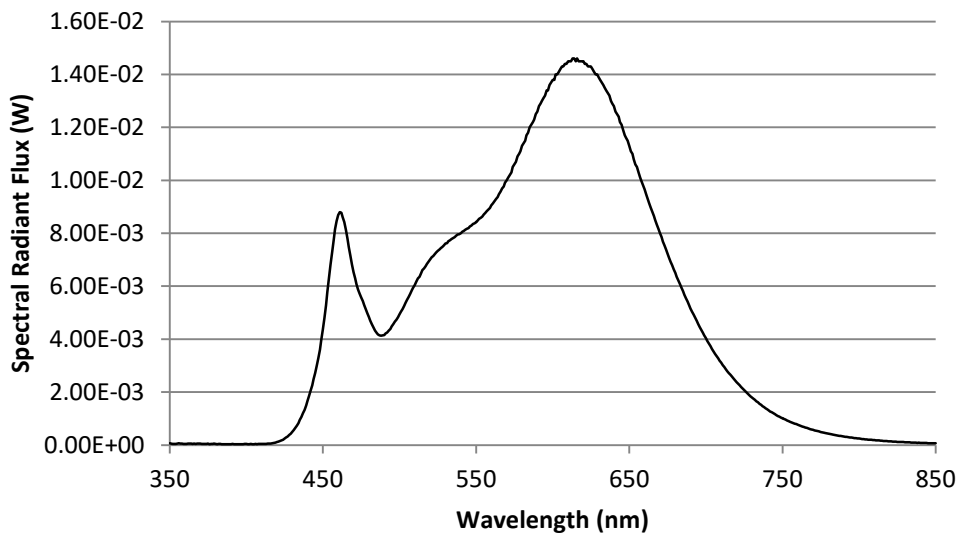
Efficacy: 58.8 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	2.43	watts
Φ(v)	700	lumens
Φ(v')	1029	lm'
Chrom x	0.4353	
Chrom y	0.3959	
Chrom u	0.2531	
Chrom v	0.3452	
Duv	0.0033	
Chrom u'	0.2531	
Chrom v'	0.5179	
CCT	2958	K
Purity	49.5	%
λ (dom)	584.2	nm
FWHM	150.5	nm
λ (peak)	614.7	nm
λ (center)	599.4	nm
λ (centroid)	591.6	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.003081541	
Correlation	0.0054	
R1	95.1	
R2	98.5	
R3	93.8	
R4	91.2	
R5	94.7	
R6	93.8	
R7	87.0	
R8	78.0	
R9	56.5	
R10	98.7	
R11	93.5	
R12	80.5	
R13	97.6	
R14	97.8	



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

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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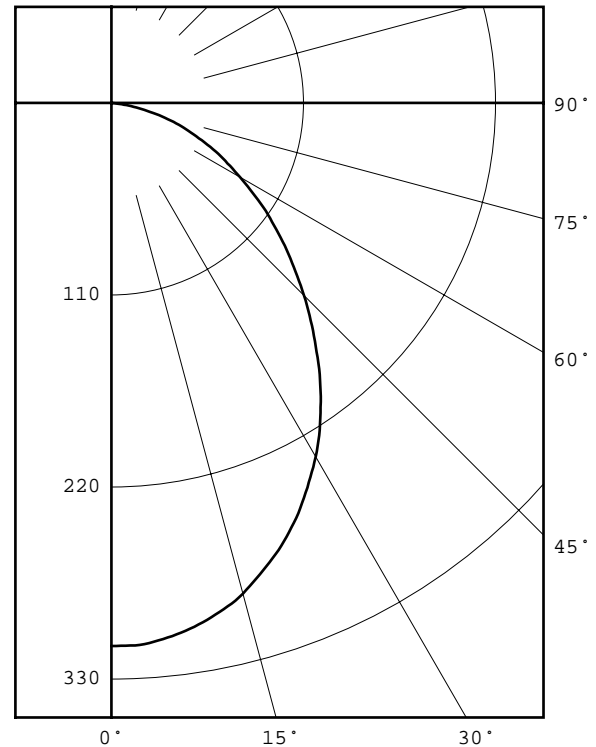
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DEG	CANDELA	LUMENS
0	311	
5	309	29
15	291	82
25	256	118
35	209	131
45	156	120
55	108	96
65	66	65
75	30	32
85	1	4
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	229	33.8
0- 40	359	53.1
0- 60	576	85.2
0- 90	676	100.0
90-180	0	0.0
0-180	676	100.0

EFFICACY = 56.3 lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.13
LUMINOUS DIAMETER: 3.000
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ M	
ANGLE	AVERAGE
IN DEG	
45	21281.
55	14650.
65	9180.
75	4419.
85	162.





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CANDELA DISTRIBUTION

0.0	311
2.5	311
5.0	309
7.5	306
10.0	302
12.5	297
15.0	291
17.5	283
20.0	275
22.5	266
25.0	256
27.5	245
30.0	234
32.5	222
35.0	209
37.5	196
40.0	182
42.5	169
45.0	156
47.5	143
50.0	131
52.5	119
55.0	108
57.5	96
60.0	85
62.5	75
65.0	66
67.5	56
70.0	47
72.5	39
75.0	30
77.5	21
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	22
10-	15	35
15-	20	47
20-	25	56
25-	30	62
30-	35	65
35-	40	65
40-	45	63
45-	50	58
50-	55	52
55-	60	44
60-	65	37
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	82
20-	30	118
30-	40	131
40-	50	120
50-	60	96
60-	70	65
70-	80	32
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	88	86	86	86
2	101	94	87	82	82	98	92	86	81	88	83	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	73	69	66	64	64	64
4	85	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	50	48	48	48
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	46	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>	<i>ITL/HLI LAB 6 - Test Distance: 31.3'</i>	<i>N/A</i>	<i>N/A</i>
<i>Power Analyzer</i>	<i>Yokogawa / WT 332</i>	<i>C2QA27076V</i>	<i>11/2/2017</i>
<i>Power Source</i>	<i>Voltage-Regulated House Power</i>	<i>N/A</i>	<i>N/A</i>
<i>Thermometer</i>	<i>National Instruments / USB-TC01</i>	<i>1912745</i>	<i>11/7/2017</i>

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

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