

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: H21261

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: H21261  
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 45 DEGREES  
Light Source: 65MR16Q/40/FL 65 WATTS 1100 LUMENS  
Ballast/Driver: -

**Summary**

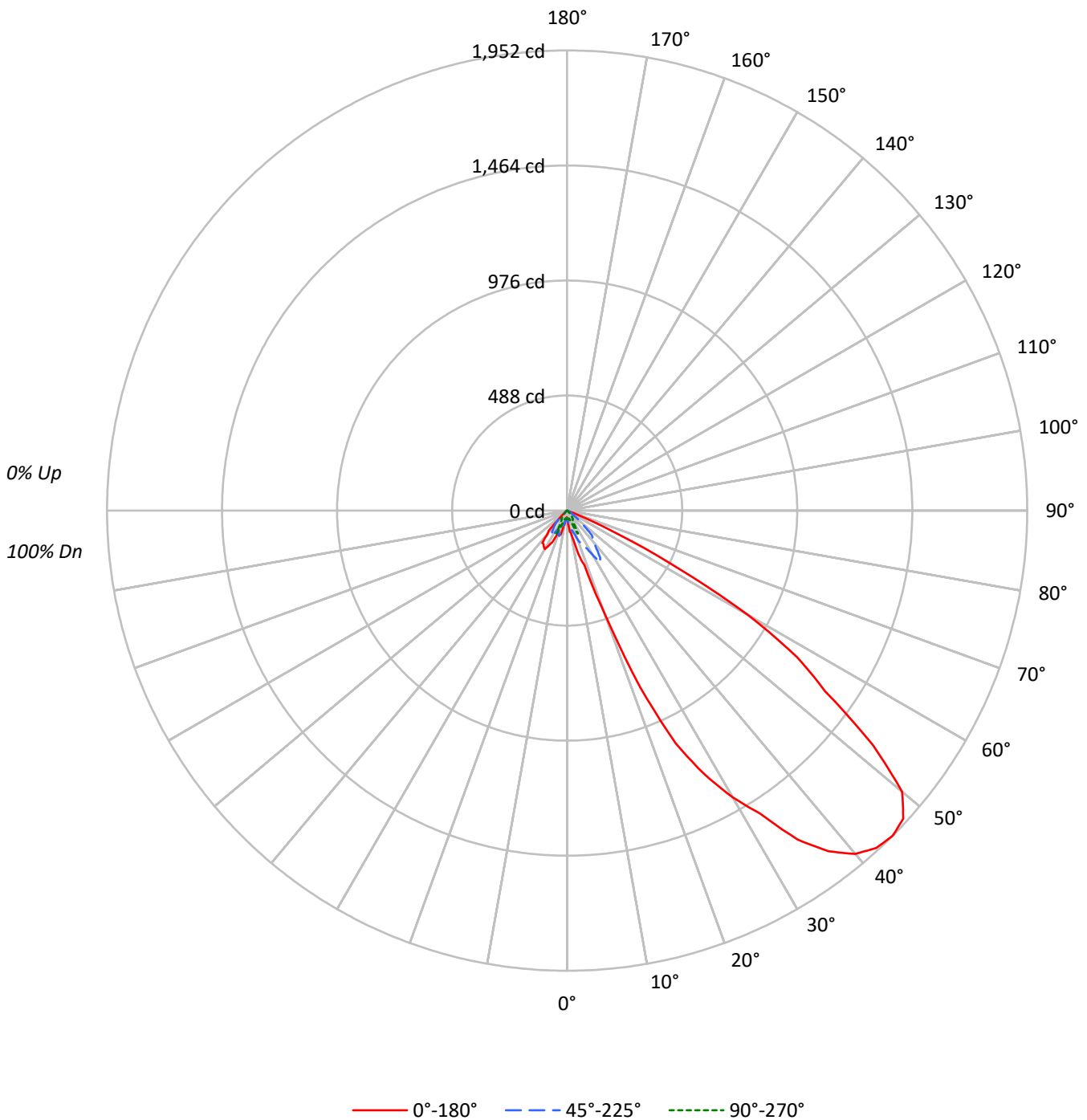
Lumens per Lamp: 1100 (1 lamp)  
Luminaire Lumens: 838.7 lumens  
Efficiency: 76.2%  
Efficacy: 12.9 lumens/watt  
Spacing Criteria (0/90/45): 4.08 / 1.56 / 1.76  
Luminous Opening: (L: 0' x W: -0.29' x H: 0'  
CIE Type: Direct

