

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: FAIL-SAFE

Report Number: P309360

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P309360
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2663.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

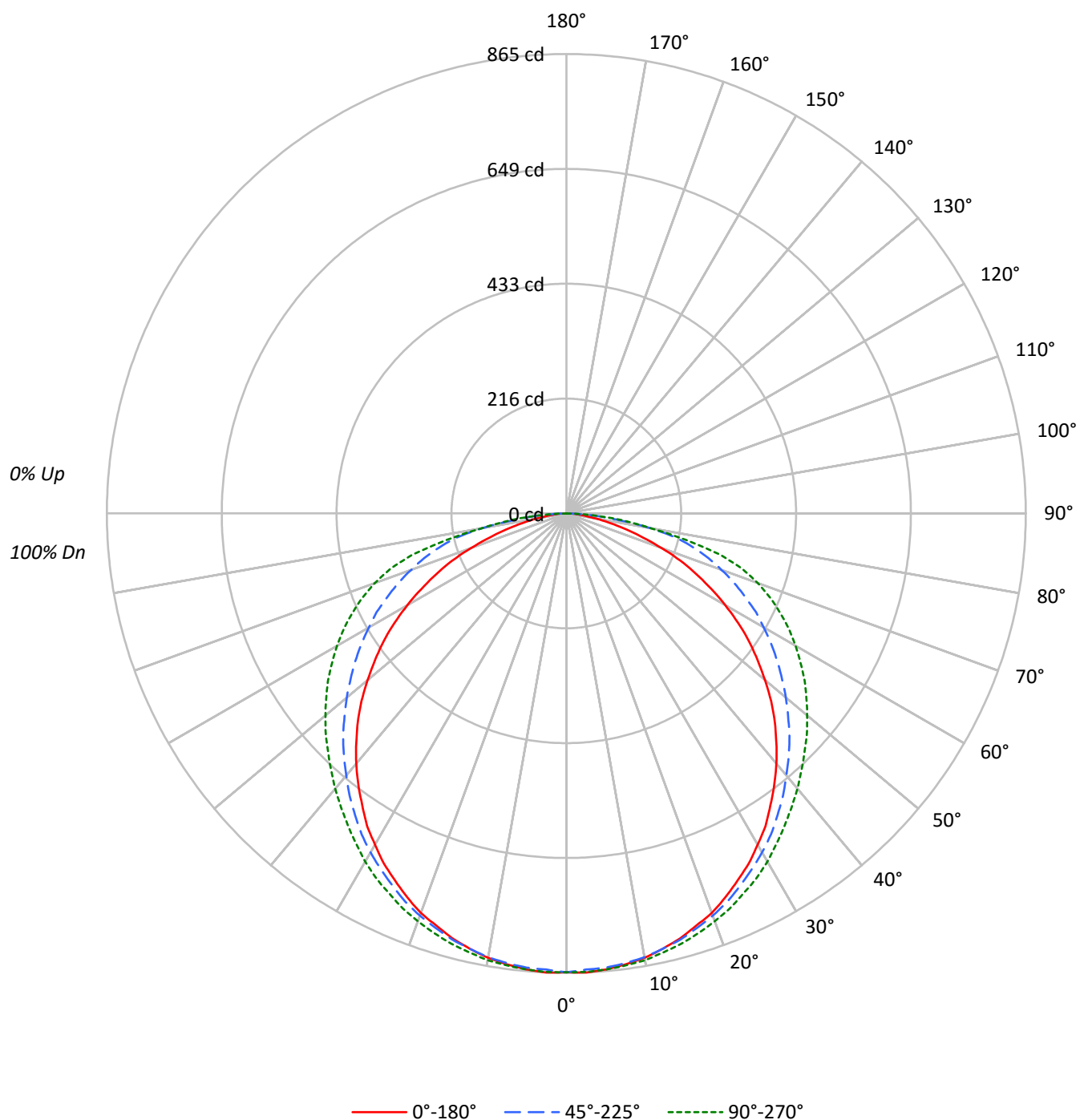
Input Watts (W): 31
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1163	1163	1163
5°	1164	1159	1164
10°	1161	1159	1167
15°	1154	1157	1168
20°	1146	1154	1170
25°	1132	1149	1172
30°	1119	1145	1176
35°	1101	1139	1178
40°	1081	1132	1189
45°	1056	1131	1207
50°	1022	1129	1239
55°	986	1138	1284
60°	930	1155	1341
65°	859	1182	1416
70°	750	1223	1509
75°	609	1287	1559
80°	449	1261	1261
85°	344	929	1050



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	3.1
10°-20°	235.0	8.8
20°-30°	357.8	13.4
30°-40°	434.5	16.3
40°-50°	459.0	17.2
50°-60°	433.1	16.3
60°-70°	360.1	13.5
70°-80°	236.9	8.9
80°-90°	64.6	2.4
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°	674.7	25.3
0°-40°	1109.2	41.7
0°-60°	2001.3	75.2
0°-90°	2663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2663.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	862	862	858	862	862	82
15°	828	830	831	838	838	234
25°	763	767	774	787	789	352
35°	670	678	693	711	717	419
45°	555	566	594	623	634	428
55°	420	438	485	531	547	374
65°	270	301	371	426	445	267
75°	117	171	248	293	300	126
85°	22	49	60	67	68	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	864.0	864.0	864.0	864.0	864.0
2.5°	865.1	864.0	859.6	864.0	864.0
5°	861.8	861.8	858.4	861.8	861.8
7.5°	856.2	856.2	854.0	858.4	858.4
10°	849.5	849.5	848.4	854.0	854.0
12.5°	839.5	840.6	839.5	846.2	846.2
15°	828.3	829.5	830.6	838.4	838.4
17.5°	813.8	816.1	818.3	827.2	828.3
20°	800.5	801.6	806.0	816.1	817.2
22.5°	782.6	786.0	791.5	801.6	804.9
25°	762.6	767.0	773.7	787.1	789.3
27.5°	743.6	747.0	755.9	770.4	774.8
30°	720.2	725.8	736.9	751.4	757.0
32.5°	697.9	703.5	716.9	732.5	736.9
35°	670.0	677.8	693.4	711.3	716.9
37.5°	643.3	651.1	670.0	690.1	696.8
40°	615.4	624.3	644.4	667.8	676.7
42.5°	585.3	597.6	619.9	645.5	655.5
45°	555.2	566.3	594.2	623.2	634.4
47.5°	522.9	536.2	566.3	600.9	614.3
50°	488.3	505.0	539.6	577.5	592.0
52.5°	453.7	472.7	511.7	554.1	569.7
55°	420.3	438.1	485.0	530.7	547.4
57.5°	383.5	405.8	457.1	506.1	522.9
60°	345.6	370.1	429.2	480.5	498.3
62.5°	307.7	335.6	402.5	453.7	472.7
65°	269.8	301.0	371.2	425.9	444.8
67.5°	233.0	267.6	342.3	396.9	415.8
70°	190.6	234.1	311.0	364.6	383.5
72.5°	151.6	201.8	280.9	331.1	347.8
75°	117.1	170.6	247.5	293.2	299.9
77.5°	85.8	139.4	212.9	228.5	229.7
80°	58.0	111.5	162.8	160.5	162.8
82.5°	37.9	83.6	102.6	114.8	115.9
85°	22.3	49.1	60.2	66.9	68.0
87.5°	11.1	16.7	21.2	22.3	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)