

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

## **Spectrum Lighting Photometric Lab**

### **Luminaire**

IF03RMx xx DWDD1020 DLWFGP WWLWMW

Nom 3" diam round recessed Infinium wall wash luminaire with 20L 27HK dim to warm emitter

### **Test Number**

SP-00951

### **Test Date**

11/6/2019

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

Input Watts	21.5 W
-------------	--------

#### Lumen Output

Output Lumens	907
Efficacy	42.19 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.22
90° - 270° Size	-0.22
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.53
Two luminaires, plane 90°	0.79
Four luminaires	1.11

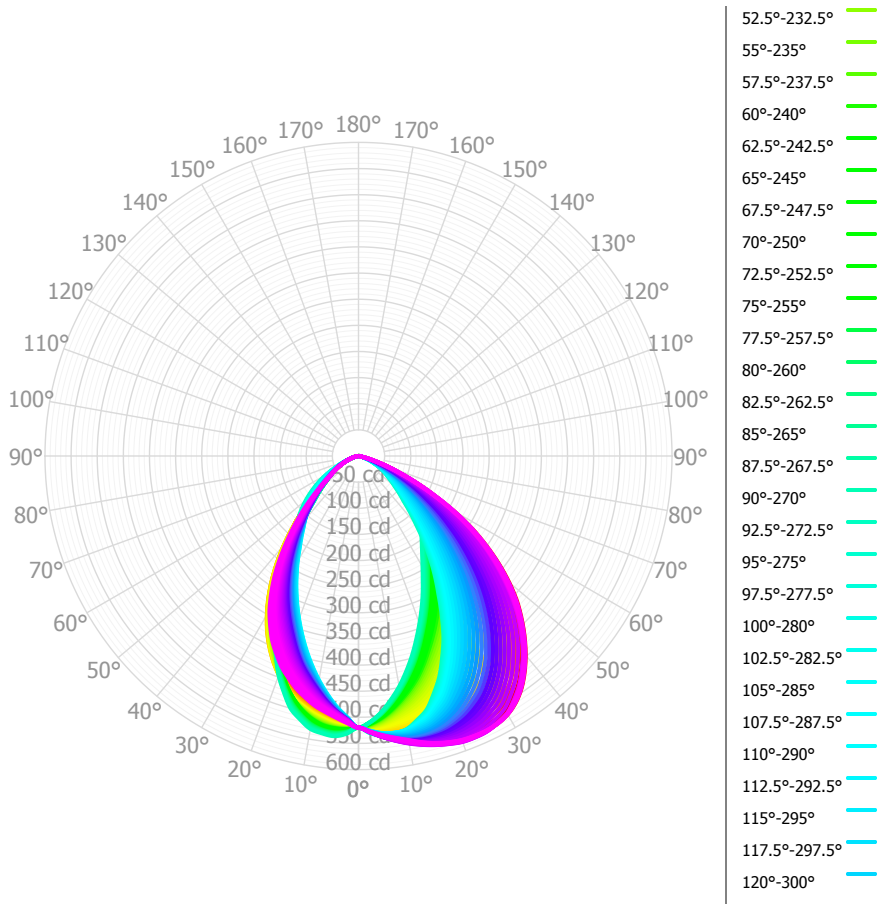
#### Full Beam Angle

0° - 180°	90°
90° - 270°	55°

### IES File Header Contents

Keyword	Value
TEST	SP-00951
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/25/2019
LUMCAT	IF03RMx xx DWDD1020 DLWFGP WWLWMW
LUMINAIRE	Nom 3" diam round recessed Infinium wall wash luminaire with 20L 27HK dim to warm emitter
OTHER	Wide Flood Optic
OTHER	Beam Angle: 88 deg x 129 deg
LAMPCAT	N/A
LAMP	N/A
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	95
_CCTMULT	N/A, dim to warm emitter
_LAMPMULT	7L x 0.38, 10L x 0.49, 15L x 0.8

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	49.40	5.45%	90.00° - 100.00°	0.10	0.01%
10.00° - 20.00°	134.09	14.78%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	186.21	20.53%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	193.08	21.28%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	161.30	17.78%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	111.23	12.26%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	55.58	6.13%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	14.24	1.57%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.90	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	907.03	99.99%	0.00° - 180.00°	907.13	100.00%

