

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: BALLABS TEST NO. 13699.0

Luminaire Tested: **S7/448R/4T5/ETG/UEB-SI-S46**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: BALLABS TEST NO. 13699.0  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S7/448R/4T5/ETG/UEB-SI-S46  
Description: 4/28W T5 LAMP 4x4'DIRECT RECESSED LUMINAIRE w/WHITE BODY  
2"REGRESSED TRIM w/.125"OPAL WHITE ACRYLIC FLAT LENS  
2 UNIVERSAL BALLAST #B228PUNV-C WATTS=127 REFL=85%  
Light Source: -  
FP28T5/835  
Ballast/Driver: -

**Summary**

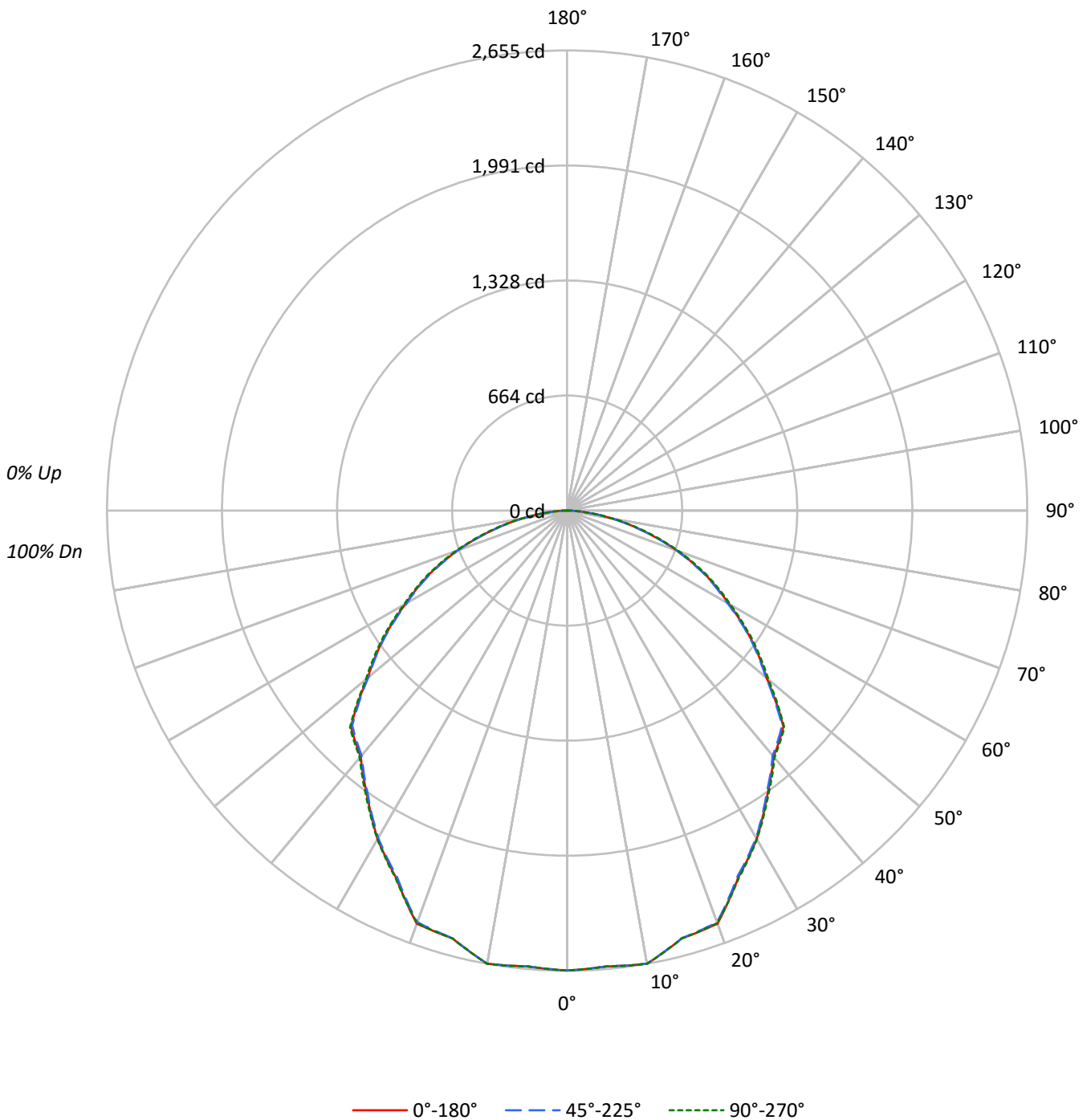
Lumens per Lamp: 2900 (4 lamps)  
Luminaire Lumens: 7285.5 lumens  
Efficiency: 62.8%  
Efficacy: 57.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.22 / 1.36  
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')  
CIE Type: Direct

