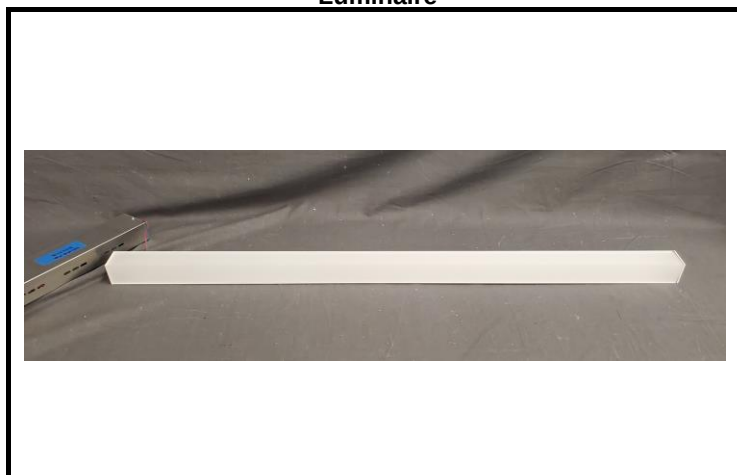




BSS745-48-35-ND-R-SM-SN-AW

Luminaire Description: White rectangular metal housing with diffuse rectangular plastic lens
Lamp: 112 White LEDs
Mounting: Surface – Ceiling
Ballast/Driver: One (1) Signify North America / XI040C110V054BST2

Luminaire



Luminaire Characteristics

Luminous Length: 2.00 in.
Luminous Width: 48.00 in.
Luminous Height: 2.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 3418 Lumens
Efficacy: 119.42 lm/w
CCT: 3431 K
CRI (Ra): 92.4

Distribution

Total Luminaire Output: 3267 Lumens
Luminaire Efficacy: 114.3 lm/w
Maximum Candela: 856 Candela

Electrical Data at 120 VAC

Test Temperature: 25.4 °C
Voltage: 120.1 VAC
Current: 0.2412 A
Power: 28.62 W
Power Factor: 0.989
Frequency: 60 Hz
Current THD: 12.1 %



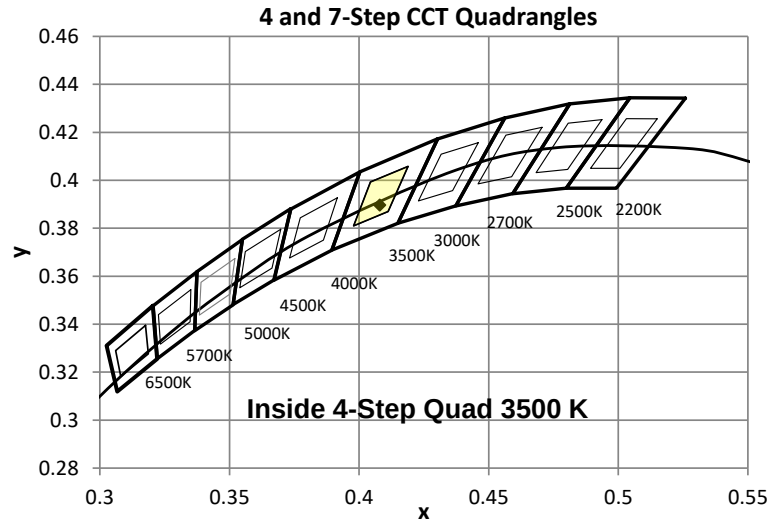
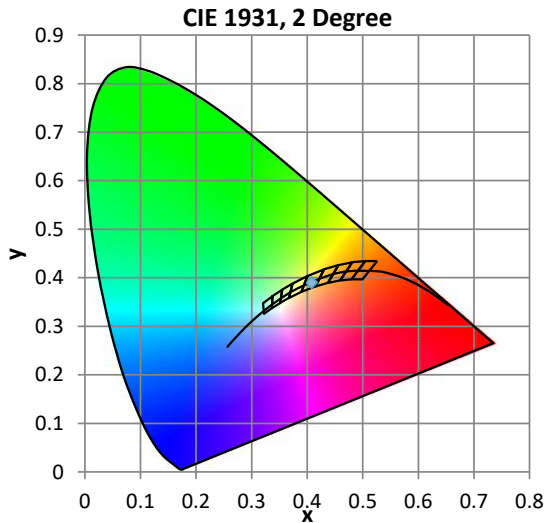
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.4 °C	120.1 VAC	0.2412 A	28.62 W	0.989	60 Hz	12.1 %

