

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: H26037

Luminaire Tested: **H2581**

Issue Date: 3/3/2020



Test Information

Test Method: LM-46-04
Report Number: H26037
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: H2581
Description: HALO KEYSTONE WALL MOUNT SCONCE
FLUORESCENT VERSION
Light Source: (1) 13W/QT4 13 WATTS 900 LUMENS
10mm QUAD TUBE COMPACT FLUORESCENT
G23 D-2 BASE
Ballast/Driver: -

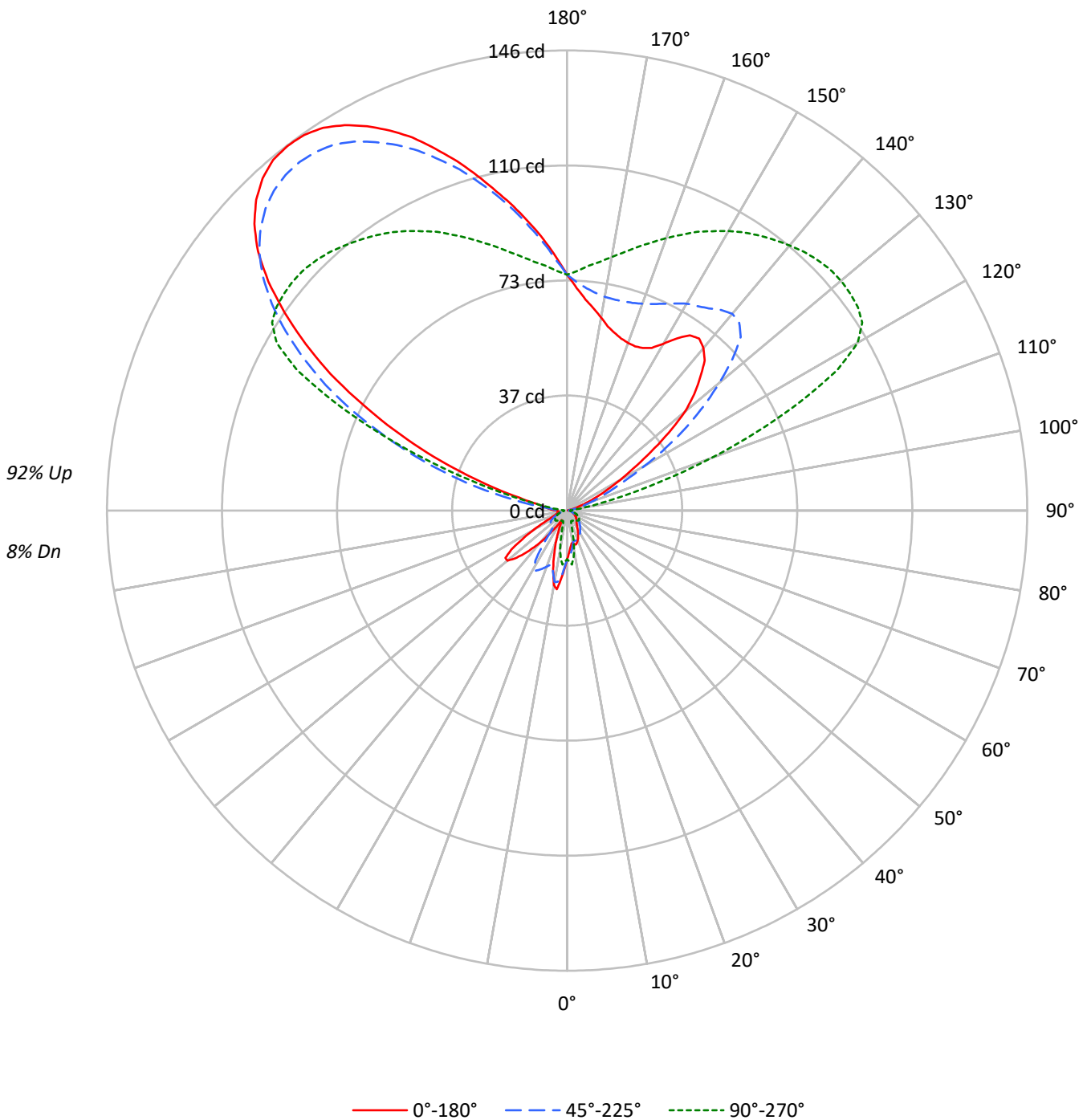
Summary

Lumens per Lamp: 900 (1 lamp)
Luminaire Lumens: 408.4 lumens
Efficiency: 45.4%
Efficacy: 22.7 lumens/watt
Spacing Criteria (0/90/45): 0.76 / 0.47 / 1.07
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Indirect

Input Watts (W): 18
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

TEST NUMBER: H26037
CATALOG NUMBER: H2581

Luminous Intensity Polar Plot





TEST NUMBER: H26037
 CATALOG NUMBER: H2581

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	44	44	44	44	38	38	38	38	27	27	27	17	17	17	8	8	8	4	4	4	4
1	40	38	37	35	35	33	32	31	24	23	22	15	14	14	7	7	7	3	3	3	3
2	36	33	31	28	31	29	27	25	21	19	18	13	12	12	6	6	5	2	2	2	2
