

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: H21229

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: H21229  
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: 45MRC16/IRC/SP8 45 WATTS 1030 LUMENS  
Ballast/Driver: -

**Summary**

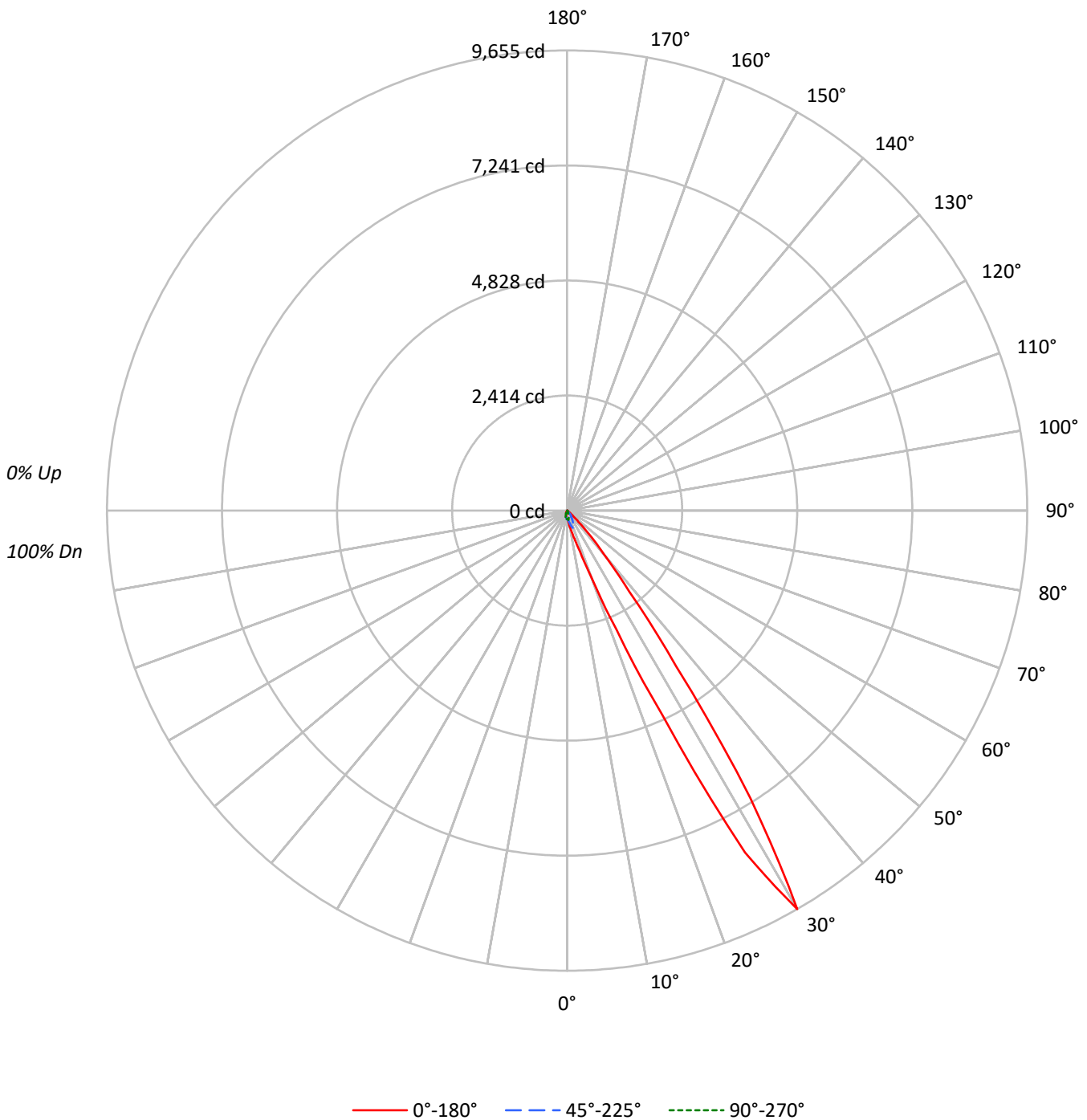
Lumens per Lamp: 1030 (1 lamp)  
Luminaire Lumens: 681.6 lumens  
Efficiency: 66.2%  
Efficacy: 15.1 lumens/watt  
Spacing Criteria (0/90/45): 1.95 / 0.6 / 0.97  
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '  
CIE Type: Direct