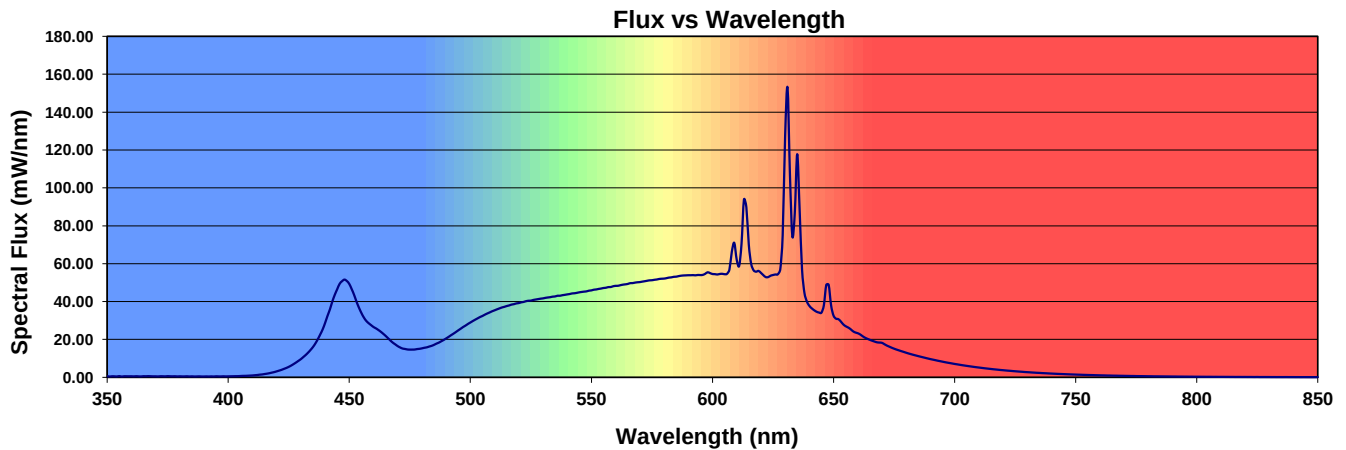
Summary of Results

Total Output:	3418 Lumens	Chromaticity (x):	0.4080
Efficacy:	119.4 lm/w	Chromaticity (y):	0.3897
CCT:	3431 K	Chromaticity (u'):	0.2379
CRI (Ra):	92.4	Chromaticity (v'):	0.5112
CRI (R9):	59.6	TM-30 Rf:	90
Peak Wavelength:	631 nm	TM-30 Rg:	102
Dominant Wavelength:	582 nm	TM-30 Rcs,h1:	-5%
S/P Ratio:	1.57	Duv:	-0.0011
M/P Ratio:	0.61	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
92.4	93.8	94.7	94.1	93.5	93.2	93.4	92.6	84.0	59.6	86.1	94.2	79.6	93.8	95.8	90.2