3	33	29	26	24	29	25	23	21	18	17	15	11	11	10	5	5	5	2	2	2	2
4	30	26	22	20	26	22	20	17	16	14	13	10	9	8	5	4	4	2	2	2	2
5	28	23	19	17	24	20	17	15	14	12	11	9	8	7	4	4	3	1	1	1	1
6	25	20	17	14	22	18	15	13	13	11	9	8	7	6	4	3	3	1	1	1	1
7	23	18	15	13	20	16	13	11	11	10	8	7	6	5	3	3	3	1	1	1	1
8	22	16	13	11	19	14	12	10	10	9	7	7	6	5	3	3	2	1	1	1	1
9	20	15	12	10	17	13	10	8	9	8	6	6	5	4	3	2	2	1	1	1	1
10	19	14	10	8	16	12	9	8	9	7	6	6	4	4	3	2	2	1	1	1	1

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°			



TEST NUMBER: H26037
 CATALOG NUMBER: H2581

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	1.6	0.4	0.2
10°-20°	3.4	0.8	0.4
20°-30°	4.2	1.0	0.5
30°-40°	4.3	1.1	0.5
40°-50°	5.1	1.3	0.6
50°-60°	5.6	1.4	0.6
60°-70°	3.7	0.9	0.4
70°-80°	2.4	0.6	0.3
80°-90°	1.7	0.4	0.2
90°-100°	3.0	0.7	0.3
100°-110°	18.7	4.6	2.1
110°-120°	50.6	12.4	5.6
120°-130°	75.4	18.5	8.4
130°-140°	82.1	20.1	9.1
140°-150°	68.0	16.7	7.6
150°-160°	45.9	11.2	5.1
160°-170°	24.9	6.1	2.8
170°-180°	7.5	1.8	0.8
0°-30°	9.2	2.3	1.0
0°-40°	13.5	3.3	1.5
0°-60°	24.3	5.9	2.7
0°-90°	32.1	7.9	3.6
90°-120°	72.4	17.7	8.0
90°-150°	298.0	73.0	33.1
90°-180°	376.0	92.1	41.8
0°-180°	408.4	100.0	45.4

