

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: H21195

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21195
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
MAIN BEAM AT 45 DEGREES WITH CLEAR LENS
Light Source: Q50MR16C/NFL25 50 WATTS 884 LUMENS
Ballast/Driver: -

Summary

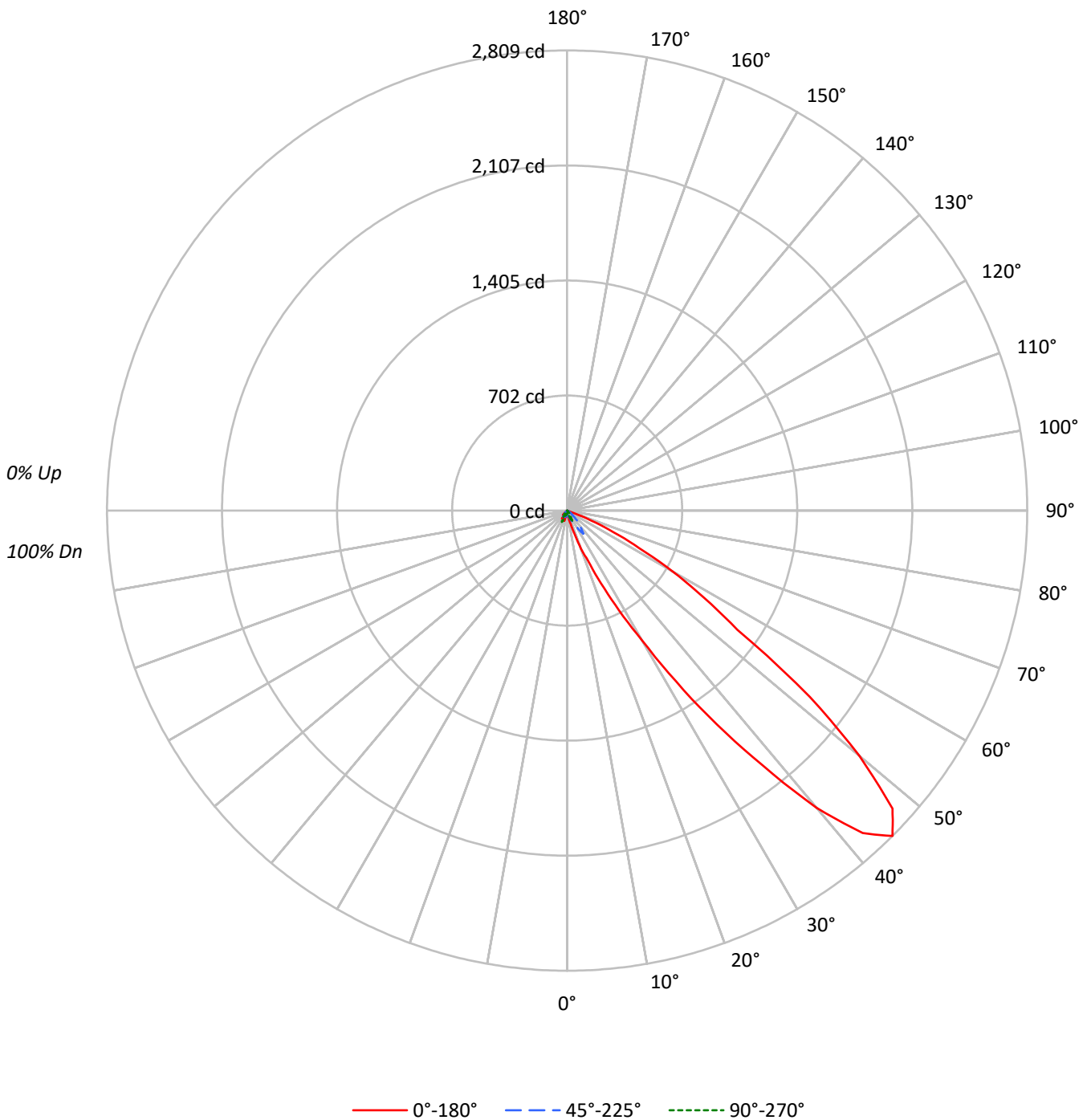
Lumens per Lamp: 884 (1 lamp)
Luminaire Lumens: 639.0 lumens
Efficiency: 72.3%
Efficacy: 11.8 lumens/watt
Spacing Criteria (0/90/45): 4.39 / 1.59 / 1.77
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 54
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: H21195
CATALOG NUMBER: PN3MR-E3AAC2

Luminous Intensity Polar Plot





TEST NUMBER: H21195

CATALOG NUMBER: PN3MR-E3AAC2

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	86	86	86	86	84	84	84	84	80	80	80		77	77	77		74	74	74	72
1	80	77	74	72	78	75	73	71	72	70	68		69	68	66		67	66	64	63
2	73	67	63	59	71	66	62	58	64	60	57		61	58	56		59	57	55	53
3	66	59	53	49	64	58	53	48	56	51	47		54	50	47		52	49	46	44
4	60	52	45	40	58	51	45	40	49	44	40		47	43	39		45	42	39	37
5	55	45	39	34	53	44	38	34	43	37	33		41	37	33		40	36	32	31
6	50	40	33	28	48	39	33	28	38	32	28		36	31	28		35	31	27	26
7	45	35	28	24	44	35	28	24	33	28	24		32	27	23		31	27	23	22
8	41	31	25	20	40	31	24	20	30	24	20		29	24	20		28	23	20	18
9	38	28	22	17	37	27	21	17	27	21	17		26	21	17		25	20	17	16
10	35	25	19	15	34	25	19	15	24	19	15		23	18	15		23	18	15	13

