

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: H21214

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: H21214  
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 30 DEGREES AND CLEAR LENS  
Light Source: Q42MR16C/VNSP9 42 WATTS 575 LUMENS  
Ballast/Driver: -

**Summary**

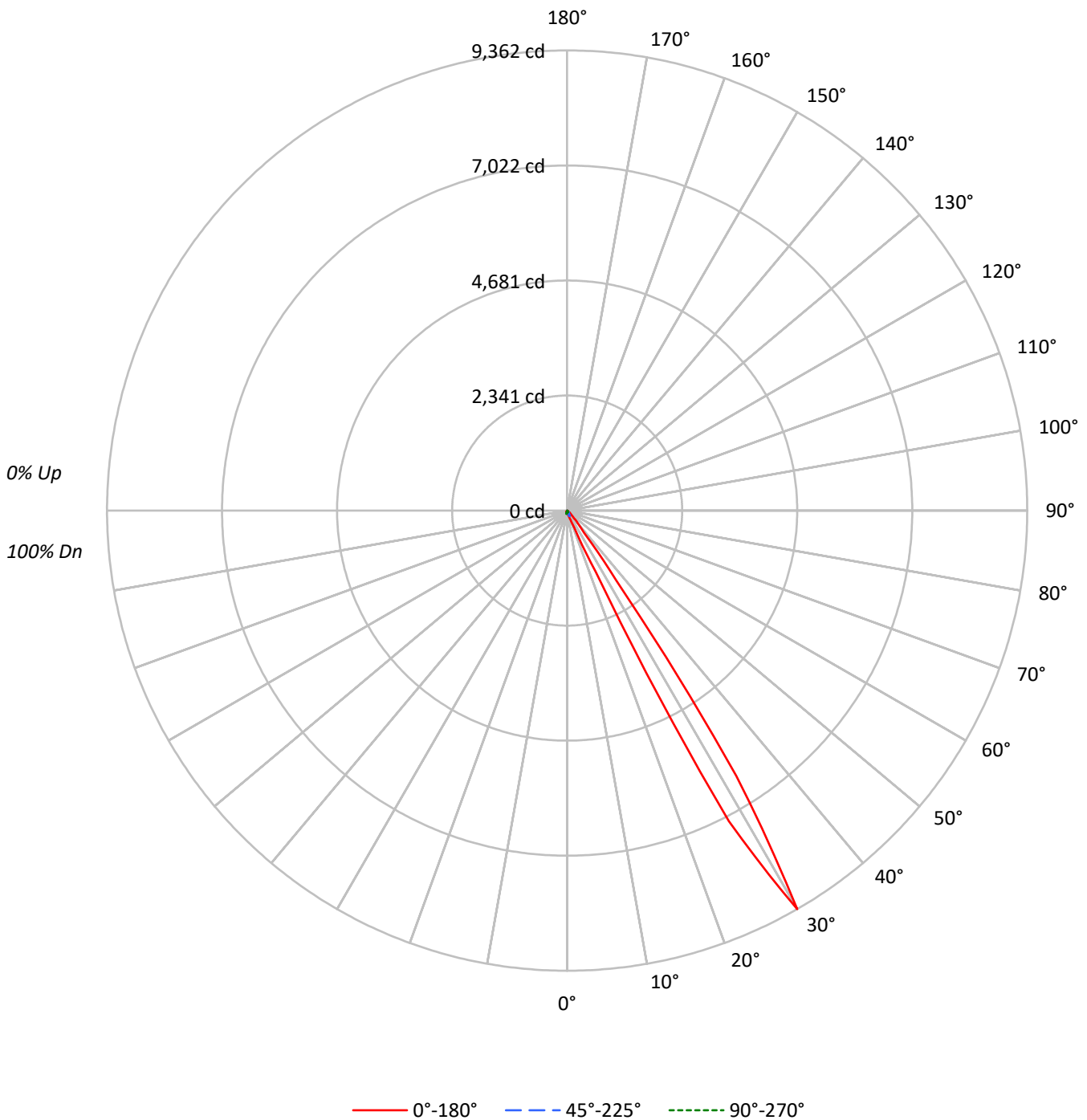
Lumens per Lamp: 575 (1 lamp)  
Luminaire Lumens: 336.4 lumens  
Efficiency: 58.5%  
Efficacy: 7.3 lumens/watt  
Spacing Criteria (0/90/45): 2.03 / 1.09 / 1.2  
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '  
CIE Type: Direct

