

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: 15713

Luminaire Tested: **701IP-S-P-4-T8**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 15713
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: 701IP-S-P-4-T8
Description: NEORAY 4 LAMP T8 DIRECT/INDIRECT LUMINAIRE - NIMBUS II PERF
WITH WHITE INTERIOR, SPECULAR REFLECTORS AND WHITE LENS OVER PERFORATIONS
Light Source: FOUR PHILIPS 32 WATT T8 LAMPS

F32T8/TL841. LUMEN RATING = 2950 LMS.

Ballast/Driver: ONE MAGNETEK B432IUNV HP--B BALLAST OPERATING AT 120 VAC AND 112 WATTS

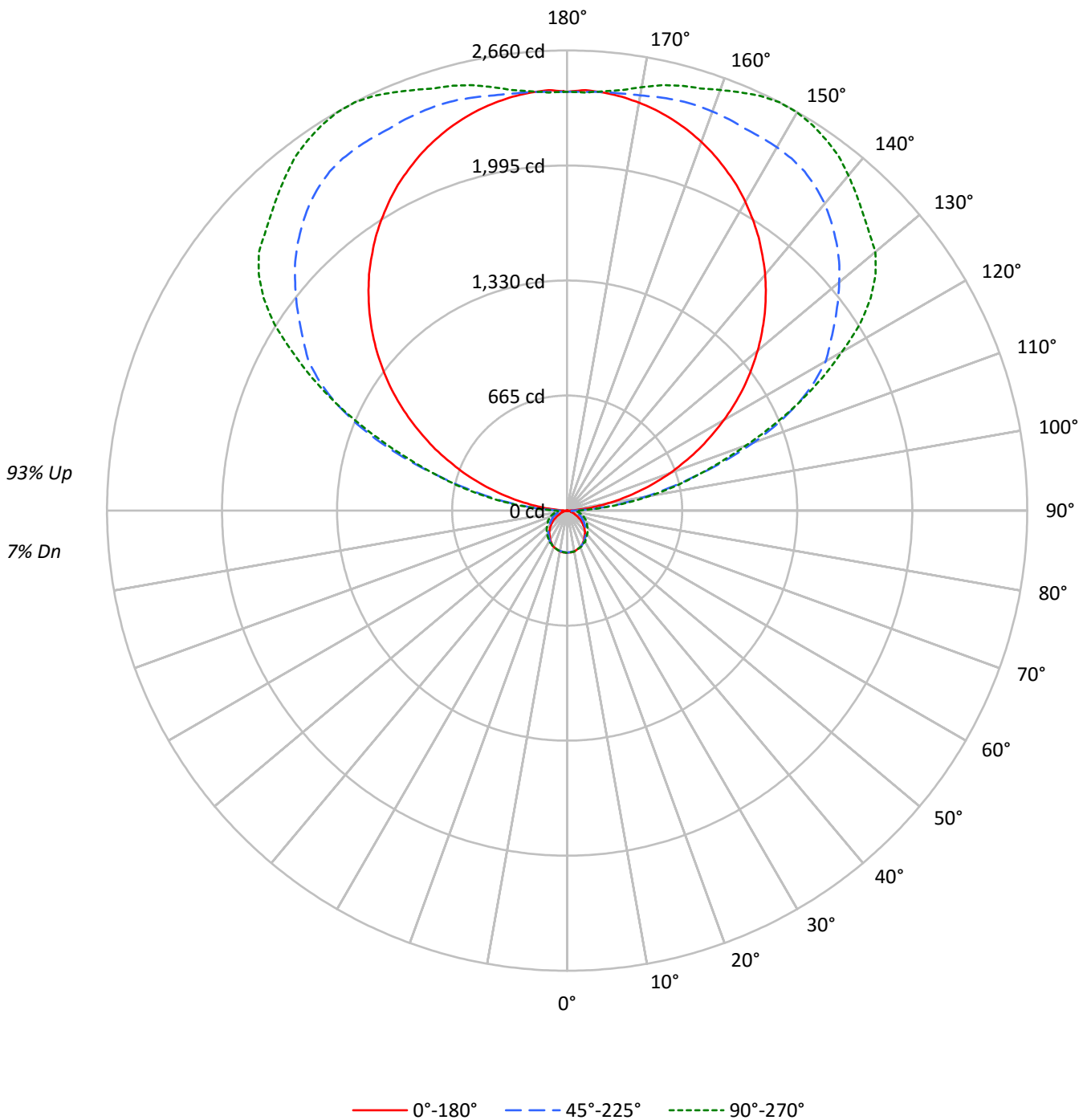
Summary

Lumens per Lamp: 2950 (4 lamps)
Luminaire Lumens: 9763.5 lumens
Efficiency: 82.7%
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.33
Luminous Opening: Rectangular w/ Sides (W: 0.75' x L: 4' x H: 0.25')
CIE Type: Indirect

