

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: P295444

Luminaire Tested: **HLB3S05940EMW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P295444  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1901-077-10)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HLB3S05940EMW  
Description: 3 IN SQUARE HALO BLADE - 4000K  
Light Source: -  
Ballast/Driver: -

**Summary**

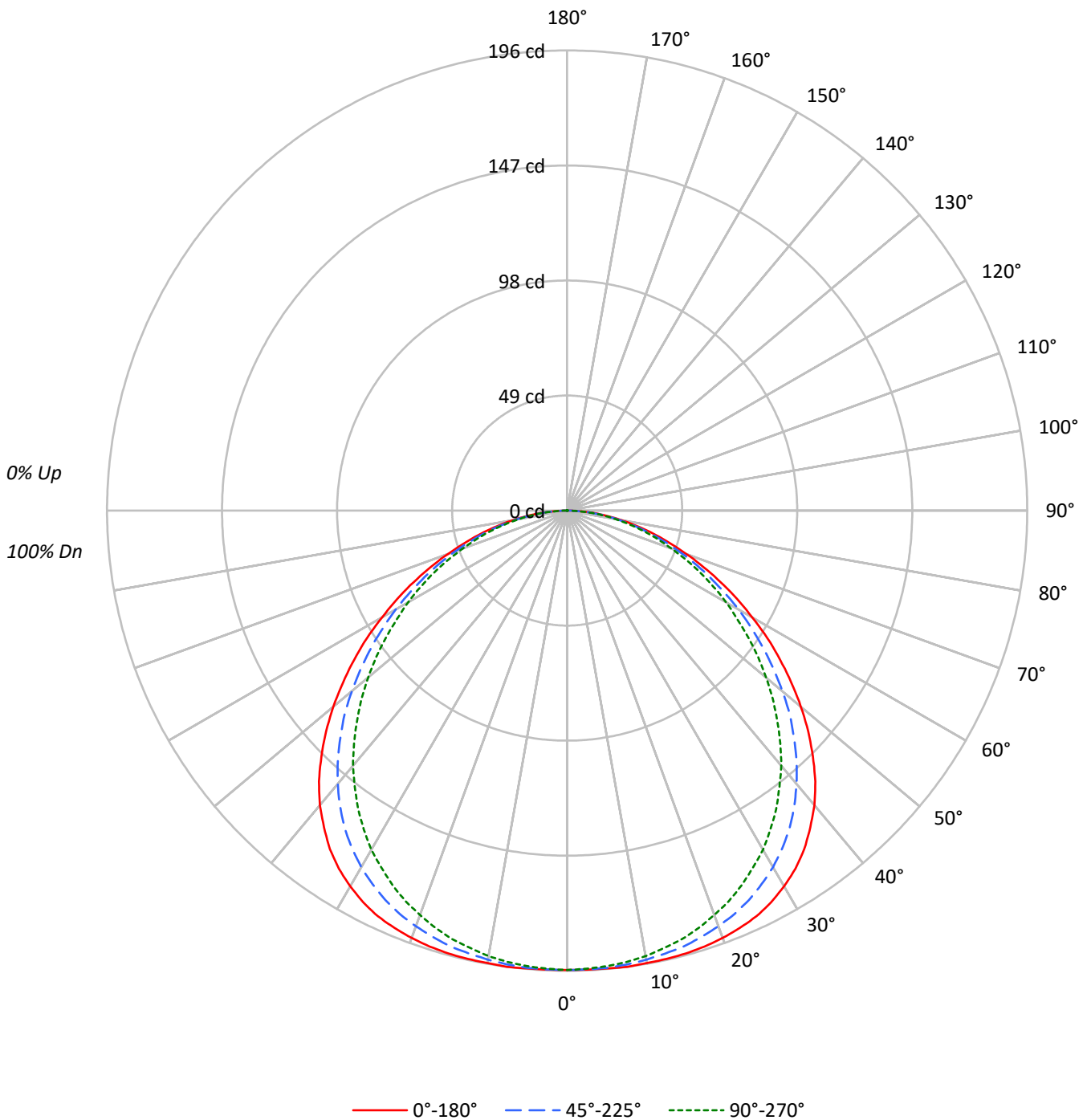
Lumens per Lamp: N/A  
Luminaire Lumens: 573.0 lumens  
Efficiency: N/A  
Efficacy: 63.7 lumens/watt  
Spacing Criteria (0/90/45): 1.39 / 1.26 / 1.4  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 9  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84				84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	70				70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59				59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50				50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44				44
6	70	57	48	41	68	56	47	41	54	47	41	52	46	41	51	45	40	38				38
7	65	51	43	37	63	51	42	36	49	42	36	48	41	36	46	40	36	34				34
8	61	47	38	33	59	46	38	32	45	38	32	44	37	32	43	36	32	30				30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27				27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	24				24

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

	0°	45°	90°
0°	42913	42913	42913
5°	43099	43033	42879
10°	43575	43241	42907
15°	44336	43632	42906
20°	45201	43964	42774
25°	46140	44301	42583
30°	46792	44412	42234
35°	47141	44223	41546
40°	46888	43510	40619
45°	45896	42361	39229
50°	44348	40834	37764
55°	42321	38957	35975
60°	39909	36971	34339
65°	37462	34712	32481
70°	34621	32441	30262
75°	32195	30331	28467
80°	29423	27781	26392
85°	26921	24908	23902



