



UL Verification Services Inc.
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Photometric Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-10-2014, UL 1598-2008
CIE 13.3-1995, CIE 15-2004, ANSI C78.377-2017
IES TM-30-2018

Prepared For
SPECTRUM LIGHTING INC
994 JEFFERSON ST
FALL RIVER, MA 02721-4823
United States

Catalog Number
GC2208LED240L35KDS10X/TJL/GW

Order Number
14671091
Test Number
14671091.02A

Revision of Test Number 14671091.02 on:

2023-03-22
Test Date

2023-03-03 - 2023-03-14

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Absorption correction was employed for Sphere measurement

Luminaire Description: White aluminum housing, frosted lens enclosure
Lamp: 384 LEDS
Mounting: Recessed
Ballast/Driver: ADVANCE CI065C135V048CDX1, 2 drivers

Luminaire



Luminaire Characteristics

Luminous Diameter: 20.00 in.
 Luminous Height: 6.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 18610 Lumens
 Efficacy: 137.86 lm/w
 CCT: 3459 K
 CRI (Ra): 83.0

Distribution

Total Luminaire Output: 18890 Lumens
 Luminaire Efficacy: 140.1 lm/w
 Maximum Candela: 5359 Candela

Electrical Data at 277 VAC

Test Temperature: 24.1 °C
 Voltage: 277.0 VAC
 Current: 0.5026 A
 Power: 133.0 W
 Power Factor: 0.955
 Frequency: 60 Hz
 Current THD: 9.49 %

In-Situ

LED #1 Temperature: 65.3 °C
 LED #2 Temperature: 65.1 °C
 Driver Temperature: 69.9 °C
 Measured LED Current: 0.1132 A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.

Color Quality - Integrating Sphere

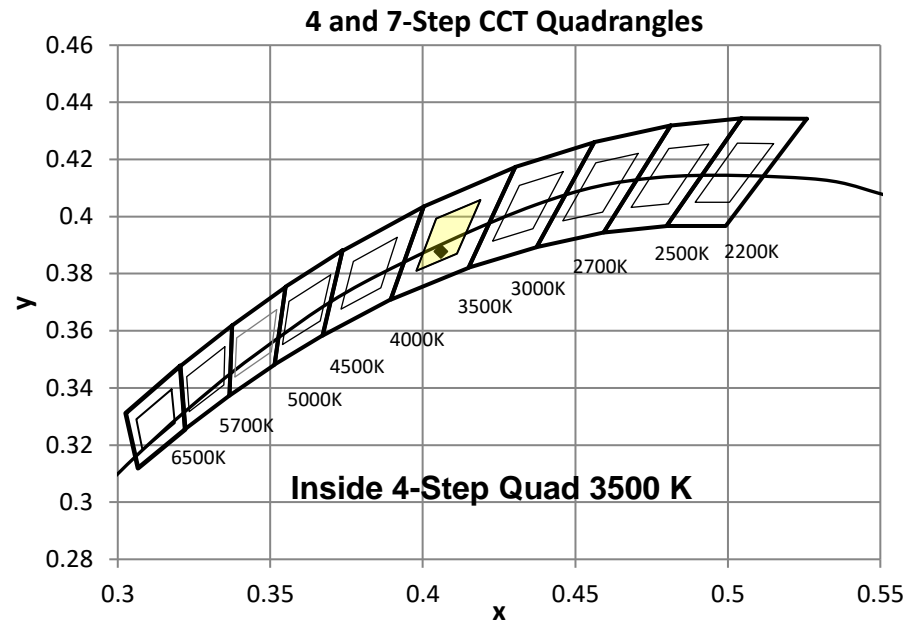
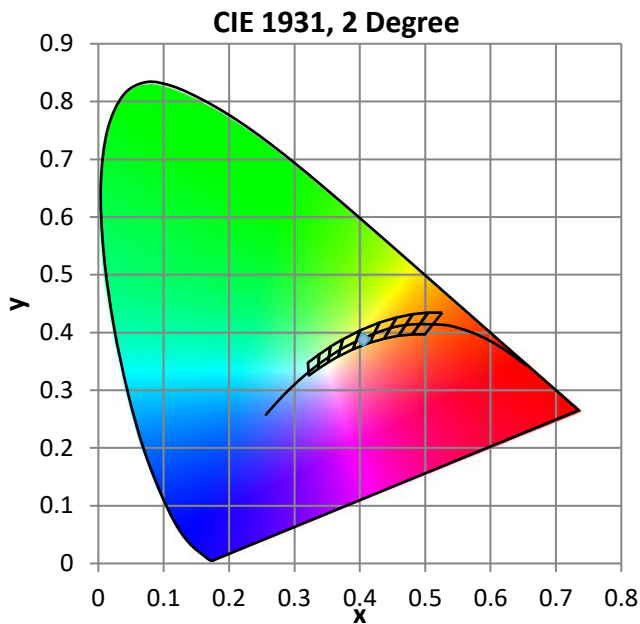
Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.0 VAC	1.135 A	135.0 W	0.992	60 Hz	11.9 %