Input Watts (W): 112
Input Voltage (V): NR
Input Current (A_{in}): 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	80	80	80	80	69	69	69	69	49	49	49	31	31	31	14	14	14	6
1	73	69	66	64	63	60	58	56	43	41	40	27	26	25	12	12	11	5
2	66	61	56	52	57	53	49	45	37	35	33	23	22	21	11	10	10	4
3	60	53	47	43	52	46	41	38	33	30	27	21	19	18	9	9	8	3
4	55	47	41	36	47	41	36	32	29	26	23	18	16	15	8	8	7	3
5	50	41	35	31	43	36	31	27	26	22	20	16	14	13	7	7	6	2
6	46	37	31	26	40	32	27	23	23	20	17	15	13	11	7	6	5	2
7	43	33	27	23	37	29	24	20	21	17	15	13	11	10	6	5	5	2
8	39	30	24	20	34	26	21	17	19	15	13	12	10	8	5	5	4	2
9	36	27	21	17	31	24	19	15	17	14	11	11	9	7	5	4	4	2
10	34	25	19	15	29	21	17	14	16	12	10	10	8	7	5	4	3	1

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	874	874	874
5°	870	848	844
10°	863	827	826
15°	844	798	792
20°	840	774	766
25°	814	741	729
30°	786	717	725
35°	738	677	682
40°	716	644	654
45°	670	603	636
50°	611	567	614
55°	559	533	595
60°	457	498	583
65°	359	493	562
70°	284	452	555
75°	238	416	536
80°	125	370	513
85°	50	299	476



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	22.8	0.2	0.2
10°-20°	65.2	0.7	0.6
20°-30°	97.7	1.0	0.8
30°-40°	115.4	1.2	1.0
40°-50°	117.0	1.2	1.0
50°-60°	105.1	1.1	0.9
60°-70°	85.6	0.9	0.7
70°-80°	61.1	0.6	0.5
80°-90°	35.6	0.4	0.3
90°-100°	219.9	2.3	1.9
100°-110°	763.2	7.8	6.5
110°-120°	1316.6	13.5	11.2
120°-130°	1622.0	16.6	13.7
130°-140°	1632.0	16.7	13.8
140°-150°	1458.9	14.9	12.4
150°-160°	1121.0	11.5	9.5
160°-170°	692.4	7.1	5.9
170°-180°	232.0	2.4	2.0
0°-30°	185.8	1.9	1.6
0°-40°	301.2	3.1	2.6
0°-60°	523.2	5.4	4.4
0°-90°	705.5	7.2	6.0
90°-120°	2299.7	23.6	19.5
90°-150°	7012.6	71.8	59.4
90°-180°	9058.0	92.8	76.8
0°-180°	9763.5	100.0	82.7

