

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: P931564

Luminaire Tested: DFN2DS-TR4F0-100DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931564
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-100DS935-RLL
Description: 4 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

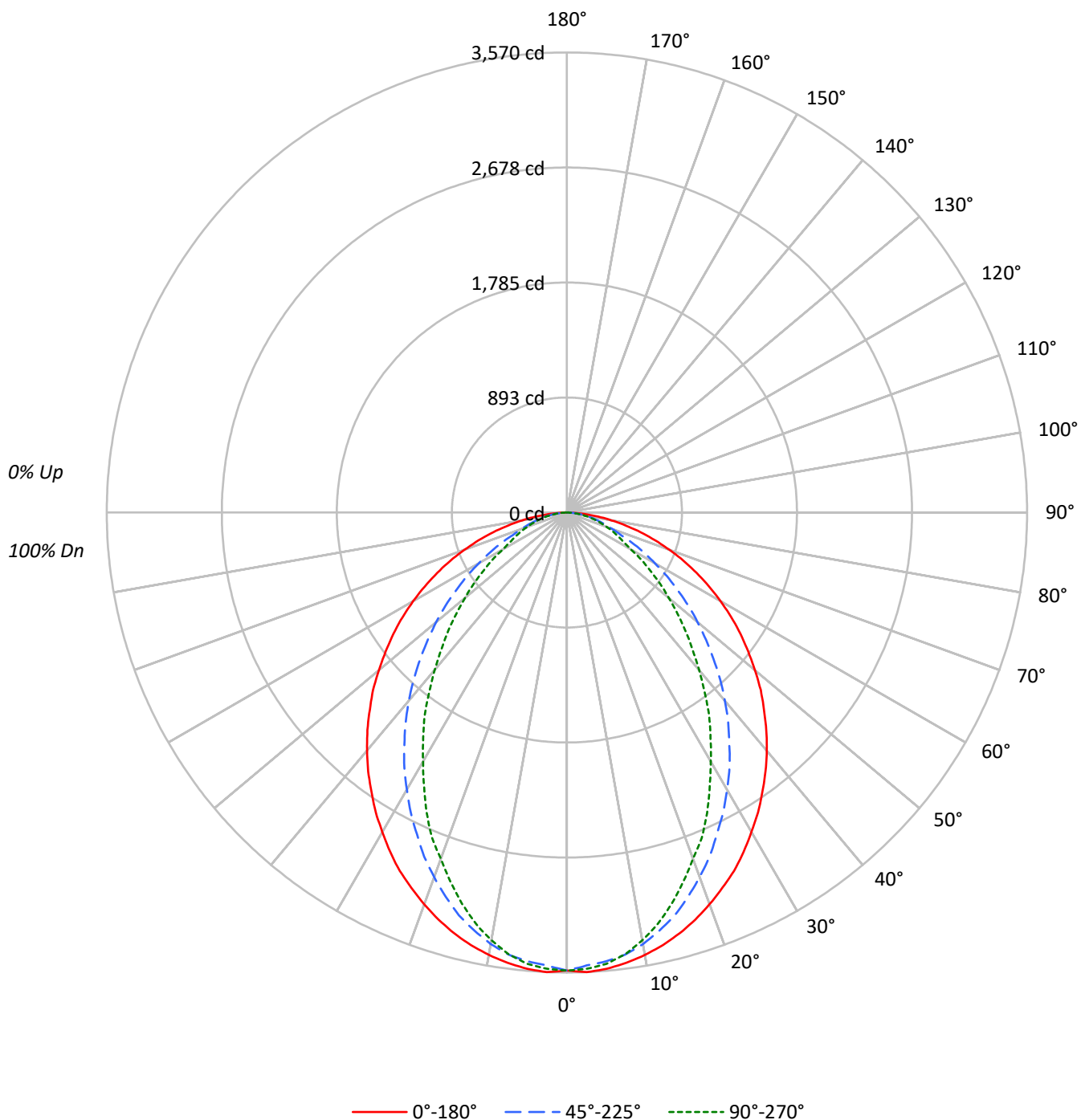
Lumens per Lamp: N/A
Luminaire Lumens: 7310.0 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 107.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2824	2824	2824
5°	2835	2788	2804
10°	2813	2743	2719
15°	2780	2661	2585
20°	2736	2545	2417
25°	2690	2414	2256
30°	2626	2278	2048
35°	2564	2131	1865
40°	2502	1978	1655
45°	2429	1807	1463
50°	2354	1634	1276
55°	2276	1448	1096
60°	2187	1252	910
65°	2086	1052	828
70°	1965	866	762
75°	1817	790	711
80°	1603	706	648
85°	1260	557	557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2429 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.1	4.6
10°-20°	914.5	12.5
20°-30°	1283.9	17.6
30°-40°	1399.5	19.1
40°-50°	1286.3	17.6
50°-60°	1010.2	13.8
60°-70°	657.6	9.0
70°-80°	338.5	4.6
80°-90°	86.4	1.2
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°	2531.5	34.6
0°-40°	3931.0	53.8
0°-60°	6227.6	85.2
0°-90°	7310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3554	3554	3554	3554	3554	
5°	3554	3538	3496	3525	3516	337
15°	3381	3345	3236	3175	3143	953
25°	3069	2966	2753	2622	2573	1411
35°	2644	2480	2197	1994	1923	1655
45°	2162	1946	1608	1380	1303	1669
55°	1644	1393	1045	852	791	1469
65°	1110	849	560	450	441	1100
75°	592	366	257	235	232	626
85°	138	71	61	61	61	166
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3554.4	3554.4	3554.4	3554.4	3554.4
2.5°	3570.4	3554.4	3518.9	3551.3	3544.8
5°	3554.4	3538.3	3496.3	3525.4	3515.8
7.5°	3525.4	3506.2	3461.2	3473.8	3457.8
10°	3486.8	3464.3	3400.1	3390.2	3371.1
12.5°	3438.7	3409.6	3322.6	3303.5	3268.0
15°	3380.7	3345.1	3235.9	3174.9	3142.8
17.5°	3313.1	3261.5	3126.4	3055.8	3004.2
20°	3235.9	3171.4	3010.7	2930.5	2859.5
22.5°	3152.3	3078.3	2891.6	2782.4	2734.3
25°	3068.7	2965.7	2753.4	2621.6	2573.2
27.5°	2969.1	2859.5	2624.7	2473.5	2399.5
30°	2862.9	2740.4	2483.1	2319.3	2232.3