Summary of Results

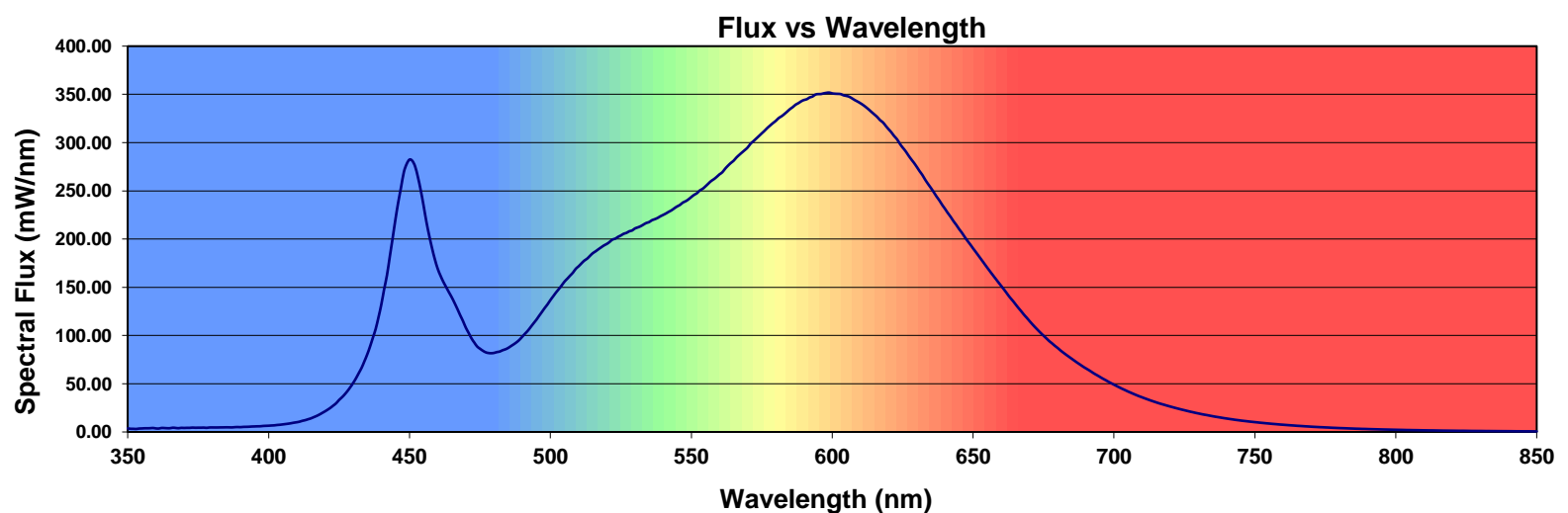
Total Output:	18610 Lumens	Chromaticity (x):	0.4059
Efficacy:	137.9 lm/w	Chromaticity (y):	0.3878
CCT:	3459 K	Chromaticity (u'):	0.2373
CRI (Ra):	83.0	Chromaticity (v'):	0.5101
CRI (R9):	7.6	TM-30 Rf:	84
Peak Wavelength:	599 nm	TM-30 Rg:	96
Dominant Wavelength:	555 nm	TM-30 Rcs,h1:	-12%
S/P Ratio:	1.52	Duv:	-0.0014
M/P Ratio:	0.6		

