

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: P626440

Luminaire Tested: HLBC4LS9FSD2W1EMWR-4000K-600lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626440
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2209627A001)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 11/17/2022
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLBC4LS9FSD2W1EMWR-4000K-600lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

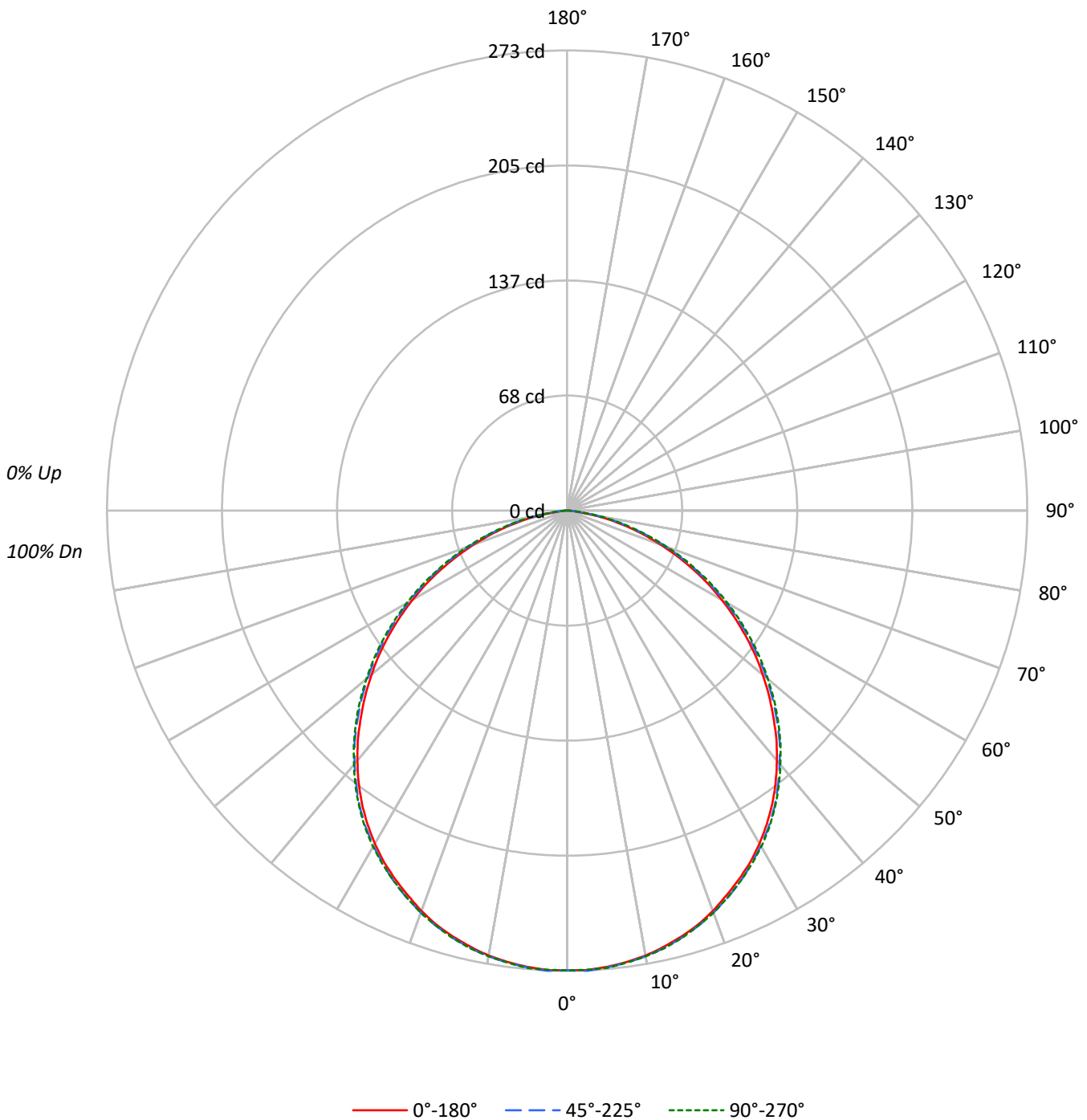
Lumens per Lamp: N/A
Luminaire Lumens: 730.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

