

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: H24027

Luminaire Tested: **H1-F-114**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number: H24027
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: H1-F-114
Description: HALO 8" SQ. RECESSED DOWNLIGHT
WHITE REFLECTOR - 4 CELL SPECULAR REFLECTOR
Light Source: (2) 18WQT 18 WATTS 1250 LUMENS EACH
13mm QUAD TUBE COMPACT FLUORESCENT
Ballast/Driver: -

Summary

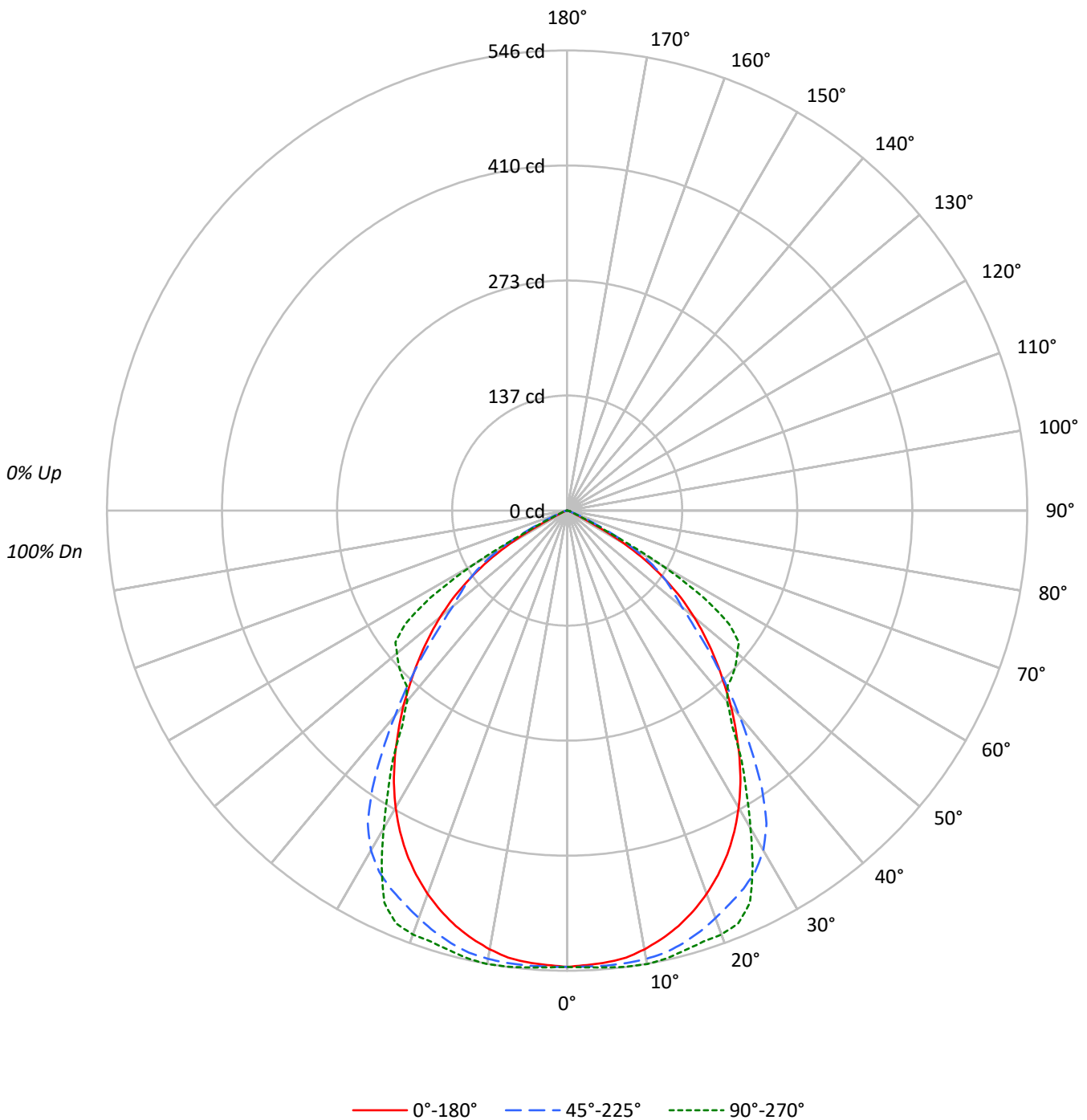
Lumens per Lamp: 1250 (2 lamps)
Luminaire Lumens: 1042.0 lumens
Efficiency: 41.7%
Efficacy: 21.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.18 / 1.21
Luminous Opening: Rectangular (W 0.48' x L: 0.48' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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	50	50	50	50	48	48	48	48	46	46	46	44	44	44	43	43	43	42
1	47	45	44	43	46	44	43	42	42	42	41	41	40	39	39	39	38	37
2	43	41	38	37	42	40	38	36	39	37	35	37	36	35	36	35	34	33
3	40	37	34	32	39	36	34	32	35	33	31	34	32	31	33	31	30	29
4	37	33	30	28	36	33	30	28	32	29	27	31	29	27	30	28	27	26
5	35	30	27	25	34	30	27	25	29	26	24	28	26	24	27	25	24	23
6	32	27	24	22	32	27	24	22	26	24	22	26	23	22	25	23	21	21
7	30	25	22	20	29	25	22	20	24	22	20	24	21	19	23	21	19	19
8	28	23	20	18	28	23	20	18	22	20	18	22	19	18	21	19	18	17
9	26	21	18	16	26	21	18	16	21	18	16	20	18	16	20	18	16	15
10	25	20	17	15	24	20	17	15	19	17	15	19	16	15	19	16	15	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25293	25293	25293
5°	25235	25413	25521
10°	25076	25622	25921
15°	24681	25707	26123
20°	24063	25584	26608
25°	23197	25516	26465
30°	21967	25123	23472
35°	20315	22996	20560
40°	18424	19406	18009
45°	16405	15923	18321
50°	14311	12886	19151
55°	11509	11501	19125
60°	7279	8755	12128
65°	1315	3725	2122
70°	724	943	970
75°	542	560	686
80°	430	457	538
85°	375	375	429



