

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: G3-1907-388-3

Luminaire Tested: **HLB4SP-3500K**

Test Date: 07/05/19

Test Information

Test Method: LM-41-14
Report Number: G3-1907-388-3
Test Lab: INNOVATION CENTER(G3)
Test Date: 07/05/19
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HLB4SP-3500K
Description: 4IN HLBSP AT 3500K.
Light Source: (64) SEOUL LEDS 90 CRI 3500K
CSPY11
Ballast/Driver: (1) LEEDARSON ELECT DRIVER
4HLBSP-CCTS

Summary

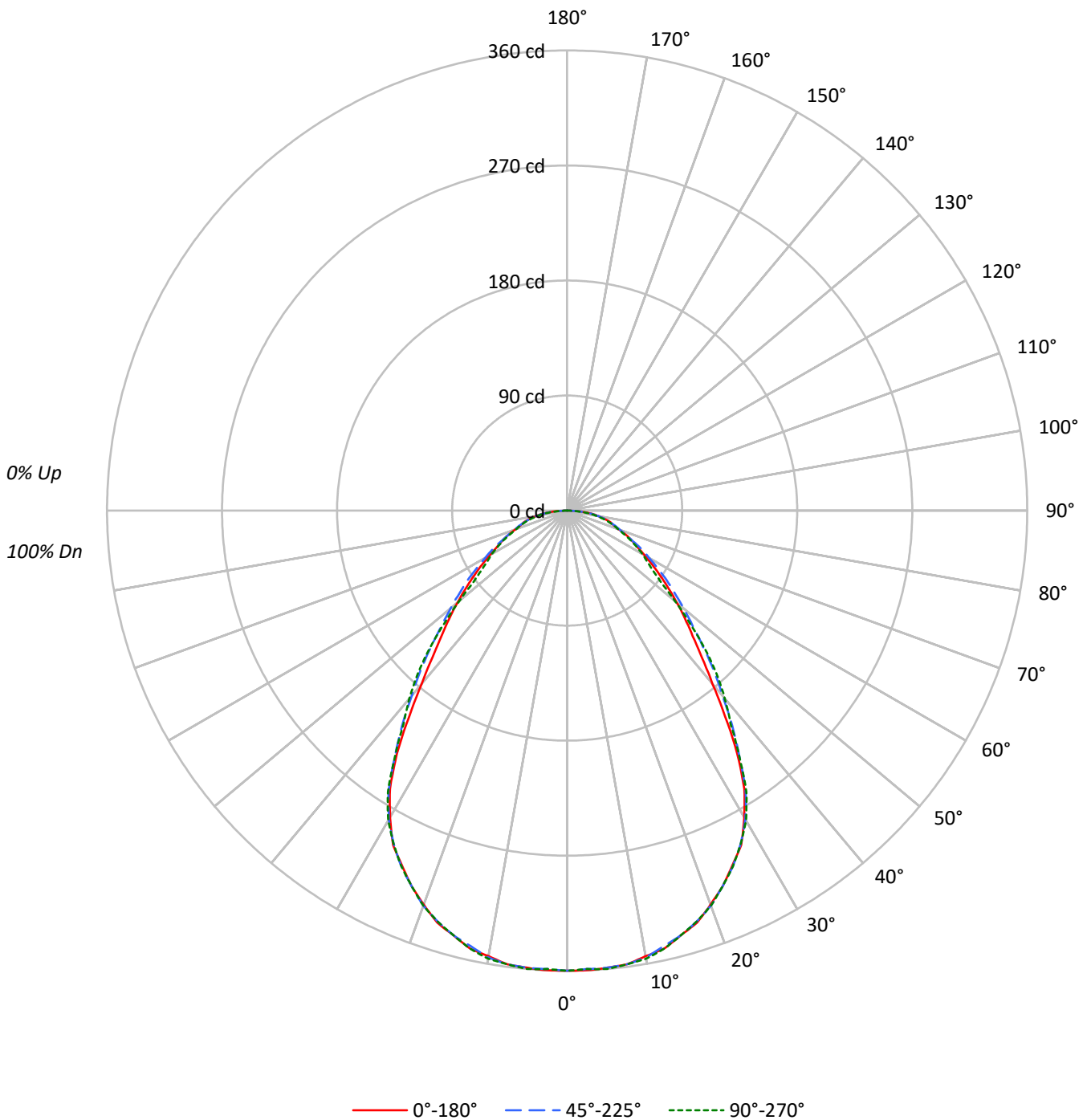
Lumens per Lamp: N/A
Luminaire Lumens: 718.5 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.16 / 1.16
Luminous Opening: Rectangular (W 0.21' x L: 0.21' x H: 0')
CIE Type: Direct

