

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: P626433

Luminaire Tested: HLBC4069FSD2W1EMW-5000K

Issue Date: 11/17/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: P626433  
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-5000K  
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT  
Light Source: (1) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

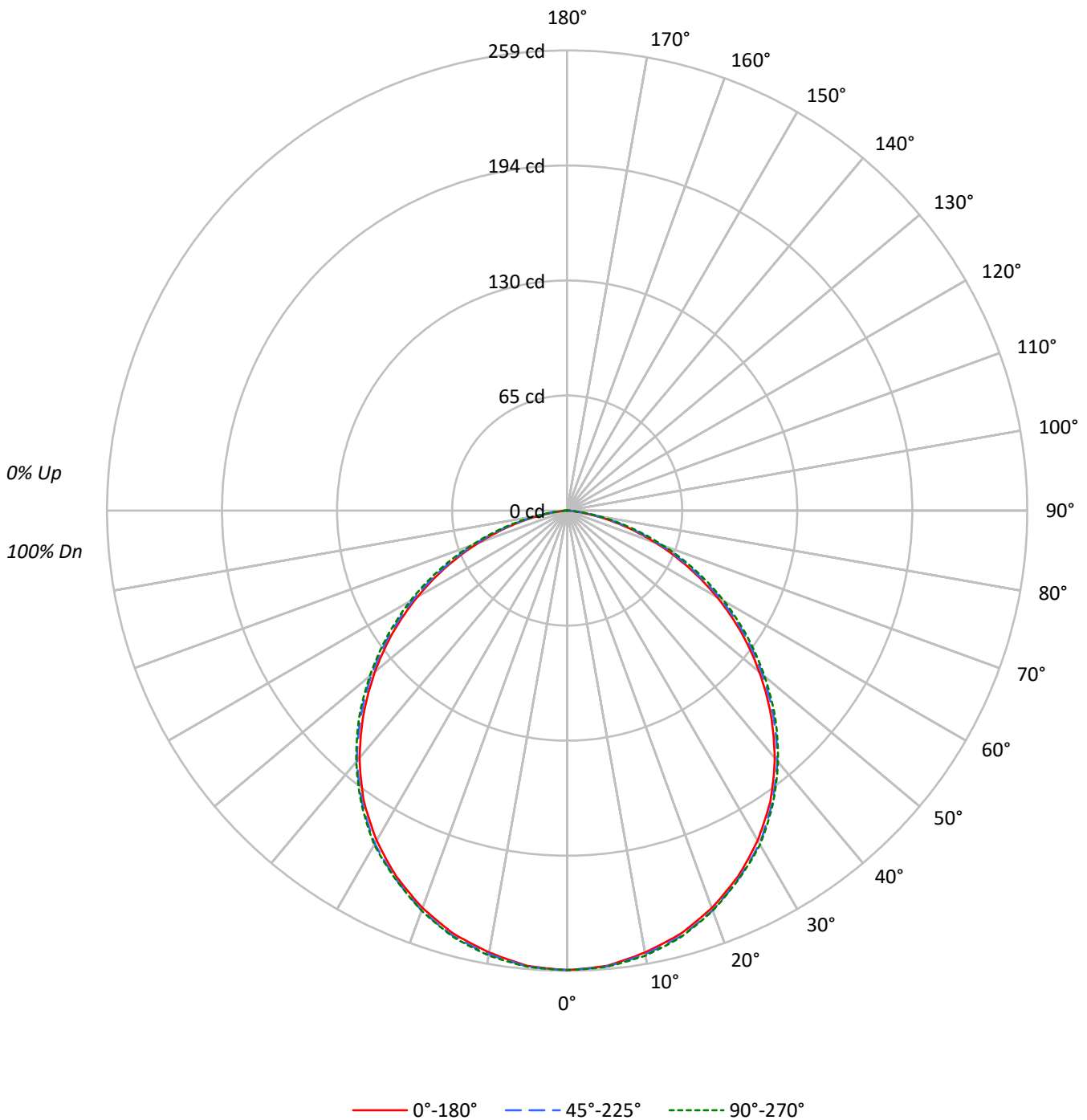
Lumens per Lamp: N/A  
Luminaire Lumens: 680.0 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.25 / 1.34  
Luminous Opening: Circular (Dia: 0.33m x H: 0m)  
CIE Type: Direct

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				
RC	80					70					30					10				
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°	2969	2969	2969
5°	2964	2968	2970
10°	2944	2956	2965
15°	2931	2947	2953
20°	2908	2925	2928
25°	2880	2895	2899
30°	2843	2870	2880
35°	2796	2817	2829
40°	2725	2759	2768
45°	2632	2668	2692
50°	2522	2565	2590
55°	2396	2440	2478
60°	2234	2292	2345
65°	2038	2097	2165
70°	1779	1850	1927
75°	1429	1522	1615
80°	899	1025	1151
85°	408	461	527

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2692 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.4	3.6
10°-20°	69.8	10.3
20°-30°	105.3	15.5
30°-40°	125.5	18.5
40°-50°	126.5	18.6
50°-60°	108.8	16.0
60°-70°	76.4	11.2
70°-80°	36.5	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°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	199.5	29.3
0°-40°	325.0	47.8
0°-60°	560.2	82.4
0°-90°	679.4	99.9
90°-120°	0.3	0.0
90°-150°	0.5	0.1
90°-180°	1.0	0.1
0°-180°	680.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	259	259	259	259	259	
5°	257	258	258	257	258	24
15°	247	248	248	247	248	70
25°	227	229	228	228	229	105
35°	200	201	201	201	202	125
45°	162	164	164	164	166	125
55°	120	121	122	122	124	107
65°	75	76	77	78	80	74
75°	32	33	34	35	36	35
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°	258.6	258.6	258.6	258.6	258.6
5°	257.2	258.0	257.5	256.6	257.7
10°	252.5	254.1	253.5	252.6	254.3
15°	246.6	247.7	247.9	247.2	248.4
20°	238.0	239.2	239.4	238.3	239.6
25°	227.3	228.8	228.5	228.3	228.8
30°	214.4	216.0	216.5	215.7	217.2
35°	199.5	200.7	201.0	201.2	201.8
40°	181.8	183.2	184.1	183.1	184.7
45°	162.1	163.9	164.3	164.2	165.8
50°	141.2	142.8	143.6	143.7	145.0
55°	119.7	121.0	121.9	122.0	123.8
60°	97.3	98.9	99.8	100.2	102.1
65°	75.0	76.3	77.2	77.7	79.7
70°	53.0	54.1	55.1	55.8	57.4
75°	32.2	33.0	34.3	34.7	36.4
80°	13.6	14.5	15.5	16.2	17.4
85°	3.1	3.3	3.5	3.7	4.0
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	0.2	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)