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	51.6	5.0	2.1
10°-20°	149.1	14.3	6.0
20°-30°	223.6	21.5	8.9
30°-40°	235.8	22.6	9.4
40°-50°	198.9	19.1	8.0
50°-60°	144.6	13.9	5.8
60°-70°	33.8	3.2	1.4
70°-80°	3.7	0.4	0.1
80°-90°	0.8	0.1	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°	424.3	40.7	17.0
0°-40°	660.1	63.4	26.4
0°-60°	1003.7	96.3	40.1
0°-90°	1042.0	100.0	41.7
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°	1042.0	100.0	41.7

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	541	541	541	541	541	
5°	538	540	542	543	544	51
15°	510	519	532	538	540	144
25°	450	469	495	515	513	206
35°	356	389	403	367	360	222
45°	248	276	241	247	277	191
55°	141	141	141	198	235	125
65°	12	18	34	25	19	24
75°	3	3	3	4	4	3
85°	1	1	1	1	1	1
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°	541.4	541.4	541.4	541.4	541.4
2.5°	539.7	541.0	541.5	541.7	542.5
5°	538.1	539.7	541.9	543.0	544.2
7.5°	535.1	537.0	541.4	545.0	545.8
10°	528.6	533.3	540.1	544.8	546.4
12.5°	520.3	527.3	537.4	542.2	544.4
15°	510.3	518.9	531.5	538.2	540.1
17.5°	498.1	509.2	523.9	533.0	536.3
20°	484.0	497.5	514.6	530.1	535.2
22.5°	467.8	484.3	504.8	526.3	530.4
25°	450.0	469.3	495.0	515.3	513.4
27.5°	429.5	451.9	483.2	488.4	476.6
30°	407.2	432.9	465.7	447.4	435.1
32.5°	382.7	411.7	440.2	405.3	395.7
35°	356.2	389.2	403.2	366.9	360.5
37.5°	328.7	363.5	359.9	329.3	321.3
40°	302.1	336.6	318.2	289.6	295.3
42.5°	273.9	306.9	278.1	262.6	281.9
45°	248.3	276.5	241.0	247.2	277.3
47.5°	222.3	244.1	205.1	238.4	271.2
50°	196.9	209.8	177.3	228.2	263.5
52.5°	170.4	175.9	158.1	215.3	256.7
55°	141.3	141.2	141.2	197.8	234.8
57.5°	111.0	108.3	120.5	166.3	192.3
60°	77.9	73.8	93.7	119.9	129.8
62.5°	37.4	41.7	62.6	62.8	50.9
65°	11.9	17.5	33.7	24.8	19.2
67.5°	7.4	7.8	15.5	10.2	10.4
70°	5.3	5.4	6.9	6.7	7.1
72.5°	3.9	3.9	4.1	4.7	5.2
75°	3.0	3.0	3.1	3.5	3.8
77.5°	2.2	2.2	2.3	2.6	2.8
80°	1.6	1.6	1.7	1.8	2.0
82.5°	1.1	1.1	1.1	1.2	1.3
85°	0.7	0.7	0.7	0.8	0.8
87.5°	0.3	0.3	0.3	0.4	0.4
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)