

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P241977

Luminaire Tested: **PRS440D010-S4M24-41SMDC-4000K**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241977  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-59)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: PRS440D010-S4M24-41SMDC-4000K  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, DEEP TRIM SPECULAR  
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3509.5 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.82 / 0.85  
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')  
CIE Type: Direct

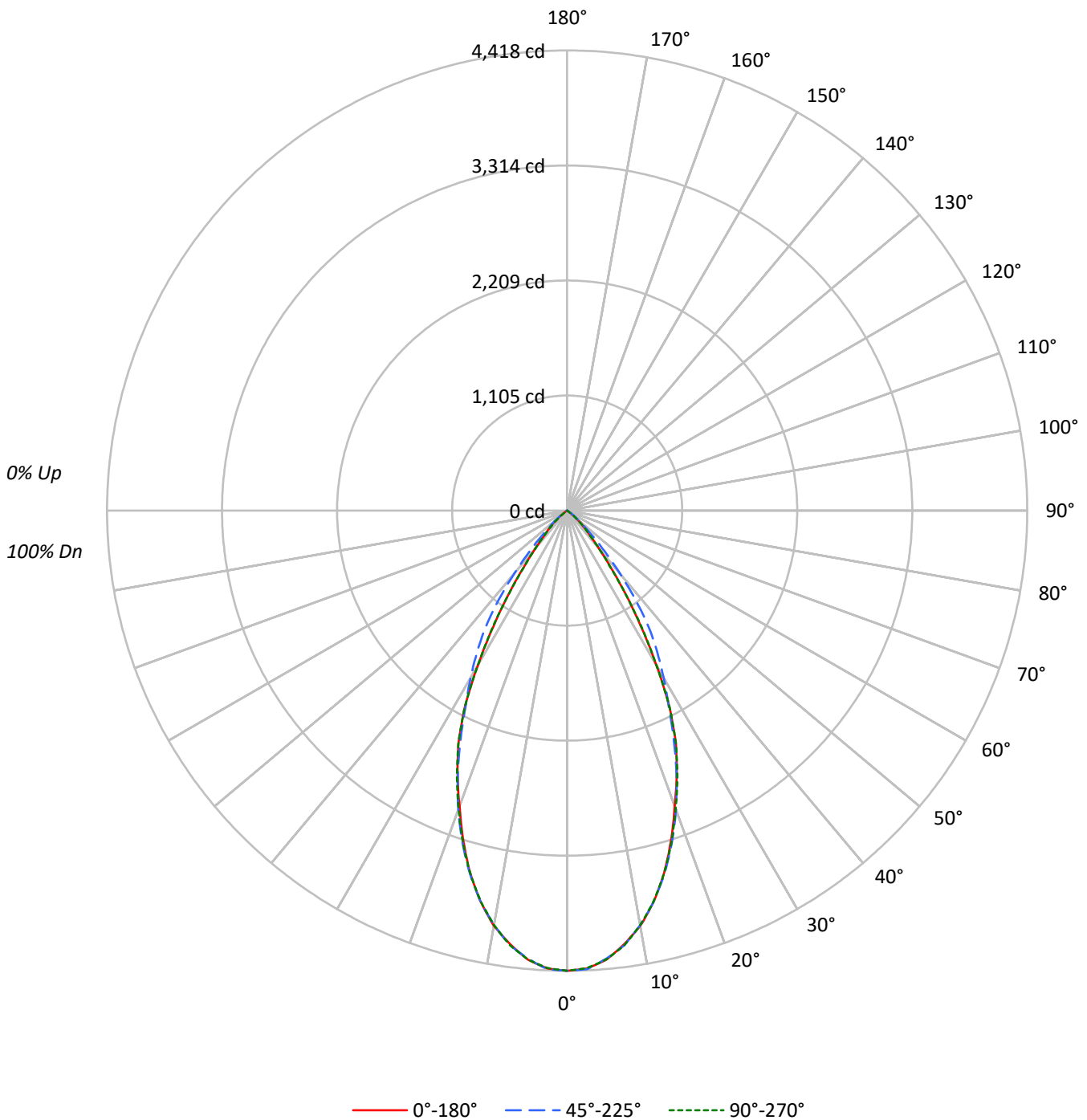
Input Watts (W): 38  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94				94
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87				87
3	103	96	92	88	101	95	91	87	92	89	86	90	87	84	88	85	83	81				81
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76				76
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71				71
6	88	79	73	69	87	79	73	69	77	72	69	76	71	68	74	71	68	66				66
7	84	75	69	65	83	74	68	64	73	68	64	72	67	64	70	66	63	62				62
8	80	70	65	61	79	70	64	60	69	64	60	68	63	60	67	63	60	58				58
9	76	67	61	57	75	66	61	57	65	60	57	64	60	56	63	59	56	55				55
10	73	63	57	54	72	63	57	53	62	57	53	61	56	53	60	56	53	52				52