WELL Building Standard v2



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83.0	81.4	90.2	96.0	81.5	81.8	87.2	84.0	61.6	7.6	77.2	80.9	68.8	83.6	98.2	74.9





Distribution - Goniophotometer

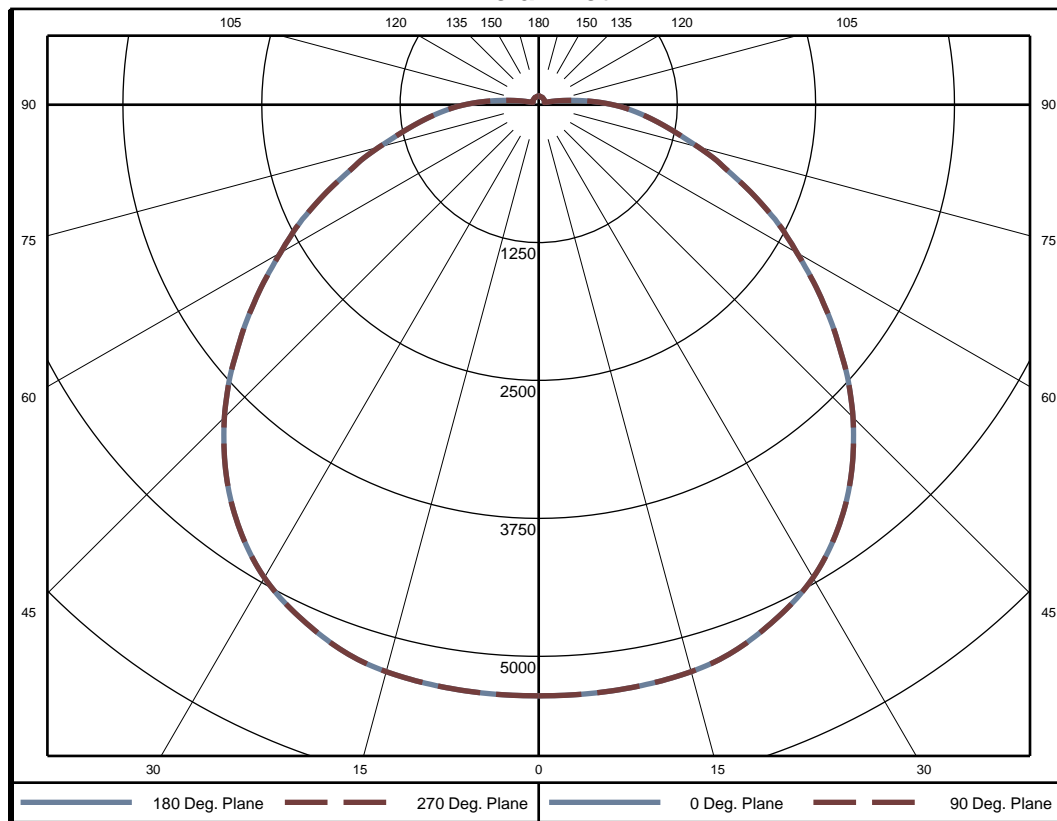
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.0 VAC	1.133 A	134.9 W	0.992	60 Hz	11.8 %

Summary of Results

Spacing Criteria	Total Lumen Output:	18890 Lumens
0-180: 1.36	Luminaire Efficacy:	140.1 lm/w
90-270: 1.36	Maximum Candela:	5359 Candela
Corrected UGR (Room Dimension: X=4H, Y=8H, Reflectances: 70/50/20%, S/H: 1)		
Crosswise: 26.1	Endwise: 26.1	