Distribution - Goniophotometer

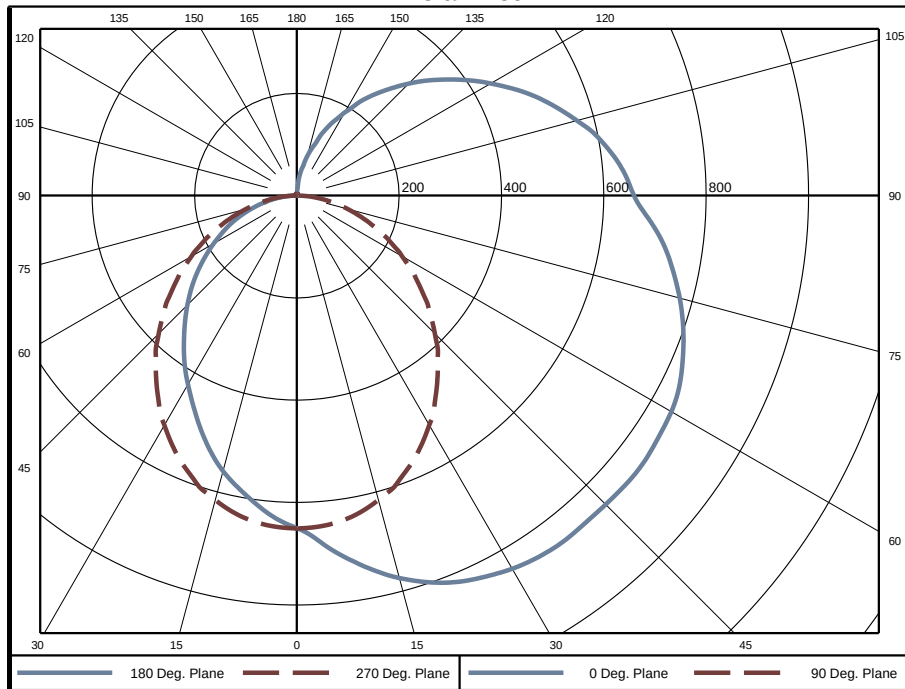
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.3 °C	120.1 VAC	0.2402 A	28.59 W	0.991	60 Hz	11.1 %

Summary of Results

Spacing Criteria	Total Lumen Output:	3267 Lumens
0-180: 1.90	Luminaire Efficacy:	114.3 lm/w
90-270: 1.19	Maximum Candela:	856 Candela
Corrected UGR (Room Dimension: X=4H, Y=8H, Reflectances: 70/50/20%, S/H: 1)		
Crosswise: 31.1	Endwise: 15.3	

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	15.6	0.5%	60-65	182.2	5.6%	120-125	55.8	1.7%
5-10	46.7	1.4%	65-70	171.3	5.2%	125-130	47.4	1.5%
10-15	77.0	2.4%	70-75	157.3	4.8%	130-135	39.2	1.2%
15-20	105.3	3.2%	75-80	141.6	4.3%	135-140	31.3	1.0%
20-25	130.3	4.0%	80-85	125.1	3.8%	140-145	23.7	0.7%
25-30	151.3	4.6%	85-90	107.9	3.3%	145-150	17.0	0.5%
30-35	168.3	5.2%	90-95	98.8	3.0%	150-155	11.6	0.4%
35-40	180.5	5.5%	95-100	94.9	2.9%	155-160	7.2	0.2%
40-45	188.9	5.8%	100-105	89.0	2.7%	160-165	4.1	0.1%
45-50	192.9	5.9%	105-110	81.3	2.5%	165-170	2.0	0.1%
50-55	193.2	5.9%	110-115	73.1	2.2%	170-175	0.7	0.0%
55-60	189.4	5.8%	115-120	64.5	2.0%	175-180	0.1	0.0%

Zone	Lumens	% of Luminaire
0-40	875	26.8%
0-60	1639	50.2%
0-90	2525	77.3%
90-180	742	22.7%



