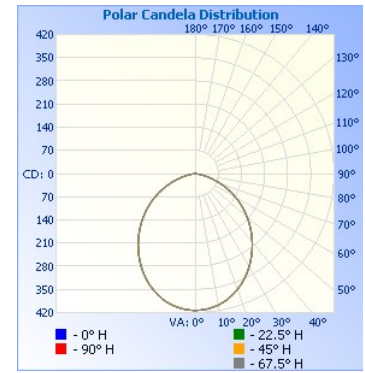


# KICHLER®

KICHLER PHOTOMETRIC LAB

**Filename:** 43870XXLEDYY-Photometric Report  
**Manufacturer:** Kichler Lighting LLC  
**Luminaire:** 43870XXLEDYY Horizon 2 Downlight  
**Luminaire Cat:** CTR180730-09  
**Lamp:** Integrated LED AC  
**Lamp Output:** Total luminaire Lumens: 989.2  
**Max Candela:** 413.0 at Horizontal: 90°, Vertical: 1°  
**Input Wattage:** 12.1  
**Luminous Opening:** Circular (Dia: 3.24")  
**Test:** LM-79 Distribution  
**Test Lab:** Kichler Lighting LLC  
**Photometry :** Type C  
**Nema Type:** 7 X 7



**Roadway Summary**

Cutoff Classification:	FULL CUTOFF
Distribution:	Type VS
Max Cd, 90 Deg Vert:	0
Max Cd, 80 to <90 Deg:	18.4
Lumens % Lamp	
Downward Street Side:	494.6 50%
Downward House Side:	494.6 50%
Downward Total:	989.3 100%
Upward Street Side:	0 0%
Upward House Side:	0 0%
Upward Total:	0 0%
Total Lumens:	989.3 100%

**Flood Summary**

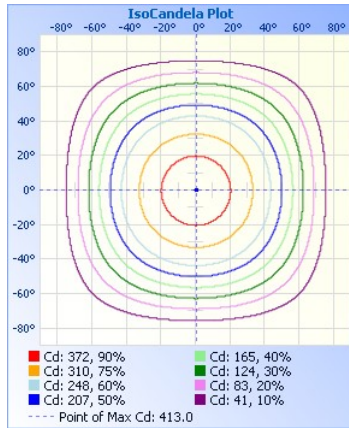
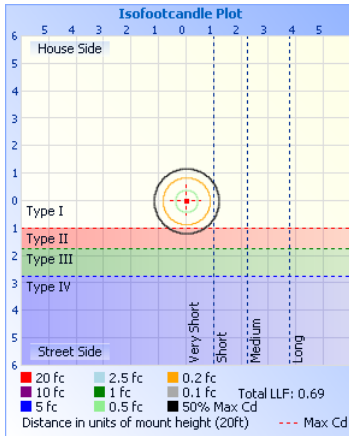
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	97.9%	968.2	150.6	150.7
Beam (50%):	68.4%	677.0	99.6	99.6
Total:	100%	989.0		

**Zonal Lumen Summary**

Zone	Lumens	% Luminaire
0-30	310.0	31.3%
0-40	495.9	50.1%
0-60	832.6	84.2%
60-90	156.6	15.8%
70-100	51.8	5.2%
90-120	0	0%
0-90	989.2	100%
90-180	0	0%
0-180	989.2	100%

**Lumens Per Zone**

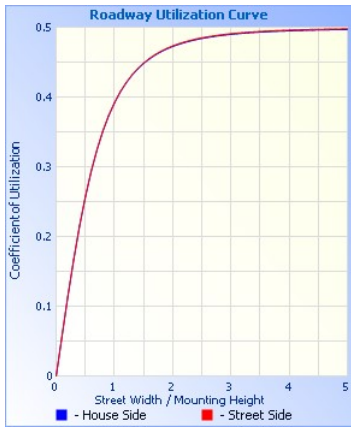
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	38.9	3.9%	90-100	0	0%
10-20	109.8	11.1%	100-110	0	0%
20-30	161.3	16.3%	110-120	0	0%
30-40	185.9	18.8%	120-130	0	0%
40-50	182.6	18.5%	130-140	0	0%
50-60	154.1	15.6%	140-150	0	0%
60-70	104.8	10.6%	150-160	0	0%
70-80	46.1	4.7%	160-170	0	0%
80-90	5.7	0.6%	170-180	0	0%



