

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: P310485

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-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: P310485
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4370.0 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

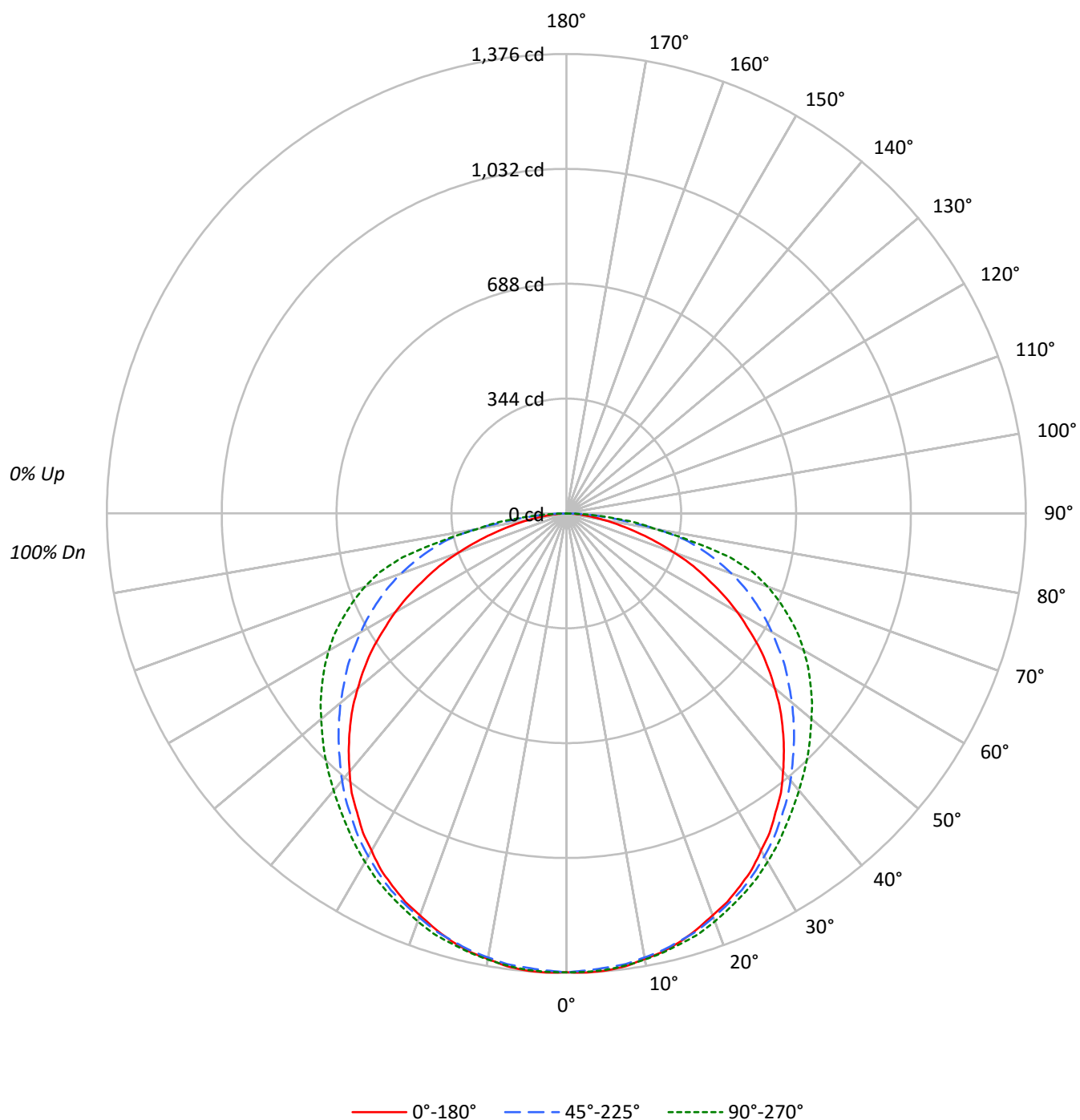
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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	100	96	92	96	93	89	92	89	87	88	86	84	82		
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67		
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47		
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40		
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35		
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27		
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24		
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1849	1849	1849
5°	1856	1844	1853
10°	1851	1845	1854
15°	1848	1845	1857
20°	1834	1843	1862
25°	1828	1847	1866
30°	1812	1842	1872
35°	1794	1837	1880
40°	1774	1835	1904
45°	1745	1835	1947
50°	1706	1847	2006
55°	1663	1876	2095
60°	1592	1913	2211
65°	1491	1981	2346
70°	1356	2072	2524
75°	1149	2186	2637
80°	907	2201	2133
85°	670	1673	1874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.4	3.0
10°-20°	375.2	8.6
20°-30°	573.7	13.1
30°-40°	701.4	16.0
40°-50°	747.5	17.1
50°-60°	714.7	16.4
60°-70°	605.5	13.9
70°-80°	406.9	9.3
80°-90°	114.8	2.6
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°	1079.3	24.7
0°-40°	1780.6	40.7
0°-60°	3242.9	74.2
0°-90°	4370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1374	1374	1374	1374	1374	
5°	1374	1372	1366	1372	1372	131
