

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: 267P144

Luminaire Tested: **H278ICAT- 405SC**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 267P144  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H278ICAT- 405SC  
Description: HALO RECESSED WITH WHITE TRIM AND CLEAR SPECULAR REFLECTOR IN  
H27 HOUSING  
Light Source: ONE COMPACT FLUORESCENT ECO TWIST LAMP  
CF28T/827 28 WATTS  
Ballast/Driver: -

**Summary**

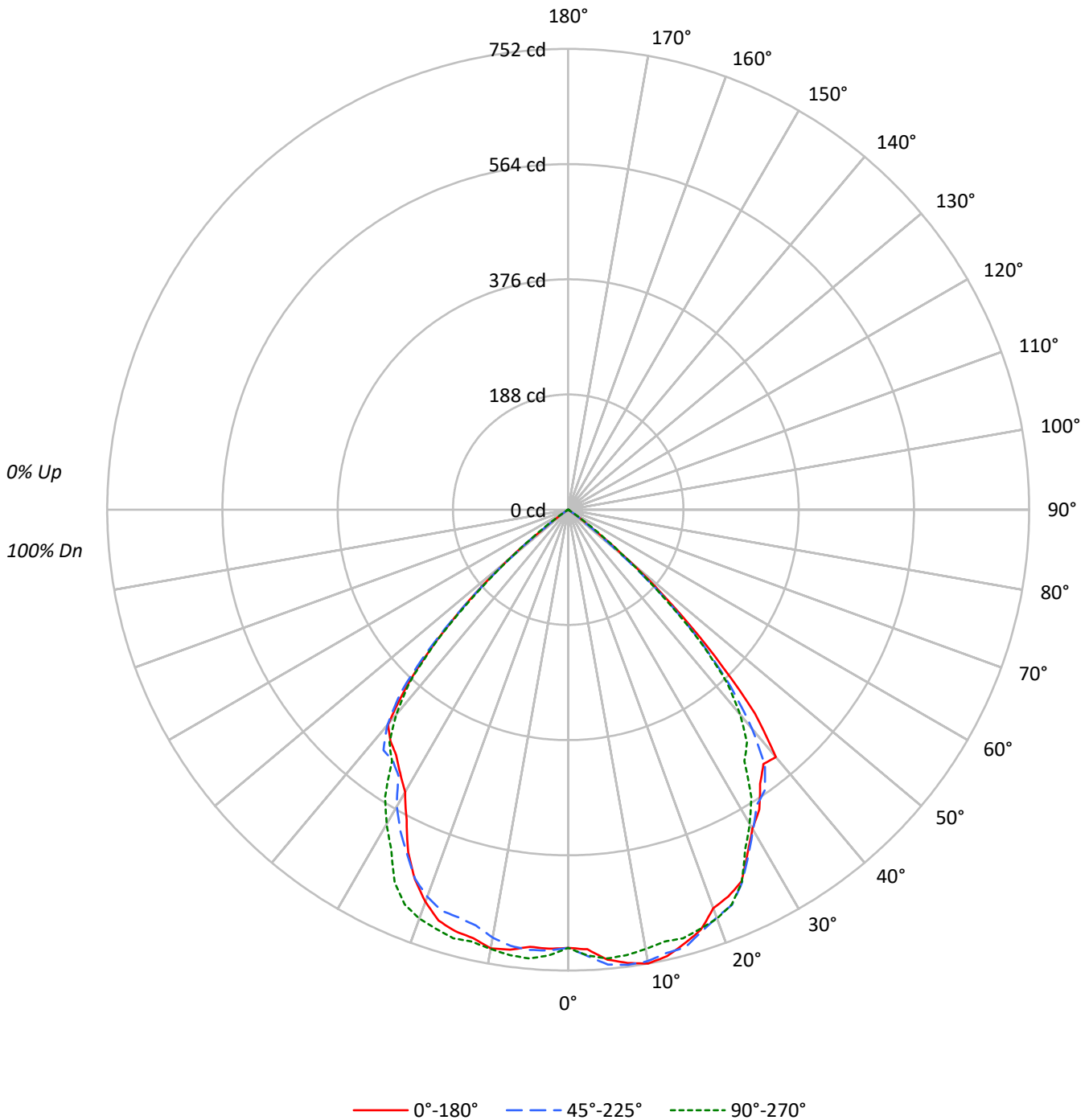
Lumens per Lamp: 1675 (1 lamp)  
Luminaire Lumens: 1158.8 lumens  
Efficiency: 69.2%  
Efficacy: 40.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
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	50	30	10	0	
RCR																						
0	82	82	82	82	80	80	80	80	77	77	77	74	74	74	71	71	71	69				
1	78	76	74	72	76	74	73	71	71	70	69	69	68	67	67	66	65	64				
2	73	70	66	64	72	68	65	63	66	64	62	64	62	60	62	60	59	58				
3	69	64	60	57	67	63	59	56	61	58	55	59	57	54	58	55	54	52				
4	65	59	54	51	63	58	54	50	56	53	50	55	52	49	53	51	49	47				
5	61	54	49	46	59	53	49	45	52	48	45	51	47	45	49	47	44	43				
6	57	50	45	41	56	49	44	41	48	44	41	47	43	41	46	43	40	39				
7	53	46	41	38	52	45	41	37	44	40	37	43	40	37	43	39	37	36				
8	50	42	38	34	49	42	37	34	41	37	34	40	37	34	40	36	34	33				
9	47	39	35	32	46	39	35	31	38	34	31	38	34	31	37	34	31	30				
10	44	37	32	29	44	36	32	29	36	32	29	35	31	29	35	31	29	28				

