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Photometric Test Report

Relevant Standards
IES LM-79-2008, IES LM-35-2002 (Withdrawn)
ANSI C78.377-2011, ANSI C82.77-2002
CIE 13.3-1995, CIE 15-2004, IES TM-30-15

Prepared For
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Catalog Number
DE-LED-x66-SP-9 SN-DE-LED-x66-SP-9 ST-DE-LED-x66-SP-9 SM-DE-LED-x66-SP-9
UL-DE-LED-x66-SP-9

Order Number
11353040
Test Number
11353040.52

Test Date

2016-10-04 - 2016-10-05

Prepared By

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Approved By

Eric Gaudreau, Senior Engineering Associate

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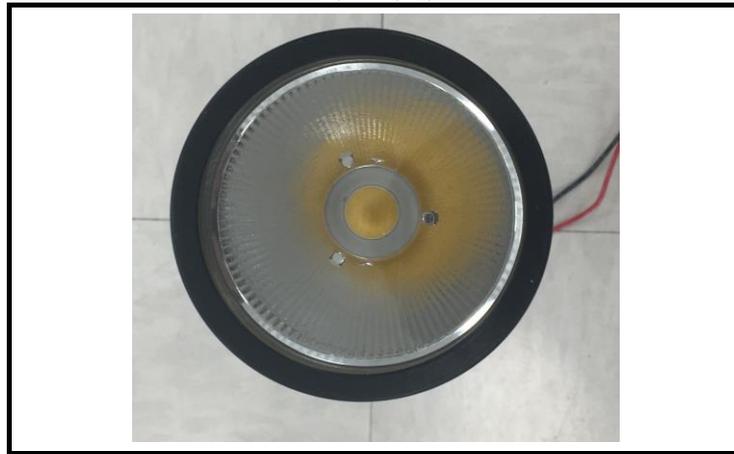
Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.
Absorption correction was employed for Sphere measurement



Luminaire Description: Circular black aluminum housing, specular linear reflector, and clear glass lens
Lamp: One (1) White LED
Mounting: VBU
Ballast/Driver: Thomas Research Products LED25W-36-C0700-LE

Luminaire



Luminaire Characteristics
Luminous Diameter: 2.75 in.

Summary of Results

Integrating Sphere

Luminous Flux: 1967 Lumens
Efficacy: 70.9 lm/w
CCT: 4132 K
CRI (Ra): 80.3

Distribution

Total Luminaire Output: 1923 Lumens
Luminaire Efficacy: 69.5 lm/w
Maximum Candela: 17042 Candela

Electrical Data at 120 VAC

Test Temperature: 25.2 °C
Voltage: 120.1 VAC
Current: 0.2350 A
Power: 27.74 W
Power Factor: 0.981
Frequency: 60 Hz
Current THD: 17.2 %



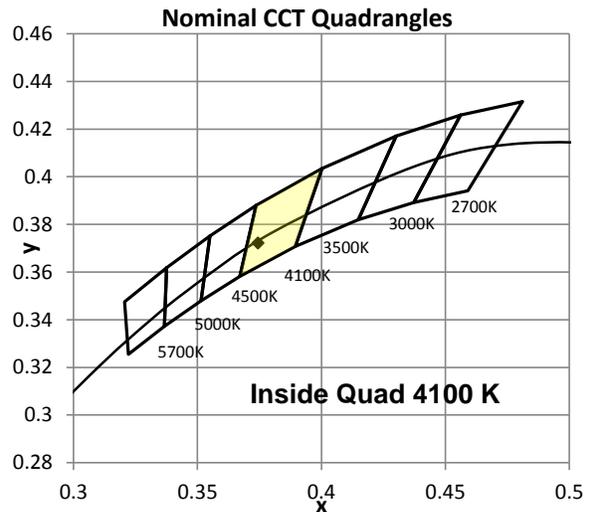
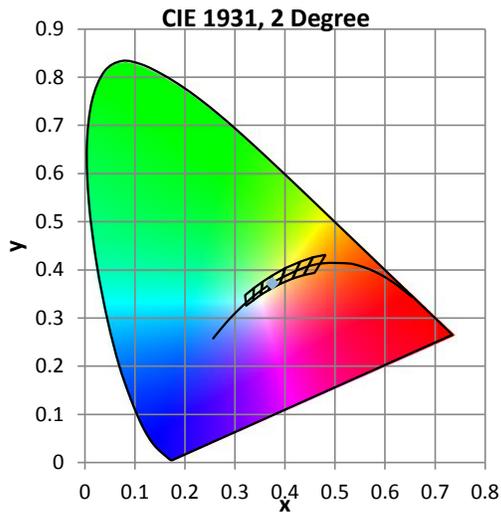
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.1 VAC	0.2350 A	27.74 W	0.981	60 Hz	17.2 %

