

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: P309363

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-5700K**

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: P309363  
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-5700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB SHEET  
Light Source: (336) 5700K 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: 2733.0 lumens  
Efficiency: N/A  
Efficacy: 87.3 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

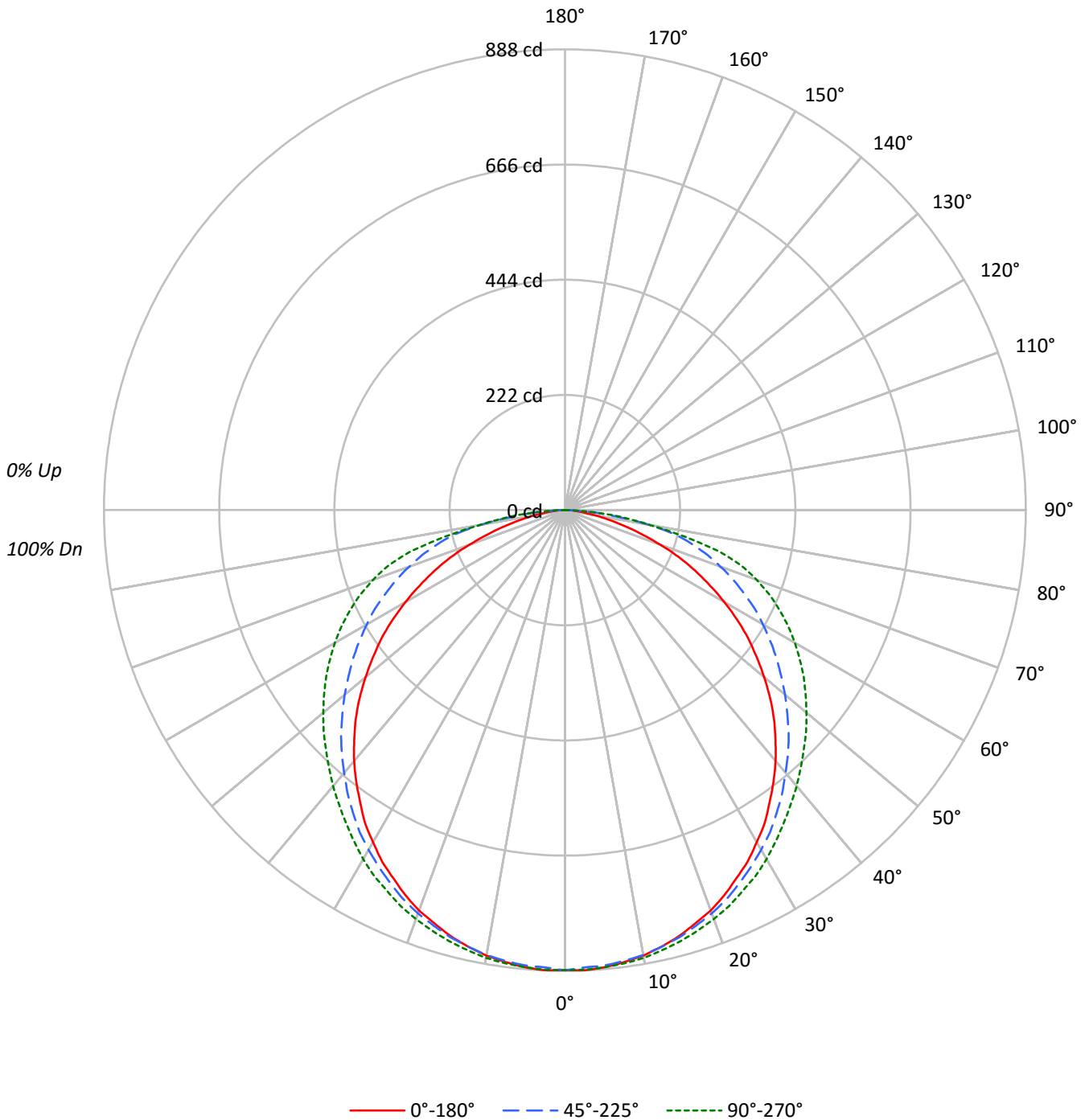
Input Watts (W): 31.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P309363