	0.00°	2.50°	5.00°	7.50°	10.00°	12.50°	15.00°	17.50°	20.00°	22.50°	25.00°	27.50°	30.00°	32.50°	35.00°	37.50°	40.00°	42.50°	45.00°	47.50°	50.00°
0.00°	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96	519.96
2.50°	528.44	527.96	527.48	527.00	526.52	526.04	525.56	525.08	524.60	524.12	523.64	522.76	522.08	521.41	520.73	520.05	519.37	518.70	518.02	517.30	516.62
5.00°	536.02	534.91	533.81	532.71	531.60	530.50	529.40	528.30	527.19	526.09	524.57	523.06	521.54	520.02	518.51	516.99	515.47	513.95	512.44	511.04	509.64
7.50°	543.26	541.47	539.68	537.89	536.10	534.31	532.53	530.74	528.95	527.16	524.49	521.82	519.15	516.48	513.82	511.15	508.48	505.81	503.14	501.02	498.90
10.00°	551.02	548.45	545.88	543.31	540.74	538.17	535.60	533.03	530.46	527.89	524.02	520.15	516.29	512.42	508.55	504.68	500.81	496.95	493.08	489.96	486.84
12.50°	560.25	556.67	553.09	549.51	545.93	542.35	538.77	535.19	531.61	528.03	522.92	517.82	512.71	507.61	502.50	497.40	492.30	487.19	482.09	477.93	473.77
15.00°	568.30	563.82	559.34	554.87	550.39	545.91	541.43	536.95	532.47	527.99	521.37	514.75	508.13	501.50	494.88	488.26	481.63	475.01	468.39	463.41	458.43
17.50°	573.80	568.35	562.90	557.45	552.00	546.55	541.10	535.65	530.20	524.75	516.66	508.58	500.49	492.41	484.32	476.24	468.15	460.06	451.98	446.15	440.32
20.00°	577.84	571.51	565.17	558.83	552.50	546.16	539.83	533.49	527.15	520.82	511.29	501.77	492.25	482.73	473.20	463.68	454.16	444.64	435.11	428.30	421.49
22.50°	579.29	571.95	564.61	557.26	549.92	542.58	535.23	527.89	520.55	513.21	502.61	492.02	481.43	470.83	460.24	449.64	439.05	428.46	417.86	410.34	402.81
25.00°	579.33	571.08	562.82	554.57	546.32	538.06	529.81	521.55	513.30	505.05	493.30	481.55	469.81	458.06	446.31	434.56	422.81	411.07	399.32	391.34	383.35
27.50°	577.32	568.14	558.96	549.78	540.60	531.42	522.25	513.07	503.89	494.71	481.95	469.19	456.43	443.68	430.92	418.16	405.40	392.65	379.89	371.59	363.22
30.00°	571.12	561.46	551.80	542.14	532.48	522.82	513.16	503.50	493.84	484.18	470.24	456.31	442.37	428.44	414.50	400.56	386.63	372.69	358.76	350.35	341.95
32.50°	559.97	549.63	539.30	528.97	518.63	508.30	497.96	487.63	477.30	466.96	452.49	438.01	423.54	409.06	394.59	380.11	365.64	351.17	336.69	328.52	320.35
35.00°	543.67	533.20	522.73	512.27	501.80	491.34	480.87	470.40	459.94	449.47	434.47	419.46	404.46	389.45	374.45	359.45	344.44	329.44	314.43	306.58	298.71
37.50°	522.27	511.67	501.07	490.47	479.86	469.26	458.66	448.06	437.45	426.85	411.88	396.90	381.93	366.96	351.98	337.01	322.04	307.06	292.09	284.97	277.81
40.00°	497.78	487.37	476.95	466.54	456.13	445.71	435.30	424.89	414.47	404.06	389.09	374.12	359.15	344.18	329.21	314.24	299.26	284.29	269.32	263.07	256.81
42.50°	470.79	460.58	450.36	440.15	429.93	419.72	409.50	399.28	389.07	378.85	364.14	349.42	334.71	319.99	305.27	290.56	275.84	261.13	246.41	241.28	236.11
45.00°	441.84	431.96	422.08	412.21	402.33	392.45	382.58	372.70	362.82	352.95	338.70	324.46	310.22	295.98	281.73	267.49	253.25	239.01	224.76	220.66	216.51
47.50°	411.59	401.61	391.63	381.64	371.66	361.68	351.69	341.71	331.73	321.75	308.60	295.46	282.32	269.17	256.03	242.89	229.74	216.60	203.46	200.09	196.71