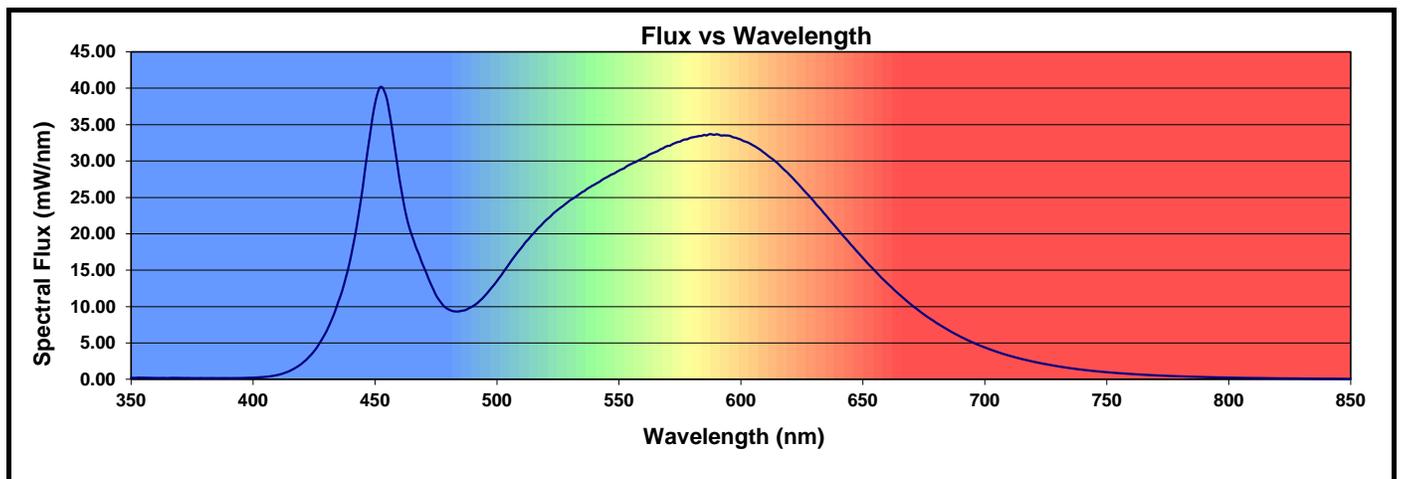
Summary of Results

Total Output:	1967 Lumens	Chromaticity (x):	0.3745
Efficacy:	70.9 lm/w	Chromaticity (y):	0.3721
CCT:	4132 K	Chromaticity (u'):	0.2230
CRI (Ra):	80.3	Chromaticity (v'):	0.4986
CRI (R9):	2.1	TM-30 R_f:	79.0
Peak Wavelength:	452.6 nm	TM-30 R_g:	94.6
Dominant Wavelength:	578.8 nm	Duv:	-0.0008
S/P Ratio:	1.683		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
80.3	78.3	86.8	92.0	78.2	77.8	80.5	85.4	62.9	2.1	67.4	75.0	54.9	80.3	95.5