**Illuminance at a Distance**

Height	Center Beam fc	Beam Width
17.0ft	1.43 fc	40.2 ft
34.0ft	0.36 fc	80.4 ft
51.0ft	0.16 fc	120.6 ft
68.0ft	0.09 fc	160.8 ft
85.0ft	0.06 fc	201.0 ft
102.0ft	0.04 fc	241.2 ft

Vert. Spread: 99.6°  
 Horiz. Spread: 99.6°



**Coefficients Of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50				30				10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	50	30	20	10	50	30	20	10	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.02	1.00	1.00
1	1.10	1.06	1.02	.98	1.07	1.03	1.00	.87	.99	.96	.94	.91	.95	.93	.91	.88	.92	.90	.88	.86	
2	1.01	.93	.87	.81	.98	.91	.85	.74	.88	.83	.79	.74	.84	.80	.77	.73	.81	.78	.75	.73	
3	.92	.82	.75	.68	.90	.81	.74	.64	.78	.72	.67	.62	.75	.70	.66	.62	.73	.68	.64	.62	
4	.85	.73	.65	.59	.82	.72	.64	.56	.69	.63	.57	.52	.67	.61	.57	.53	.65	.60	.56	.54	
5	.78	.66	.57	.51	.76	.65	.57	.49	.63	.55	.50	.45	.61	.54	.49	.45	.59	.53	.49	.47	
6	.72	.59	.51	.45	.70	.58	.50	.43	.57	.49	.44	.40	.55	.49	.44	.40	.53	.48	.43	.41	
7	.67	.54	.46	.40	.65	.53	.45	.39	.52	.44	.39	.35	.50	.44	.39	.35	.49	.43	.39	.37	
8	.63	.49	.41	.36	.61	.49	.41	.35	.47	.40	.35	.31	.46	.40	.35	.31	.45	.39	.35	.33	
9	.59	.45	.37	.32	.57	.45	.37	.31	.44	.37	.32	.28	.43	.36	.32	.28	.42	.36	.32	.30	
10	.55	.42	.34	.29	.54	.42	.34	.29	.41	.34	.29	.25	.40	.33	.29	.25	.39	.33	.29	.27	



53.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.1			
56.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1		
58.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0			
61.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0		
63.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0		
66.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0
68.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
71.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	
73.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
76.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
78.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
81.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
83.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
86.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
88.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Maximum lm: 0.8  
Field lm: 968.2  
Total lm: 989.0

## Candela Table - Type C

	0	22.5	45	67.5	90
0	413	413	413	413	413
1	412	413	413	413	413
2	412	412	413	412	412
3	412	411	412	412	412
4	411	411	411	411	411
5	410	410	410	410	410
6	409	409	409	409	410
7	407	407	407	408	408
8	406	406	406	406	406
9	405	404	405	404	404
10	402	403	403	403	403
11	400	400	401	401	400
12	398	398	398	398	398
13	396	396	396	396	396
14	393	393	393	393	393
15	390	390	390	390	390
16	386	387	387	387	387
17	383	383	383	383	383
18	380	380	380	380	380
19	376	376	376	376	376
20	372	372	372	372	372
21	368	368	368	368	368
22	364	364	364	364	365
23	360	359	359	360	360
24	355	355	355	355	355
25	350	350	351	350	351
26	345	346	346	346	346
27	341	341	341	341	341
28	336	336	336	335	336
29	331	331	331	330	331
30	325	325	325	325	325
31	320	320	320	320	320
32	315	314	314	314	315
33	309	309	309	309	309
34	303	303	303	303	303
35	297	297	298	297	298
36	292	292	292	291	292
37	286	286	286	286	286
38	280	280	280	280	280
39	274	274	274	274	274
40	268	268	268	268	268
41	262	262	262	262	262
42	256	255	256	255	256
43	250	249	249	249	249
44	243	243	243	243	243
45	237	237	237	237	237
46	231	231	231	231	231
47	225	224	224	224	224
48	218	218	218	218	218
49	212	212	211	211	212
50	205	205	205	205	205
51	199	199	199	198	199
52	192	192	192	192	192
53	186	185	186	186	186
54	179	179	179	179	179
55	173	172	173	172	173
56	166	166	166	166	166
57	160	159	159	159	160
58	153	153	153	153	153
59	146	146	146	146	146
60	140	140	139	139	139
61	133	133	133	133	132
62	126	126	126	126	126
63	119	119	119	119	119
64	113	113	113	113	113
65	106	106	106	106	106
66	99	99	99	99	99
67	93	93	93	93	93
68	86	86	86	86	86
69	80	80	79	79	80
70	73	73	73	73	73
71	67	67	67	67	67
72	61	61	61	60	60
73	55	54	54	54	54
74	49	48	48	48	48
75	43	43	43	43	43
76	38	38	37	37	38
77	33	32	32	32	32
78	28	27	27	27	27
79	23	23	22	22	22