50.00°	376.37	366.82	357.27	347.72	338.17	328.62	319.07	309.52	299.98	290.43	278.48	266.54	254.60	242.66	230.71	218.77	206.83	194.89	182.95	180.22	177.49
52.50°	338.44	329.56	320.68	311.80	302.91	294.03	285.15	276.27	267.38	258.50	247.85	237.19	226.53	215.88	205.22	194.56	183.91	173.25	162.59	160.42	158.25
55.00°	298.26	290.24	282.23	274.21	266.20	258.19	250.17	242.16	234.14	226.13	216.92	207.72	198.52	189.31	180.11	170.91	161.70	152.50	143.30	141.56	139.81
57.50°	257.10	249.87	242.65	235.42	228.20	220.97	213.75	206.52	199.29	192.07	184.52	176.97	169.43	161.88	154.33	146.78	139.24	131.69	124.14	122.67	121.20
60.00°	211.93	206.03	200.12	194.21	188.30	182.39	176.48	170.57	164.66	158.75	152.73	146.70	140.68	134.65	128.63	122.60	116.58	110.56	104.53	103.36	102.20
62.50°	165.43	161.21	157.00	152.79	148.58	144.36	140.15	135.94	131.73	127.52	122.78	118.04	113.31	108.57	103.84	99.10	94.36	89.63	84.89	83.82	82.76
65.00°	125.79	122.67	119.54	116.42	113.30	110.17	107.05	103.93	100.80	97.68	94.14	90.60	87.06	83.52	79.98	76.44	72.90	69.36	65.82	64.86	63.91
67.50°	87.90	86.01	84.13	82.24	80.35	78.46	76.58	74.69	72.80	70.92	68.27	65.62	62.97	60.33	57.68	55.03	52.39	49.74	47.09	46.65	46.21
70.00°	61.50	59.92	58.34	56.76	55.19	53.61	52.03	50.45	48.87	47.29	45.60	43.92	42.23	40.54	38.86	37.17	35.48	33.80	32.11	31.89	31.67
72.50°	37.51	36.38	35.26	34.13	33.01	31.88	30.76	29.63	28.50	27.38	26.49	25.60	24.71	23.82	22.94	22.05	21.16	20.27	19.38	19.43	19.47
75.00°	19.18	18.63	18.08	17.52	16.97	16.42	15.87	15.32	14.77	14.22	13.87	13.53	13.19	12.84	12.50	12.16	11.81	11.47	11.13	11.18	11.24
77.50°	7.89	7.59	7.30	7.00	6.70	6.40	6.11	5.81	5.51	5.22	5.29	5.36	5.43	5.50	5.57	5.64	5.71	5.78	5.85	5.80	5.75
80.00°	2.29	2.27	2.26	2.24	2.23	2.21	2.20	2.19	2.17	2.16	2.22	2.28	2.34	2.40	2.46	2.53	2.59	2.65	2.71	2.77	2.82
82.50°	1.23	1.26	1.30	1.34	1.37	1.41	1.45	1.49	1.52	1.56	1.57	1.57	1.58	1.59	1.59	1.60	1.61	1.62	1.62	1.64	1.66
85.00°	1.29	1.31	1.33	1.35	1.37	1.39	1.41	1.43	1.45	1.47	1.43	1.39	1.34	1.30	1.26	1.22	1.18	1.14	1.10	1.16	1.21
87.50°	1.22	1.24	1.26	1.29	1.31	1.34	1.36	1.38	1.41	1.43	1.44	1.45	1.46	1.47	1.48	1.49	1.50	1.51	1.52	1.51	1.50
90.00°	1.68	1.65	1.61	1.58	1.54	1.50	1.47	1.43	1.40	1.36	1.38	1.41	1.43	1.45	1.47	1.49	1.52	1.54	1.56	1.56	1.56
92.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	<b>0</b>	1,080	1,080	1,080	1,080	1,055	1,055	1,055	1,055	1,008	1,008	1,008	965	965	965	926	926	926	907
	<b>1</b>	1,010	976	946	919	986	956	929	905	919	897	876	884	866	850	852	838	825	821
	<b>2</b>	937	877	827	786	915	860	815	777	830	792	759	801	770	742	775	749	726	733
	<b>3</b>	868	789	728	680	848	776	719	674	750	702	662	726	686	651	704	670	641	656
	<b>4</b>	805	713	646	595	786	702	639	591	681	626	583	661	614	576	642	602	569	590
	<b>5</b>	749	648	578	526	731	639	573	524	621	563	518	604	553	513	588	544	508	533
	<b>6</b>	697	592	521	470	682	584	517	468	568	509	464	554	501	461	541	494	457	484
	<b>7</b>	652	543	473	423	637	536	469	422	523	463	419	511	457	416	499	451	414	442
	<b>8</b>	610	500	431	384	597	495	429	383	483	424	381	473	418	379	463	414	377	406
	<b>9</b>	573	463	396	351	561	458	394	350	448	390	348	439	385	347	431	381	345	375
	<b>10</b>	540	431	365	322	529	426	364	321	418	360	320	410	357	319	402	353	318	347