Distribution - Goniophotometer

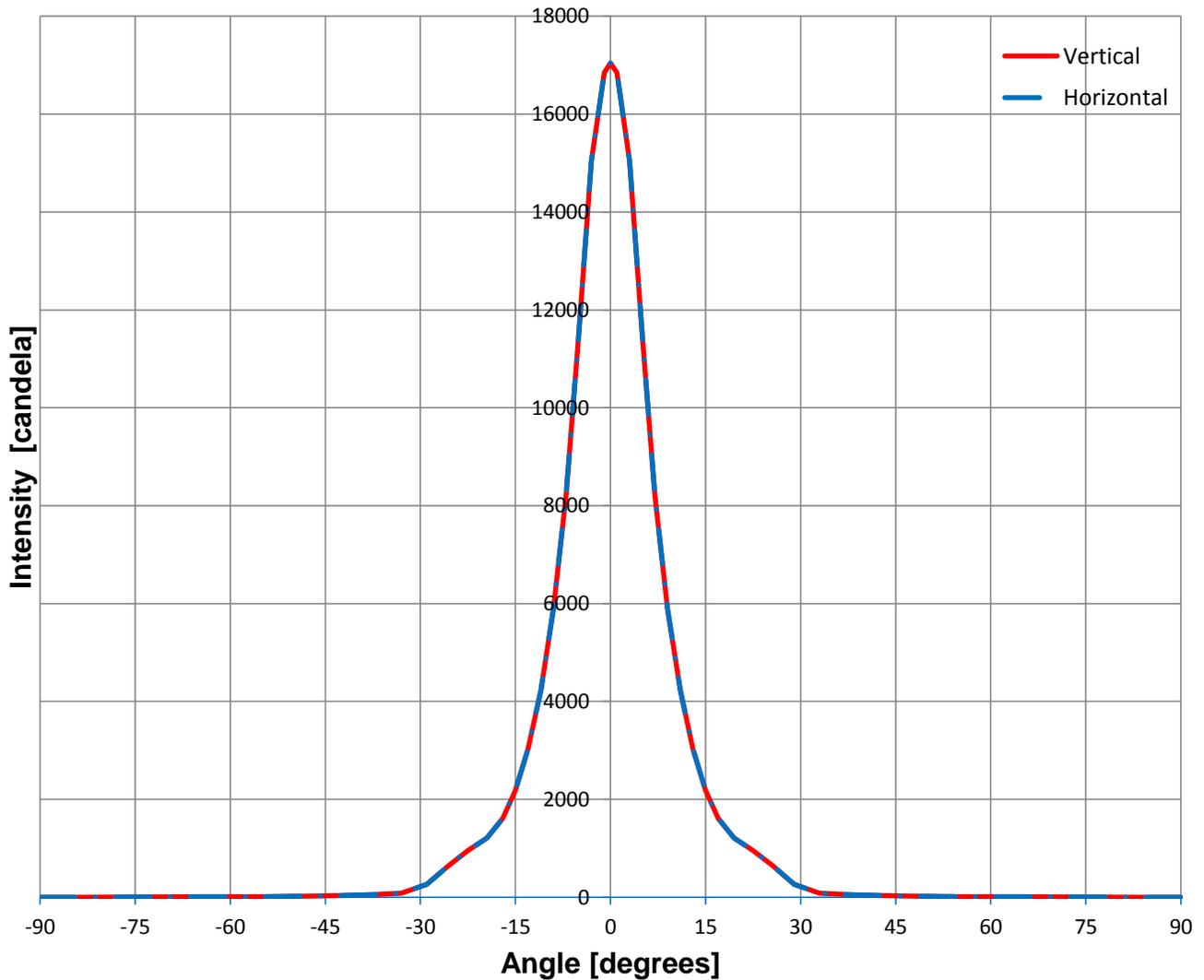
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.4 °C	120.0 VAC	0.2340 A	27.66 W	0.981	60 Hz	16.7 %

Summary of Results

Total Lumen Output:	1923.3 Lumens	Maximum Candela:	17042.4 Candela
Luminaire Efficacy:	69.5 Lumens/Watt	Maximum Angle:	0 H 0 V
Field Lumens:	1357.0 Lumens	Field Angle :	33.3 H X 33.3 V
Beam Lumens:	497.0 Lumens	Beam Angle :	13.6 H X 13.6 V
Spill Light Lumens:	566.2 Lumens	IESNA Type:	3 H X 3 V

Maximum Candlepower Plot





Candela Tabulation
Lateral Angle (Degrees)

	0	1	3	5	7	9	11	13	15	17	19.5
85.0	1	1	1	1	1	1	1	1	1	1	1
75.0	5	5	5	5	5	4	4	4	4	4	4
65.0	9	9	9	9	9	9	9	9	9	9	8
55.0	13	13	13	13	13	13	13	13	13	13	12
47.5	20	20	20	20	19	19	18	17	17	16	16
42.5	32	32	32	31	31	30	29	28	27	25	23
37.5	54	54	53	52	51	49	47	44	41	39	35
33.0	81	81	81	79	77	75	72	68	63	58	52
29.0	266	264	254	233	202	167	132	106	88	80	72
25.5	652	650	633	599	549	484	408	324	238	162	101
22.5	950	949	936	911	865	804	719	615	498	374	229
19.5	1210	1207	1184	1143	1091	1032	966	885	774	635	443
17.0	1611	1605	1561	1474	1364	1247	1138	1040	948	833	635
15.0	2181	2171	2089	1929	1732	1525	1337	1181	1055	948	774
13.0	3028	3011	2874	2609	2283	1937	1619	1370	1181	1040	885
11.0	4222	4193	3964	3535	3021	2500	2020	1619	1337	1138	966
9.0	5899	5849	5460	4771	3973	3191	2500	1937	1525	1247	1032
7.0	8223	8134	7451	6330	5093	3973	3021	2283	1732	1364	1091
5.0	11500	11325	10034	8139	6330	4771	3535	2609	1929	1474	1143
3.0	15044	14774	12927	10034	7451	5460	3964	2874	2089	1561	1184
1.0	16846	16581	14774	11325	8134	5849	4193	3011	2171	1605	1207
0.0	17042	16846	15044	11500	8223	5899	4222	3028	2181	1611	1210
-1.0	16846	16581	14774	11325	8134	5849	4193	3011	2171	1605	1207
-3.0	15044	14774	12927	10034	7451	5460	3964	2874	2089	1561	1184
-5.0	11500	11325	10034	8139	6330	4771	3535	2609	1929	1474	1143
-7.0	8223	8134	7451	6330	5093	3973	3021	2283	1732	1364	1091
-9.0	5899	5849	5460	4771	3973	3191	2500	1937	1525	1247	1032
-11.0	4222	4193	3964	3535	3021	2500	2020	1619	1337	1138	966
-13.0	3028	3011	2874	2609	2283	1937	1619	1370	1181	1040	885
-15.0	2181	2171	2089	1929	1732	1525	1337	1181	1055	948	774
-17.0	1611	1605	1561	1474	1364	1247	1138	1040	948	833	635
-19.5	1210	1207	1184	1143	1091	1032	966	885	774	635	443
-22.5	950	949	936	911	865	804	719	615	498	374	229
-25.5	652	650	633	599	549	484	408	324	238	162	101
-29.0	266	264	254	233	202	167	132	106	88	80	72
-33.0	81	81	81	79	77	75	72	68	63	58	52
-37.5	54	54	53	52	51	49	47	44	41	39	35
-42.5	32	32	32	31	31	30	29	28	27	25	23
-47.5	20	20	20	20	19	19	18	17	17	16	16
-55.0	13	13	13	13	13	13	13	13	13	13	12
-65.0	9	9	9	9	9	9	9	9	9	9	8
-75.0	5	5	5	5	5	4	4	4	4	4	4
-85.0	1	1	1	1	1	1	1	1	1	1	1

