

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: H21251

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21251
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 CLEAR LENS AND BEAM AT 30 DEGREES
Light Source: 37MR16/IR/SP10 37 WATTS 900 LUMENS
Ballast/Driver: -

Summary

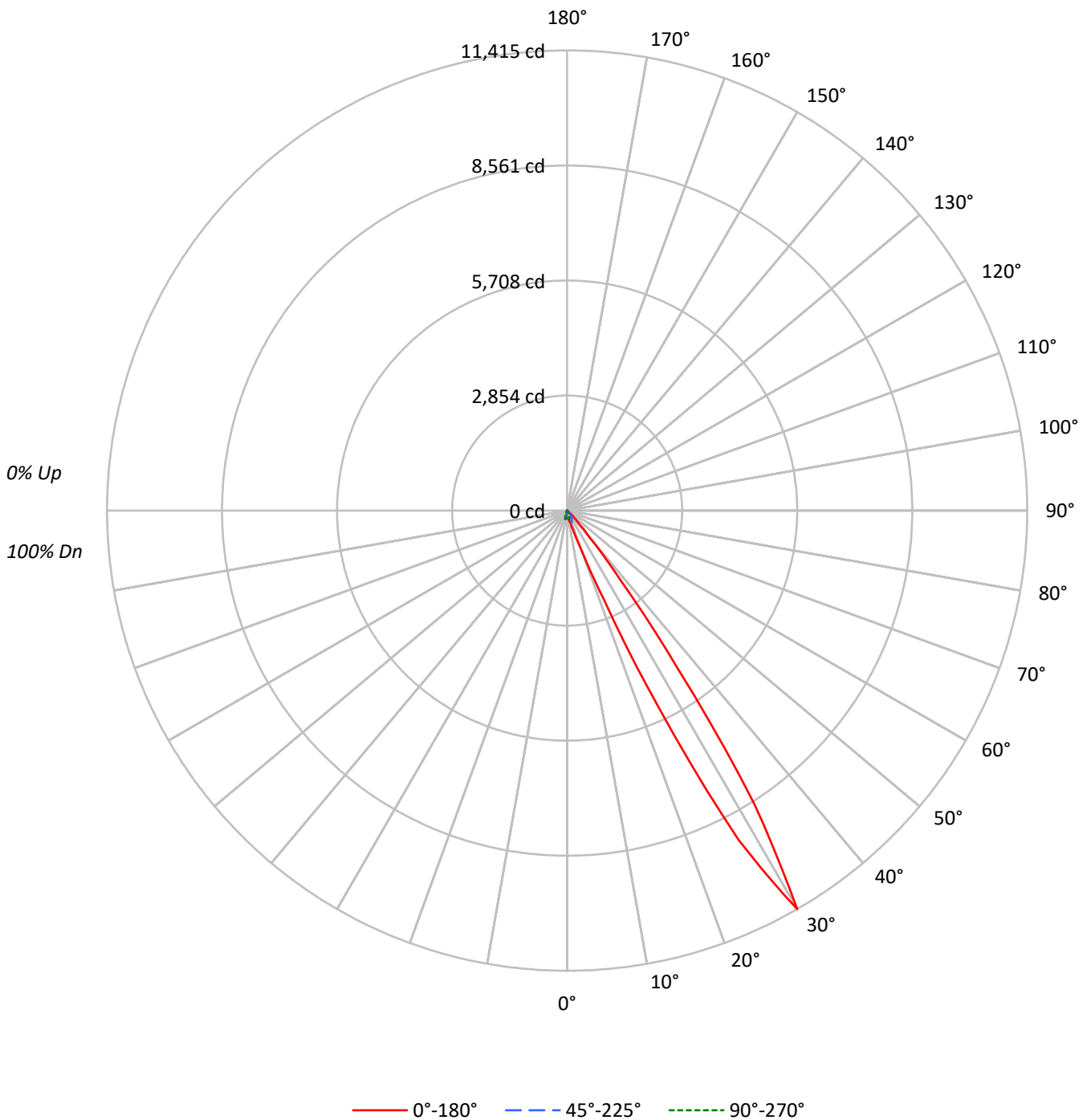
Lumens per Lamp: 900 (1 lamp)
Luminaire Lumens: 600.8 lumens
Efficiency: 66.8%
Efficacy: 16.2 lumens/watt
Spacing Criteria (0/90/45): 1.82 / 0.78 / 1.01
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 37
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: H21251
CATALOG NUMBER: PN3MR-E3AAC2

Luminous Intensity Polar Plot





TEST NUMBER: H21251

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	79	79	79	79	78	78	78	78	74	74	74		71	71	71		68	68	68	67
1	75	73	71	70	74	72	70	69	69	68	66		67	65	64		64	63	63	61
2	71	67	64	62	69	66	63	61	64	62	60		62	60	58		60	58	57	56
3	67	62	58	55	65	61	57	54	59	56	54		57	55	53		56	54	52	51
4	62	57	52	49	61	56	52	49	54	51	48		53	50	48		52	49	47	46
5	59	52	48	44	57	51	47	44	50	47	44		49	46	43		48	45	43	42
6	55	48	43	40	54	47	43	40	46	43	40		45	42	39		44	41	39	38
7	51	44	40	36	50	44	39	36	43	39	36		42	38	36		41	38	36	34
8	48	41	36	33	47	40	36	33	40	36	33		39	35	33		38	35	32	31
9	45	38	33	30	44	37	33	30	37	33	30		36	32	30		35	32	30	29
10	42	35	30	27	42	35	30	27	34	30	27		33	30	27		33	29	27	26

