

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: IRiS

Report Number: H21213

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: H21213  
Test Lab:  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: IRiS  
Catalog Number: PN3MR-E3AAC2  
Description: IRIS 3.5 IN RECESSED ADJUSTABLE DOWNLIGHT  
WITH BEAM AT 45 DEGREES AND CLEAR LENS  
Light Source: Q42MR16C/VNSP9 42 WATTS 575 LUMENS  
Ballast/Driver: -

**Summary**

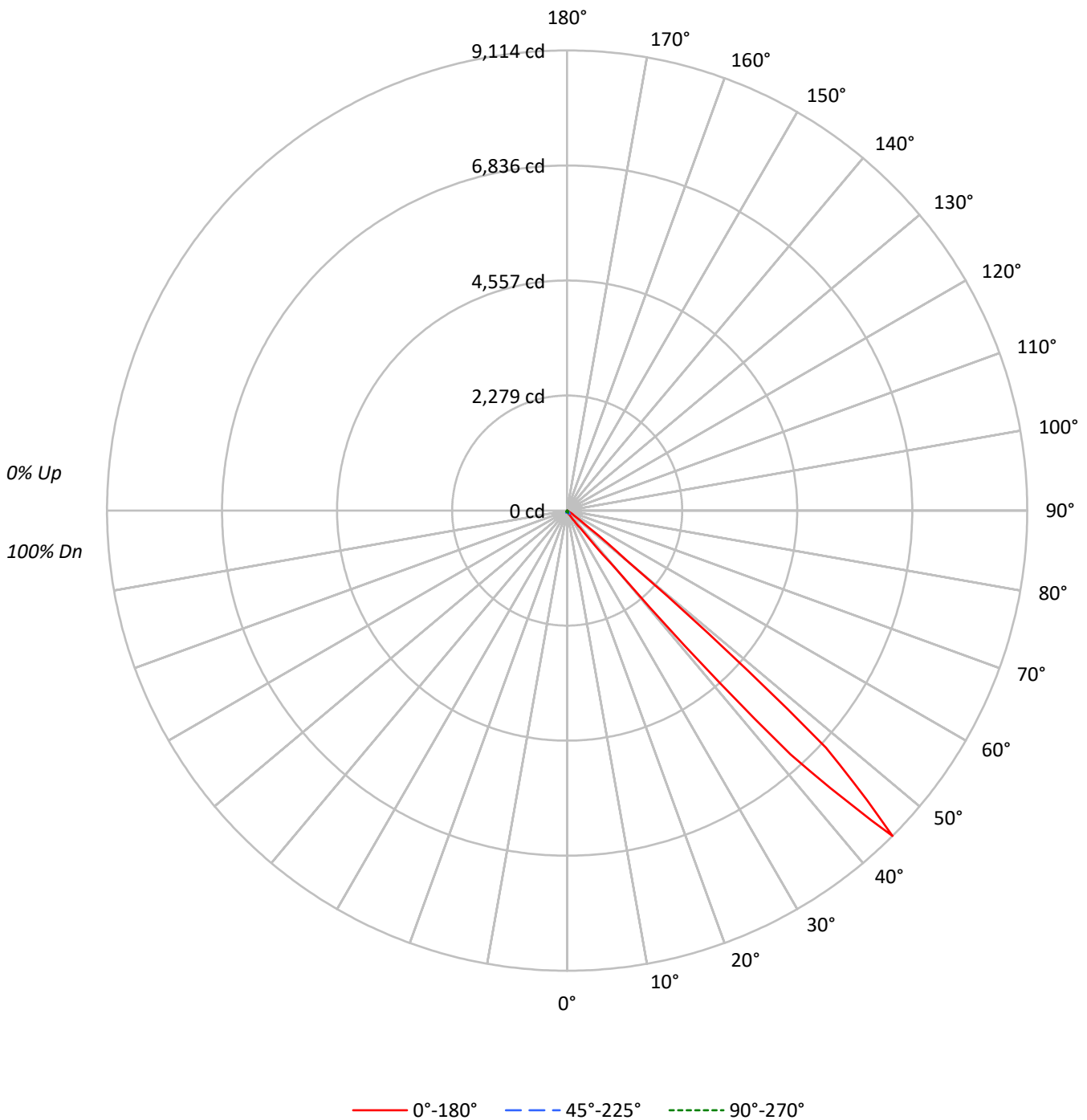
Lumens per Lamp: 575 (1 lamp)  
Luminaire Lumens: 330.4 lumens  
Efficiency: 57.5%  
Efficacy: 7.2 lumens/watt  
Spacing Criteria (0/90/45): 3.22 / 1.76 / 1.68  
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '  
CIE Type: Direct