Vertical Angle (Degrees)



Candela Tabulation

Lateral Angle (Degrees)

	22.5	25.5	29	33	37.5	42.5	47.5	55	65	75	85
85.0	1	1	1	1	1	1	1	1	1	0	0
75.0	4	4	4	4	4	3	3	2	2	1	0
65.0	8	8	8	7	6	6	5	4	3	2	1
55.0	12	12	11	11	10	9	8	6	4	2	1
47.5	15	14	14	13	12	11	10	8	5	3	1
42.5	21	18	16	15	13	12	11	9	6	3	1
37.5	31	27	23	18	15	13	12	10	6	4	1
33.0	45	38	31	25	18	15	13	11	7	4	1
29.0	62	52	41	31	23	16	14	11	8	4	1
25.5	78	66	52	38	27	18	14	12	8	4	1
22.5	110	78	62	45	31	21	15	12	8	4	1
19.5	229	101	72	52	35	23	16	12	8	4	1
17.0	374	162	80	58	39	25	16	13	9	4	1
15.0	498	238	88	63	41	27	17	13	9	4	1
13.0	615	324	106	68	44	28	17	13	9	4	1
11.0	719	408	132	72	47	29	18	13	9	4	1
9.0	804	484	167	75	49	30	19	13	9	4	1
7.0	865	549	202	77	51	31	19	13	9	5	1
5.0	911	599	233	79	52	31	20	13	9	5	1
3.0	936	633	254	81	53	32	20	13	9	5	1
1.0	949	650	264	81	54	32	20	13	9	5	1
0.0	950	652	266	81	54	32	20	13	9	5	1
-1.0	949	650	264	81	54	32	20	13	9	5	1
-3.0	936	633	254	81	53	32	20	13	9	5	1
-5.0	911	599	233	79	52	31	20	13	9	5	1
-7.0	865	549	202	77	51	31	19	13	9	5	1
-9.0	804	484	167	75	49	30	19	13	9	4	1
-11.0	719	408	132	72	47	29	18	13	9	4	1
-13.0	615	324	106	68	44	28	17	13	9	4	1
-15.0	498	238	88	63	41	27	17	13	9	4	1
-17.0	374	162	80	58	39	25	16	13	9	4	1
-19.5	229	101	72	52	35	23	16	12	8	4	1
-22.5	110	78	62	45	31	21	15	12	8	4	1
-25.5	78	66	52	38	27	18	14	12	8	4	1
-29.0	62	52	41	31	23	16	14	11	8	4	1
-33.0	45	38	31	25	18	15	13	11	7	4	1
-37.5	31	27	23	18	15	13	12	10	6	4	1
42.5	21	18	16	15	13	12	11	9	6	3	1
-47.5	15	14	14	13	12	11	10	8	5	3	1
-55.0	12	12	11	11	10	9	8	6	4	2	1
-65.0	8	8	8	7	6	6	5	4	3	2	1
-75.0	4	4	4	4	4	3	3	2	2	1	0
-85.0	1	1	1	1	1	1	1	1	1	0	0

Vertical Angle (Degrees)



Isocandela Diagram (Percent of Maximum Intensity)

