

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: P309811

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-5000K**

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: P309811
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: 24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5000K 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: 4996.0 lumens
Efficiency: N/A
Efficacy: 77.7 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

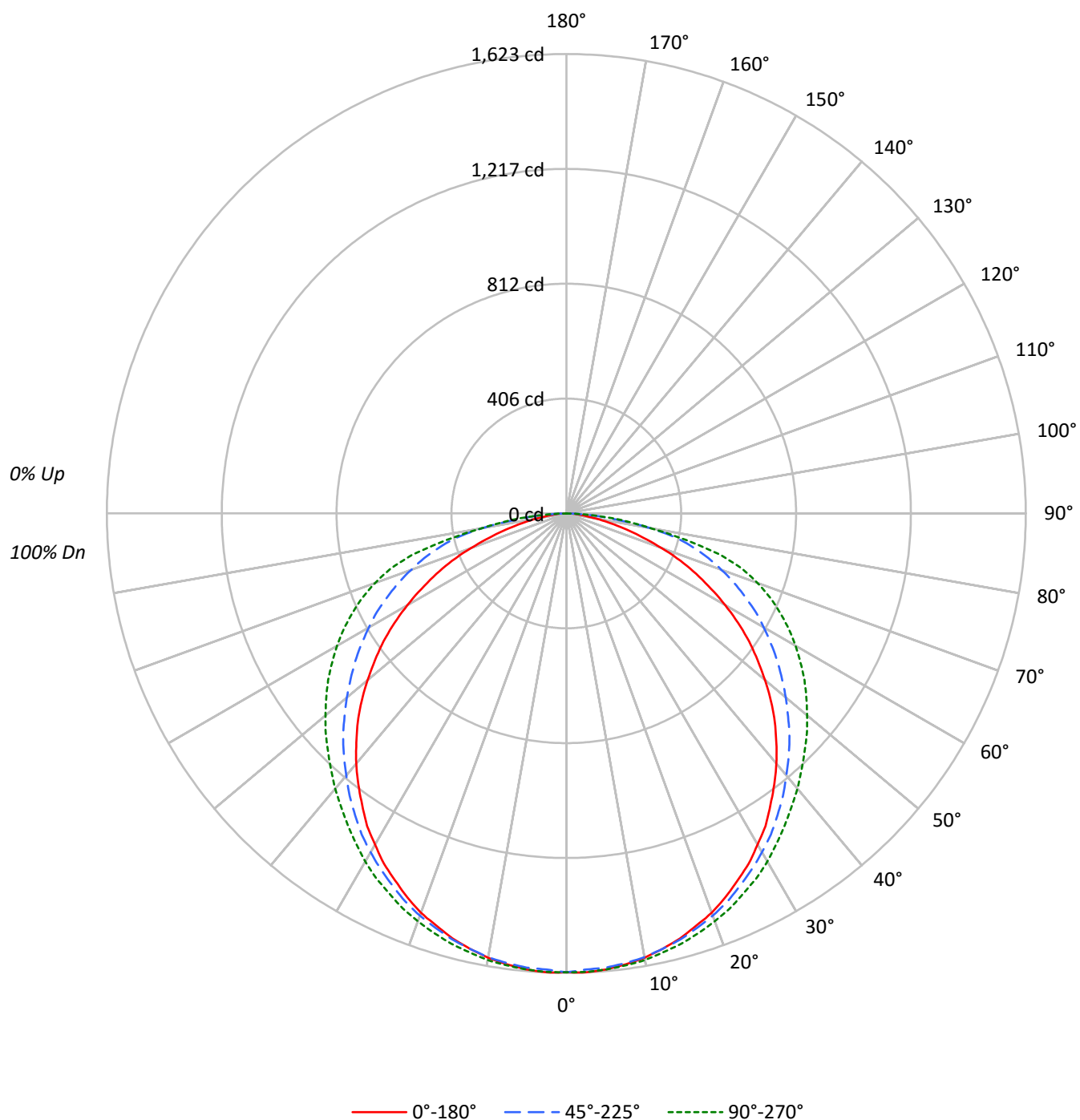
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2181	2181	2181
5°	2184	2175	2184
10°	2178	2175	2189
15°	2165	2170	2191
20°	2150	2165	2195
25°	2124	2155	2198
30°	2099	2148	2206
35°	2065	2137	2209
40°	2028	2123	2230
45°	1982	2121	2265
50°	1918	2119	2325
55°	1850	2134	2409
60°	1745	2167	2516
65°	1612	2217	2657
70°	1407	2295	2830
75°	1142	2414	2925
80°	843	2366	2366
85°	645	1743	1970