Input Watts (W): 9.2
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	95	93		95	92	90		91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77		83	79	75		80	77	74	71
3	91	81	73	67	89	79	72	66	76	70	65		74	68	64		71	67	63	61
4	84	72	63	57	81	71	62	56	68	61	56		66	60	55		64	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48		59	53	48		57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42		54	47	42		52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	52	40	33	28	39	32	27		38	32	27		37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3132	3132	3132
5°	3132	3135	3140
10°	3126	3132	3131
15°	3110	3119	3122
20°	3089	3102	3102
25°	3057	3079	3076
30°	3026	3047	3053
35°	2976	3007	3012
40°	2902	2939	2950
45°	2809	2858	2876
50°	2706	2760	2778
55°	2582	2638	2666
60°	2430	2492	2526
65°	2236	2312	2347
70°	1981	2068	2118
75°	1633	1752	1797
80°	1098	1276	1329
85°	474	527	659

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2876 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.8	3.5
10°-20°	73.9	10.1
20°-30°	111.7	15.3
30°-40°	133.6	18.3
40°-50°	135.3	18.5
50°-60°	117.4	16.1
60°-70°	83.8	11.5
70°-80°	41.5	5.7
80°-90°	6.9	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	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°	211.5	29.0
0°-40°	345.1	47.3
0°-60°	597.8	81.9
0°-90°	730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	273	273	273	273	273	
5°	272	272	272	272	272	26
15°	262	262	262	262	263	74
25°	241	242	243	242	243	111
35°	212	213	214	214	215	133
45°	173	175	176	176	177	133
55°	129	130	132	132	133	115
65°	82	84	85	86	86	81
75°	37	38	40	40	40	39
85°	4	4	4	4	5	6
90°	0	0	0	0	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	272.8	272.8	272.8	272.8	272.8
2.5°	272.8	272.3	273.3	272.8	272.6
5°	271.7	271.7	272.0	271.7	272.4
7.5°	270.1	270.1	270.5	271.0	270.5
10°	268.1	267.9	268.6	268.4	268.5
12.5°	265.0	265.0	265.7	265.3	266.0
15°	261.6	261.9	262.4	261.8	262.6
17.5°	257.7	257.5	258.4	258.2	258.3
20°	252.8	253.0	253.9	254.0	253.9
22.5°	247.0	248.0	248.6	248.0	248.5
25°	241.3	242.0	243.0	242.3	242.8
27.5°	235.2	235.8	236.5	236.2	236.8
30°	228.2	229.0	229.8	229.4	230.3
32.5°	220.5	221.5	222.5	222.3	223.1
35°	212.3	213.4	214.5	214.0	214.9
37.5°	203.2	204.5	205.5	205.5	206.2
40°	193.6	194.9	196.1	196.2	196.8
42.5°	183.7	185.0	186.6	186.3	187.3
45°	173.0	174.8	176.0	176.1	177.1
47.5°	162.4	163.9	165.4	165.8	166.6
50°	151.5	152.9	154.5	154.7	155.5
52.5°	140.6	141.8	143.3	143.8	144.6
55°	129.0	130.5	131.8	132.3	133.2
57.5°	117.5	119.0	120.2	120.8	121.5
60°	105.8	107.4	108.5	109.1	110.0
62.5°	94.2	95.7	96.9	97.2	98.3
65°	82.3	83.8	85.1	85.5	86.4
67.5°	70.6	72.0	73.4	73.5	74.7
70°	59.0	60.5	61.6	61.8	63.1
72.5°	47.7	49.3	50.4	50.5	51.6
75°	36.8	38.4	39.5	39.5	40.5
77.5°	26.4	27.9	29.1	29.1	30.0
80°	16.6	18.1	19.3	19.4	20.1
82.5°	7.9	9.1	10.1	10.5	11.2
85°	3.6	3.9	4.0	4.1	5.0
87.5°	1.6	1.9	2.2	2.2	2.4
90°	0.0	0.1	0.2	0.4	0.6

(END OF REPORT)