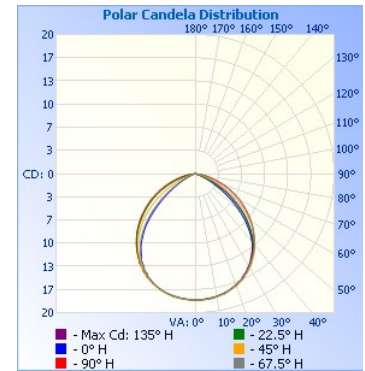


KICHLER®

KICHLER PHOTOMETRIC LAB

Filename: CTR180535-02
Manufacturer: Kichler Lighting LLC
Luminaire: 16101-27 Hardscape
Luminaire Cat: CTR180535-02
Lamp: Integrated LED AC
Lamp Output: Total luminaire Lumens: 42.8
Max Candela: 18.2 at Horizontal: 135°, Vertical: 1°
Input Wattage: 0.8
Luminous Opening: Rectangle (L: 4.92", 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:	1.1	
Lumens % Lamp		
Downward Street Side:	22.1	51.6%
Downward House Side:	20.7	48.4%
Downward Total:	42.8	100%
Upward Street Side:	0	0%
Upward House Side:	0	0%
Upward Total:	0	0%
Total Lumens:	42.8	100%

Flood Summary

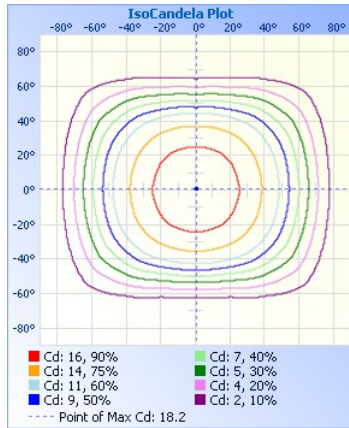
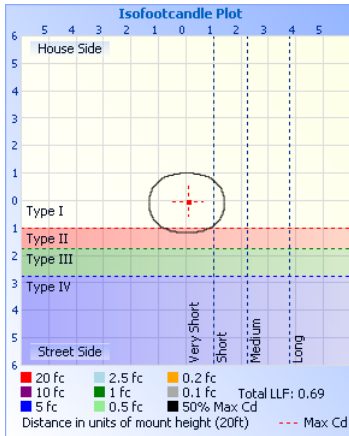
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	98.3%	42.1	154.8	127
Beam (50%):	76%	32.5	108	94.3
Total:	100%	42.8		

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	14.2	33.1%
0-40	23.1	53.9%
0-60	38.2	89.2%
60-90	4.6	10.8%
70-100	1.1	2.6%
90-120	0	0%
0-90	42.8	100%
90-180	0	0%
0-180	42.8	100%

Lumens Per Zone

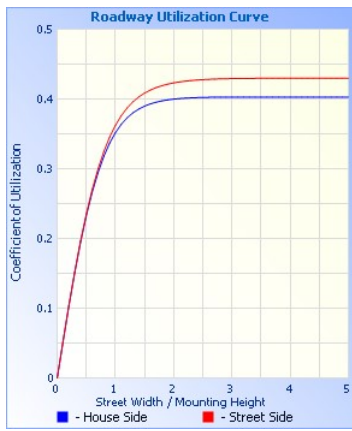
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1.7	4.0%	90-100	0	0%
10-20	5.0	11.6%	100-110	0	0%
20-30	7.5	17.6%	110-120	0	0%
30-40	8.9	20.8%	120-130	0	0%
40-50	8.6	20.1%	130-140	0	0%
50-60	6.5	15.2%	140-150	0	0%
60-70	3.5	8.2%	150-160	0	0%
70-80	1.0	2.4%	160-170	0	0%
80-90	0.1	0.1%	170-180	0	0%



Illuminance at a Distance

Center Beam fc	Beam Width
17.0ft: 0.06 fc	36.7 ft 46.8 ft
34.0ft: 0.02 fc	73.4 ft 93.5 ft
51.0ft: 0.01 fc	110.0 ft 140.3 ft
68.0ft: 0.00 fc	146.7 ft 187.1 ft
85.0ft: 0.00 fc	183.4 ft 233.8 ft
102.0ft: 0.00 fc	220.1 ft 280.6 ft