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	128	0.7%	60-65	1210	6.4%	120-125	29	0.2%
5-10	383	2.0%	65-70	1047	5.5%	125-130	28	0.1%
10-15	633	3.4%	70-75	876	4.6%	130-135	27	0.1%
15-20	872	4.6%	75-80	708	3.7%	135-140	25	0.1%
20-25	1087	5.8%	80-85	565	3.0%	140-145	23	0.1%
25-30	1275	6.7%	85-90	432	2.3%	145-150	21	0.1%
30-35	1422	7.5%	90-95	291	1.5%	150-155	18	0.1%
35-40	1517	8.0%	95-100	163	0.9%	155-160	15	0.1%
40-45	1554	8.2%	100-105	80	0.4%	160-165	12	0.1%
45-50	1534	8.1%	105-110	39	0.2%	165-170	9	0.0%
50-55	1459	7.7%	110-115	28	0.1%	170-175	6	0.0%
55-60	1345	7.1%	115-120	29	0.2%	175-180	2	0.0%

Zone	Lumens	% of Luminaire
0-40	7317	38.7%
0-60	13209	69.9%
0-90	18047	95.5%
90-180	845	4.5%

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	5358	5358	5358	5358	5358	5358	5358	5358	5358	5358	5358	5358	5358	5358	5358
	5	5357	5357	5357	5357	5357	5357	5357	5357	5357	5357	5357	5357	5357	5357	5357
	10	5346	5346	5346	5346	5346	5346	5346	5346	5346	5346	5346	5346	5346	5346	5346
	15	5320	5320	5320	5320	5320	5320	5320	5320	5320	5320	5320	5320	5320	5320	5320
	20	5249	5249	5249	5249	5249	5249	5249	5249	5249	5249	5249	5249	5249	5249	5249
	25	5119	5119	5119	5119	5119	5119	5119	5119	5119	5119	5119	5119	5119	5119	5119
	30	4950	4950	4950	4950	4950	4950	4950	4950	4950	4950	4950	4950	4950	4950	4950
	35	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700
	40	4384	4384	4384	4384	4384	4384	4384	4384	4384	4384	4384	4384	4384	4384	4384
	45	4009	4009	4009	4009	4009	4009	4009	4009	4009	4009	4009	4009	4009	4009	4009
	50	3578	3578	3578	3578	3578	3578	3578	3578	3578	3578	3578	3578	3578	3578	3578
	55	3133	3133	3133	3133	3133	3133	3133	3133	3133	3133	3133	3133	3133	3133	3133
	60	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691
	65	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281
	70	1858	1858	1858	1858	1858	1858	1858	1858	1858	1858	1858	1858	1858	1858	1858
	75	1492	1492	1492	1492	1492	1492	1492	1492	1492	1492	1492	1492	1492	1492	1492
	80	1172	1172	1172	1172	1172	1172	1172	1172	1172	1172	1172	1172	1172	1172	1172
	85	912	912	912	912	912	912	912	912	912	912	912	912	912	912	912
	90	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663
	95	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403
	100	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210
	105	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	110	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
	115	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
	120	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
	125	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
	130	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
	135	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
	140	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	145	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
	150	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
	155	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
	160	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
	165	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
	170	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
	175	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
	180	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	26440	26440	26440
	45	20240	20240	20240
	55	17440	17440	17440
	65	14640	14640	14640
	75	11730	11730	11730
	85	9621	9621	9621



