

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: H22004

Luminaire Tested: **H47ICT-498**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: H22004  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H47ICT-498  
Description: HALO 6" RECESSED DOWNLIGHT  
SLOPE CEILING UNIT - BAFFLE  
Light Source: Q90PAR38SP 90W 1450 LUMENS  
PAR38 SPOT  
GAIN 311  
Ballast/Driver: -

**Summary**

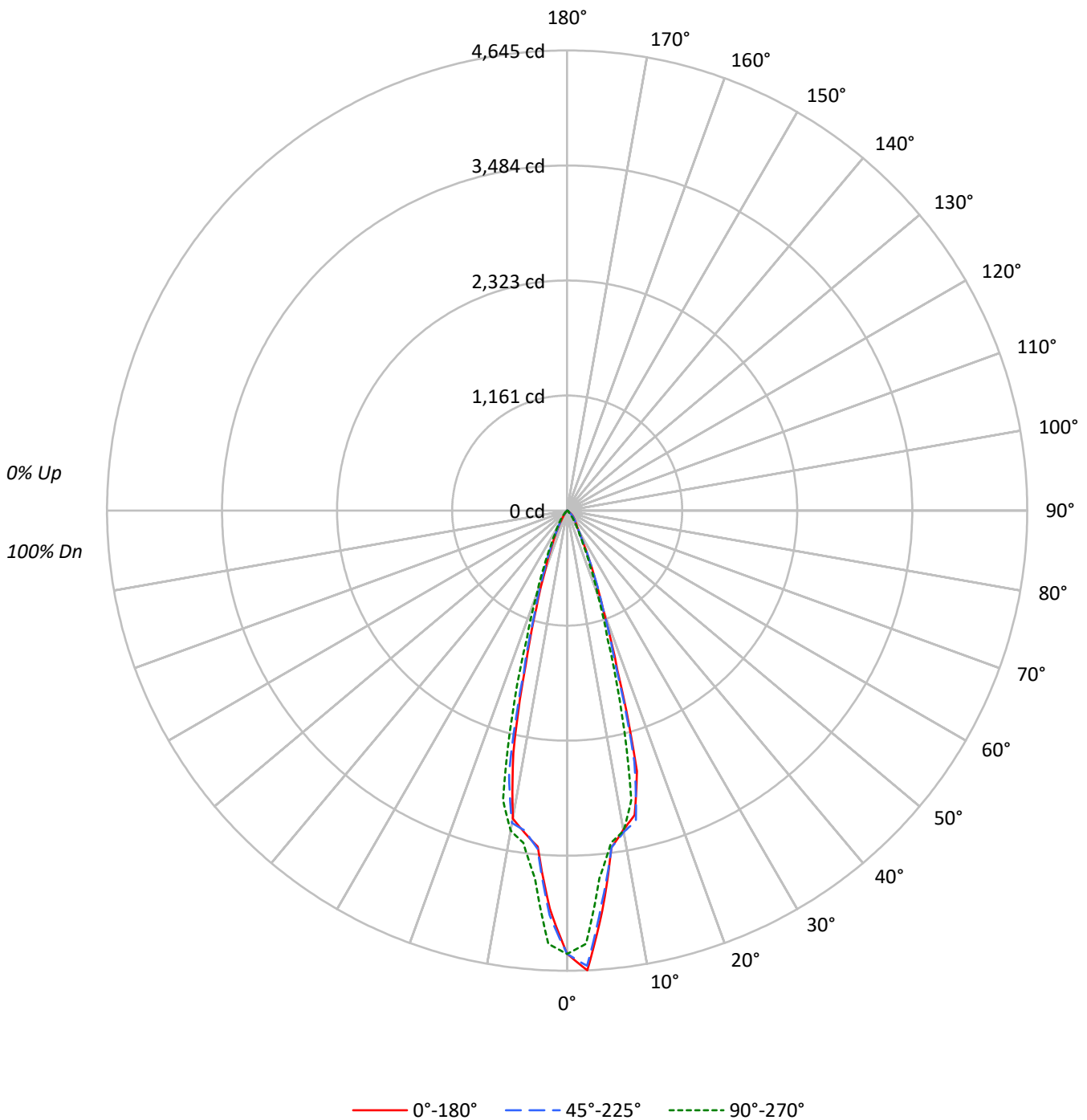
Lumens per Lamp: 1450 (1 lamp)  
Luminaire Lumens: 1222.1 lumens  
Efficiency: 84.3%  
Efficacy: 13.6 lumens/watt  
Spacing Criteria (0/90/45): 0.5 / 0.5 / 0.46  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