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



TEST NUMBER: H21214  
CATALOG NUMBER: PN3MR-E3AAC2

### 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	70	70	70	70	68	68	68	68	65	65	65		62	62	62		60	60	60	59
1	66	64	62	61	64	63	61	60	60	59	58		58	57	56		56	55	55	54
2	62	59	56	54	61	58	55	53	56	54	52		54	52	51		52	51	50	49
3	58	54	50	48	57	53	50	47	51	49	46		50	48	46		48	47	45	44
4	54	49	45	42	53	48	45	42	47	44	42		46	43	41		45	43	41	40
5	51	45	41	38	50	44	41	38	43	40	37		42	39	37		41	39	37	36
6	47	41	37	34	46	41	37	34	40	36	34		39	36	33		38	35	33	32
7	44	38	34	31	43	37	33	31	37	33	30		36	33	30		35	32	30	29
8	41	35	31	28	41	34	30	28	34	30	27		33	30	27		32	29	27	26
9	39	32	28	25	38	32	28	25	31	27	25		30	27	25		30	27	25	24
10	36	29	25	23	35	29	25	23	29	25	22		28	25	22		28	24	22	21

**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°			



TEST NUMBER: H21214

CATALOG NUMBER: PN3MR-E3AAC2

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	4.9	1.5	0.9	0°	40	40	40	40	40	
10°-20°	16.9	5.0	2.9	5°	54	49	42	38	59	6
20°-30°	134.9	40.1	23.5	15°	102	71	69	33	29	34
30°-40°	159.2	47.3	27.7	25°	1365	126	27	24	29	1726
40°-50°	16.8	5.0	2.9	35°	1732	61	15	5	8	2003
50°-60°	3.4	1.0	0.6	45°	120	13	2	1	2	110
60°-70°	0.3	0.1	0.0	55°	17	6	0	0	0	19
70°-80°	0.0	0.0	0.0	65°	2	0	0	0	0	2
80°-90°	0.0	0.0	0.0	75°	0	0	0	0	0	0
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°	156.8	46.6	27.3	165°	0	0	0	0	0	0
0°-40°	315.9	93.9	54.9	175°	0	0	0	0	0	0
0°-60°	336.1	99.9	58.5	180°	0	0	0	0	0	0
0°-90°	336.4	100.0	58.5							
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°	336.4	100.0	58.5							



TEST NUMBER: H21214

CATALOG NUMBER: PN3MR-E3AAC2

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	40	40	40	40	40	40	40	40	40	40	40
2.5°	46	46	47	47	48	48	47	43	43	40	29
5°	54	54	55	55	56	55	49	49	42	31	38
7.5°	63	63	64	64	64	62	56	51	43	49	75
10°	73	74	75	75	76	73	61	52	46	75	50
12.5°	86	86	87	87	87	82	66	56	63	50	41
15°	102	102	102	102	102	91	71	68	69	38	33
17.5°	135	135	135	135	133	107	76	86	47	28	27
20°	200	199	198	192	187	136	84	101	31	24	22
22.5°	371	364	357	343	324	174	121	71	24	24	20
25°	1365	1330	1265	1079	903	232	126	50	27	29	24
27.5°	7126	6918	5993	4471	3099	393	102	41	36	28	28
30°	9362	8811	7711	6122	4442	524	80	33	21	31	18
32.5°	6402	6257	5442	4519	3282	418	68	28	20	14	12
35°	1732	1734	1579	1612	1448	279	61	17	15	7	5
37.5°	565	556	531	521	487	155	54	13	9	5	3
40°	326	326	308	281	256	109	45	10	5	2	2
42.5°	191	190	182	175	161	82	30	8	2	1	1
45°	120	118	112	104	95	64	13	8	2	1	1
47.5°	78	77	75	73	70	53	8	6	0	0	0
50°	58	58	57	55	52	28	7	4	0	0	0
52.5°	27	27	27	26	25	18	5	2	0	0	0
55°	17	16	15	15	14	12	6	0	0	0	0
57.5°	9	9	9	9	9	7	5	0	0	0	0
60°	7	7	7	6	6	3	0	0	0	0	0
62.5°	2	2	3	3	2	1	0	0	0	0	0
65°	2	2	2	2	2	2	0	0	0	0	0
67.5°	0	0	0	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0	0	0	0
72.5°	0	0	0	0	0	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



TEST NUMBER: H21214

CATALOG NUMBER: PN3MR-E3AAC2

**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



TEST NUMBER: H21214

CATALOG NUMBER: PN3MR-E3AAC2

**CANDELA DISTRIBUTION (continued):**

	157.5°	180°
0°	40	40
2.5°	28	28
5°	49	59
7.5°	62	59
10°	43	41
12.5°	38	36
15°	28	29
17.5°	21	21
20°	18	19
22.5°	20	21
25°	28	29
27.5°	22	21
30°	15	13
32.5°	18	18
35°	6	8
37.5°	3	5
40°	2	3
42.5°	2	2
45°	1	2
47.5°	1	1
50°	0	0
52.5°	0	0
55°	0	0
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)