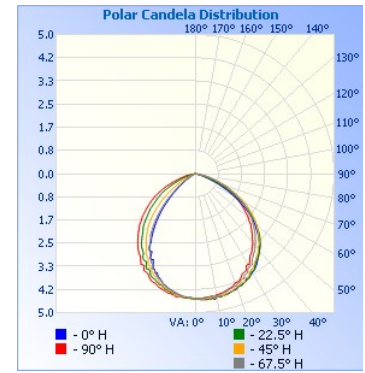


KICHLER®

KICHLER PHOTOMETRIC LAB

Filename: CTR180535-01
Manufacturer: Kichler Lighting LLC
Luminaire: 16100-27 Hardscape
Luminaire Cat: CTR180535-01
Lamp: Integrated LED AC
Lamp Output: Total luminaire Lumens: 10.4
Max Candela: 4.6 at Horizontal: 0°, Vertical: 9°
Input Wattage: 0.2
Luminous Opening: Rectangle (L: 2.4", W: 0.48")
Test: LM-79 Distribution
Test Lab: Kichler Lighting
Photometry : Type C
Nema Type: 7 X 6



Roadway Summary

Cutoff Classification:	FULL CUTOFF	
Distribution:	TYPE II, VERY SHORT	
Max Cd, 90 Deg Vert:	0	
Max Cd, 80 to <90 Deg:	0.2	
Lumens % Lamp		
Downward Street Side:	6.1	58.9%
Downward House Side:	4.3	41.1%
Downward Total:	10.4	100%
Upward Street Side:	0	0%
Upward House Side:	0	0%
Upward Total:	0	0%
Total Lumens:	10.4	100%

Flood Summary

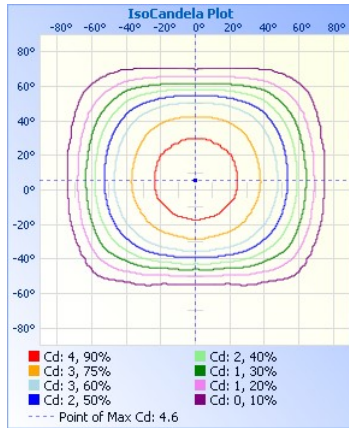
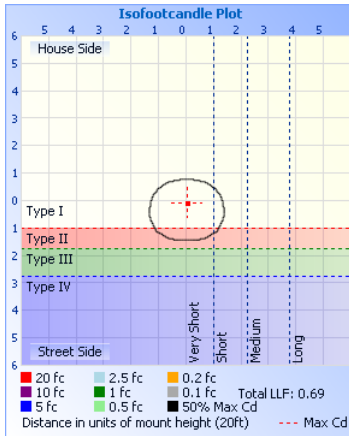
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	98.3%	10.2	148.8	124.8
Beam (50%):	76.3%	7.9	106.3	93.3
Total:	100%	10.4		

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3.5	33.6%
0-40	5.6	54.2%
0-60	9.2	89%
60-90	1.1	11%
70-100	0.3	2.6%
90-120	0	0%
0-90	10.4	100%
90-180	0	0%
0-180	10.4	100%

Lumens Per Zone

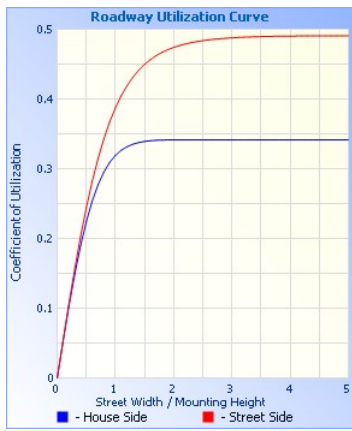
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	0.4	4.1%	90-100	0	0%
10-20	1.2	11.8%	100-110	0	0%
20-30	1.8	17.7%	110-120	0	0%
30-40	2.1	20.6%	120-130	0	0%
40-50	2.0	19.7%	130-140	0	0%
50-60	1.6	15.1%	140-150	0	0%
60-70	0.9	8.4%	150-160	0	0%
70-80	0.3	2.6%	160-170	0	0%
80-90	0.0	0.1%	170-180	0	0%



Illuminance at a Distance

Center Beam fc	Beam Width
17.0ft: 0.02 fc	36.0 ft 45.3 ft
34.0ft: 0.00 fc	72.0 ft 90.7 ft
51.0ft: 0.00 fc	108.0 ft 136.0 ft
68.0ft: 0.00 fc	144.0 ft 181.4 ft
85.0ft: 0.00 fc	180.0 ft 226.7 ft
102.0ft: 0.00 fc	216.0 ft 272.1 ft