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	338199	338199	338199
5°	332614	331754	332330
10°	314705	314122	314122
15°	285372	285958	285372
20°	245915	248953	248041
25°	208649	204232	208649
30°	151721	163600	151394
35°	91013	127278	90667
40°	47352	78308	46983
45°	25850	37162	25049
50°	11551	15552	11110
55°	1001	6472	494
60°	566	1715	566
65°	0	670	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	403.9	11.5
10°-20°	1000.3	28.5
20°-30°	1115.0	31.8
30°-40°	717.8	20.5
40°-50°	234.1	6.7
50°-60°	36.6	1.0
60°-70°	1.8	0.1
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	2519.3	71.8
0°-40°	3237.0	92.2
0°-60°	3507.7	99.9
0°-90°	3509.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3509.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4418	4418	4418	4418	4418	
5°	4329	4329	4318	4333	4325	404
15°	3601	3601	3609	3609	3601	998
25°	2470	2467	2418	2467	2470	1107
35°	974	1123	1362	1120	970	623
45°	239	272	343	265	231	194
55°	8	30	48	30	4	23
65°	0	0	4	0	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4418.4	4418.4	4418.4	4418.4	4418.4
2.5°	4399.8	4403.5	4407.3	4403.5	4396.1
5°	4328.9	4328.9	4317.7	4332.6	4325.2
7.5°	4198.3	4202.0	4209.5	4202.0	4209.5
10°	4049.0	4041.5	4041.5	4041.5	4041.5
12.5°	3843.8	3840.0	3843.8	3840.0	3840.0
15°	3601.2	3601.2	3608.6	3608.6	3601.2
17.5°	3317.6	3325.0	3343.7	3340.0	3332.5
20°	3019.0	3034.0	3056.3	3037.7	3045.1
22.5°	2750.3	2735.4	2742.9	2735.4	2765.3
25°	2470.5	2466.7	2418.2	2466.7	2470.5
27.5°	2127.1	2179.4	2108.5	2183.1	2127.1
30°	1716.6	1847.2	1851.0	1862.2	1712.9
32.5°	1317.3	1470.3	1608.4	1477.8	1332.3
35°	974.0	1123.3	1362.1	1119.5	970.3
37.5°	679.2	813.5	1078.5	809.8	671.7
40°	473.9	563.5	783.7	567.2	470.2
42.5°	332.1	391.8	533.6	380.6	328.4
45°	238.8	272.4	343.3	265.0	231.4
47.5°	164.2	190.3	212.7	186.6	160.5
50°	97.0	126.9	130.6	126.9	93.3
52.5°	44.8	70.9	82.1	70.9	44.8
55°	7.5	29.9	48.5	29.9	3.7
57.5°	3.7	3.7	26.1	3.7	3.7
60°	3.7	3.7	11.2	3.7	3.7
62.5°	3.7	3.7	3.7	3.7	3.7
65°	0.0	0.0	3.7	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)