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	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
	5	689.4	686.6	674.6	657.8	647.0	638.0	633.4	629.5	624.7	629.5	633.4	638.0	647.0	657.8	674.6
	10	733.9	725.8	700.6	664.1	635.9	619.0	607.7	599.6	591.5	599.6	607.7	619.0	635.9	664.1	700.6
	15	773.6	758.1	719.1	663.8	615.7	593.6	577.3	566.2	557.5	566.2	577.3	593.6	615.7	663.8	719.1
	20	804.9	782.5	728.9	657.9	589.5	564.8	543.5	527.6	515.6	527.6	543.5	564.8	589.5	657.9	728.9
	25	826.6	797.8	734.3	639.9	556.3	527.3	502.0	481.8	469.2	481.8	502.0	527.3	556.3	639.9	734.3
	30	842.0	807.5	726.1	615.7	517.5	486.1	457.0	436.9	425.8	436.9	457.0	486.1	517.5	615.7	726.1
	35	851.2	810.7	714.1	586.5	473.7	443.5	414.4	394.4	384.3	394.4	414.4	443.5	473.7	586.5	714.1
	40	853.0	809.5	697.6	550.7	428.2	400.4	372.0	350.9	341.9	350.9	372.0	400.4	428.2	550.7	697.6
	45	853.6	802.7	676.2	518.6	381.2	354.7	330.0	310.2	302.6	310.2	330.0	354.7	381.2	518.6	676.2
	50	856.0	796.0	654.0	477.6	334.7	308.7	288.5	271.6	264.2	271.6	288.5	308.7	334.7	477.6	654.0
	55	852.0	784.0	627.7	437.5	285.0	263.9	247.1	232.3	225.2	232.3	247.1	263.9	285.0	437.5	627.7
	60	845.1	768.0	599.0	396.5	237.4	220.3	206.9	194.9	187.8	194.9	206.9	220.3	237.4	396.5	599.0
	65	829.0	750.1	565.9	354.0	192.2	177.6	167.3	157.8	152.8	157.8	167.3	177.6	192.2	354.0	565.9
	70	804.2	719.9	528.5	314.2	146.9	136.7	129.1	122.1	118.2	122.1	129.1	136.7	146.9	314.2	528.5
	75	774.8	685.9	489.9	273.5	104.2	97.6	92.2	87.6	84.1	87.6	92.2	97.6	104.2	273.5	489.9
	80	740.9	651.2	453.3	235.2	65.7	61.6	58.5	55.9	53.2	55.9	58.5	61.6	65.7	235.2	453.3