Input Watts (W): 46  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20			
RC	80				70				50				30				10	0		
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	68	68	68	68	67	67	67	67	64	64	64		61	61	61		59	59	59	57
1	64	61	59	57	62	60	58	57	58	56	55		55	54	53		53	52	52	50
2	58	54	51	48	57	53	50	47	51	48	46		49	47	45		48	46	44	43
3	53	48	43	40	52	47	43	39	45	41	39		43	40	38		42	39	37	36
4	48	42	37	33	47	41	36	33	39	35	32		38	35	32		37	34	31	30
5	44	36	31	27	43	36	31	27	35	30	27		33	30	27		32	29	26	25
6	40	32	27	23	39	31	26	23	30	26	23		29	25	22		28	25	22	21
7	36	28	23	19	35	28	23	19	27	22	19		26	22	19		25	21	19	17
8	33	25	20	16	32	24	19	16	24	19	16		23	19	16		22	18	16	15
9	30	22	17	14	29	22	17	13	21	16	13		20	16	13		20	16	13	12
10	28	20	15	11	27	19	15	11	19	14	11		18	14	11		18	14	11	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	1.1	0.3	0.2	0°	10	10	10	10	10	
10°-20°	6.5	2.0	1.1	5°	11	14	9	10	12	1
20°-30°	16.3	4.9	2.8	15°	40	13	14	22	27	10
30°-40°	41.0	12.4	7.1	25°	76	31	40	22	16	36
40°-50°	238.0	72.0	41.4	35°	299	82	21	16	17	294
50°-60°	25.3	7.7	4.4	45°	9114	39	6	4	4	4679
60°-70°	2.1	0.6	0.4	55°	161	6	0	0	1	291
70°-80°	0.1	0.0	0.0	65°	14	1	0	0	0	14
80°-90°	0.0	0.0	0.0	75°	0	0	0	0	0	1
90°-100°	0.0	0.0	0.0	85°	0	0	0	0	0	0
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	23.9	7.2	4.2	165°	0	0	0	0	0	0
0°-40°	64.9	19.6	11.3	175°	0	0	0	0	0	0
0°-60°	328.2	99.3	57.1	180°	0	0	0	0	0	0
0°-90°	330.4	100.0	57.5							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	330.4	100.0	57.5							



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**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	10	10	10	10	10	10	10	10	10	10	10
2.5°	11	11	11	11	11	11	11	10	10	10	10
5°	11	11	11	11	11	13	14	11	9	9	10
7.5°	11	11	11	11	11	11	13	13	11	10	11
10°	13	14	13	13	13	12	11	15	15	13	14
12.5°	21	21	21	21	21	21	12	13	15	15	17
15°	40	40	40	40	40	26	13	12	14	18	22
17.5°	42	43	43	43	43	42	18	13	17	20	31
20°	52	52	52	51	50	45	21	17	20	31	47
22.5°	62	61	62	61	61	50	23	21	26	43	34
25°	76	75	74	71	69	57	31	26	40	46	22
27.5°	82	82	81	80	77	63	39	35	43	24	15
30°	114	111	109	106	99	69	46	53	30	16	13
32.5°	169	171	166	161	147	78	59	44	24	14	13
35°	299	295	282	265	236	88	82	28	21	19	16
37.5°	500	510	496	433	368	116	76	25	24	18	17
40°	1526	1594	1389	1062	725	126	56	17	15	11	14
42.5°	6549	5929	4838	3019	1738	131	46	13	9	8	9
45°	9114	8534	6708	4312	2283	130	39	15	6	4	4
47.5°	6956	6443	4854	3018	1587	119	31	9	3	2	3
50°	1524	1432	1169	875	627	97	16	7	1	1	2
52.5°	321	315	317	272	246	80	8	4	1	1	1
55°	161	153	152	139	128	60	6	3	0	0	0
57.5°	82	86	80	75	68	25	6	1	0	0	0
60°	26	26	26	23	21	17	5	0	0	0	0
62.5°	20	18	18	17	17	12	4	0	0	0	0
65°	14	14	13	13	12	7	1	0	0	0	0
67.5°	9	9	9	8	8	3	0	0	0	0	0
70°	4	4	4	4	4	1	0	0	0	0	0
72.5°	1	1	1	1	1	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	157.5°	180°
0°	10	10
2.5°	10	11
5°	11	12
7.5°	11	13
10°	15	16
12.5°	19	19
15°	25	27
17.5°	39	38
20°	34	34
22.5°	27	26
25°	17	16
27.5°	14	14
30°	13	14
32.5°	14	15
35°	16	17
37.5°	16	16
40°	14	11
42.5°	10	10
45°	4	4
47.5°	3	3
50°	2	2
52.5°	1	1
55°	0	1
57.5°	0	0
60°	0	0
62.5°	0	0
65°	0	0
67.5°	0	0
70°	0	0
72.5°	0	0
75°	0	0
77.5°	0	0
80°	0	0
82.5°	0	0
85°	0	0
87.5°	0	0
90°	0	0
92.5°	0	0
95°	0	0
97.5°	0	0
100°	0	0
102.5°	0	0
105°	0	0
107.5°	0	0
110°	0	0





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**CANDELA DISTRIBUTION (continued):**

	157.5°	180°
112.5°	0	0
115°	0	0
117.5°	0	0
120°	0	0
122.5°	0	0
125°	0	0
127.5°	0	0
130°	0	0
132.5°	0	0
135°	0	0
137.5°	0	0
140°	0	0
142.5°	0	0
145°	0	0
147.5°	0	0
150°	0	0
152.5°	0	0
155°	0	0
157.5°	0	0
160°	0	0
162.5°	0	0
165°	0	0
167.5°	0	0
170°	0	0
172.5°	0	0
175°	0	0
177.5°	0	0
180°	0	0

(END OF REPORT)