

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: P626438

Luminaire Tested: HLBC4LS9FSD2W1EMWR-3500K-600lm

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626438
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-3500K-600lm
Description: 4IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT AND SELECTABLE LUMEN OUTPUT
Light Source: (1) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

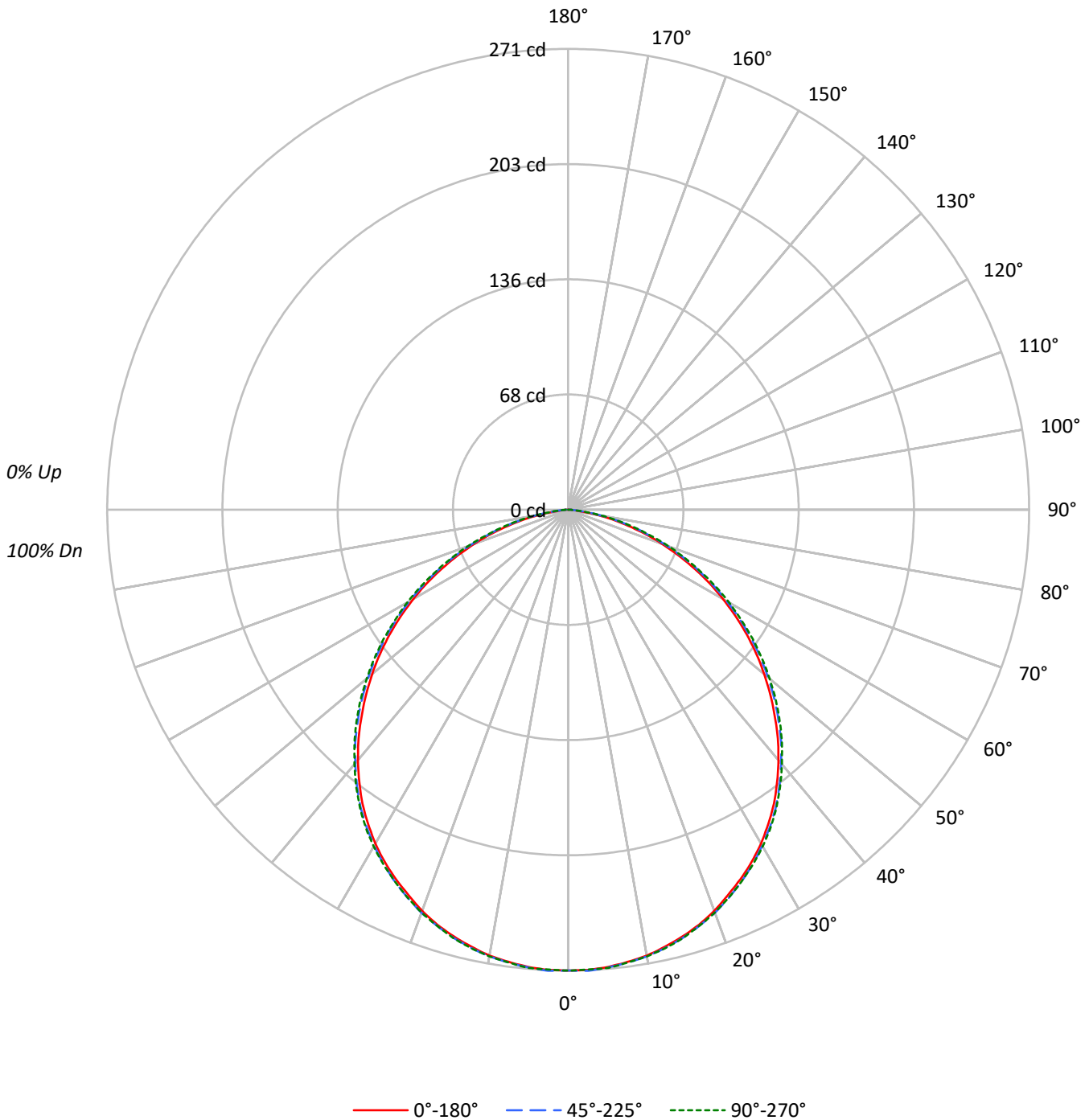
Lumens per Lamp: N/A
Luminaire Lumens: 725.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.35
Luminous Opening: Circular (Dia: 0.33m x H: 0m)
CIE Type: Direct