32.5°	2759.9	2611.7	2348.3	2155.2	2074.6
35°	2644.2	2480.1	2197.1	1994.4	1923.4
37.5°	2531.6	2354.4	2055.5	1833.3	1753.1
40°	2412.5	2219.7	1907.4	1679.1	1595.5
42.5°	2290.3	2084.5	1759.6	1521.4	1441.2
45°	2161.6	1945.9	1608.5	1379.8	1302.6
47.5°	2039.5	1811.2	1463.7	1235.0	1164.4
50°	1904.3	1676.0	1322.1	1099.9	1032.7
52.5°	1772.2	1531.0	1187.0	974.6	913.6
55°	1643.5	1392.8	1045.3	852.5	791.4
57.5°	1511.9	1254.5	920.1	739.9	688.3
60°	1376.7	1119.4	788.0	624.2	572.7
62.5°	1244.9	987.6	675.4	521.2	495.5
65°	1109.8	849.1	559.7	450.5	440.6
67.5°	981.2	720.4	450.5	395.5	386.0
70°	846.0	595.2	373.0	340.9	328.0
72.5°	717.3	479.1	311.9	286.3	279.8
75°	591.8	366.5	257.3	234.8	231.7
77.5°	466.6	260.4	202.7	189.7	183.3
80°	350.4	186.7	154.3	141.6	141.6
82.5°	244.3	125.6	106.1	99.7	99.7
85°	138.2	70.6	61.1	61.1	61.1
87.5°	51.5	25.6	25.6	22.5	22.5
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	14.84	16.36	15.21	16.68	16.99	10.80	12.32	11.17	12.64	12.95
	3H	16.61	17.97	16.98	18.30	18.66	12.07	13.43	12.44	13.76	14.12
	4H	17.27	18.55	17.67	18.90	19.28	12.57	13.85	12.97	14.20	14.58
	6H	17.76	18.94	18.17	19.31	19.70	12.95	14.13	13.36	14.50	14.89
	8H	17.93	19.05	18.35	19.44	19.84	13.07	14.20	13.50	14.59	14.99
	12H	18.03	19.11	18.46	19.49	19.92	13.16	14.23	13.59	14.62	15.04
4H	2H	14.95	16.23	15.34	16.57	16.95	11.50	12.78	11.90	13.13	13.51
	3H	16.88	17.94	17.29	18.34	18.74	12.94	14.00	13.35	14.40	14.80
	4H	17.63	18.58	18.06	19.00	19.44	13.54	14.50	13.97	14.91	15.35
	6H	18.22	19.05	18.68	19.49	19.95	14.03	14.86	14.49	15.30	15.76
	8H	18.43	19.21	18.90	19.66	20.12	14.19	14.97	14.65	15.41	15.88
	12H	18.59	19.28	19.07	19.76	20.23	14.31	15.00	14.79	15.48	15.95
8H	4H	17.65	18.43	18.12	18.87	19.34	13.89	14.67	14.36	15.12	15.58
	6H	18.29	18.93	18.79	19.42	19.90	14.48	15.12	14.98	15.61	16.09
	8H	18.54	19.12	19.05	19.63	20.11	14.70	15.28	15.22	15.79	16.28
	12H	18.74	19.25	19.25	19.75	20.31	14.88	15.39	15.39	15.88	16.45
12H	4H	17.64	18.33	18.12	18.81	19.28	13.94	14.63	14.42	15.11	15.58
	6H	18.27	18.85	18.78	19.36	19.85	14.54	15.12	15.06	15.63	16.12
	8H	18.55	19.06	19.06	19.56	20.12	14.82	15.33	15.33	15.82	16.38