

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: H21246

Luminaire Tested: **PN3MR-E3AAC**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21246
Test Lab:
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: IRiS
Catalog Number: PN3MR-E3AAC
Description: IRIS 3.5 IN RECESSED ADJUSTABLE DOWNLIGHT
WITH CLEAR LENS AND BEAM AT 45 DEGREES
Light Source: Q50MR16C/NSP15 50 WATTS 750 LUMENS
Ballast/Driver: -

Summary

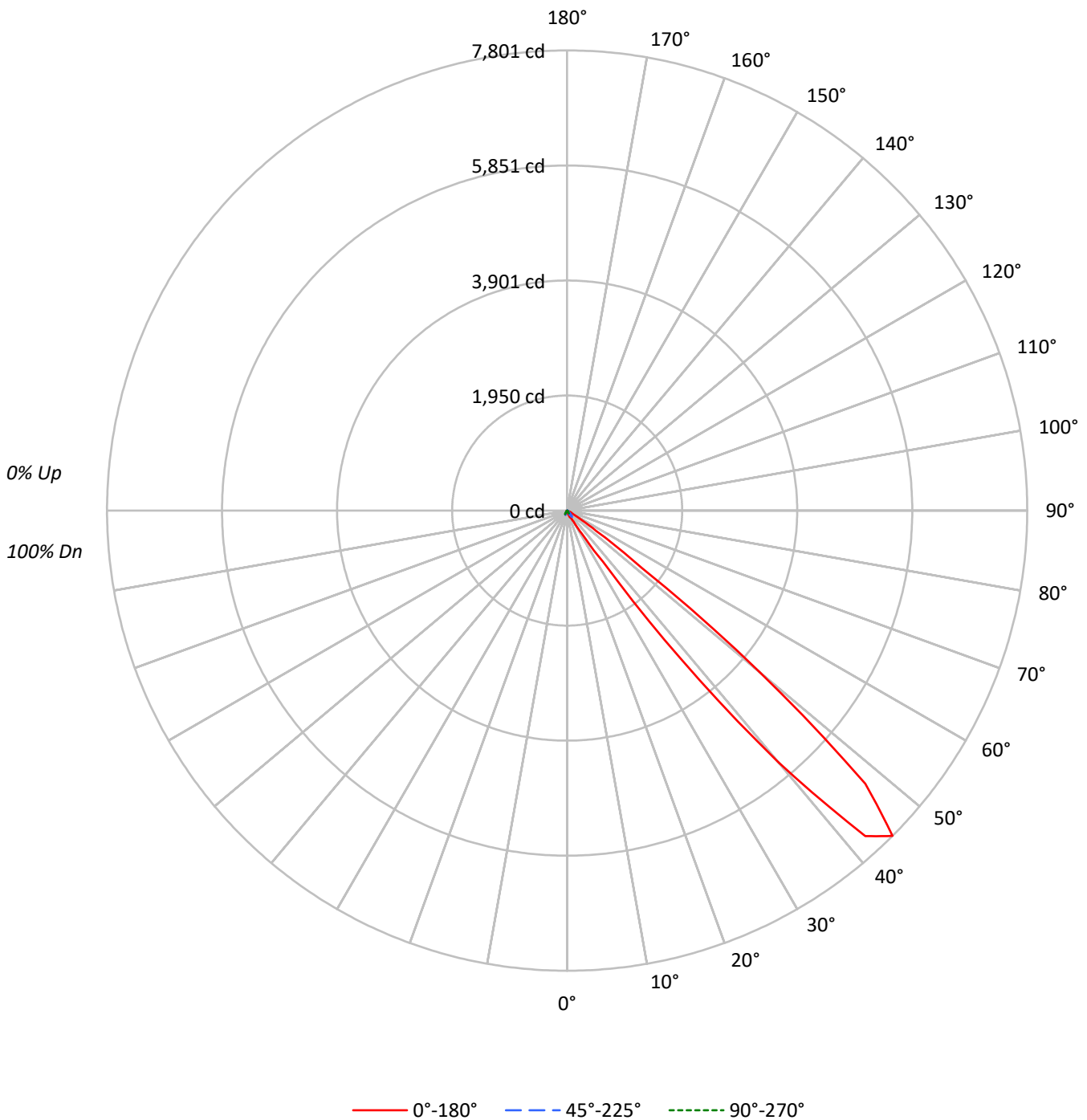
Lumens per Lamp: 750 (1 lamp)
Luminaire Lumens: 617.2 lumens
Efficiency: 82.3%
Efficacy: 12.3 lumens/watt
Spacing Criteria (0/90/45): 3.51 / 1.75 / 1.77
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 50
Input Voltage (V): NR
Input Current (A_{in}): 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	98	98	98	98	96	96	96	96	91	91	91		88	88	88		84	84	84	82
1	91	88	85	82	89	86	83	81	82	80	78		79	77	76		76	75	74	72
2	83	77	72	68	81	76	71	67	73	69	65		70	67	64		68	65	63	61
3	76	67	61	56	74	66	60	56	64	59	55		62	57	54		59	56	53	51
4	69	59	52	46	67	58	51	46	56	50	45		54	49	45		52	48	44	42
5	62	51	44	38	60	51	44	38	49	43	38		47	42	37		46	41	37	35
6	56	45	37	32	55	44	37	32	43	36	32		41	36	31		40	35	31	29
7	51	40	32	27	50	39	32	27	38	31	26		36	31	26		35	30	26	24
8	47	35	27	22	45	34	27	22	33	27	22		32	26	22		31	26	22	20
9	43	31	24	19	41	30	23	19	29	23	19		28	23	18		28	22	18	17
10	39	27	20	16	38	27	20	16	26	20	16		25	20	16		25	19	15	14

