

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: P626432

Luminaire Tested: HLBC4069FSD2W1EMW-4000K

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626432
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-4000K
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT
Light Source: (1) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

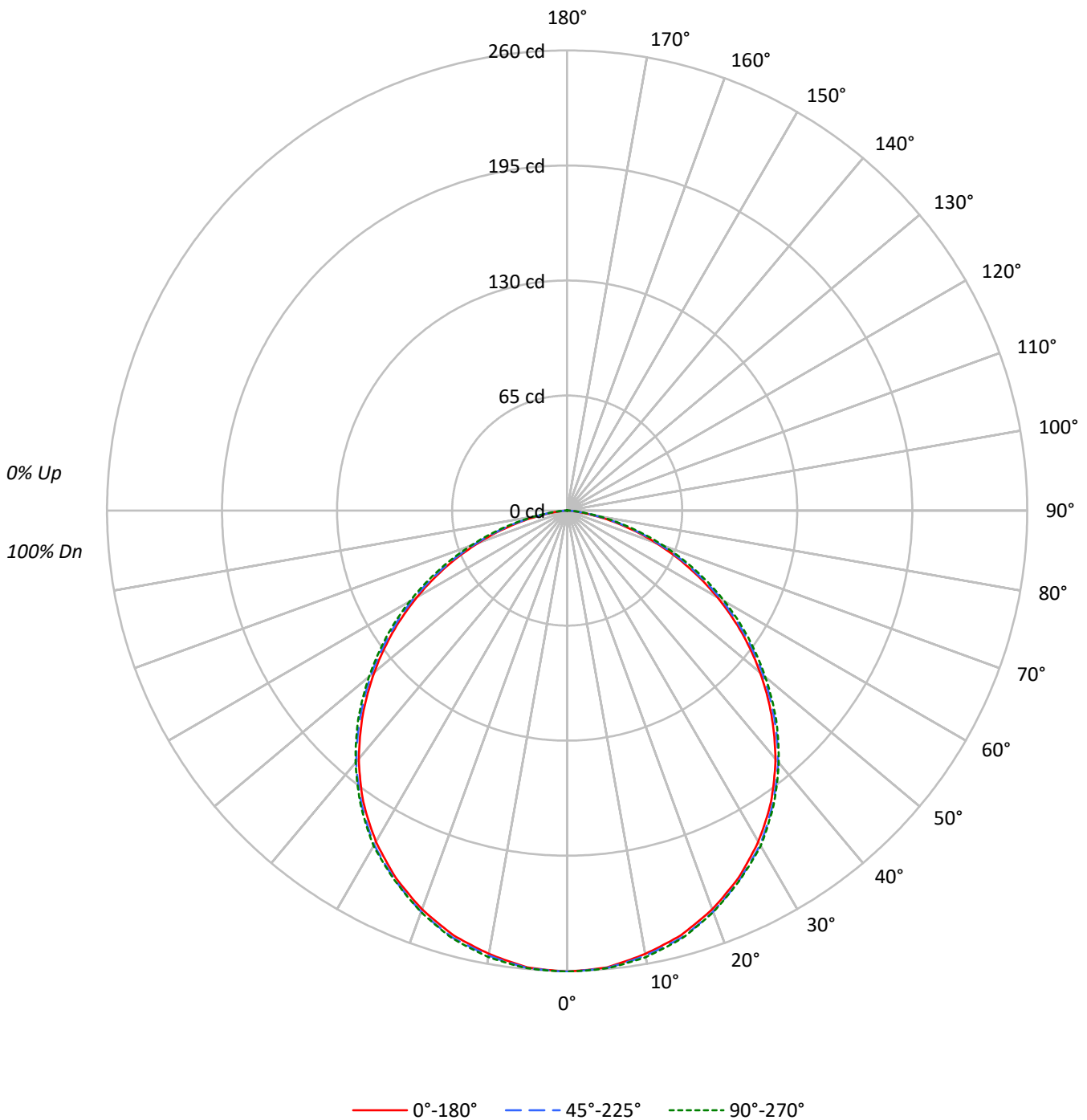
Lumens per Lamp: N/A
Luminaire Lumens: 685.0 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.25 / 1.34
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	105	101	97	107	103	99	96	98	96	93	95	92	90	91	89	87
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74
3	91	81	73	67	89	80	72	66	77	70	65	74	69	64	71	67	63
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54
5	77	65	56	49	75	63	55	49	61	54	48	59	53	48	58	52	47
6	71	58	49	43	69	57	49	43	55	48	43	54	47	42	52	46	42
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2991	2991	2991
5°	2986	2990	2992
10°	2965	2977	2987
15°	2953	2969	2975
20°	2929	2947	2950
25°	2901	2916	2920
30°	2864	2892	2901
35°	2816	2838	2850
40°	2744	2780	2788
45°	2652	2687	2712
50°	2542	2585	2610
55°	2414	2458	2498
60°	2253	2310	2361
65°	2054	2114	2182
70°	1793	1863	1940
75°	1442	1531	1624
80°	906	1032	1157
85°	408	461	527

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2712 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.6	3.6
10°-20°	70.3	10.3
20°-30°	106.0	15.5
30°-40°	126.4	18.5
40°-50°	127.4	18.6
50°-60°	109.6	16.0
60°-70°	77.0	11.2
70°-80°	36.8	5.4
80°-90°	6.2	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°	201.0	29.3
0°-40°	327.4	47.8
0°-60°	564.4	82.4
0°-90°	684.4	99.9
90°-120°	0.3	0.0
90°-150°	0.5	0.1
90°-180°	1.0	0.1
0°-180°	685.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	260	260	260	260	260	
5°	259	260	259	258	260	25
15°	248	250	250	249	250	70
25°	229	230	230	230	230	105
35°	201	202	202	203	203	125
45°	163	165	166	165	167	126
55°	121	122	123	123	125	108
65°	76	77	78	78	80	75
75°	32	33	34	35	37	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°	260.5	260.5	260.5	260.5	260.5
5°	259.1	259.9	259.4	258.5	259.6
10°	254.3	256.0	255.3	254.4	256.2
15°	248.4	249.5	249.8	249.0	250.3
20°	239.7	241.0	241.2	240.1	241.4
25°	229.0	230.5	230.2	230.0	230.5
30°	216.0	217.6	218.1	217.3	218.8
35°	200.9	202.2	202.5	202.7	203.3
40°	183.1	184.5	185.5	184.4	186.0
45°	163.3	165.1	165.5	165.4	167.0
50°	142.3	143.8	144.7	144.8	146.1
55°	120.6	121.9	122.8	122.9	124.8
60°	98.1	99.6	100.6	100.9	102.8
65°	75.6	76.8	77.8	78.2	80.3
70°	53.4	54.5	55.5	56.2	57.8
75°	32.5	33.3	34.5	35.0	36.6
80°	13.7	14.6	15.6	16.3	17.5
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°	0.2	0.2	0.2	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)