	85	700.7	611.1	415.7	199.0	31.4	29.6	28.4	27.1	25.1	27.1	28.4	29.6	31.4	199.0	415.7
	90	659.1	573.3	383.6	170.4	2.8	3.1	3.4	3.3	2.5	3.3	3.4	3.1	2.8	170.4	383.6
	95	636.2	555.3	374.3	167.7	2.2	1.2	1.3	1.3	1.1	1.3	1.3	1.2	2.2	167.7	374.3
	100	605.7	534.1	362.6	164.0	2.1	0.9	1.0	1.0	0.8	1.0	1.0	0.9	2.1	164.0	362.6
	105	566.8	499.7	343.4	156.6	2.1	0.8	0.8	0.8	0.7	0.8	0.8	0.8	2.1	156.6	343.4
	110	526.0	463.3	322.3	146.4	2.1	0.8	0.7	0.7	0.5	0.7	0.7	0.8	2.1	146.4	322.3
	115	483.4	426.6	299.9	135.9	2.2	0.8	0.7	0.7	0.5	0.7	0.7	0.8	2.2	135.9	299.9
	120	438.2	388.6	275.2	124.4	2.3	0.8	0.8	0.8	0.5	0.8	0.8	0.8	2.3	124.4	275.2
	125	394.4	350.4	250.6	114.7	2.5	0.9	0.9	0.9	0.7	0.9	0.9	0.9	2.5	114.7	250.6
	130	351.8	313.9	224.9	102.4	2.6	1.1	1.1	1.1	0.8	1.1	1.1	1.1	2.6	102.4	224.9
	135	309.6	278.9	198.5	87.1	2.7	1.2	1.2	1.2	1.0	1.2	1.2	1.2	2.7	87.1	198.5
	140	268.5	240.0	170.6	72.1	2.8	1.4	1.4	1.3	1.2	1.3	1.4	1.4	2.8	72.1	170.6
	145	229.8	203.9	129.1	57.9	2.8	1.6	1.5	1.4	1.3	1.4	1.5	1.6	2.8	57.9	129.1
	150	188.0	169.4	96.2	45.3	3.0	1.7	1.7	1.5	1.4	1.5	1.7	1.7	3.0	45.3	96.2
	155	152.0	125.6	73.4	37.0	3.2	1.8	1.8	1.6	1.5	1.6	1.8	1.8	3.2	37.0	73.4
	160	110.5	79.5	55.4	29.2	3.4	1.9	2.0	1.7	1.6	1.7	2.0	1.9	3.4	29.2	55.4
	165	80.8	51.6	41.1	22.0	3.5	2.0	2.0	1.7	1.6	1.7	2.0	2.0	3.5	22.0	41.1
	170	51.1	26.9	26.1	15.8	3.6	2.0	2.0	1.9	1.6	1.9	2.0	2.0	3.6	15.8	26.1
	175	11.2	14.4	14.1	8.4	3.6	2.1	2.0	1.9	1.7	1.9	2.0	2.1	3.6	8.4	14.1
	180	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	10510	10510
	45	9746	8892
	55	9877	8611
	65	10070	8381
	75	10210	8153
	85	10440	8176