Input Watts (W): 127  
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				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	75	75	75	75	73	73	73	73	70	70	70	67	67	67	64	64	64	63
1	68	65	63	60	67	64	62	59	61	59	58	59	57	56	57	55	54	53
2	62	57	53	49	61	56	52	49	54	50	48	52	49	46	50	47	45	44
3	57	50	45	41	55	49	44	41	47	43	40	46	42	39	44	41	39	37
4	52	44	39	35	51	44	39	35	42	38	34	41	37	34	39	36	33	32
5	48	40	34	30	47	39	34	30	38	33	30	37	32	29	35	32	29	28
6	44	36	30	26	43	35	30	26	34	29	26	33	29	26	32	28	25	24
7	41	33	27	23	40	32	27	23	31	26	23	30	26	23	29	25	23	21
8	38	30	24	21	37	29	24	21	28	24	21	28	23	20	27	23	20	19
9	36	27	22	19	35	27	22	19	26	22	18	25	21	18	25	21	18	17
10	33	25	20	17	33	25	20	17	24	20	17	24	20	17	23	19	17	16

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

	0°	45°	90°
0°	1860	1860	1860
5°	1857	1857	1857
10°	1889	1889	1889
15°	1854	1853	1854
20°	1891	1885	1889
25°	1806	1800	1810
30°	1770	1764	1772
35°	1720	1714	1727
40°	1695	1688	1702
45°	1749	1738	1756
50°	1638	1632	1652
55°	1584	1578	1598
60°	1509	1498	1527
65°	1467	1454	1484
70°	1377	1371	1403
75°	1234	1229	1264
80°	1045	1045	1077
85°	748	748	724



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	252.7	3.5	2.2
10°-20°	728.1	10.0	6.3
20°-30°	1081.7	14.8	9.3
30°-40°	1261.3	17.3	10.9
40°-50°	1327.5	18.2	11.4
50°-60°	1156.2	15.9	10.0
60°-70°	869.5	11.9	7.5
70°-80°	487.2	6.7	4.2
80°-90°	121.3	1.7	1.0
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	2062.4	28.3	17.8
0°-40°	3323.7	45.6	28.7
0°-60°	5807.4	79.7	50.1
0°-90°	7285.5	100.0	62.8
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	7285.5	100.0	62.8

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2654	2654	2654	2654	2654	
5°	2640	2640	2640	2640	2640	253
15°	2556	2554	2554	2554	2556	729
25°	2336	2331	2328	2333	2341	1083
35°	2011	2006	2004	2009	2019	1263
45°	1765	1754	1754	1762	1772	1330
55°	1297	1292	1292	1297	1308	1158
65°	885	877	877	887	895	871
75°	456	451	454	462	467	486
85°	93	93	93	93	90	121
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2654	2654	2654	2654	2654
5°	2640	2640	2640	2640	2640
10°	2655	2655	2655	2655	2655
15°	2556	2554	2554	2554	2556
20°	2536	2531	2528	2528	2533
25°	2336	2331	2328	2333	2341
30°	2188	2183	2180	2185	2190
35°	2011	2006	2004	2009	2019
40°	1853	1848	1845	1853	1861
45°	1765	1754	1754	1762	1772
50°	1503	1497	1497	1503	1516
55°	1297	1292	1292	1297	1308
60°	1077	1069	1069	1077	1090
65°	885	877	877	887	895
70°	672	667	669	674	685
75°	456	451	454	462	467
80°	259	256	259	264	267
85°	93	93	93	93	90
90°	0	0	0	0	0

(END OF REPORT)