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	244	244	244	244	244	
5°	243	240	241	240	241	23
15°	231	231	231	231	232	65
25°	212	208	212	213	213	97
35°	176	180	185	189	192	111
45°	140	140	152	162	167	107
55°	97	101	119	134	140	85
65°	48	63	93	109	114	50
75°	21	36	61	82	87	22
85°	2	14	30	46	56	3
90°	0	15	34	53	61	4
95°	76	162	199	214	220	98
105°	428	768	766	763	768	453
115°	841	1224	1478	1489	1480	830
125°	1248	1582	1887	2068	2142	1114
135°	1615	1876	2200	2354	2421	1246
145°	1930	2122	2393	2560	2614	1206
155°	2173	2278	2436	2580	2645	1002
165°	2342	2375	2456	2511	2543	661
175°	2425	2427	2428	2425	2433	231
180°	2421	2421	2421	2421	2421	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	243.6	243.6	243.6	243.6	243.6
2.5°	242.8	237.9	241.1	241.1	242.8
5°	242.8	239.5	241.1	239.9	241.1
7.5°	241.1	237.9	237.9	238.3	241.1
10°	239.5	235.1	238.3	235.1	239.9
12.5°	235.5	233.8	233.8	233.8	235.1
15°	231.0	230.6	231.0	230.6	232.2
17.5°	227.8	224.9	229.4	227.8	227.8
20°	224.9	220.5	223.3	221.7	224.9
22.5°	218.9	215.6	218.9	218.9	222.1
25°	211.6	208.3	211.6	212.8	212.8
27.5°	202.2	202.7	208.3	207.1	209.9
30°	196.6	196.6	201.0	202.7	208.7
32.5°	184.8	187.7	192.1	198.2	198.2
35°	175.9	180.0	184.8	189.3	192.1
37.5°	168.2	169.8	175.9	180.4	186.0
40°	160.9	160.9	169.8	174.3	178.8
42.5°	149.2	152.0	159.7	167.0	174.3
45°	140.3	140.3	152.0	162.5	167.0
47.5°	126.5	129.7	143.1	153.6	159.3
50°	117.6	119.2	135.4	146.3	153.6
52.5°	107.5	109.1	125.3	140.3	145.9
55°	97.3	101.4	119.2	134.2	140.3
57.5°	80.7	90.8	110.3	125.3	134.2
60°	70.6	81.9	103.0	119.2	128.1
62.5°	60.1	73.4	95.7	115.1	124.1
65°	47.9	62.9	92.9	109.1	113.5
67.5°	42.2	57.2	82.3	101.4	107.5
70°	31.7	46.7	76.3	97.3	101.4
72.5°	27.2	40.6	68.6	89.6	96.9
75°	21.2	36.2	61.3	81.9	86.8
77.5°	15.5	27.2	55.6	71.8	79.5
80°	8.2	22.8	46.3	64.1	71.8
82.5°	3.7	19.9	37.8	55.6	62.9
85°	2.1	13.9	30.5	46.3	55.6
87.5°	0.5	7.8	25.6	43.4	52.4
90°	0.5	15.1	34.1	53.2	61.3
92.5°	27.2	67.3	90.8	109.1	111.9
95°	76.3	162.5	199.4	214.0	220.5
97.5°	153.6	288.5	322.6	337.6	347.7
100°	235.1	487.0	454.6	511.0	484.6
102.5°	328.6	564.8	601.7	577.8	628.4
105°	427.9	767.8	766.2	763.3	767.8
107.5°	529.2	892.2	953.3	922.1	925.4
110°	634.1	1000.7	1144.6	1106.1	1100.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	732.1	1109.3	1321.2	1299.3	1288.8
115°	840.7	1223.6	1478.4	1489.3	1480.4
117.5°	941.2	1328.9	1612.1	1670.0	1661.1
120°	1045.3	1428.1	1726.3	1840.6	1834.9
122.5°	1147.8	1545.6	1803.7	2012.7	2006.7
125°	1247.5	1582.5	1886.7	2067.8	2142.0
127.5°	1343.9	1680.1	1971.4	2184.9	2247.3
130°	1437.1	1751.8	2052.8	2238.4	2325.9
132.5°	1527.8	1815.8	2133.0	2293.5	2370.4
135°	1615.3	1876.2	2199.9	2354.2	2421.1
137.5°	1699.6	1934.1	2260.7	2417.8	2475.8
140°	1781.4	1992.1	2315.8	2475.8	2529.3
142.5°	1855.5	2050.0	2358.7	2518.7	2579.9
145°	1929.7	2122.5	2392.7	2560.5	2613.9
147.5°	1996.5	2146.4	2413.4	2573.8	2640.7
150°	2060.5	2207.2	2425.1	2594.9	2657.3
152.5°	2121.3	2247.3	2431.2	2593.3	2660.1
155°	2172.8	2278.5	2435.7	2579.9	2645.1
157.5°	2223.8	2306.8	2447.8	2558.8	2616.8
160°	2268.0	2329.1	2455.1	2541.0	2587.2
162.5°	2308.1	2353.0	2459.6	2523.2	2559.2
165°	2342.1	2374.9	2456.3	2511.4	2542.6
167.5°	2372.1	2398.8	2447.4	2483.1	2518.7
170°	2394.4	2406.1	2436.9	2470.1	2484.7
172.5°	2413.4	2420.7	2431.2	2435.7	2451.9
175°	2425.1	2426.8	2428.4	2425.1	2432.8
177.5°	2432.8	2431.2	2422.3	2412.2	2419.1
180°	2421.0	2421.0	2421.0	2421.0	2421.0

(END OF REPORT)