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°	3112	3112	3112
5°	3111	3114	3118
10°	3105	3111	3110
15°	3088	3098	3100
20°	3068	3082	3080
25°	3037	3057	3056
30°	3006	3026	3032
35°	2956	2986	2993
40°	2882	2918	2929
45°	2790	2838	2856
50°	2687	2740	2760
55°	2566	2620	2648
60°	2414	2473	2510
65°	2220	2296	2331
70°	1967	2055	2105
75°	1624	1743	1788
80°	1091	1270	1322
85°	474	527	646

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2856 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.7	3.5
10°-20°	73.4	10.1
20°-30°	110.9	15.3
30°-40°	132.7	18.3
40°-50°	134.4	18.5
50°-60°	116.6	16.1
60°-70°	83.2	11.5
70°-80°	41.2	5.7
80°-90°	6.9	1.0
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°	210.0	29.0
0°-40°	342.7	47.3
0°-60°	593.7	81.9
0°-90°	725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	271	271	271	271	271	
5°	270	270	270	270	270	26
15°	260	260	261	260	261	73
25°	240	240	241	241	241	110
35°	211	212	213	212	214	132
45°	172	174	175	175	176	133
55°	128	130	131	131	132	115
65°	82	83	84	85	86	81
75°	37	38	39	39	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°	271.0	271.0	271.0	271.0	271.0
2.5°	270.9	270.5	271.4	270.9	270.7
5°	269.9	269.8	270.2	269.8	270.5
7.5°	268.2	268.3	268.6	269.1	268.6
10°	266.3	266.1	266.8	266.6	266.7
12.5°	263.2	263.2	263.9	263.5	264.1
15°	259.8	260.1	260.6	260.0	260.8
17.5°	255.9	255.8	256.6	256.5	256.5
20°	251.1	251.3	252.2	252.2	252.1
22.5°	245.3	246.3	246.9	246.3	246.8
25°	239.7	240.3	241.3	240.6	241.2
27.5°	233.6	234.2	234.9	234.6	235.2
30°	226.7	227.5	228.2	227.8	228.7
32.5°	219.0	220.0	220.9	220.7	221.6
35°	210.9	211.9	213.0	212.5	213.5
37.5°	201.8	203.1	204.1	204.1	204.8
40°	192.3	193.5	194.7	194.9	195.4
42.5°	182.4	183.8	185.3	185.0	186.0
45°	171.8	173.6	174.8	174.9	175.9
47.5°	161.3	162.8	164.3	164.7	165.5
50°	150.4	151.8	153.4	153.6	154.5
52.5°	139.6	140.9	142.3	142.8	143.6
55°	128.2	129.6	130.9	131.4	132.3
57.5°	116.7	118.1	119.4	120.0	120.7
60°	105.1	106.6	107.7	108.4	109.3
62.5°	93.5	95.0	96.2	96.6	97.6
65°	81.7	83.2	84.5	84.9	85.8
67.5°	70.1	71.5	72.9	73.0	74.2
70°	58.6	60.1	61.2	61.4	62.7
72.5°	47.4	48.9	50.1	50.1	51.2
75°	36.6	38.1	39.3	39.3	40.3
77.5°	26.2	27.7	28.9	28.9	29.8
80°	16.5	18.0	19.2	19.3	20.0
82.5°	7.8	9.1	10.1	10.5	11.1
85°	3.6	3.9	4.0	4.1	4.9
87.5°	1.6	1.9	2.1	2.2	2.4
90°	0.0	0.1	0.2	0.4	0.6

(END OF REPORT)