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: H21195

CATALOG NUMBER: PN3MR-E3AAC2

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp	0°	45°	90°	135°	180°	Flux
0°-10°	2.5	0.4	0.3	0°	20	20	20	20	
10°-20°	14.6	2.3	1.7	5°	28	30	17	19	3
20°-30°	55.1	8.6	6.2	15°	88	41	27	41	34
30°-40°	152.4	23.8	17.2	25°	489	75	77	43	250
40°-50°	244.7	38.3	27.7	35°	1593	173	31	33	1027
50°-60°	136.3	21.3	15.4	45°	2809	83	6	13	2037
60°-70°	32.1	5.0	3.6	55°	1269	28	1	1	1256
70°-80°	0.9	0.1	0.1	65°	314	2	1	0	332
80°-90°	0.4	0.1	0.0	75°	1	1	1	0	4
90°-100°	0.0	0.0	0.0	85°	0	1	1	0	0
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0
0°-30°	72.3	11.3	8.2	165°	0	0	0	0	0
0°-40°	224.6	35.2	25.4	175°	0	0	0	0	0
0°-60°	605.7	94.8	68.5	180°	0	0	0	0	0
0°-90°	639.0	100.0	72.3						
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°	639.0	100.0	72.3						



TEST NUMBER: H21195

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	55°	60°
0°	20	20	20	20	20	20	20	20	20	20	20
2.5°	24	24	24	25	25	25	25	25	25	24	24
5°	28	28	28	29	29	29	29	30	30	28	26
7.5°	35	35	35	34	34	33	31	31	31	32	31
10°	42	42	42	42	41	39	38	37	32	30	30
12.5°	63	63	62	60	55	49	44	42	38	30	28
15°	88	88	87	86	75	66	61	52	41	34	30
17.5°	144	140	131	116	100	88	76	64	46	39	35
20°	247	238	221	200	162	128	98	80	55	43	39
22.5°	326	314	298	272	241	199	145	106	65	46	44
25°	489	465	421	370	308	256	203	152	75	52	49
27.5°	686	662	600	518	408	315	248	183	88	60	67
30°	912	887	802	686	546	408	293	220	106	95	121
32.5°	1235	1186	1077	902	690	501	352	255	149	118	97
35°	1593	1533	1365	1148	866	609	420	298	173	89	69
37.5°	1962	1913	1737	1434	1058	725	471	309	145	67	52
40°	2366	2300	2094	1720	1235	809	476	285	111	48	37
42.5°	2670	2591	2329	1905	1328	847	464	256	96	38	27
45°	2809	2714	2420	1942	1326	813	432	233	83	31	22
47.5°	2694	2612	2337	1864	1241	733	364	212	60	24	17
50°	2326	2286	2078	1659	1071	611	301	174	44	19	13
52.5°	1868	1805	1638	1263	790	444	214	114	34	16	11
55°	1269	1240	1056	813	542	288	154	66	28	12	8
57.5°	991	949	794	568	351	200	116	47	20	13	6
60°	743	697	583	411	257	150	64	33	12	6	2
62.5°	498	481	404	302	186	89	36	15	7	2	2
65°	314	304	258	189	97	37	14	7	2	1	1
67.5°	159	144	118	77	28	9	5	2	1	1	1
70°	23	15	9	4	3	2	1	1	1	1	1
72.5°	3	3	3	2	2	1	1	1	1	1	1
75°	1	1	1	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	0	1	1	1	1	1
80°	1	1	1	0	0	0	1	1	1	1	1
82.5°	0	0	0	0	0	0	0	0	1	1	1
85°	0	0	0	0	0	0	0	0	1	1	1
87.5°	0	0	0	0	0	0	0	0	1	1	1
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: H21195

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	55°	60°
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: H21195

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	20	20	20	20	20	20
2.5°	23	20	19	19	20	20
5°	23	17	18	19	21	22
7.5°	27	22	22	21	25	27
10°	28	26	26	27	29	31
12.5°	25	27	28	33	39	40
15°	27	27	33	41	53	60
17.5°	33	30	42	62	65	66
20°	38	39	66	66	61	60
22.5°	44	64	73	56	51	49
25°	53	77	56	43	42	43
27.5°	90	67	43	39	42	43
30°	88	47	38	40	46	48
32.5°	65	36	39	45	55	60
35°	48	31	32	33	38	39
37.5°	40	25	24	27	29	29
40°	25	14	16	25	45	41
42.5°	18	10	11	18	29	35
45°	14	6	7	13	25	31
47.5°	10	3	4	11	20	24
50°	8	2	2	5	8	8
52.5°	4	1	2	2	3	3
55°	4	1	1	1	1	1
57.5°	2	1	1	1	1	1
60°	1	1	1	1	1	1
62.5°	1	1	1	0	0	1
65°	1	1	1	0	0	0
67.5°	1	1	1	0	0	0
70°	1	1	1	0	0	0
72.5°	1	1	1	0	0	0
75°	1	1	1	0	0	0
77.5°	1	1	1	0	0	0
80°	1	1	1	0	0	0
82.5°	1	1	0	0	0	0
85°	1	1	0	0	0	0
87.5°	1	1	0	0	0	0
90°	0	0	0	0	0	0
92.5°	0	0	0	0	0	0
95°	0	0	0	0	0	0
97.5°	0	0	0	0	0	0
100°	0	0	0	0	0	0
102.5°	0	0	0	0	0	0
105°	0	0	0	0	0	0
107.5°	0	0	0	0	0	0
110°	0	0	0	0	0	0



TEST NUMBER: H21195

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)