15°	1327	1327	1324	1335	1333	374
25°	1231	1236	1244	1255	1257	567
35°	1092	1101	1118	1140	1144	684
45°	917	932	965	1006	1023	707
55°	709	735	800	863	893	631
65°	468	516	622	704	737	465
75°	221	301	420	492	507	237
85°	43	89	108	117	121	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1374.2	1374.2	1374.2	1374.2	1374.2
2.5°	1376.4	1376.4	1369.9	1374.2	1374.2
5°	1374.2	1372.1	1365.6	1372.1	1372.1
7.5°	1367.7	1365.6	1361.2	1367.7	1365.6
10°	1354.7	1354.7	1350.4	1356.9	1356.9
12.5°	1343.9	1341.7	1339.6	1348.2	1346.1
15°	1326.6	1326.6	1324.4	1335.2	1333.1
17.5°	1304.9	1307.0	1309.2	1317.9	1320.1
20°	1281.0	1285.4	1287.5	1300.5	1300.5
22.5°	1259.4	1261.5	1265.9	1278.9	1278.9
25°	1231.2	1235.5	1244.2	1255.0	1257.2
27.5°	1203.0	1205.2	1216.0	1231.2	1233.3
30°	1166.2	1172.7	1185.7	1203.0	1205.2
32.5°	1133.6	1140.1	1155.3	1172.7	1177.0
35°	1092.5	1101.1	1118.5	1140.1	1144.5
37.5°	1055.6	1062.1	1083.8	1107.6	1114.1
40°	1010.1	1023.1	1044.8	1072.9	1083.8
42.5°	964.6	977.6	1003.6	1040.4	1053.4
45°	916.9	932.1	964.6	1005.8	1023.1
47.5°	869.2	886.5	923.4	971.1	990.6
50°	815.0	836.7	882.2	936.4	958.1
52.5°	763.0	789.0	838.9	899.5	927.7
55°	708.8	734.8	799.8	862.7	893.0
57.5°	648.1	682.8	754.3	825.8	858.4
60°	591.7	624.3	711.0	789.0	821.5
62.5°	531.1	574.4	667.6	750.0	782.5
65°	468.2	515.9	622.1	704.5	737.0
67.5°	411.8	463.9	576.6	658.9	691.5
70°	344.6	409.7	526.7	609.1	641.6
72.5°	281.8	353.3	474.7	554.9	585.2
75°	221.1	301.3	420.5	492.0	507.2
77.5°	164.7	249.3	364.2	394.5	383.7
80°	117.0	199.4	284.0	268.8	275.3
82.5°	75.9	151.7	175.6	199.4	205.9
85°	43.4	88.9	108.4	117.0	121.4
87.5°	19.5	32.5	43.4	43.4	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)