Coefficients of Utilization - Zonal Cavity Method

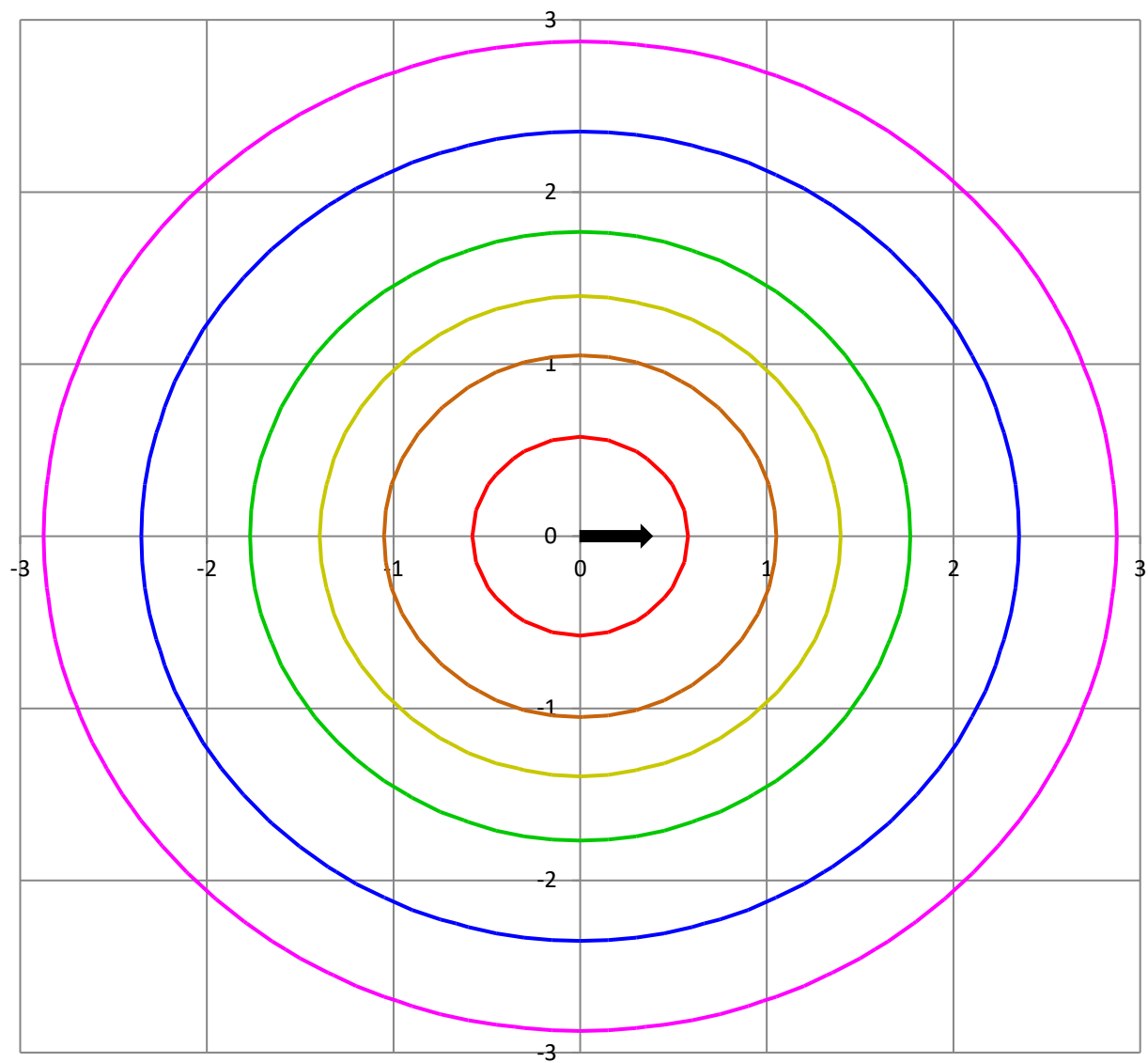
Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as percent of total lumen output delivered to the task surface **																	
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	106	101	96	91	103	98	93	89	93	89	86	88	85	82	84	81	79	76
2	96	87	79	73	93	85	78	72	80	74	69	76	71	67	72	69	65	63
3	87	76	67	60	84	74	66	59	70	63	58	67	61	56	64	59	55	52
4	79	67	58	51	77	65	57	50	62	55	49	59	53	48	56	51	46	44
5	73	60	50	43	70	58	49	43	55	48	42	53	46	41	51	45	40	38
6	67	53	44	38	65	52	44	37	50	42	37	48	41	36	46	40	35	33
7	62	48	39	33	60	47	39	33	45	38	32	44	37	32	42	36	31	29
8	58	44	35	29	56	43	35	29	41	34	29	40	33	28	38	32	28	26
9	54	40	32	26	52	40	32	26	38	31	26	37	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	33	27	23	21