Input Watts (W): 90  
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	100	100	100	100	98	98	98	98	94	94	94	90	90	90	86	86	86	84
1	97	95	93	92	95	93	91	90	90	88	87	87	86	85	84	83	82	81
2	93	90	87	85	91	88	86	84	86	84	82	83	82	80	81	80	79	78
3	90	86	82	80	88	84	81	79	82	80	78	80	78	77	79	77	76	74
4	87	82	78	75	85	81	78	75	79	76	74	78	75	73	76	74	73	71
5	84	78	75	72	83	78	74	72	76	73	71	75	72	70	74	72	70	69
6	81	75	71	69	80	75	71	68	74	70	68	72	70	68	71	69	67	66
7	78	72	69	66	77	72	68	66	71	68	65	70	67	65	69	67	65	64
8	76	70	66	63	75	69	66	63	69	65	63	68	65	63	67	65	63	62
9	74	68	64	61	73	67	64	61	66	63	61	66	63	61	65	63	61	60
10	71	65	62	59	71	65	62	59	64	61	59	64	61	59	63	61	59	58

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	342.3	28.0	23.6
10°-20°	565.6	46.3	39.0
20°-30°	199.3	16.3	13.7
30°-40°	71.7	5.9	4.9
40°-50°	30.8	2.5	2.1
50°-60°	9.2	0.8	0.6
60°-70°	2.5	0.2	0.2
70°-80°	0.6	0.1	0.0
80°-90°	0.1	0.0	0.0
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	1107.2	90.6	76.4
0°-40°	1178.9	96.5	81.3
0°-60°	1218.9	99.7	84.1
0°-90°	1222.1	100.0	84.3
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°	1222.1	100.0	84.3

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	4475	4475	4475	4475	4475	
5°	4055	3988	3725	3425	3406	357
15°	2722	2624	2141	1692	1616	652
25°	474	473	397	324	295	235
35°	153	151	113	70	53	98
45°	82	68	26	12	10	62
55°	19	15	8	3	2	20
65°	6	5	2	0	0	6
75°	2	1	0	0	0	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4475	4475	4475	4475	4475	4475	4475	4475	4475
2.5°	4645	4652	4599	4510	4376	4230	4086	4040	4020
5°	4055	4108	3988	3904	3725	3569	3425	3396	3406
7.5°	3429	3437	3430	3396	3382	3333	3258	3294	3280
10°	3271	3239	3293	3264	3281	3233	3203	3204	3158
12.5°	3147	3134	3208	3141	2990	2856	2708	2605	2508
15°	2722	2631	2624	2447	2141	1931	1692	1681	1616
17.5°	1677	1664	1601	1512	1351	1260	1091	1043	1028
20°	1057	1056	1059	1001	899	843	736	678	674
22.5°	707	705	725	681	609	568	503	459	448
25°	474	471	473	435	397	366	324	297	295
27.5°	304	313	308	295	274	249	223	201	194
30°	225	234	232	221	203	178	155	137	131
32.5°	181	189	183	169	151	128	107	96	88
35°	153	159	151	135	113	88	70	58	53
37.5°	131	133	125	108	80	62	45	35	31
40°	111	114	103	84	57	40	28	23	21
42.5°	98	100	86	65	38	26	19	15	14
45°	82	83	68	45	26	18	12	12	10
47.5°	66	67	49	29	20	13	10	9	8
50°	49	46	33	22	15	10	7	6	6
52.5°	32	30	22	16	10	8	5	3	3
55°	19	18	15	10	8	6	3	2	2
57.5°	12	12	10	8	6	4	2	1	1
60°	9	9	7	6	5	2	1	1	0
62.5°	7	7	6	5	3	2	1	0	0
65°	6	6	5	3	2	1	0	0	0
67.5°	4	4	3	2	1	0	0	0	0
70°	3	3	3	1	1	0	0	0	0
72.5°	2	2	2	1	0	0	0	0	0
75°	2	2	1	1	0	0	0	0	0
77.5°	1	1	1	0	0	0	0	0	0
80°	1	1	1	0	0	0	0	0	0
82.5°	0	1	0	0	0	0	0	0	0
85°	0	1	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)