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	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77
1	101	95	89	85	95	90	85	81	82	78	74	74	71	68	67	64	62	58
2	90	81	73	67	86	77	70	64	70	64	59	63	59	55	57	53	50	46
3	82	70	61	54	77	67	59	52	61	54	48	55	49	45	49	45	41	38
4	74	62	52	45	70	59	50	44	53	46	41	48	42	38	44	39	35	32
5	68	55	45	38	64	52	44	37	48	40	35	43	37	32	39	34	30	27
6	63	49	40	33	59	47	38	32	43	35	30	39	33	28	35	30	26	23
7	58	44	35	29	55	42	34	28	39	31	26	35	29	25	32	27	23	20
8	54	40	31	25	51	38	30	25	35	28	23	32	26	22	29	24	20	18
9	50	37	28	23	48	35	27	22	32	26	21	30	24	19	27	22	18	16
10	47	34	26	20	45	32	25	20	30	23	19	27	22	18	25	20	16	15

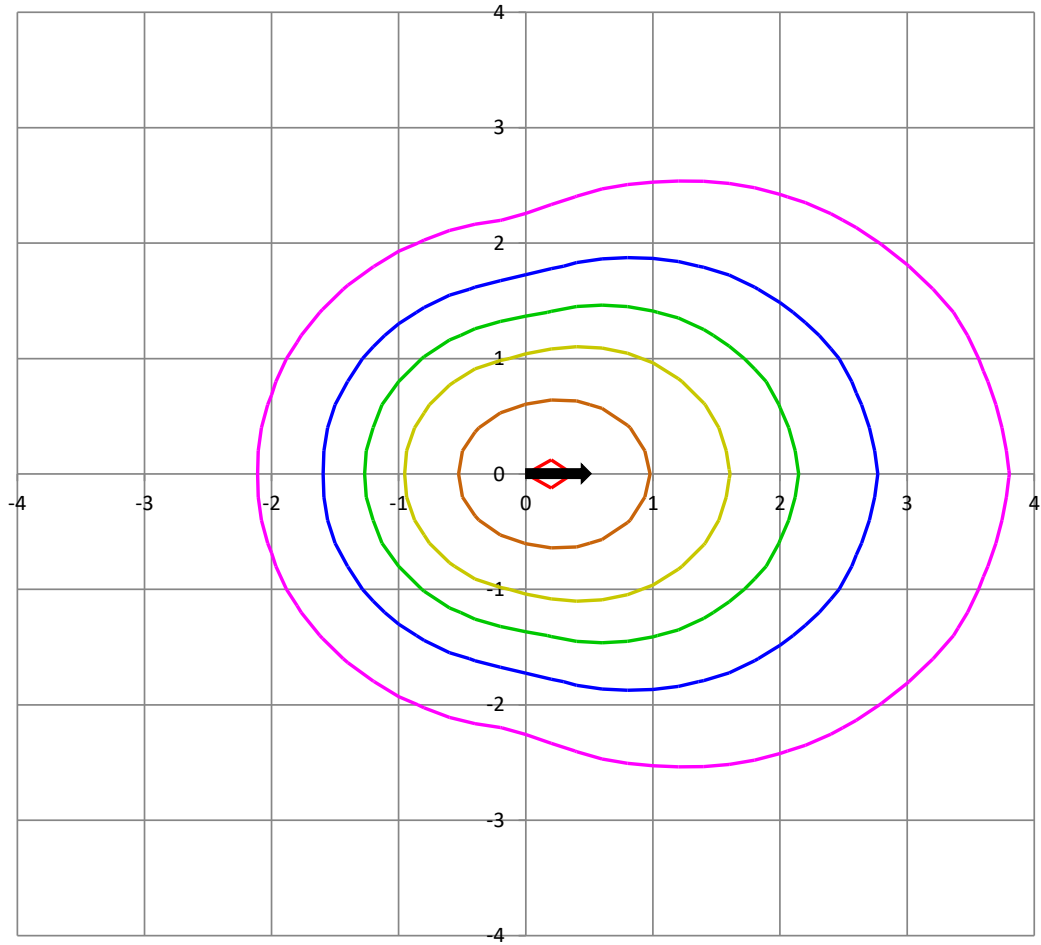
Beam and Field Information	
CIE Type:	Semi-Direct
Center Beam Intensity:	651.2 Candela
Central Cone Intensity:	652 Candela
Beam Flux:	2569.3 Lumens
Beam Angle (0-180):	175.2 Degrees
Beam Angle (90-270):	101.8 Degrees
Field Angle (0-180):	245.3 Degrees
Field Angle (90-270):	160.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		40.7	5.33
6.00		18.1	8.00
8.00		10.2	10.7
10.0		6.51	13.3
12.0		4.52	16.0
14.0		3.32	18.7
16.0		2.54	21.3