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	5358 Candela
Central Cone Intensity:	5358 Candela
Beam Flux:	13247.0 Lumens
Beam Angle (0-180):	120.3 Degrees
Beam Angle (90-270):	120.3 Degrees
Field Angle (0-180):	184.8 Degrees
Field Angle (90-270):	184.8 Degrees

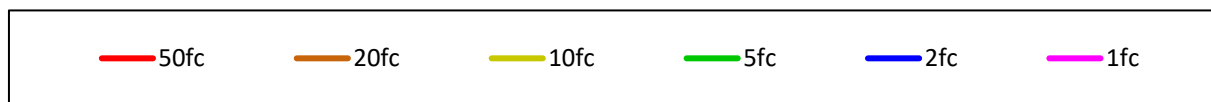
Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		335	5.45
6.00		149	8.17
8.00		83.7	10.9
10.0		53.6	13.6
12.0		37.2	16.3
14.0		27.3	19.1
16.0		20.9	21.8

ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height



ANSI/IES TM-30-18 Color Rendition Report

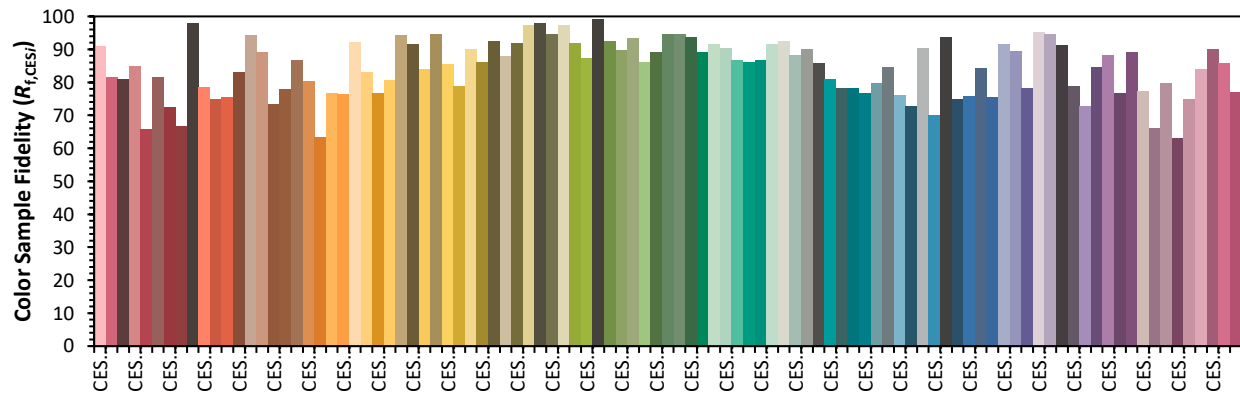