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	15	15	15	15	15	
5°	12	14	17	21	22	1
15°	11	10	6	18	17	3
25°	8	9	4	21	5	4
35°	5	7	4	14	7	3
45°	4	6	4	6	20	3
55°	3	4	5	6	22	3
65°	2	3	4	4	6	2
75°	2	2	2	2	3	2
85°	1	1	1	2	3	1
90°	1	1	1	2	3	1
95°	0	0	2	4	5	0
105°	1	4	20	31	16	2
115°	10	16	82	75	61	11
125°	32	46	113	114	109	29
135°	60	78	112	135	140	46
145°	68	78	106	139	146	42
155°	57	72	98	128	133	27
165°	58	69	87	108	110	17
175°	67	71	78	85	86	6
180°	75	75	75	75	75	



TEST NUMBER: H26037
 CATALOG NUMBER: H2581

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
2.5°	13.5	13.7	14.2	15.2	16.3	17.2	17.8	18.2	18.3
5°	11.8	12.2	13.5	15.2	17.2	19.2	20.9	21.8	21.7
7.5°	10.6	11.0	12.2	13.4	15.2	18.4	22.8	25.2	25.2
10°	10.3	10.1	10.6	11.5	12.8	16.2	23.0	25.1	24.0
12.5°	11.0	10.6	9.7	10.3	9.2	12.5	20.4	21.8	20.3
15°	11.1	10.8	9.9	8.9	6.1	8.9	18.0	19.3	16.7
17.5°	10.5	10.5	9.9	8.2	4.2	6.9	18.1	17.1	13.2
20°	9.9	9.9	9.6	7.8	3.6	6.4	18.9	14.6	10.2
22.5°	9.1	9.4	9.3	7.6	3.6	6.0	19.8	12.5	7.4
25°	8.2	8.6	8.9	7.2	3.6	5.6	20.7	11.0	5.1
27.5°	7.3	7.7	8.5	6.9	3.7	5.3	21.5	10.1	3.6
30°	6.5	7.0	8.2	6.6	3.7	4.9	20.9	9.4	3.5
32.5°	5.9	6.4	7.6	6.4	3.8	4.2	18.8	8.3	5.0
35°	5.3	6.0	7.2	6.2	3.8	4.1	13.6	7.6	7.1
37.5°	4.9	5.5	6.8	6.2	3.9	4.2	8.9	6.8	9.8
40°	4.6	5.1	6.4	6.1	4.1	4.4	6.7	7.6	13.1
42.5°	4.4	4.8	5.9	6.0	4.3	4.5	6.5	8.8	16.2
45°	4.2	4.5	5.6	5.8	4.5	4.6	6.5	10.0	19.5
47.5°	4.0	4.2	5.1	5.6	4.7	4.7	6.7	11.0	22.4
50°	3.8	4.0	4.7	5.2	4.8	4.8	6.8	11.6	24.7
52.5°	3.6	3.7	4.4	4.8	4.8	4.8	6.7	11.7	24.7
55°	3.3	3.4	4.0	4.5	4.6	4.8	6.4	11.0	21.6
57.5°	3.1	3.2	3.6	4.1	4.5	4.7	6.0	9.7	16.8
60°	2.9	2.9	3.3	3.8	4.2	4.6	5.4	7.8	12.4
62.5°	2.6	2.7	3.0	3.4	4.0	4.4	4.8	6.2	8.7
65°	2.4	2.4	2.7	3.1	3.6	4.2	4.1	5.1	6.1
67.5°	2.2	2.2	2.4	2.8	3.3	4.0	3.5	4.2	4.7
70°	2.0	2.0	2.1	2.5	3.0	3.7	2.9	3.7	4.0
72.5°	1.7	1.7	1.9	2.2	2.6	3.3	2.4	3.3	3.5
75°	1.6	1.5	1.6	1.9	2.3	2.7	2.1	2.9	3.1
77.5°	1.4	1.4	1.4	1.7	2.0	2.1	2.3	2.6	2.8
80°	1.3	1.2	1.2	1.5	1.7	1.7	2.7	2.3	2.6
82.5°	1.2	1.1	1.1	1.3	1.4	1.4	2.6	2.2	2.6
85°	1.1	1.1	1.0	1.2	1.2	1.2	2.4	2.3	2.8
87.5°	1.1	1.0	1.0	1.0	1.0	1.0	2.4	2.4	3.0
90°	1.1	1.0	0.9	1.0	0.9	1.1	2.5	2.6	3.3
92.5°	0.5	0.5	0.6	1.0	1.2	1.6	3.7	4.3	4.7
95°	0.4	0.4	0.5	0.8	1.7	2.2	4.0	4.9	5.4
97.5°	0.3	0.4	0.6	0.8	2.7	5.8	6.6	5.8	6.4
100°	0.4	0.6	1.0	1.5	5.5	15.9	12.8	7.2	7.7
102.5°	0.6	0.9	2.5	2.5	10.8	28.7	21.1	10.8	9.8
105°	1.3	2.1	4.1	3.9	20.1	43.5	31.0	20.5	15.6
107.5°	3.0	4.1	6.0	6.0	32.5	58.6	41.4	33.3	24.7
110°	4.9	6.2	8.5	8.5	48.4	73.6	52.5	47.5	35.9



