

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931519

Luminaire Tested: DFN2DS-TR4F0-080DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-080DS840-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

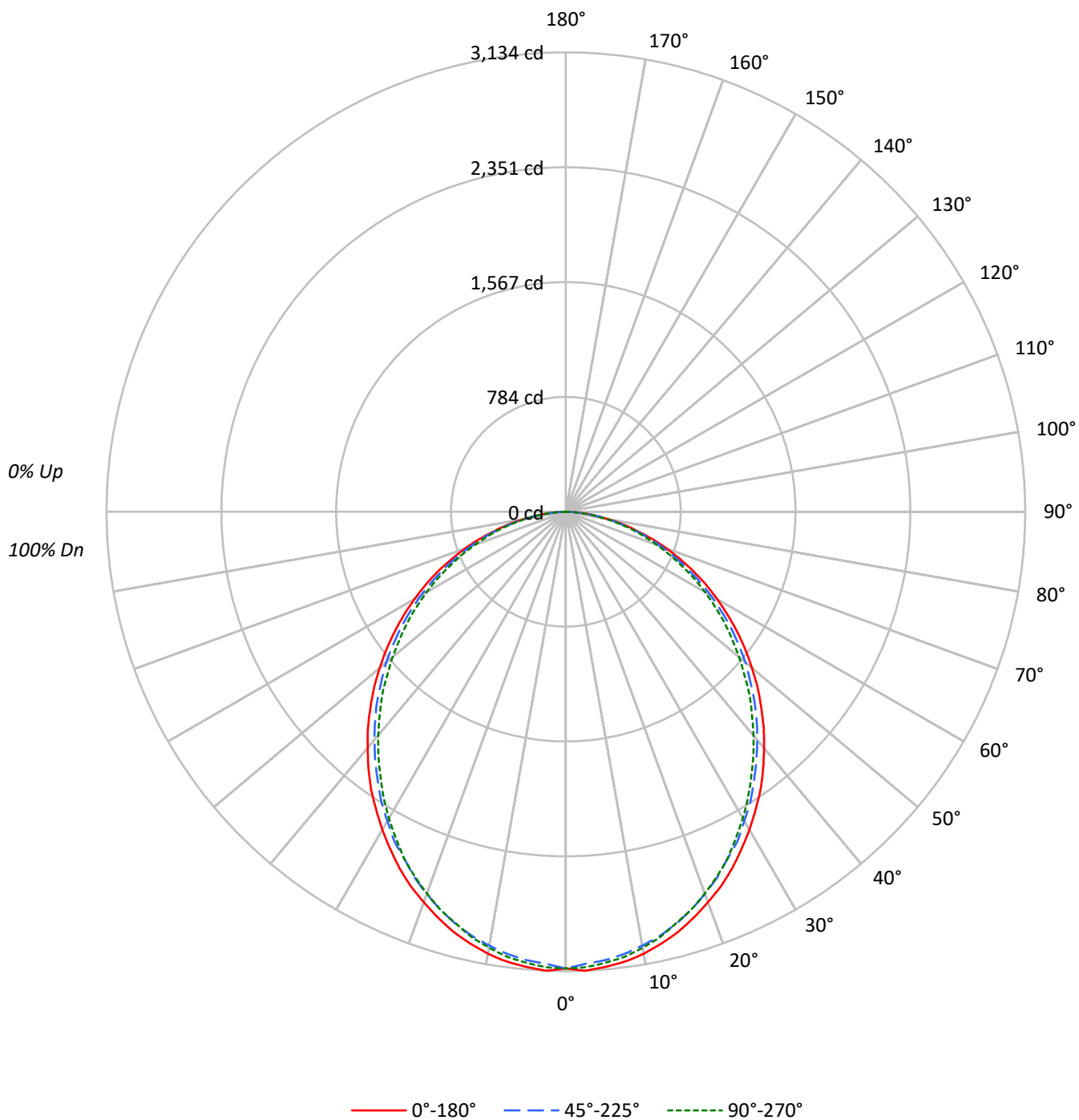
Lumens per Lamp: N/A
Luminaire Lumens: 7927.9 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 81.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2475	2475	2475
5°	2485	2449	2464
10°	2470	2424	2436
15°	2440	2393	2390
20°	2396	2346	2343
25°	2353	2288	2288
30°	2298	2235	2215
35°	2246	2171	2139
40°	2181	2107	2066
45°	2118	2043	1993
50°	2048	1977	1907
55°	1976	1901	1830
60°	1895	1809	1743
65°	1808	1718	1639
70°	1698	1608	1531
75°	1545	1480	1444
80°	1372	1329	1261
85°	1118	1066	956