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: H21251

CATALOG NUMBER: PN3MR-E3AAC2

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	17.3	2.9	1.9	0°	168	168	168	168	168	
10°-20°	51.4	8.6	5.7	5°	192	183	170	171	185	20
20°-30°	246.8	41.1	27.4	15°	328	232	188	56	46	139
30°-40°	242.5	40.4	26.9	25°	5429	268	55	40	42	2853
40°-50°	34.6	5.8	3.8	35°	4789	151	13	10	14	3273
50°-60°	5.5	0.9	0.6	45°	224	38	9	1	1	230
60°-70°	0.9	0.1	0.1	55°	27	6	0	0	0	31
70°-80°	0.9	0.2	0.1	65°	2	0	0	1	0	3
80°-90°	0.9	0.2	0.1	75°	0	1	1	1	1	0
90°-100°	0.0	0.0	0.0	85°	0	1	1	1	1	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°	315.5	52.5	35.1	165°	0	0	0	0	0	0
0°-40°	558.0	92.9	62.0	175°	0	0	0	0	0	0
0°-60°	598.1	99.5	66.5	180°	0	0	0	0	0	0
0°-90°	600.8	100.0	66.8							
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°	600.8	100.0	66.8							



TEST NUMBER: H21251

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	168	168	168	168	168	168	168	168	168	168	168
2.5°	178	177	177	178	176	176	177	171	170	162	160
5°	192	192	193	193	191	188	183	176	170	163	171
7.5°	212	211	212	211	208	204	192	184	171	190	199
10°	232	232	232	231	228	220	206	189	191	201	152
12.5°	266	265	264	262	259	245	220	195	221	163	89
15°	328	330	327	320	310	284	232	229	188	103	56
17.5°	548	542	530	504	468	334	247	252	142	59	49
20°	1109	1080	1021	946	838	426	307	186	117	46	42
22.5°	2393	2302	2145	1913	1631	596	306	153	91	38	37
25°	5429	5245	4657	3992	3188	798	268	136	55	39	40
27.5°	9213	8808	7667	6158	4700	818	226	124	41	41	36
30°	11415	10684	9094	7033	5138	707	193	112	25	28	25
32.5°	8648	8231	6937	5419	3939	514	169	96	16	20	19
35°	4789	4474	3878	3200	2431	374	151	43	13	15	10
37.5°	2164	2041	1840	1580	1185	293	127	18	12	9	5
40°	858	861	805	710	561	231	113	11	11	4	3
42.5°	392	395	370	339	291	175	71	10	12	1	2
45°	224	217	207	197	175	132	38	12	9	0	1
47.5°	135	134	134	131	127	88	26	13	4	0	0
50°	88	88	88	87	81	53	16	10	1	0	0
52.5°	55	53	52	52	48	28	9	3	0	0	0
55°	27	27	26	26	23	13	6	1	0	0	0
57.5°	13	13	12	12	12	7	5	0	0	0	0
60°	8	8	8	8	8	5	5	0	0	0	1
62.5°	5	5	5	5	5	2	0	0	0	0	1
65°	2	2	2	3	3	2	0	0	0	1	1
67.5°	0	0	0	0	0	1	0	0	0	1	1
70°	0	0	0	0	1	1	1	0	1	1	1
72.5°	0	0	0	1	0	1	1	0	1	1	1
75°	0	0	0	1	1	1	1	1	1	1	1
77.5°	0	0	0	1	1	1	1	1	1	1	1
80°	0	0	0	1	1	1	1	1	1	1	1
82.5°	0	0	0	1	1	1	1	1	1	1	1
85°	0	0	0	1	1	1	1	1	1	1	1
87.5°	0	0	0	1	1	1	1	1	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: H21251

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: H21251

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (continued):

	157.5°	180°
0°	168	168
2.5°	163	158
5°	191	185
7.5°	187	171
10°	112	99
12.5°	70	65
15°	53	46
17.5°	48	41
20°	44	37
22.5°	40	37
25°	45	42
27.5°	35	34
30°	19	17
32.5°	19	20
35°	12	14
37.5°	5	6
40°	3	3
42.5°	3	2
45°	2	1
47.5°	0	1
50°	0	0
52.5°	0	0
55°	0	0
57.5°	1	0
60°	1	0
62.5°	1	0
65°	1	0
67.5°	1	0
70°	1	1
72.5°	1	0
75°	1	1
77.5°	1	1
80°	1	1
82.5°	1	1
85°	1	1
87.5°	1	1
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



TEST NUMBER: H21251

CATALOG NUMBER: PN3MR-E3AAC2

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)