

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: H26052

Luminaire Tested: **H2513**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-46-04  
Report Number: H26052  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H2513  
Description: HALO 8" DIA SURFACE MOUNT  
SPECULAR REFLECTOR WITH LINEAR PLASTIC LENS  
LENS LINES IN LINE WITH LAMPS  
SMOOTH SIDE OF LENS DOWN  
Light Source: (2) F13TT 13 WATTS 900 LUMENS EACH  
TWIN TUBE COMPACT FLUORESCENT  
Ballast/Driver: -

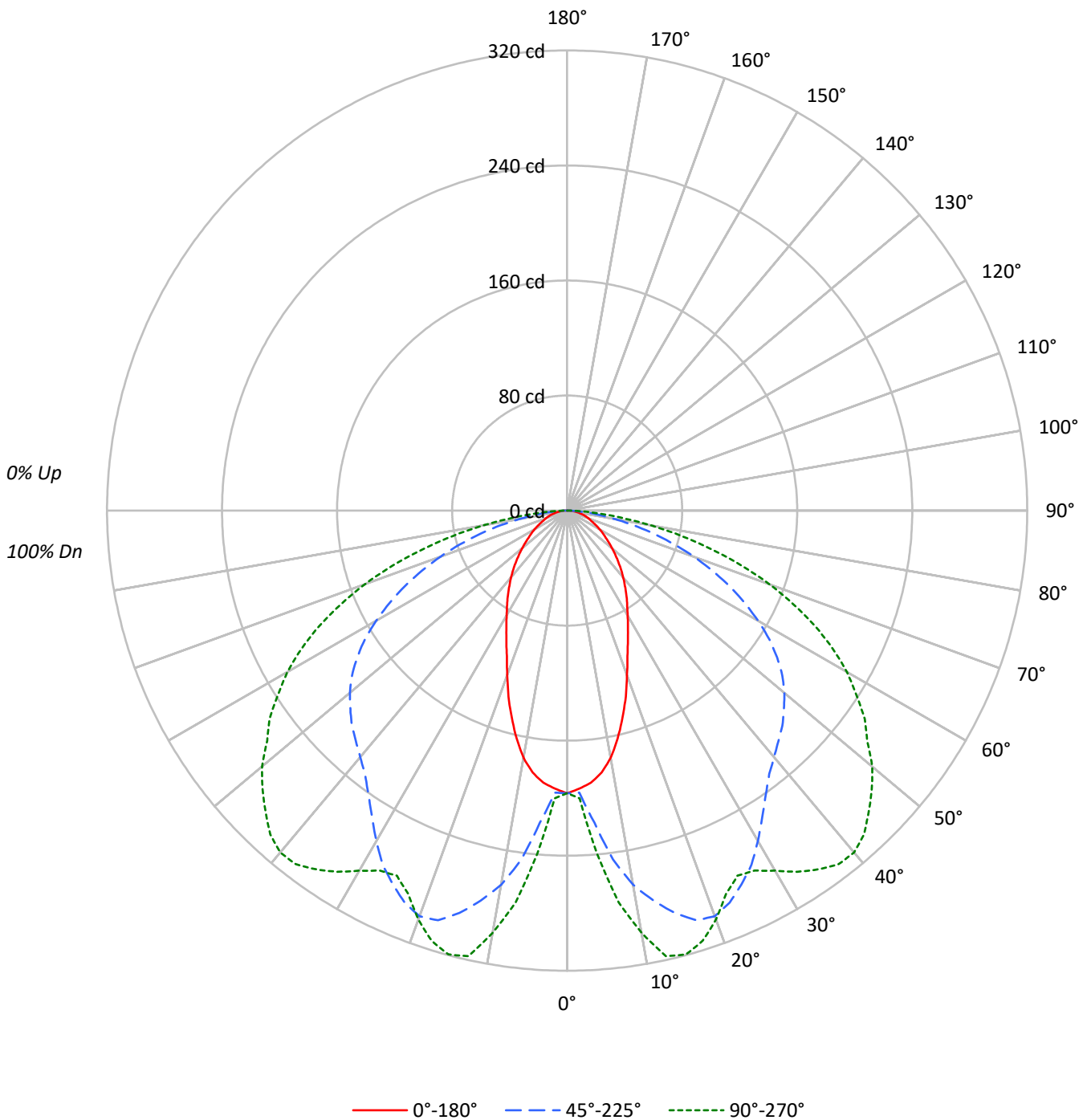
**Summary**

Lumens per Lamp: 900 (2 lamps)  
Luminaire Lumens: 842.9 lumens  
Efficiency: 46.8%  
Efficacy: 24.8 lumens/watt  
Spacing Criteria (0/90/45): 0.75 / 2.07 / 1.76  
Luminous Opening: (L: 0 ' x W: -0.67 ' x H: 0 '  
CIE Type: Direct