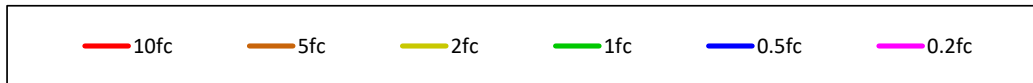


ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height



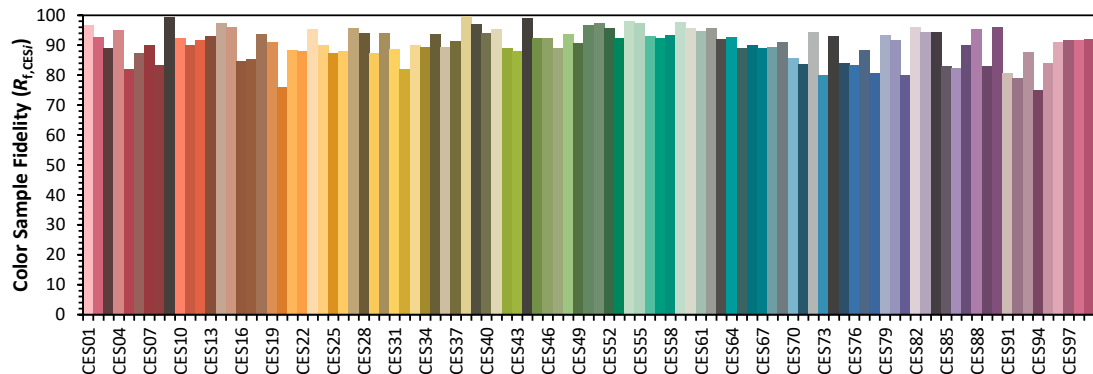
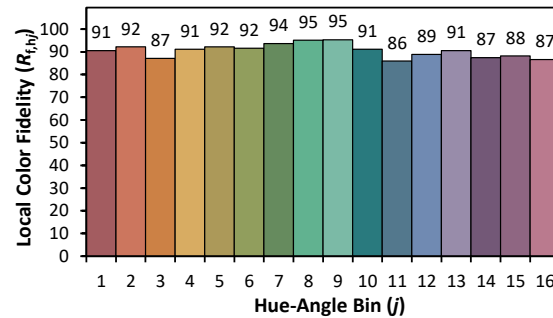
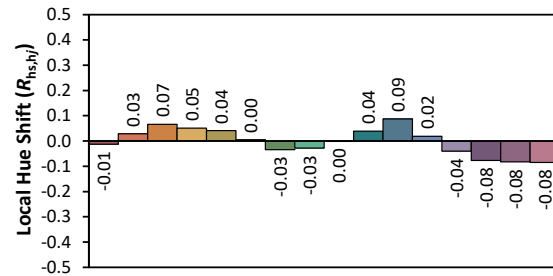
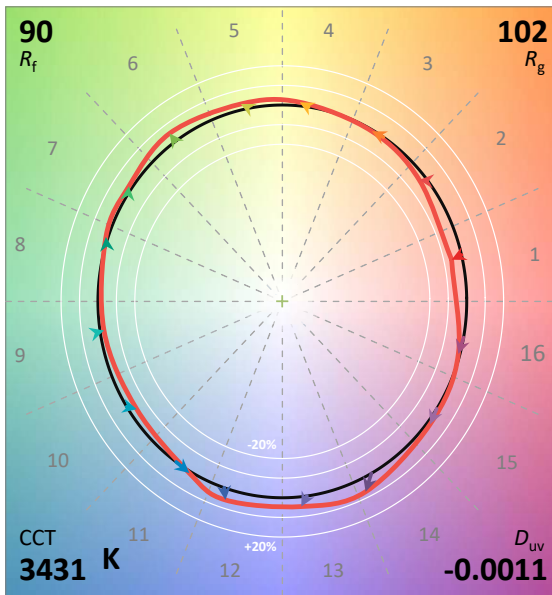
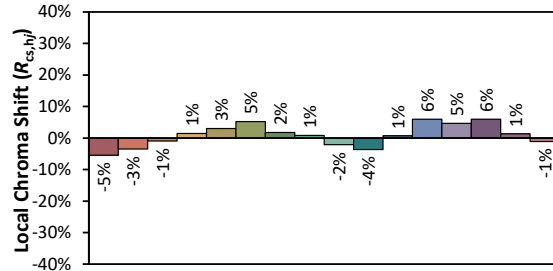
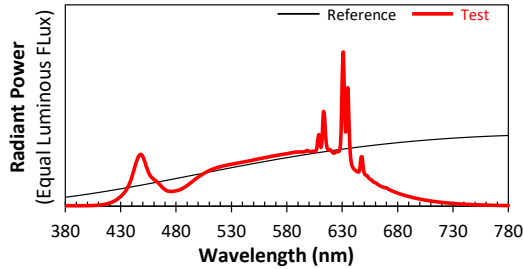
ANSI/IES TM-30-18 Color Rendition Report

Date: 2021-07-29

Manufacturer: BARTCO LIGHTING INC

Model:

BSS745-48-35-ND-R-SM-SN=AW



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

x 0.4080
y 0.3897
u' 0.2379
v' 0.5112

CIE 13.3-1995
(CRI)
R_a 92
R₉ 60

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