

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: G3-1907-388-2

Luminaire Tested: **HLB4SP-3000K**

Test Date: 07/05/19

Test Information

Test Method: LM-41-14
Report Number: G3-1907-388-2
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-3000K
Description: 4IN HLBSP AT 3000K.
Light Source: (64) SEOUL LEDS 90 CRI 3000K
CSPY11
Ballast/Driver: (1) LEEDARSON ELECT DRIVER
4HLBSP-CCTS

Summary

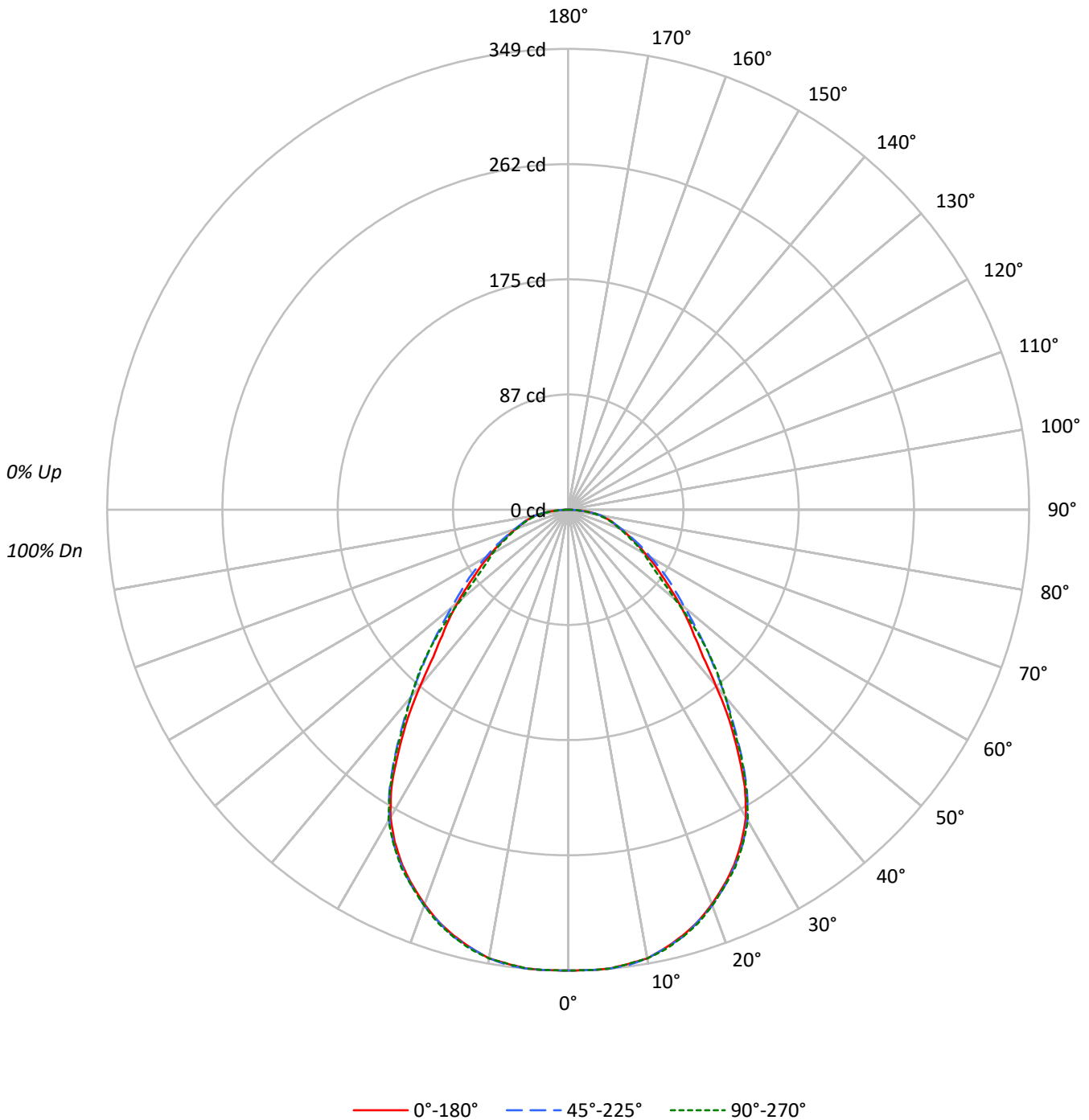
Lumens per Lamp: N/A
Luminaire Lumens: 698.4 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.16
Luminous Opening: Rectangular (W 0.21' x L: 0.21' x H: 0')
CIE Type: Direct

Input Watts (W): 9.81
Input Voltage (V): 120.0
Input Current (Ain): 0.0836
Voltage Rise (V): NR
Power Factor: 0.9782
Total Harmonic Distortion (THDi): 11.8%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 3 HR
Ambient Temperature (°C): 24.7
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	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	63	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	43	68	56	49	43	55	48	43	54	47	43	52	47	42	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°	86552	86552	86552
5°	86883	86883	86883
10°	86880	86880	86880
15°	85754	86011	86011
20°	83926	84190	84190
25°	81271	81545	81818
30°	77033	77606	77892
35°	67817	69331	69028
40°	56331	59892	59892
45°	47348	51557	51557
50°	42055	44369	40897
55°	37184	40211	34590
60°	33728	35712	32736
65°	31688	32862	30515
70°	30455	31180	29729
75°	32579	31621	30663
80°	35705	35705	32848
85°	36991	31300	31300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.2	4.7
10°-20°	94.2	13.5
20°-30°	136.7	19.6
30°-40°	141.6	20.3
40°-50°	111.6	16.0
50°-60°	79.2	11.3
60°-70°	54.4	7.8
70°-80°	34.9	5.0
80°-90°	12.7	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°	264.0	37.8
0°-40°	405.6	58.1
0°-60°	596.4	85.4
0°-90°	698.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	698.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	349	349	349	349	349	33
15°	334	335	335	335	335	94
25°	297	298	298	298	299	136
35°	224	230	229	225	228	139
45°	135	150	147	139	147	106
55°	86	86	93	88	80	78
65°	54	55	56	54	52	54
75°	34	32	33	34	32	35
85°	13	11	11	12	11	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	349	349	349	349	349
2.5°	349	349	349	349	349
5°	349	349	349	349	349
7.5°	347	347	348	347	347
10°	345	345	345	345	345
12.5°	340	340	340	340	341
15°	334	335	335	335	335
17.5°	327	327	327	327	328
20°	318	319	319	318	319
22.5°	308	309	309	309	309
25°	297	298	298	298	299
27.5°	284	285	286	285	286
30°	269	271	271	270	272
32.5°	249	253	252	249	251
35°	224	230	229	225	228
37.5°	200	208	206	200	204
40°	174	188	185	175	185
42.5°	151	170	165	155	167
45°	135	150	147	139	147
47.5°	122	130	130	124	126
50°	109	113	115	110	106
52.5°	97	99	103	99	91
55°	86	86	93	88	80
57.5°	77	77	82	79	72
60°	68	69	72	70	66
62.5°	61	62	64	62	59
65°	54	55	56	54	52
67.5°	48	48	49	47	46
70°	42	42	43	41	41
72.5°	37	37	38	38	37
75°	34	32	33	34	32
77.5°	29	28	29	29	28
80°	25	24	25	25	23
82.5°	19	18	19	19	17
85°	13	11	11	12	11
87.5°	5	4	4	5	4
90°	0	0	0	0	0

(END OF REPORT)