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

	0°	90°	180°
0°	46647	46647	46647
5°	48266	48135	46891
10°	49818	48228	48162
15°	49508	48900	48090
20°	48044	49294	47280
25°	48158	48230	44415
30°	45275	44597	40077
35°	43486	39902	38946
40°	44882	37132	38921
45°	31185	28141	28325
50°	13093	12687	13195
55°	796	2502	682
60°	261	261	261
65°	154	154	154
70°	191	191	191
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	69.8	6.0	4.2
10°-20°	202.4	17.5	12.1
20°-30°	297.3	25.7	17.8
30°-40°	327.2	28.2	19.5
40°-50°	233.3	20.1	13.9
50°-60°	27.3	2.4	1.6
60°-70°	1.1	0.1	0.1
70°-80°	0.4	0.0	0.0
80°-90°	0.0	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°	569.5	49.1	34.0
0°-40°	896.6	77.4	53.5
0°-60°	1157.2	99.9	69.1
0°-90°	1158.8	100.0	69.2
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°	1158.8	100.0	69.2

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	715	715	715	715	715	
5°	737	745	735	721	716	71
15°	733	739	724	689	712	206
25°	669	671	670	621	617	303
35°	546	559	501	499	489	346
45°	338	309	305	318	307	257
55°	7	12	22	11	6	27
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	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°	715	715	715	715	715	715	715	715	715
2.5°	718	724	729	730	728	724	720	718	717
5°	737	736	745	745	735	727	721	718	716
7.5°	746	747	749	750	733	721	718	719	724
10°	752	750	748	744	728	711	709	719	727
12.5°	746	744	741	737	722	702	695	713	716
15°	733	734	739	738	724	702	689	697	712
17.5°	719	719	722	726	717	696	686	694	703
20°	692	699	708	712	710	686	672	676	681
22.5°	683	685	698	700	697	672	652	654	653
25°	669	668	671	677	670	653	621	615	617
27.5°	633	638	636	640	625	614	592	580	571
30°	601	604	603	596	592	577	559	545	532
32.5°	580	580	572	563	556	539	515	510	510
35°	546	558	559	537	501	512	499	491	489
37.5°	523	531	527	493	479	495	495	481	476
40°	527	512	467	442	436	444	459	460	457
42.5°	451	428	393	387	384	393	403	398	389
45°	338	329	309	303	305	312	318	312	307
47.5°	231	227	214	205	210	217	219	220	219
50°	129	123	105	117	125	118	124	128	130
52.5°	47	34	37	54	63	57	48	46	46
55°	7	8	12	20	22	17	11	8	6
57.5°	3	3	2	3	4	3	3	3	3
60°	2	2	2	2	2	2	2	2	2
62.5°	1	2	1	1	1	1	1	1	1
65°	1	1	1	1	1	1	1	1	1
67.5°	1	1	1	1	1	1	1	1	1
70°	1	1	1	1	1	1	1	1	1
72.5°	1	1	1	1	1	1	1	1	1
75°	0	1	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0
85°	0	0	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

(END OF REPORT)