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P309363

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-5700K

**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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	1193	1193	1193
5°	1194	1190	1194
10°	1191	1190	1197
15°	1184	1187	1198
20°	1176	1184	1201
25°	1162	1179	1203
30°	1148	1175	1207
35°	1129	1169	1208
40°	1109	1162	1220
45°	1084	1160	1239
50°	1049	1159	1272
55°	1012	1167	1318
60°	954	1185	1376
65°	882	1213	1453
70°	770	1256	1548
75°	624	1320	1600
80°	461	1294	1294
85°	354	954	1078



TEST NUMBER: P309363

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-5700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.0	3.1
10°-20°	241.2	8.8
20°-30°	367.2	13.4
30°-40°	445.9	16.3
40°-50°	471.1	17.2
50°-60°	444.5	16.3
60°-70°	369.6	13.5
70°-80°	243.2	8.9
80°-90°	66.3	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°	692.4	25.3
0°-40°	1138.3	41.7
0°-60°	2053.9	75.2
0°-90°	2733.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2733.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	884	884	881	884	884	84
15°	850	851	852	860	860	240
25°	783	787	794	808	810	361
35°	688	696	712	730	736	430
45°	570	581	610	640	651	439
55°	431	450	498	545	562	384
65°	277	309	381	437	456	274
75°	120	175	254	301	308	129
85°	23	50	62	69	70	28
90°	0	0	0	0	0	



TEST NUMBER: P309363

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-HRP-CP250-W2A-U-5700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	886.7	886.7	886.7	886.7	886.7
2.5°	887.9	886.7	882.1	886.7	886.7
5°	884.4	884.4	881.0	884.4	884.4
7.5°	878.7	878.7	876.4	881.0	881.0
10°	871.8	871.8	870.7	876.4	876.4
12.5°	861.6	862.7	861.6	868.4	868.4
15°	850.1	851.3	852.4	860.4	860.4
17.5°	835.2	837.5	839.8	849.0	850.1
20°	821.5	822.7	827.2	837.5	838.7
22.5°	803.2	806.6	812.4	822.7	826.1
25°	782.6	787.2	794.0	807.8	810.1
27.5°	763.2	766.6	775.7	790.6	795.2
30°	739.1	744.8	756.3	771.2	776.9
32.5°	716.2	722.0	735.7	751.7	756.3
35°	687.6	695.6	711.7	730.0	735.7
37.5°	660.2	668.2	687.6	708.2	715.1
40°	631.6	640.7	661.3	685.4	694.5
42.5°	600.7	613.3	636.2	662.5	672.8
45°	569.8	581.2	609.8	639.6	651.0
47.5°	536.6	550.3	581.2	616.7	630.4
50°	501.1	518.3	553.8	592.7	607.5
52.5°	465.7	485.1	525.2	568.6	584.7
55°	431.3	449.7	497.7	544.6	561.8
57.5°	393.6	416.5	469.1	519.4	536.6
60°	354.7	379.9	440.5	493.1	511.4
62.5°	315.8	344.4	413.0	465.7	485.1
65°	276.9	308.9	381.0	437.1	456.5
67.5°	239.1	274.6	351.3	407.3	426.8
70°	195.7	240.3	319.2	374.1	393.6
72.5°	155.6	207.1	288.3	339.8	357.0
75°	120.1	175.1	254.0	300.9	307.8
77.5°	88.1	143.0	218.5	234.6	235.7
80°	59.5	114.4	167.0	164.8	167.0
82.5°	38.9	85.8	105.3	117.8	119.0
85°	22.9	50.3	61.8	68.6	69.8
87.5°	11.4	17.2	21.7	22.9	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)