Vert. Spread: 94.3°
 Horiz. Spread: 108.0°



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	1.11	1.07	1.03	1.00	1.08	1.04	1.01	.88	1.00	.98	.95	.96	.94	.92	.93	.91	.90	.88	.88	.88	.88
2	1.02	.95	.89	.84	.99	.93	.88	.77	.89	.85	.81	.86	.83	.79	.83	.80	.78	.76	.76	.76	.76
3	.94	.84	.77	.71	.91	.83	.76	.67	.80	.74	.70	.77	.72	.68	.75	.71	.67	.65	.65	.65	.65
4	.86	.75	.68	.61	.84	.74	.67	.58	.72	.65	.60	.70	.64	.59	.67	.63	.59	.57	.57	.57	.57
5	.80	.68	.60	.54	.78	.67	.59	.51	.65	.58	.53	.63	.57	.52	.61	.56	.52	.50	.50	.50	.50
6	.74	.61	.53	.47	.72	.61	.53	.46	.59	.52	.47	.57	.51	.46	.56	.50	.46	.44	.44	.44	.44
7	.69	.56	.48	.42	.67	.55	.47	.41	.54	.47	.41	.52	.46	.41	.51	.45	.41	.39	.39	.39	.39
8	.64	.51	.43	.38	.62	.51	.43	.37	.49	.42	.37	.48	.42	.37	.47	.41	.37	.35	.35	.35	.35
9	.60	.47	.39	.34	.58	.46	.39	.33	.45	.39	.34	.44	.38	.34	.43	.38	.33	.32	.32	.32	.32
10	.56	.43	.36	.31	.55	.43	.36	.30	.42	.35	.31	.41	.35	.31	.40	.35	.30	.29	.29	.29	.29

Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180
0	18	18	18	18	18	18	18	18	18
1	18	18	18	18	18	18	18	18	18
2	18	18	18	18	18	18	18	18	18
3	18	18	18	18	18	18	18	18	18
4	18	18	18	18	18	18	18	18	18
5	18	18	18	18	18	18	18	18	18
6	18	18	18	18	18	18	18	18	18
7	18	18	18	18	18	18	18	18	18
8	18	18	18	18	18	18	18	18	18
9	18	18	18	18	18	18	18	18	18
10	18	18	18	18	18	18	18	18	18
11	18	18	18	18	18	18	18	18	18
12	18	18	18	18	18	18	18	18	18
13	18	18	18	18	18	18	18	18	18
14	18	18	18	18	18	18	18	18	18
15	18	18	18	18	18	18	18	17	18
16	18	18	18	17	17	17	17	17	17
17	17	17	17	17	17	17	17	17	17
18	17	17	17	17	17	17	17	17	17
19	17	17	17	17	17	17	17	17	17
20	17	17	17	17	17	17	17	17	17
21	17	17	17	17	17	17	17	17	17
22	17	17	17	17	17	17	17	17	17
23	17	17	17	17	17	17	17	17	17
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27	16	16	16	16	16	16	16	16	16
28	16	16	16	16	16	16	16	16	16
29	16	16	16	16	16	16	16	15	15
30	16	16	16	15	15	15	15	15	15
31	15	15	15	15	15	15	15	15	15
32	15	15	15	15	15	15	15	15	15
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34	15	15	15	15	15	15	14	14	14
35	14	14	15	14	14	14	14	14	14
36	14	14	14	14	14	14	14	13	13
37	14	14	14	14	14	14	14	13	13
38	13	14	14	14	14	14	13	13	13
39	13	13	14	14	13	13	13	12	12
40	13	13	13	13	13	13	13	12	12
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44	11	12	12	12	12	12	11	10	10
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51	8	9	10	10	10	10	9	7	6
52	7	8	9	10	10	9	8	7	6
53	7	8	9	9	9	9	8	6	5
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56	5	6	8	9	8	8	7	5	4
57	5	6	7	8	8	8	6	4	4
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61	3	4	6	7	7	6	5	3	2
62	3	4	5	7	7	6	4	2	2
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65	2	2	4	5	6	5	3	1	1
66	2	2	4	5	5	5	3	1	1
67	1	2	3	5	5	4	2	1	1
68	1	1	3	4	5	4	2	1	0
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70	1	1	2	4	4	3	1	0	0
71	0	1	2	3	4	3	1	0	0
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74	0	0	1	2	3	2	0	0	0
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76	0	0	0	2	2	1	0	0	0
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78	0	0	0	1	2	1	0	0	0
79	0	0	0	1	1	1	0	0	0

80	0	0	0	1	1	0	0	0	0
81	0	0	0	0	1	0	0	0	0
82	0	0	0	0	1	0	0	0	0
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94	0	0	0	0	0	0	0	0	0
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177	0	0	0	0	0	0	0	0	0
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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] CTR180535-02
[LUMINAIRE] 16101-27 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.