

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: P309409

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-6500K**

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: P309409
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: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 6500K 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: 2723.0 lumens
Efficiency: N/A
Efficacy: 79.6 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

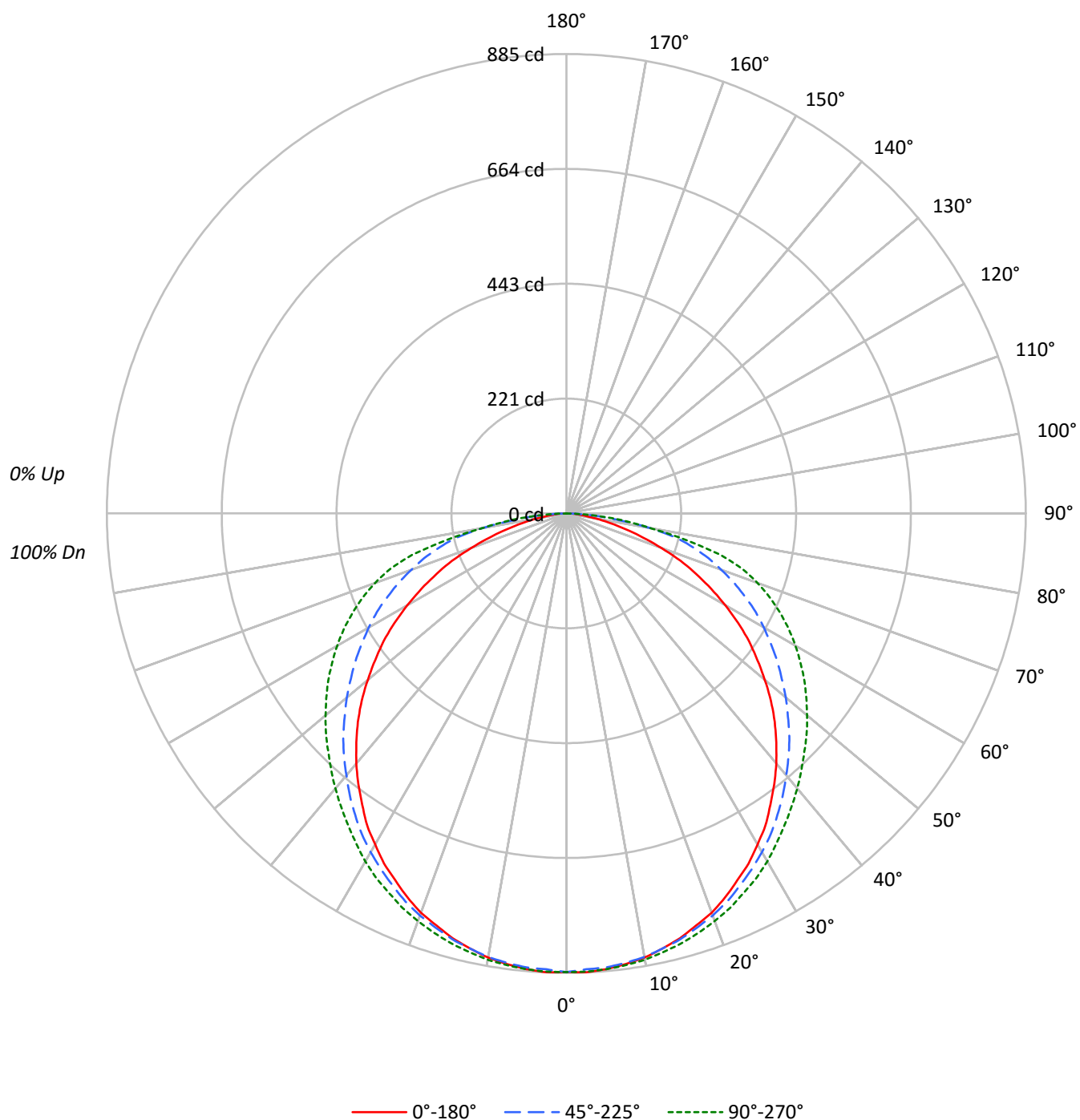
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309409

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P309409

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-6500K

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°	1189	1189	1189
5°	1190	1186	1190
10°	1187	1185	1193
15°	1180	1183	1194
20°	1172	1180	1196
25°	1158	1174	1198
30°	1144	1171	1203
35°	1125	1165	1204
40°	1105	1157	1215
45°	1080	1156	1234
50°	1045	1155	1267
55°	1008	1163	1313
60°	951	1181	1371
65°	878	1209	1448
70°	767	1251	1543
75°	622	1316	1594
80°	459	1289	1289
85°	352	951	1073



TEST NUMBER: P309409

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.7	3.1
10°-20°	240.3	8.8
20°-30°	365.9	13.4
30°-40°	444.3	16.3
40°-50°	469.3	17.2
50°-60°	442.9	16.3
60°-70°	368.3	13.5
70°-80°	242.3	8.9
80°-90°	66.1	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°	689.9	25.3
0°-40°	1134.2	41.7
0°-60°	2046.4	75.2
0°-90°	2723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2723.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	881	881	878	881	881	84
15°	847	848	849	857	857	239
25°	780	784	791	805	807	360
35°	685	693	709	727	733	429
45°	568	579	608	637	649	437
55°	430	448	496	543	560	383
65°	276	308	380	436	455	273
75°	120	174	253	300	307	129
85°	23	50	62	68	70	28
90°	0	0	0	0	0	



TEST NUMBER: P309409

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	883.5	883.5	883.5	883.5	883.5
2.5°	884.6	883.5	878.9	883.5	883.5
5°	881.2	881.2	877.8	881.2	881.2
7.5°	875.5	875.5	873.2	877.8	877.8
10°	868.7	868.7	867.5	873.2	873.2
12.5°	858.4	859.5	858.4	865.2	865.2
15°	847.0	848.1	849.3	857.3	857.3
17.5°	832.2	834.5	836.7	845.9	847.0
20°	818.5	819.6	824.2	834.5	835.6
22.5°	800.3	803.7	809.4	819.6	823.1
25°	779.7	784.3	791.1	804.8	807.1
27.5°	760.4	763.8	772.9	787.7	792.3
30°	736.4	742.1	753.5	768.3	774.0
32.5°	713.6	719.3	733.0	749.0	753.5
35°	685.1	693.1	709.1	727.3	733.0
37.5°	657.8	665.7	685.1	705.6	712.5
40°	629.3	638.4	658.9	682.8	692.0
42.5°	598.5	611.0	633.8	660.0	670.3
45°	567.7	579.1	607.6	637.2	648.6
47.5°	534.6	548.3	579.1	614.4	628.1
50°	499.3	516.4	551.7	590.5	605.3
52.5°	464.0	483.3	523.2	566.6	582.5
55°	429.8	448.0	495.9	542.6	559.7
57.5°	392.2	415.0	467.4	517.5	534.6
60°	353.4	378.5	438.9	491.3	509.6
62.5°	314.6	343.1	411.5	464.0	483.3
65°	275.9	307.8	379.6	435.5	454.8
67.5°	238.3	273.6	350.0	405.8	425.2
70°	194.9	239.4	318.1	372.8	392.2
72.5°	155.0	206.3	287.3	338.6	355.7
75°	119.7	174.4	253.1	299.8	306.7
77.5°	87.8	142.5	217.7	233.7	234.8
80°	59.3	114.0	166.4	164.2	166.4
82.5°	38.8	85.5	104.9	117.4	118.6
85°	22.8	50.2	61.6	68.4	69.5
87.5°	11.4	17.1	21.7	22.8	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)