Input Watts (W): 65  
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



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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	91	91	91	91	89	89	89	89	85	85	85	81	81	81	78	78	78	76
1	84	81	79	76	82	80	77	75	76	74	73	74	72	70	71	70	68	67
2	77	72	67	63	75	70	66	63	68	64	61	65	62	60	63	61	58	57
3	71	63	57	53	69	62	57	52	60	55	51	58	54	51	56	53	50	48
4	64	56	49	44	63	55	49	44	53	48	43	51	46	43	49	45	42	41
5	59	49	42	37	57	48	42	37	47	41	37	45	40	36	44	39	36	34
6	54	44	37	32	52	43	36	32	41	36	31	40	35	31	39	34	31	29
7	49	39	32	27	48	38	32	27	37	31	27	36	31	27	35	30	27	25
8	45	35	28	23	44	34	28	23	33	27	23	32	27	23	31	27	23	21
9	42	31	25	20	41	31	25	20	30	24	20	29	24	20	28	23	20	19
10	39	28	22	18	38	28	22	18	27	21	18	26	21	18	26	21	17	16

**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°	4.6	0.5	0.4	0°	32	32	32	32	32	
10°-20°	27.5	3.3	2.5	5°	65	49	34	38	34	7
20°-30°	113.5	13.5	10.3	15°	200	91	37	72	104	65
30°-40°	225.1	26.8	20.5	25°	1089	167	108	86	145	487
40°-50°	255.0	30.4	23.2	35°	1703	244	41	112	174	1059
50°-60°	173.9	20.7	15.8	45°	1952	147	12	44	45	1491
60°-70°	37.2	4.4	3.4	55°	1335	31	2	2	3	1224
70°-80°	1.2	0.1	0.1	65°	251	4	1	1	1	315
80°-90°	0.6	0.1	0.1	75°	1	1	1	1	1	2
90°-100°	0.0	0.0	0.0	85°	0	1	1	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°	145.6	17.4	13.2	165°	0	0	0	0	0	0
0°-40°	370.7	44.2	33.7	175°	0	0	0	0	0	0
0°-60°	799.6	95.3	72.7	180°	0	0	0	0	0	0
0°-90°	838.7	100.0	76.2							
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°	838.7	100.0	76.2							



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**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	22.5°	45°	67.5°	90°	112.5°	135°
0°	32	32	32	32	32	32	32	32	32	32	32
2.5°	42	42	42	42	42	41	38	36	36	35	34
5°	65	66	66	65	65	61	49	38	34	33	38
7.5°	91	92	92	92	92	89	64	44	37	35	37
10°	98	99	99	98	98	90	81	47	34	38	44
12.5°	134	135	138	137	135	111	86	49	36	44	53
15°	200	202	202	201	200	164	91	51	37	54	72
17.5°	244	245	243	241	241	218	105	53	43	69	112
20°	462	450	441	429	404	268	132	56	54	105	107
22.5°	814	823	809	781	741	427	148	62	89	103	92
25°	1089	1091	1078	1057	1022	651	167	70	108	70	86
27.5°	1261	1272	1252	1234	1197	855	182	145	59	59	93
30°	1405	1405	1389	1354	1322	1033	218	76	47	62	114
32.5°	1523	1523	1507	1487	1450	1169	262	55	42	68	128
35°	1703	1694	1686	1656	1614	1286	244	43	41	69	112
37.5°	1821	1812	1792	1749	1697	1330	204	33	34	54	96
40°	1901	1891	1848	1799	1741	1359	178	27	26	46	83
42.5°	1941	1933	1891	1827	1756	1358	161	23	19	39	68
45°	1952	1934	1889	1812	1733	1327	147	20	12	28	44
47.5°	1934	1920	1865	1787	1699	1277	102	15	7	15	21
50°	1855	1842	1798	1720	1633	1175	72	10	3	5	7
52.5°	1635	1618	1574	1506	1439	999	49	8	2	3	4
55°	1335	1325	1310	1282	1251	729	31	5	2	2	2
57.5°	1156	1163	1143	1113	1062	495	20	2	1	1	1
60°	885	864	849	814	764	327	14	2	1	1	1
62.5°	534	523	502	487	457	183	8	2	1	1	1
65°	251	247	238	225	200	71	4	1	1	1	1
67.5°	61	57	57	55	47	12	3	1	1	1	1
70°	7	7	7	6	6	3	1	1	1	1	1
72.5°	3	3	3	3	4	2	1	1	1	1	1
75°	1	1	1	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1	1	1
80°	1	1	1	1	1	1	1	1	1	1	0
82.5°	1	1	1	1	1	1	1	1	1	1	0
85°	0	0	0	0	0	1	1	1	1	1	0
87.5°	0	0	0	0	0	0	1	1	1	1	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°	32	32
2.5°	33	30
5°	39	34
7.5°	42	40
10°	50	50
12.5°	63	66
15°	101	104
17.5°	116	112
20°	107	103
22.5°	105	106
25°	120	145
27.5°	147	166
30°	172	189
32.5°	171	184
35°	163	174
37.5°	152	173
40°	119	130
42.5°	97	115
45°	49	45
47.5°	23	21
50°	9	10
52.5°	5	5
55°	3	3
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°	1	1
80°	1	1
82.5°	1	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)