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°	1.0	0.2	0.1	0°	13	13	13	13	13	
10°-20°	7.0	1.1	0.9	5°	14	14	9	6	6	2
20°-30°	27.5	4.5	3.7	15°	50	22	11	17	21	16
30°-40°	116.8	18.9	15.6	25°	127	41	31	61	44	65
40°-50°	371.7	60.2	49.6	35°	1056	94	34	21	20	1254
50°-60°	83.2	13.5	11.1	45°	7801	72	6	8	16	5223
60°-70°	8.4	1.4	1.1	55°	597	11	1	1	2	1003
70°-80°	1.2	0.2	0.2	65°	65	6	1	1	1	61
80°-90°	0.4	0.1	0.1	75°	3	1	1	1	1	5
90°-100°	0.0	0.0	0.0	85°	1	1	1	0	0	1
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°	35.5	5.8	4.7	165°	0	0	0	0	0	0
0°-40°	152.3	24.7	20.3	175°	0	0	0	0	0	0
0°-60°	607.2	98.4	81.0	180°	0	0	0	0	0	0
0°-90°	617.2	100.0	82.3							
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°	617.2	100.0	82.3							



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	13	13	13	13	13	13	13	13	13	13	13
2.5°	15	15	14	15	15	14	13	12	11	9	9
5°	14	14	14	14	14	14	14	11	9	7	6
7.5°	17	16	16	17	17	15	14	11	8	6	6
10°	25	24	24	24	24	20	16	13	9	7	8
12.5°	33	32	32	32	32	26	19	14	11	9	11
15°	50	49	48	48	46	35	22	12	11	12	17
17.5°	71	70	68	67	64	49	25	13	13	16	22
20°	98	97	95	92	90	66	30	14	16	21	41
22.5°	121	121	119	118	115	86	36	17	19	43	80
25°	127	127	125	124	122	108	41	20	31	91	61
27.5°	152	150	148	146	140	119	46	24	84	66	41
30°	211	206	205	194	178	133	58	41	75	43	29
32.5°	460	440	412	361	311	152	71	123	47	31	24
35°	1056	1102	955	813	645	196	94	74	34	23	21
37.5°	3171	2978	2623	2120	1514	294	137	51	22	19	17
40°	5554	5313	4780	3901	2911	423	124	29	19	17	17
42.5°	7484	7143	6442	5393	3973	484	96	16	11	11	11
45°	7801	7504	6632	5529	4140	479	72	11	6	7	8
47.5°	6856	6341	5545	4443	3264	389	63	6	4	4	5
50°	4250	4020	3524	2775	1995	290	32	6	2	3	3
52.5°	1603	1592	1519	1285	979	217	19	4	2	2	2
55°	597	573	550	487	407	147	11	3	1	1	1
57.5°	231	220	206	187	170	98	7	3	1	1	1
60°	111	111	103	99	97	56	6	2	1	1	1
62.5°	80	79	79	78	76	35	5	1	1	1	1
65°	65	63	62	60	57	16	6	1	1	0	1
67.5°	41	40	39	36	31	6	5	1	1	0	1
70°	16	13	11	10	9	4	1	1	1	0	1
72.5°	6	6	5	6	6	2	1	1	1	0	1
75°	3	3	4	5	4	1	1	1	1	0	1
77.5°	1	1	1	1	1	1	1	1	1	0	1
80°	1	1	0	1	1	0	1	1	1	0	0
82.5°	1	1	0	1	1	0	1	1	1	0	0
85°	1	1	0	1	1	0	1	1	1	0	0
87.5°	1	1	0	1	0	0	1	1	1	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°	13	13
2.5°	8	7
5°	5	6
7.5°	6	7
10°	9	9
12.5°	14	15
15°	21	21
17.5°	30	31
20°	83	75
22.5°	66	59
25°	49	44
27.5°	34	32
30°	26	25
32.5°	23	23
35°	20	20
37.5°	18	17
40°	18	18
42.5°	10	10
45°	13	16
47.5°	7	9
50°	5	6
52.5°	3	3
55°	2	2
57.5°	2	2
60°	1	1
62.5°	1	1
65°	1	1
67.5°	1	1
70°	1	1
72.5°	1	1
75°	1	1
77.5°	0	1
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)