80	18	18	18	18	18
81	15	14	14	14	14
82	11	11	11	11	11
83	8	8	8	8	8
84	5	5	5	5	5
85	3	3	3	3	3
86	2	2	2	2	2
87	1	1	1	1	1
88	0	0	0	0	0
89	0	0	0	0	0
90	0	0	0	0	0
91	0	0	0	0	0
92	0	0	0	0	0
93	0	0	0	0	0
94	0	0	0	0	0
95	0	0	0	0	0
96	0	0	0	0	0
97	0	0	0	0	0
98	0	0	0	0	0
99	0	0	0	0	0
100	0	0	0	0	0
101	0	0	0	0	0
102	0	0	0	0	0
103	0	0	0	0	0
104	0	0	0	0	0
105	0	0	0	0	0
106	0	0	0	0	0
107	0	0	0	0	0
108	0	0	0	0	0
109	0	0	0	0	0
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114	0	0	0	0	0
115	0	0	0	0	0
116	0	0	0	0	0
117	0	0	0	0	0
118	0	0	0	0	0
119	0	0	0	0	0
120	0	0	0	0	0
121	0	0	0	0	0
122	0	0	0	0	0
123	0	0	0	0	0
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125	0	0	0	0	0
126	0	0	0	0	0
127	0	0	0	0	0
128	0	0	0	0	0
129	0	0	0	0	0
130	0	0	0	0	0
131	0	0	0	0	0
132	0	0	0	0	0
133	0	0	0	0	0
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135	0	0	0	0	0
136	0	0	0	0	0
137	0	0	0	0	0
138	0	0	0	0	0
139	0	0	0	0	0
140	0	0	0	0	0
141	0	0	0	0	0
142	0	0	0	0	0
143	0	0	0	0	0
144	0	0	0	0	0
145	0	0	0	0	0
146	0	0	0	0	0
147	0	0	0	0	0
148	0	0	0	0	0
149	0	0	0	0	0
150	0	0	0	0	0
151	0	0	0	0	0
152	0	0	0	0	0
153	0	0	0	0	0
154	0	0	0	0	0
155	0	0	0	0	0
156	0	0	0	0	0
157	0	0	0	0	0
158	0	0	0	0	0
159	0	0	0	0	0
160	0	0	0	0	0
161	0	0	0	0	0
162	0	0	0	0	0

163	0	0	0	0	0
164	0	0	0	0	0
165	0	0	0	0	0
166	0	0	0	0	0
167	0	0	0	0	0
168	0	0	0	0	0
169	0	0	0	0	0
170	0	0	0	0	0
171	0	0	0	0	0
172	0	0	0	0	0
173	0	0	0	0	0
174	0	0	0	0	0
175	0	0	0	0	0
176	0	0	0	0	0
177	0	0	0	0	0
178	0	0	0	0	0
179	0	0	0	0	0
180	0	0	0	0	0





**Luminaire Report Summary**

IESNA:LM-63-2002  
[TEST] LM-79 Distribution  
[TESTLAB] Kichler Lighting LLC  
[ISSUEDATE] 7/11/2019  
[MANUFAC] Kichler Lighting LLC  
[LUMCAT] CTR180730-09  
[LUMINAIRE] 43870XXLEDYY Horizon 2 Downlight  
[LAMP] Integrated LED AC

FILE: CREATED USING ABSOLUTE PHOTOMETRY  
FILE: CANDELA MULTIPLIER: 1  
FILE: VERTICAL ANGLES: 181, HORIZONTAL ANGLES: 5  
FILE: COORDINATE SYSTEM: TYPE C  
FILE: UNIT OF MEASURE: STANDARD  
FILE: BALLAST FACTOR: 1

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Reported data calculated from manufacturer's data file, based on IES recommended methods.