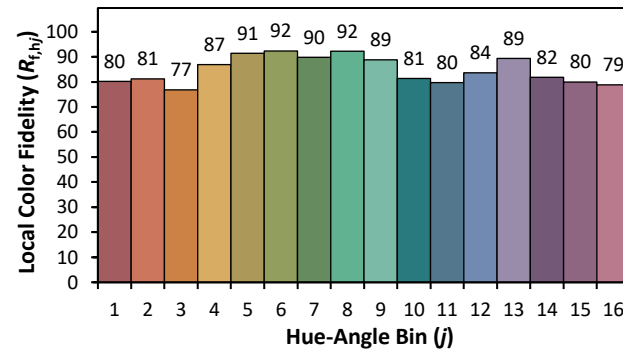
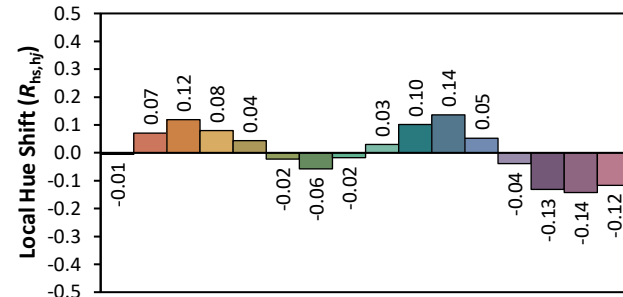
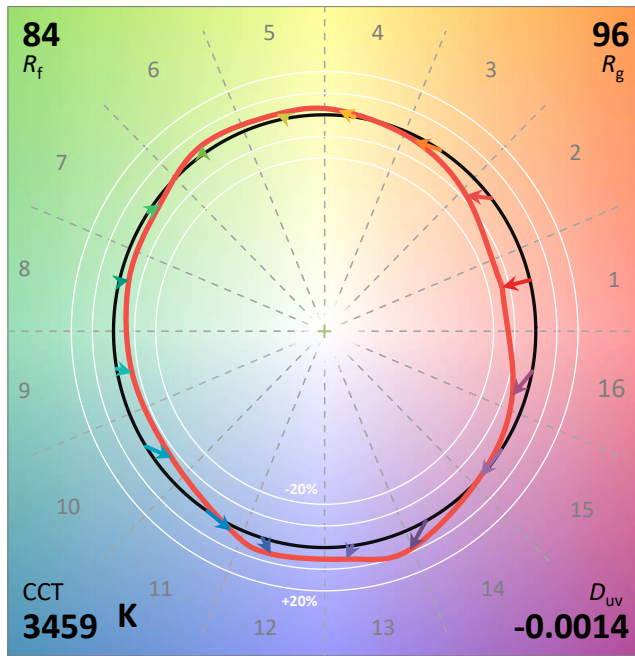
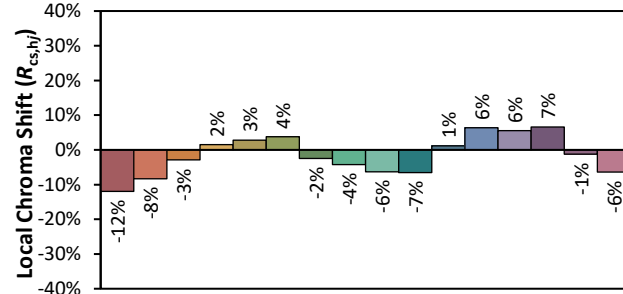
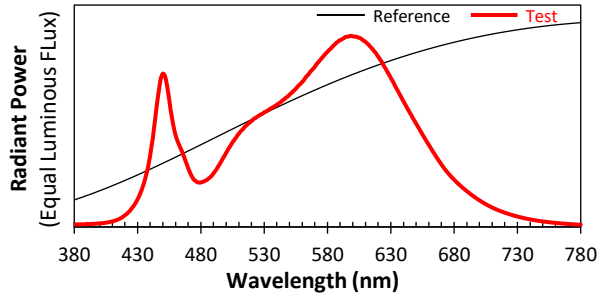
Date: 2023-03-03

Manufacturer:

SPECTRUM LIGHTING INC

Model:

GC2208LED240L35KDS10X/TJL/GW



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4059

y 0.3878

u' 0.2373

v' 0.5101

CIE 13.3-1995
(CRI)

R_a 83

R_g 8

Colors are for visual orientation purposes only. Created with the IES TM-30-18 Calculator Version 2.00.



Attachment A

Amended Report Documentation

[illegible]