Input Watts (W): 34  
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			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	56	56	56	56	54	54	54	54	52	52	52	50	50	50	48	48	48	47		
1	51	49	46	45	50	47	46	44	45	44	42	44	42	41	42	41	40	39		
2	46	42	39	36	45	41	38	36	40	37	35	38	36	34	37	35	33	32		
3	42	37	33	30	41	36	32	29	35	31	29	33	31	28	32	30	28	27		
4	38	32	28	25	37	32	28	25	31	27	24	29	26	24	28	26	24	23		
5	35	29	25	21	34	28	24	21	27	24	21	26	23	21	25	23	20	19		
6	32	26	22	18	31	25	21	18	25	21	18	24	21	18	23	20	18	17		
7	30	23	19	16	29	23	19	16	22	19	16	22	18	16	21	18	16	15		
8	28	21	17	14	27	21	17	14	20	17	14	20	16	14	19	16	14	13		
9	26	19	16	13	25	19	15	13	19	15	13	18	15	13	18	15	13	12		
10	24	18	14	12	24	18	14	12	17	14	12	17	14	11	16	13	11	11		

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

	0°	45°	90°
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:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	21.8	2.6	1.2
10°-20°	74.9	8.9	4.2
20°-30°	114.2	13.5	6.3
30°-40°	142.4	16.9	7.9
40°-50°	156.9	18.6	8.7
50°-60°	144.8	17.2	8.0
60°-70°	111.2	13.2	6.2
70°-80°	62.0	7.4	3.4
80°-90°	14.7	1.7	0.8
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°	210.9	25.0	11.7
0°-40°	353.4	41.9	19.6
0°-60°	655.1	77.7	36.4
0°-90°	842.9	100.0	46.8
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°	842.9	100.0	46.8

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	197	197	197	197	197	
5°	190	200	218	233	240	18
15°	149	232	290	316	320	41
25°	100	229	287	279	280	46
35°	72	200	241	281	305	45
45°	50	154	212	277	297	39
55°	33	99	178	229	253	30
65°	20	53	125	168	190	20
75°	12	23	62	91	104	12
85°	4	5	12	18	20	4
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°
0°	196.6	196.6	196.6	196.6	196.6
2.5°	193.5	194.9	196.3	199.1	200.3
5°	190.0	199.9	217.9	232.6	239.6
7.5°	183.7	208.2	244.7	265.5	274.8
10°	174.6	218.2	264.2	288.1	298.1
12.5°	162.3	226.6	277.9	306.3	317.4
15°	148.9	231.8	289.7	315.6	319.5
17.5°	135.6	234.6	298.7	312.3	313.6
20°	121.7	234.8	300.2	304.4	302.6
22.5°	109.5	232.5	295.1	292.7	288.6
25°	99.8	229.1	286.8	278.7	280.2
27.5°	91.5	223.8	277.6	271.7	282.2
30°	84.1	217.1	265.3	270.6	289.1
32.5°	77.6	209.1	252.5	275.9	297.8
35°	71.9	199.6	240.8	280.8	304.6
37.5°	66.0	189.6	230.8	283.5	310.0
40°	60.6	178.5	223.8	285.5	310.4
42.5°	55.4	166.6	217.4	283.4	305.5
45°	50.1	153.5	211.7	277.3	296.6
47.5°	45.4	140.2	204.5	268.5	287.3
50°	40.9	126.4	197.2	256.1	277.0
52.5°	36.6	112.6	188.7	242.6	263.0
55°	32.7	99.0	178.3	228.7	252.7
57.5°	29.3	86.0	166.8	214.4	238.4
60°	26.3	73.9	153.3	200.1	224.7
62.5°	23.1	62.8	139.3	183.9	208.4
65°	20.2	52.8	124.7	167.6	190.4
67.5°	17.7	43.8	109.4	150.4	170.3
70°	15.8	36.0	93.8	131.7	149.7
72.5°	13.8	28.9	78.0	111.9	127.2
75°	11.8	23.0	62.5	90.6	103.7
77.5°	9.7	17.4	47.4	69.8	81.4
80°	7.7	12.7	33.2	50.2	59.1
82.5°	5.8	8.3	21.8	32.1	37.5
85°	4.1	5.2	12.1	17.6	20.5
87.5°	2.7	2.6	4.9	6.8	8.1
90°	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)