

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: HALO

Report Number: P626430

Luminaire Tested: HLBC4069FSD2W1EMW-3000K

Issue Date: 11/17/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P626430  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2210273A001)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/17/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: HLBC4069FSD2W1EMW-3000K  
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT  
Light Source: (1) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

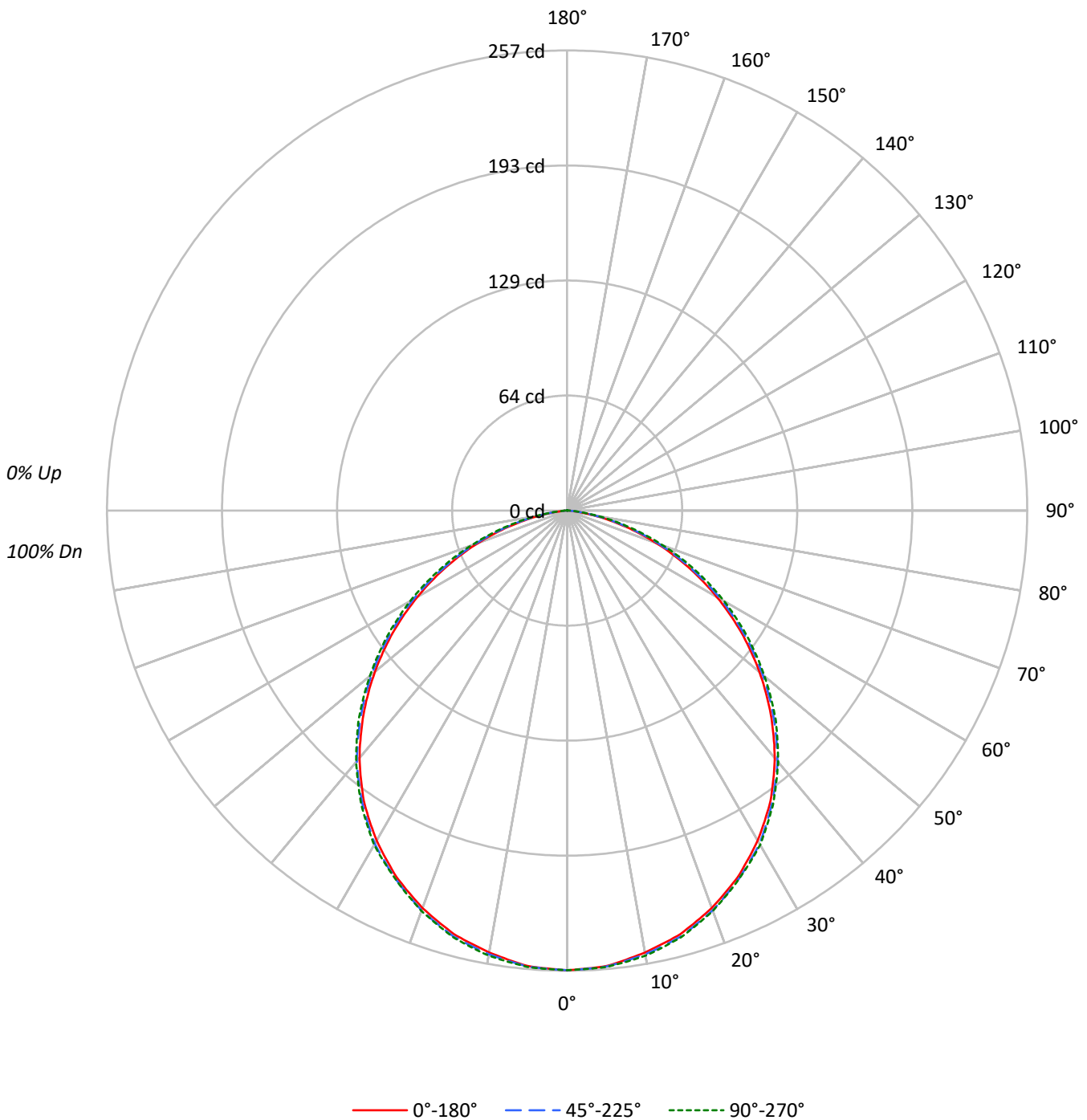
Lumens per Lamp: N/A  
Luminaire Lumens: 675.1 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.25 / 1.34  
Luminous Opening: Circular (Dia: 0.33m x H: 0m)  
CIE Type: Direct