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2118 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.3	3.7
10°-20°	825.2	10.4
20°-30°	1212.7	15.3
30°-40°	1408.4	17.8
40°-50°	1406.7	17.7
50°-60°	1226.6	15.5
60°-70°	906.7	11.4
70°-80°	513.0	6.5
80°-90°	135.4	1.7
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°	2331.1	29.4
0°-40°	3739.5	47.2
0°-60°	6372.8	80.4
0°-90°	7927.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7927.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3116	3116	3116	3116	3116	
5°	3116	3104	3071	3095	3089	296
15°	2966	2948	2909	2921	2906	835
25°	2685	2661	2610	2616	2610	1235
35°	2316	2286	2238	2220	2205	1446
45°	1885	1864	1819	1786	1774	1455
55°	1426	1408	1372	1336	1321	1275
65°	962	944	914	887	872	951
75°	503	498	482	464	470	537
85°	123	120	117	108	105	144
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3115.9	3115.9	3115.9	3115.9	3115.9
2.5°	3134.0	3119.1	3086.1	3115.9	3110.2
5°	3115.9	3104.2	3071.2	3095.0	3089.3
7.5°	3095.0	3077.2	3044.1	3068.3	3062.3
10°	3062.3	3041.2	3005.3	3029.1	3020.3
12.5°	3017.1	2999.3	2963.4	2978.3	2972.3
15°	2966.3	2948.4	2909.3	2921.4	2906.5
17.5°	2903.3	2885.5	2846.3	2861.4	2846.3
20°	2834.3	2816.5	2774.6	2783.5	2771.7
22.5°	2765.7	2738.6	2699.5	2699.5	2693.5
25°	2684.6	2660.8	2609.9	2615.6	2609.9
27.5°	2594.6	2573.7	2534.8	2525.9	2511.0
30°	2505.0	2480.8	2436.0	2427.1	2415.0
32.5°	2409.0	2391.2	2343.1	2325.0	2313.0
35°	2316.1	2286.3	2238.2	2220.1	2205.2
37.5°	2211.2	2184.2	2136.2	2115.2	2100.3
40°	2103.5	2079.3	2031.3	2004.6	1992.5
42.5°	1998.6	1974.4	1926.7	1896.5	1878.8
45°	1884.8	1863.8	1818.6	1785.9	1773.9
47.5°	1773.9	1752.9	1704.8	1671.8	1654.0
50°	1656.9	1641.9	1599.9	1558.0	1543.0
52.5°	1543.0	1522.0	1483.3	1450.2	1429.2
55°	1426.3	1408.2	1372.4	1336.4	1321.4
57.5°	1309.4	1294.5	1255.4	1219.4	1207.3
60°	1192.4	1180.7	1138.6	1105.6	1096.7
62.5°	1078.6	1057.7	1027.7	997.9	985.8
65°	962.0	943.8	913.9	886.9	872.0
67.5°	842.0	826.8	800.1	779.2	767.1
70°	731.1	719.0	692.1	671.1	659.3
72.5°	617.3	605.3	590.3	569.4	560.5
75°	503.2	497.5	482.3	464.5	470.5
77.5°	401.5	389.4	383.4	374.5	365.6
80°	299.8	296.6	290.6	281.7	275.6
82.5°	203.8	203.8	200.9	188.8	188.8
85°	122.7	119.8	117.0	107.8	104.9
87.5°	54.1	48.0	41.9	33.0	29.9
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.43	16.04	14.80	16.36	16.67	13.99	15.60	14.35	15.91	16.23
	3H	16.18	17.64	16.56	17.96	18.32	15.69	17.15	16.07	17.47	17.83
	4H	16.83	18.20	17.23	18.54	18.92	16.33	17.70	16.73	18.05	18.43
	6H	17.30	18.57	17.71	18.93	19.32	16.80	18.06	17.21	18.43	18.82
	8H	17.44	18.65	17.87	19.04	19.44	16.94	18.15	17.36	18.54	18.94
	12H	17.53	18.69	17.96	19.07	19.50	17.02	18.18	17.45	18.56	18.99
4H	2H	14.99	16.36	15.39	16.71	17.09	14.64	16.01	15.04	16.36	16.73
	3H	16.97	18.11	17.38	18.51	18.91	16.56	17.71	16.97	18.10	18.50
	4H	17.74	18.78	18.18	19.19	19.63	17.32	18.36	17.75	18.77	19.21
	6H	18.34	19.25	18.79	19.69	20.14	17.91	18.81	18.36	19.25	19.71
	8H	18.53	19.38	18.99	19.82	20.28	18.09	18.94	18.55	19.38	19.85
	12H	18.66	19.42	19.14	19.90	20.37	18.21	18.97	18.69	19.45	19.91
8H	4H	18.02	18.86	18.48	19.31	19.77	17.64	18.49	18.10	18.93	19.40
	6H	18.73	19.43	19.23	19.92	20.40	18.35	19.05	18.84	19.54	20.02
	8H	18.99	19.62	19.50	20.13	20.61	18.60	19.23	19.11	19.74	20.22
	12H	19.19	19.75	19.70	20.24	20.80	18.78	19.34	19.28	19.83	20.39
12H	4H	18.04	18.80	18.52	19.28	19.75	17.68	18.44	18.16	18.91	19.38
	6H	18.78	19.41	19.29	19.92	20.40	18.41	19.04	18.92	19.55	20.03
	8H	19.09	19.65	19.60	20.14	20.70	18.71	19.27	19.22	19.76	20.32