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.2 fc	11.7 ft
6.5 ft	12.3 fc	13.9 ft
7.5 ft	9.2 fc	16.0 ft
8.0 ft	8.1 fc	17.1 ft
10.0 ft	5.2 fc	21.4 ft
12.0 ft	3.6 fc	25.6 ft
14.0 ft	2.7 fc	29.9 ft
16.0 ft	2.0 fc	34.2 ft
20.0 ft	1.3 fc	42.7 ft
24.0 ft	0.9 fc	51.2 ft
28.0 ft	0.7 fc	59.8 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	147,233	147,233	147,233
<b>45.00°</b>	176,933	90,007	65,533
<b>55.00°</b>	147,243	70,743	51,515
<b>65.00°</b>	84,281	44,101	30,500
<b>75.00°</b>	20,982	12,171	12,587
<b>85.00°</b>	4,188	3,567	4,730

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	29.6	31.0	30.0	31.3	31.7	20.9	22.3	21.3	22.7	23.0
	<b>3H</b>	30.1	31.4	30.5	31.7	32.1	21.7	23.0	22.1	23.3	23.7
	<b>4H</b>	30.1	31.3	30.5	31.6	32.0	21.8	23.0	22.2	23.4	23.7
	<b>6H</b>	30.1	31.1	30.5	31.5	31.9	21.9	22.9	22.3	23.3	23.7
	<b>8H</b>	30.0	31.0	30.4	31.4	31.8	21.8	22.8	22.3	23.2	23.6
	<b>12H</b>	30.0	30.9	30.4	31.3	31.8	21.8	22.8	22.2	23.1	23.6
<b>4H</b>	<b>2H</b>	29.6	30.7	30.0	31.1	31.5	21.2	22.4	21.6	22.7	23.1
	<b>3H</b>	30.1	31.1	30.5	31.5	31.9	22.1	23.1	22.5	23.5	23.9
	<b>4H</b>	30.1	31.0	30.6	31.4	31.8	22.3	23.1	22.7	23.5	24.0
	<b>6H</b>	30.1	30.8	30.5	31.2	31.7	22.3	23.0	22.8	23.5	24.0
	<b>8H</b>	30.0	30.7	30.5	31.1	31.6	22.3	23.0	22.8	23.4	23.9
	<b>12H</b>	30.0	30.6	30.5	31.1	31.5	22.3	22.9	22.8	23.4	23.8
<b>8H</b>	<b>4H</b>	30.0	30.7	30.5	31.2	31.6	22.3	23.0	22.8	23.4	23.9
	<b>6H</b>	29.9	30.5	30.4	31.0	31.5	22.4	22.9	22.9	23.4	23.9
	<b>8H</b>	29.9	30.4	30.4	30.9	31.4	22.3	22.8	22.8	23.3	23.8
	<b>12H</b>	29.8	30.3	30.4	30.8	31.4	22.3	22.8	22.8	23.2	23.8
<b>12H</b>	<b>4H</b>	30.0	30.6	30.5	31.1	31.5	22.3	22.9	22.7	23.3	23.8
	<b>6H</b>	29.9	30.4	30.4	30.9	31.4	22.3	22.8	22.8	23.3	23.8
	<b>8H</b>	29.8	30.3	30.4	30.8	31.4	22.3	22.7	22.8	23.2	23.8

Corrected UGR values based on total output lumens

SHR = 1.0