Input Watts (W): 8.5  
Input Voltage (V): 120  
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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	105	101	97	107	103	99	96	98	96	93		95	92	90		91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77		83	79	76		80	77	74	72
3	91	81	73	67	89	80	72	66	77	70	65		74	69	64		71	67	63	61
4	84	72	64	57	81	71	63	57	68	61	56		66	60	55		64	59	54	52
5	77	65	56	49	75	63	55	49	61	54	48		59	53	48		58	52	47	45
6	71	58	49	43	69	57	49	43	55	48	43		54	47	42		52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38		49	42	37		48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34		45	38	34		44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30		41	35	30		40	35	30	28
10	54	41	33	28	53	40	33	28	39	32	28		38	32	28		38	32	27	26

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

	0°	45°	90°
0°	2947	2947	2947
5°	2943	2946	2948
10°	2922	2933	2943
15°	2910	2925	2931
20°	2886	2903	2907
25°	2859	2875	2877
30°	2821	2849	2859
35°	2775	2796	2809
40°	2704	2740	2747
45°	2613	2648	2673
50°	2504	2547	2570
55°	2378	2422	2460
60°	2218	2276	2326
65°	2024	2081	2149
70°	1769	1836	1914
75°	1420	1508	1602
80°	893	1018	1144
85°	408	461	514

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2673 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.3	3.6
10°-20°	69.3	10.3
20°-30°	104.5	15.5
30°-40°	124.6	18.5
40°-50°	125.5	18.6
50°-60°	108.0	16.0
60°-70°	75.9	11.2
70°-80°	36.3	5.4
80°-90°	6.1	0.9
90°-100°	0.1	0.0
100°-110°	0.1	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.1	0.0
140°-150°	0.1	0.0
150°-160°	0.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	198.0	29.3
0°-40°	322.6	47.8
0°-60°	556.1	82.4
0°-90°	674.4	99.9
90°-120°	0.3	0.0
90°-150°	0.5	0.1
90°-180°	1.0	0.1
0°-180°	675.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	257	257	257	257	257	
5°	255	256	256	255	256	24
15°	245	246	246	245	247	69
25°	226	227	227	227	227	104
35°	198	199	200	200	200	124
45°	161	163	163	163	165	124
55°	119	120	121	121	123	106
65°	74	76	77	77	79	74
75°	32	33	34	34	36	34
85°	3	3	4	4	4	5
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°	256.7	256.7	256.7	256.7	256.7
5°	255.3	256.1	255.6	254.7	255.8
10°	250.6	252.3	251.6	250.7	252.4
15°	244.8	245.9	246.1	245.4	246.6
20°	236.2	237.5	237.6	236.6	237.9
25°	225.7	227.1	226.9	226.6	227.1
30°	212.8	214.4	214.9	214.1	215.6
35°	198.0	199.3	199.5	199.7	200.4
40°	180.4	181.8	182.8	181.7	183.3
45°	160.9	162.7	163.1	162.9	164.6
50°	140.2	141.7	142.6	142.7	143.9
55°	118.8	120.1	121.0	121.1	122.9
60°	96.6	98.2	99.1	99.5	101.3
65°	74.5	75.7	76.6	77.1	79.1
70°	52.7	53.7	54.7	55.3	57.0
75°	32.0	32.8	34.0	34.5	36.1
80°	13.5	14.4	15.4	16.1	17.3
85°	3.1	3.3	3.5	3.7	3.9
90°	0.1	0.1	0.1	0.2	0.3
95°	0.1	0.1	0.1	0.1	0.1
100°	0.1	0.1	0.1	0.1	0.0
105°	0.1	0.1	0.1	0.1	0.0
110°	0.1	0.1	0.1	0.1	0.0
115°	0.1	0.1	0.1	0.1	0.1
120°	0.1	0.1	0.1	0.1	0.1
125°	0.1	0.1	0.1	0.1	0.1
130°	0.1	0.1	0.1	0.1	0.1
135°	0.1	0.1	0.1	0.1	0.1
140°	0.1	0.1	0.1	0.1	0.1
145°	0.1	0.1	0.1	0.1	0.1
150°	0.1	0.1	0.1	0.1	0.2
155°	0.1	0.1	0.1	0.1	0.2
160°	0.1	0.1	0.1	0.1	0.2
165°	0.2	0.2	0.2	0.2	0.2
170°	0.2	0.2	0.2	0.2	0.2
175°	0.2	0.2	0.2	0.2	0.2
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)