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Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
LF Illumination LLC

Justin Weaver
9200 Deering Avenue
Chatsworth, CA 91311

Catalog Number
MF31DNT22L9030MTDLDUWW

Order Number
10804087
Test Number
1096482

Test Date

2015-06-09

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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Luminaire Description: Aluminum housing, faceted specular plastic reflector, no enclosure
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: ERP ESS030W-0700-42

Luminaire



Luminaire Characteristics

Luminous Diameter: 4.00 in.

Summary of Results

Total Luminaire Output:	1785 Lumens
Luminaire Efficacy:	73.5 lm/w
Maximum Candela:	10182 Candela

Electrical Data

Test Temperature:	25.0 °C
Voltage:	120.0 VAC
Current:	0.2054 A
Power:	24.29 W
Power Factor:	0.985
Frequency:	60 Hz
Current THD:	11.3 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

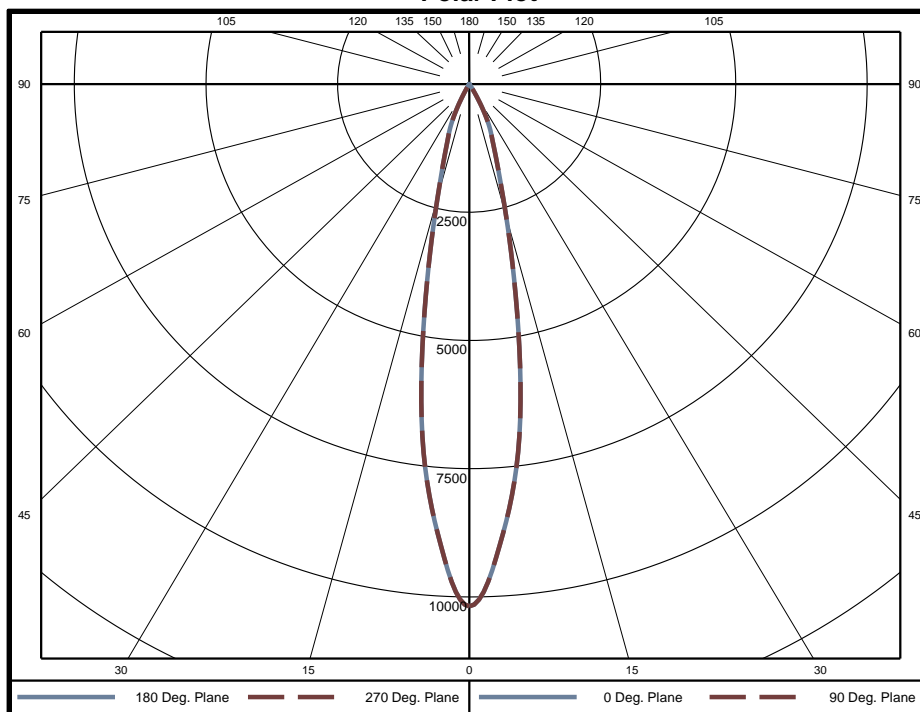
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.0 VAC	0.2054 A	24.29 W	0.985	60 Hz	11.3 %

Summary of Results

Spacing Criteria
 0-180: 0.35
 90-270: 0.35

Total Lumen Output: 1785 Lumens
Luminaire Efficacy: 73.5 lm/w
Maximum Candela: 10182 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	217.4	12.2%	60-65	2.8	0.2%	120-125	0	0.0%
5-10	479.6	26.9%	65-70	2.7	0.2%	125-130	0	0.0%
10-15	427.7	24.0%	70-75	2.9	0.2%	130-135	0	0.0%
15-20	289.1	16.2%	75-80	2.7	0.2%	135-140	0	0.0%
20-25	211.1	11.8%	80-85	1.8	0.1%	140-145	0	0.0%
25-30	108.3	6.1%	85-90	0.5	0.0%	145-150	0	0.0%
30-35	22.9	1.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	4.9	0.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	2.5	0.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	2.4	0.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.6	0.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	2.8	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1761	98.7%
0-60	1771	99.2%
0-90	1785	100.0%
90-180	0	0.0%



Candela Tabulation

Horizontal 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	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180	10180
5	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301	8301
10	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210	5210
15	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462
20	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290	1290
25	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743
30	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169
35	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
40	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
45	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
50	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
55	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
60	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
65	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
70	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
75	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
80	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
85	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Vertical Angle (Degrees)

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

	0	45	90
0	1256000	1256000	1256000
45	1068	1068	1068
55	1320	1320	1320
65	1593	1593	1593
75	2583	2583	2583
85	3094	3094	3094

Vertical Angle (Degrees)



Utilization of Lumens - 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 Lumens delivered to the task surface **																	
0	2125	2125	2125	2125	2075	2075	2075	2075	1983	1983	1983	1899	1899	1899	1821	1821	1821	1785
1	2053	2015	1981	1950	2010	1977	1947	1919	1906	1882	1861	1841	1823	1806	1780	1767	1754	1724
2	1986	1922	1869	1825	1950	1893	1845	1805	1837	1799	1766	1786	1756	1729	1739	1715	1694	1668
3	1925	1843	1780	1729	1893	1820	1762	1715	1776	1728	1689	1735	1696	1663	1698	1666	1639	1616
4	1868	1774	1705	1652	1840	1755	1692	1642	1720	1666	1624	1687	1642	1606	1657	1620	1589	1567
5	1815	1712	1640	1587	1791	1697	1630	1580	1668	1611	1567	1642	1593	1555	1617	1576	1542	1522
6	1765	1656	1584	1532	1743	1644	1576	1527	1621	1561	1517	1599	1547	1508	1579	1534	1499	1480
7	1718	1606	1533	1483	1699	1596	1527	1479	1576	1516	1472	1558	1505	1465	1541	1494	1458	1441
8	1673	1560	1488	1439	1657	1551	1483	1436	1535	1474	1431	1519	1465	1425	1505	1457	1420	1403
9	1632	1517	1446	1399	1617	1509	1442	1397	1496	1435	1393	1483	1428	1389	1470	1421	1385	1368
10	1592	1477	1408	1362	1579	1471	1405	1360	1459	1399	1357	1448	1393	1354	1437	1387	1351	1336

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	636	1.39
6.00	283	2.08
8.00	159	2.78
10.0	102	3.47
12.0	70.7	4.16
14.0	52.0	4.86
16.0	39.8	5.55

Cone of Light Plot