Vert. Spread: 93.3°
 Horiz. Spread: 106.3°



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	1.02	1.00
1	1.11	1.07	1.03	1.00	1.08	1.04	1.01	.88	1.00	.98	.95	.92	.96	.94	.92	.93	.91	.90	.88	.88	.88
2	1.02	.95	.89	.84	.99	.93	.88	.77	.89	.85	.81	.77	.86	.83	.79	.83	.80	.78	.76	.76	.76
3	.94	.84	.77	.71	.91	.83	.76	.67	.80	.74	.70	.67	.77	.72	.68	.75	.71	.67	.65	.65	.65
4	.86	.76	.68	.61	.84	.74	.67	.58	.72	.65	.60	.57	.70	.64	.59	.67	.63	.59	.57	.57	.57
5	.80	.68	.60	.54	.78	.67	.59	.51	.65	.58	.53	.51	.63	.57	.52	.61	.56	.52	.50	.50	.50
6	.74	.62	.53	.47	.72	.61	.53	.46	.59	.52	.47	.46	.57	.51	.46	.56	.50	.46	.44	.44	.44
7	.69	.56	.48	.42	.67	.55	.47	.41	.54	.47	.42	.42	.52	.46	.41	.51	.45	.41	.39	.39	.39
8	.64	.51	.43	.38	.63	.51	.43	.37	.49	.42	.37	.37	.48	.42	.37	.47	.41	.37	.35	.35	.35
9	.60	.47	.39	.34	.59	.47	.39	.33	.46	.39	.34	.34	.44	.38	.34	.43	.38	.34	.32	.32	.32
10	.56	.44	.36	.31	.55	.43	.36	.31	.42	.35	.31	.31	.41	.35	.31	.40	.35	.31	.29	.29	.29

Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180
0	4	4	4	4	4	4	4	4	4
1	5	4	4	4	4	4	4	4	4
2	5	5	5	4	4	4	4	4	4
3	5	5	5	4	4	4	4	4	4
4	5	5	5	4	4	4	4	4	4
5	5	5	5	4	4	4	4	4	4
6	5	5	5	4	4	4	4	4	4
7	5	5	5	4	4	4	4	4	4
8	5	5	4	4	4	4	4	4	4
9	5	4	5	4	4	4	4	4	4
10	4	5	4	4	4	4	4	4	4
11	4	5	4	4	4	4	4	4	4
12	5	5	4	4	4	4	4	4	4
13	5	4	4	4	4	4	4	4	4
14	4	4	4	4	4	4	4	4	4
15	4	4	4	4	4	4	4	4	4
16	4	4	4	4	4	4	4	4	4
17	4	4	4	4	4	4	4	4	4
18	4	4	4	4	4	4	4	4	4
19	4	4	4	4	4	4	4	4	4
20	4	4	4	4	4	4	4	4	4
21	4	4	4	4	4	4	4	4	4
22	4	4	4	4	4	4	4	4	4
23	4	4	4	4	4	4	4	4	4
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26	4	4	4	4	4	4	4	4	3
27	4	4	4	4	4	4	4	4	3
28	4	4	4	4	4	4	4	3	3
29	4	4	4	4	4	3	3	3	3
30	4	4	4	4	4	3	3	3	3
31	4	4	4	4	4	3	3	3	3
32	4	4	4	4	4	3	3	3	3
33	4	4	4	4	3	3	3	3	3
34	4	4	4	4	3	3	3	3	3
35	4	4	4	4	3	3	3	3	3
36	4	4	4	3	3	3	3	3	3
37	4	4	4	3	3	3	3	2	2
38	4	4	3	3	3	3	2	2	2
39	4	4	3	3	3	3	2	2	2
40	4	4	3	3	3	3	2	2	2
41	4	3	3	3	3	3	2	2	2
42	3	3	3	3	3	2	2	2	2
43	3	3	3	3	3	2	2	2	2
44	3	3	3	3	3	2	2	2	2
45	3	3	3	3	3	2	2	1	1
46	3	3	3	3	3	2	2	1	1
47	3	3	3	3	2	2	1	1	1
48	3	3	3	3	2	2	1	1	1
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52	3	3	3	2	2	1	1	1	1
53	2	3	3	2	2	2	1	1	1
54	2	2	3	2	2	2	1	1	0
55	2	2	2	2	2	2	1	1	0
56	2	2	2	2	2	2	1	0	0
57	2	2	2	2	2	2	1	0	0
58	2	2	2	2	2	2	1	0	0
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60	2	2	2	2	2	1	1	0	0
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62	1	2	2	2	2	1	0	0	0
63	1	1	2	2	1	1	0	0	0
64	1	1	2	1	1	1	0	0	0
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67	1	1	1	1	1	1	0	0	0
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70	0	1	1	1	1	0	0	0	0
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72	0	1	1	1	1	0	0	0	0
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74	0	0	1	1	0	0	0	0	0
75	0	0	0	1	0	0	0	0	0
76	0	0	0	1	0	0	0	0	0
77	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0

80	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0
82	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0
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86	0	0	0	0	0	0	0	0	0
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88	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0
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104	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0
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116	0	0	0	0	0	0	0	0	0
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123	0	0	0	0	0	0	0	0	0
124	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0
126	0	0	0	0	0	0	0	0	0
127	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0
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165	0	0	0	0	0	0	0	0	0
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167	0	0	0	0	0	0	0	0	0
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177	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0

Luminaire Report Summary

IESNA:LM-63-2002
[TEST] LM-79 Distribution
[TESTLAB] Kichler Lighting
[ISSUEDATE] 3/4/2019
[MANUFAC] Kichler Lighting LLC
[LUMCAT] CTR180535-01
[LUMINAIRE] 16100-27 Hardscape
[LAMP] Integrated LED AC

FILE: CREATED USING ABSOLUTE PHOTOMETRY
FILE: CANDELA MULTIPLIER: 1
FILE: VERTICAL ANGLES: 181, HORIZONTAL ANGLES: 9
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.