TEST NUMBER: H26037
 CATALOG NUMBER: H2581

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	7.1	9.2	11.6	11.7	65.1	87.0	63.7	60.6	48.0
115°	10.5	13.1	15.6	16.3	81.5	98.6	75.4	73.9	60.6
117.5°	14.6	17.4	21.0	22.7	96.6	107.6	86.4	88.1	73.3
120°	19.3	22.5	28.4	30.9	106.4	114.2	96.4	100.6	86.7
122.5°	24.9	29.9	37.4	40.4	111.0	119.1	105.9	112.0	98.3
125°	32.4	38.6	46.2	51.9	112.6	122.5	114.4	121.5	109.4
127.5°	40.6	46.9	54.8	64.6	113.2	124.9	121.6	128.9	119.5
130°	48.8	54.9	62.9	77.2	113.4	126.4	127.5	135.2	128.1
132.5°	54.7	62.6	71.2	86.5	113.2	127.4	132.0	140.1	134.6
135°	59.7	69.8	77.9	92.5	112.4	127.7	135.4	143.6	139.5
137.5°	64.6	74.6	80.8	95.0	111.3	127.8	137.7	146.1	143.0
140°	67.3	77.0	81.5	95.3	109.8	127.2	139.0	147.6	145.2
142.5°	68.8	75.8	80.2	95.1	108.2	126.4	139.4	148.1	145.8
145°	67.9	72.5	78.3	93.9	106.5	124.9	138.9	147.6	145.5
147.5°	64.8	68.5	76.9	92.1	104.6	123.0	137.7	146.0	144.0
150°	61.1	64.9	75.8	90.3	102.4	120.5	135.2	143.1	141.2
152.5°	58.2	62.9	74.1	88.2	99.9	117.7	131.8	139.7	137.5
155°	56.9	62.1	72.4	86.2	97.6	114.5	128.0	135.6	133.0
157.5°	56.4	61.8	70.9	84.1	94.7	110.8	123.6	130.3	128.1
160°	56.6	61.2	69.8	82.2	92.0	106.7	118.5	124.7	122.1
162.5°	57.2	61.1	69.1	80.4	89.2	102.5	113.5	118.3	116.2
165°	58.3	61.5	68.7	78.8	86.6	98.3	107.8	111.9	110.0
167.5°	59.8	62.6	68.6	77.2	84.0	94.1	102.3	105.4	103.7
170°	62.2	64.1	68.9	76.1	81.7	89.9	96.6	98.9	98.0
172.5°	64.6	66.1	69.6	75.1	79.6	85.7	90.7	92.4	92.1
175°	67.2	68.3	70.8	74.6	78.0	81.9	85.2	86.1	86.4
177.5°	70.6	70.9	72.4	74.4	76.1	78.1	79.5	80.1	80.5
180°	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8

(END OF REPORT)