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.6	3.2
10°-20°	54.2	9.5
20°-30°	84.3	14.7
30°-40°	103.1	18.0
40°-50°	105.4	18.4
50°-60°	91.3	15.9
60°-70°	66.5	11.6
70°-80°	37.9	6.6
80°-90°	11.2	2.0
90°-100°	0.0	0.0
100°-110°	0.1	0.0
110°-120°	0.1	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	157.2	27.4
0°-40°	260.3	45.4
0°-60°	457.1	79.8
0°-90°	572.7	100.0
90°-120°	0.2	0.0
90°-150°	0.2	0.0
90°-180°	0.0	0.0
0°-180°	573.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	196	196	196	196	196	
5°	196	196	196	195	195	19
15°	195	194	192	190	189	55
25°	191	188	183	178	176	88
35°	176	173	165	157	155	110
45°	148	144	137	129	126	114
55°	111	108	102	96	94	99
65°	72	71	67	64	63	72
75°	38	37	36	34	34	40
85°	11	10	10	10	10	11
90°	0	0	0	0	0	1
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°	195.7	195.7	195.7	195.7	195.7
2.5°	195.7	195.6	195.6	195.3	195.3
5°	195.8	195.6	195.5	194.9	194.8
7.5°	196.0	195.5	195.0	194.2	193.9
10°	195.7	195.2	194.2	192.9	192.7
12.5°	195.6	194.7	193.2	191.2	190.8
15°	195.3	194.2	192.2	189.6	189.0
17.5°	194.7	193.1	190.4	187.0	186.4
20°	193.7	191.9	188.4	184.4	183.3
22.5°	192.4	190.3	186.1	181.4	180.0
25°	190.7	188.2	183.1	177.5	176.0
27.5°	188.1	185.4	179.4	173.4	171.4
30°	184.8	181.8	175.4	168.5	166.8
32.5°	180.9	177.7	170.5	163.2	161.1
35°	176.1	172.7	165.2	157.4	155.2
37.5°	170.1	166.7	158.9	150.9	148.5
40°	163.8	160.0	152.0	144.0	141.9
42.5°	156.5	152.6	144.6	136.6	134.4
45°	148.0	144.3	136.6	129.0	126.5
47.5°	139.3	135.9	128.6	121.1	118.8
50°	130.0	126.7	119.7	113.0	110.7
52.5°	120.4	117.4	110.8	104.4	102.5
55°	110.7	107.6	101.9	96.3	94.1
57.5°	101.2	98.3	93.0	87.8	85.9
60°	91.0	88.8	84.3	79.8	78.3
62.5°	81.6	79.7	75.4	71.5	70.3
65°	72.2	70.6	66.9	63.5	62.6
67.5°	62.9	61.8	58.7	55.6	54.9
70°	54.0	53.2	50.6	48.3	47.2
72.5°	45.7	44.9	42.9	40.8	40.4
75°	38.0	37.2	35.8	33.9	33.6
77.5°	30.3	29.9	28.6	27.4	27.1
80°	23.3	23.0	22.0	21.2	20.9
82.5°	16.7	16.4	15.9	15.3	15.0
85°	10.7	10.4	9.9	9.5	9.5
87.5°	4.8	4.7	4.4	4.2	4.3
90°	0.0	0.0	0.0	0.0	0.0
92.5°	0.1	0.0	0.1	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	0.1
100°	0.0	0.0	0.1	0.1	0.1
102.5°	0.0	0.0	0.1	0.1	0.1
105°	0.0	0.1	0.1	0.1	0.1
107.5°	0.0	0.0	0.0	0.1	0.1
110°	0.0	0.1	0.1	0.1	0.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.1	0.1	0.1
115°	0.0	0.0	0.0	0.1	0.1
117.5°	0.0	0.1	0.1	0.1	0.1
120°	0.0	0.0	0.1	0.1	0.1
122.5°	0.0	0.0	0.1	0.0	0.1
125°	0.0	0.0	0.1	0.0	0.1
127.5°	0.0	0.0	0.1	0.0	0.1
130°	0.0	0.0	0.1	0.0	0.1
132.5°	0.0	0.0	0.1	0.0	0.1
135°	0.0	0.0	0.0	0.0	0.1
137.5°	0.0	0.0	0.0	0.0	0.1
140°	0.0	0.0	0.0	0.1	0.1
142.5°	0.0	0.0	0.0	0.0	0.1
145°	0.0	0.0	0.0	0.1	0.1
147.5°	0.0	0.0	0.0	0.1	0.1
150°	0.0	0.0	0.0	0.1	0.1
152.5°	0.0	0.0	0.0	0.1	0.1
155°	0.0	0.0	0.0	0.1	0.1
157.5°	0.0	0.0	0.0	0.1	0.1
160°	0.0	0.0	0.0	0.1	0.1
162.5°	0.0	0.0	0.0	0.1	0.1
165°	0.0	0.0	0.0	0.1	0.1
167.5°	0.0	0.0	0.0	0.1	0.0
170°	0.0	0.0	0.0	0.0	0.1
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	0.1	0.1
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)