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.6	3.1
10°-20°	441.0	8.8
20°-30°	671.3	13.4
30°-40°	815.1	16.3
40°-50°	861.2	17.2
50°-60°	812.6	16.3
60°-70°	675.7	13.5
70°-80°	444.5	8.9
80°-90°	121.2	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°	1265.8	25.3
0°-40°	2080.9	41.7
0°-60°	3754.7	75.2
0°-90°	4996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4996.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1621	1621	1621	1621	1621	
5°	1617	1617	1610	1617	1617	154
15°	1554	1556	1558	1573	1573	438
25°	1431	1439	1452	1477	1481	660
35°	1257	1272	1301	1334	1345	787
45°	1042	1062	1115	1169	1190	802
55°	788	822	910	996	1027	702
65°	506	565	696	799	834	500
75°	220	320	464	550	563	237
85°	42	92	113	126	128	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1621.0	1621.0	1621.0	1621.0	1621.0
2.5°	1623.0	1621.0	1612.6	1621.0	1621.0
5°	1616.8	1616.8	1610.5	1616.8	1616.8
7.5°	1606.3	1606.3	1602.1	1610.5	1610.5
10°	1593.8	1593.8	1591.7	1602.1	1602.1
12.5°	1574.9	1577.0	1574.9	1587.5	1587.5
15°	1554.0	1556.1	1558.2	1572.9	1572.9
17.5°	1526.8	1531.0	1535.2	1551.9	1554.0
20°	1501.7	1503.8	1512.2	1531.0	1533.1
22.5°	1468.3	1474.5	1485.0	1503.8	1510.1
25°	1430.6	1439.0	1451.5	1476.6	1480.8
27.5°	1395.1	1401.3	1418.1	1445.3	1453.6
30°	1351.1	1361.6	1382.5	1409.7	1420.2
32.5°	1309.3	1319.8	1344.9	1374.2	1382.5
35°	1257.0	1271.7	1300.9	1334.4	1344.9
37.5°	1206.8	1221.5	1257.0	1294.7	1307.2
40°	1154.5	1171.3	1208.9	1252.8	1269.6
42.5°	1098.1	1121.1	1162.9	1211.0	1229.8
45°	1041.6	1062.5	1114.8	1169.2	1190.1
47.5°	980.9	1006.0	1062.5	1127.3	1152.4
50°	916.1	947.5	1012.3	1083.4	1110.6
52.5°	851.3	886.8	960.0	1039.5	1068.8
55°	788.5	822.0	909.8	995.6	1027.0
57.5°	719.5	761.3	857.5	949.6	980.9
60°	648.4	694.4	805.2	901.5	934.9
62.5°	577.3	629.6	755.1	851.3	886.8
65°	506.2	564.7	696.5	799.0	834.5
67.5°	437.1	502.0	642.1	744.6	780.2
70°	357.7	439.2	583.5	683.9	719.5
72.5°	284.5	378.6	527.1	621.2	652.6
75°	219.6	320.0	464.3	550.1	562.6
77.5°	161.0	261.4	399.5	428.8	430.9
80°	108.8	209.2	305.4	301.2	305.4
82.5°	71.1	156.9	192.4	215.4	217.5
85°	41.8	92.0	112.9	125.5	127.6
87.5°	20.9	31.4	39.7	41.8	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)