Input Watts (W): 9.8
Input Voltage (V): 120.0
Input Current (Ain): 0.835
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 11.8%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 3 HR
Ambient Temperature (°C): 24.6
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	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					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	94	88	83	99	92	86	82	89	84	80	85	81	78	82	79	76	74					74			
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65			
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59	57					57			
5	80	69	60	54	78	67	60	54	65	59	53	64	58	53	62	57	52	50					50			
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41					41			
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	89281	89281	89281
5°	89373	89373	89622
10°	89147	89399	89650
15°	88322	88322	88322
20°	86565	86829	86829
25°	83734	84007	84007
30°	79324	79896	80183
35°	70239	71147	71147
40°	57302	61187	62159
45°	48751	52609	53310
50°	43212	45913	42440
55°	38482	41076	35455
60°	34720	36704	33728
65°	32862	33449	32275
70°	31180	31905	30455
75°	33537	32579	31621
80°	35705	35705	32848
85°	36991	34146	31300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.2	4.8
10°-20°	97.0	13.5
20°-30°	140.8	19.6
30°-40°	145.8	20.3
40°-50°	114.7	16.0
50°-60°	81.4	11.3
60°-70°	55.9	7.8
70°-80°	35.8	5.0
80°-90°	13.1	1.8
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°	271.9	37.8
0°-40°	417.7	58.1
0°-60°	613.8	85.4
0°-90°	718.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	718.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	360	360	360	360	360	
5°	359	358	359	359	360	34
15°	344	345	344	344	344	97
25°	306	306	307	307	307	141
35°	232	237	235	232	235	143
45°	139	155	150	143	152	109
55°	89	89	95	91	82	80
65°	56	56	57	56	55	56
75°	35	33	34	35	33	36
85°	13	11	12	12	11	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	360	360	360	360	360
2.5°	360	360	359	360	359
5°	359	358	359	359	360
7.5°	358	358	358	358	358
10°	354	355	355	355	356
12.5°	351	351	349	351	351
15°	344	345	344	344	344
17.5°	338	337	337	337	337
20°	328	328	329	328	329
22.5°	318	319	318	318	318
25°	306	306	307	307	307
27.5°	295	294	294	295	294
30°	277	279	279	278	280
32.5°	258	260	260	258	261
35°	232	237	235	232	235
37.5°	203	213	212	205	210
40°	177	193	189	180	192
42.5°	156	174	170	159	173
45°	139	155	150	143	152
47.5°	125	134	133	127	130
50°	112	116	119	113	110
52.5°	100	101	106	101	93
55°	89	89	95	91	82
57.5°	79	79	84	81	74
60°	70	71	74	72	68
62.5°	62	64	66	63	61
65°	56	56	57	56	55
67.5°	50	49	50	48	48
70°	43	43	44	42	42
72.5°	38	38	39	39	38
75°	35	33	34	35	33
77.5°	30	28	30	30	28
80°	25	24	25	26	23
82.5°	20	19	19	20	18
85°	13	11	12	12	11
87.5°	5	4	5	5	4
90°	0	0	0	0	0

(END OF REPORT)