Input Watts (W): 45  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	79	79	79	79	77	77	77	77	74	74	74		70	70	70		68	68	68	66
1	75	73	71	69	73	71	70	68	68	67	66		66	65	64		64	63	62	61
2	70	67	64	61	69	66	63	60	63	61	59		61	59	58		59	58	57	55
3	66	61	58	55	65	60	57	54	59	56	53		57	54	52		55	53	52	50
4	62	56	52	49	61	56	52	49	54	51	48		53	50	47		51	49	47	46
5	58	52	47	44	57	51	47	44	50	46	43		49	46	43		48	45	43	42
6	54	48	43	40	53	47	43	40	46	42	39		45	42	39		44	41	39	38
7	51	44	39	36	50	43	39	36	43	39	36		42	38	36		41	38	35	34
8	48	41	36	33	47	40	36	33	39	35	33		39	35	32		38	35	32	31
9	45	37	33	30	44	37	33	30	36	32	30		36	32	30		35	32	29	28
10	42	35	30	27	41	34	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°			



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp	0°	45°	90°	135°	180°	Flux
0°-10°	17.9	2.6	1.7	0°	173	173	173	173	
10°-20°	66.9	9.8	6.5	5°	205	197	186	160	26
20°-30°	274.7	40.3	26.7	15°	641	330	118	70	223
30°-40°	268.8	39.4	26.1	25°	4753	295	47	38	2568
40°-50°	46.3	6.8	4.5	35°	3981	143	16	6	2826
50°-60°	5.4	0.8	0.5	45°	334	32	1	0	358
60°-70°	0.6	0.1	0.1	55°	30	6	0	0	34
70°-80°	0.5	0.1	0.1	65°	8	0	0	0	5
80°-90°	0.5	0.1	0.0	75°	1	0	0	1	1
90°-100°	0.0	0.0	0.0	85°	1	0	0	1	1
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°	359.5	52.8	34.9	165°	0	0	0	0	0
0°-40°	628.3	92.2	61.0	175°	0	0	0	0	0
0°-60°	679.9	99.8	66.0	180°	0	0	0	0	0
0°-90°	681.6	100.0	66.2						
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°	681.6	100.0	66.2						



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**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	173	173	173	173	173	173	173	173	173	173	173
2.5°	190	191	191	190	190	188	185	183	177	179	181
5°	205	208	206	205	205	203	197	193	186	175	160
7.5°	294	299	296	293	290	267	213	202	193	159	140
10°	368	365	362	358	354	337	247	215	181	133	112
12.5°	478	475	468	460	456	417	288	250	151	104	89
15°	641	644	633	625	610	509	330	241	118	81	70
17.5°	895	898	866	844	826	629	368	197	87	64	59
20°	1482	1474	1415	1344	1261	796	415	150	68	57	55
22.5°	2709	2669	2556	2343	2090	1009	348	118	61	57	58
25°	4753	4710	4546	4046	3518	1196	295	91	47	43	38
27.5°	8087	8080	7505	6672	5548	1280	252	70	39	34	28
30°	9655	9526	8550	7500	6109	1224	207	53	28	22	17
32.5°	7161	7047	6524	5726	4707	961	169	38	21	15	11
35°	3981	3957	3744	3391	2906	691	143	28	16	9	6
37.5°	2142	2156	2023	1849	1629	524	118	22	10	4	3
40°	1192	1170	1109	1032	912	404	88	19	7	1	2
42.5°	754	738	711	657	594	252	48	14	4	1	1
45°	334	338	314	294	254	149	32	10	1	0	0
47.5°	180	178	175	166	149	85	20	6	0	0	0
50°	94	93	91	88	83	51	15	3	0	0	0
52.5°	55	55	53	50	48	29	9	0	0	0	0
55°	30	30	29	27	27	16	6	0	0	0	0
57.5°	17	18	16	15	14	10	3	0	0	0	0
60°	11	11	11	10	9	6	2	0	0	0	0
62.5°	7	6	6	6	5	3	0	0	0	0	0
65°	8	6	5	4	3	0	0	0	0	0	0
67.5°	0	0	0	0	1	0	0	0	0	0	1
70°	1	0	1	1	1	1	0	0	0	0	1
72.5°	1	0	1	1	1	1	0	0	0	0	1
75°	1	1	1	1	1	1	0	0	0	0	1
77.5°	1	1	1	1	1	1	0	0	0	0	1
80°	1	1	1	1	1	1	0	0	0	0	1
82.5°	1	1	1	1	1	1	0	0	0	0	1
85°	1	1	1	1	1	1	0	0	0	0	1
87.5°	1	1	1	1	1	1	0	0	0	0	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



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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°	173	173
2.5°	180	170
5°	154	146
7.5°	134	126
10°	105	97
12.5°	83	77
15°	66	62
17.5°	58	56
20°	55	53
22.5°	60	59
25°	36	35
27.5°	23	22
30°	15	16
32.5°	13	15
35°	6	7
37.5°	4	5
40°	3	4
42.5°	1	4
45°	1	5
47.5°	0	1
50°	0	0
52.5°	0	0
55°	0	0
57.5°	0	0
60°	0	0
62.5°	0	0
65°	0	1
67.5°	0	1
70°	1	1
72.5°	1	1
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





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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)