

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: P1056218

Luminaire Tested: S124R3DR-H795D940-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056218
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H795D940-X4F0-XX-UDD-FLL-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

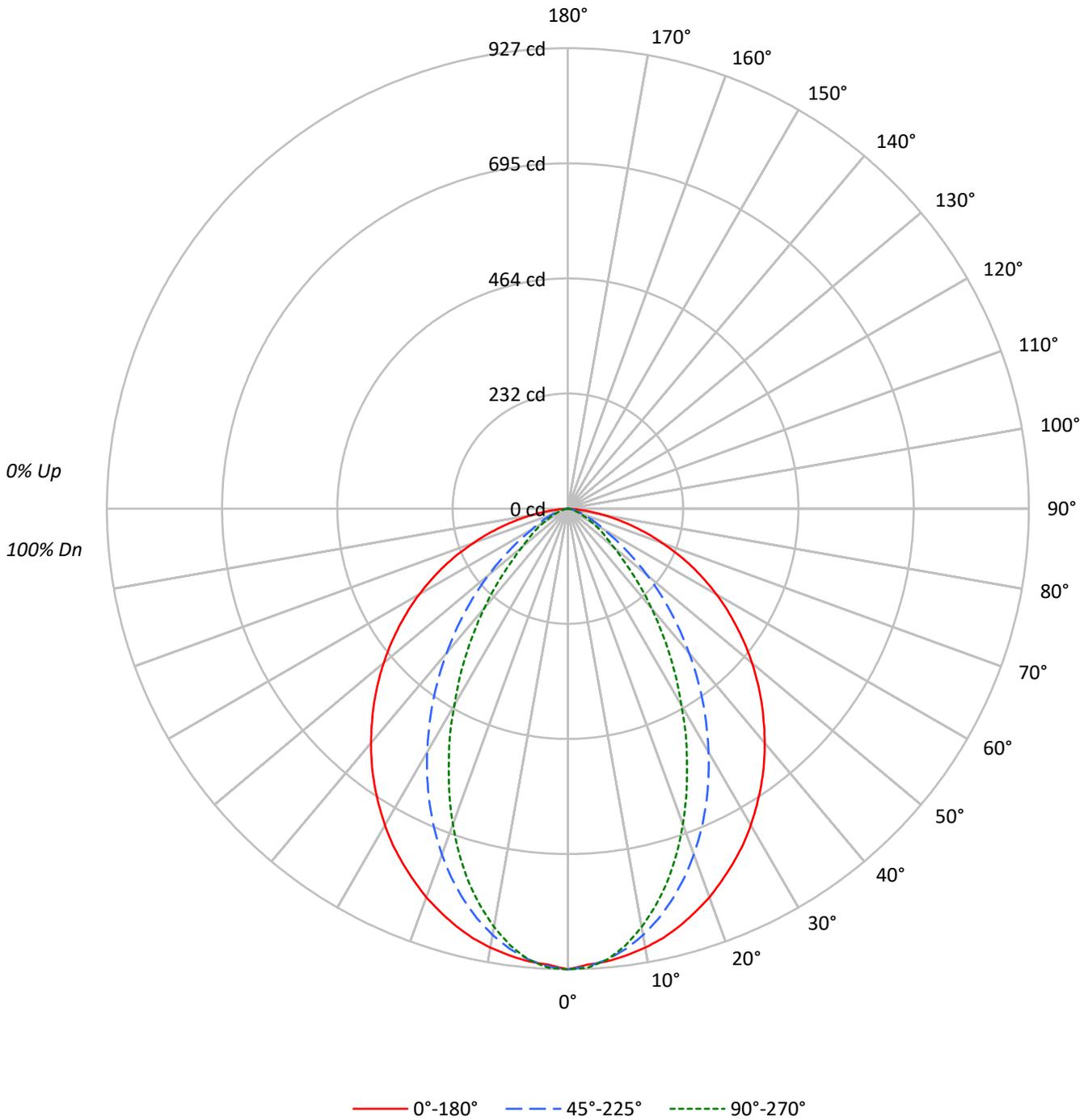
Lumens per Lamp: N/A
Luminaire Lumens: 1499.6 lumens
Efficiency: N/A
Efficacy: 63.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
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: 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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8199	8199	8199
5°	8116	8085	8085
10°	8055	7822	7675
15°	7960	7445	7097
20°	7832	6971	6361
25°	7675	6410	5526
30°	7511	5774	4654
35°	7317	5098	3831
40°	7106	4375	3019
45°	6888	3639	2257
50°	6652	2862	1651
55°	6389	2116	1318
60°	6108	1466	1008
65°	5745	1138	741
70°	5201	804	582
75°	4543	560	444
80°	3651	438	397
85°	2019	355	355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6888 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	5.7
10°-20°	229.8	15.3
20°-30°	306.6	20.4
30°-40°	308.7	20.6
40°-50°	253.1	16.9
50°-60°	173.0	11.5
60°-70°	96.7	6.4
70°-80°	38.3	2.6
80°-90°	7.3	0.5
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°	622.4	41.5
0°-40°	931.1	62.1
0°-60°	1357.3	90.5
0°-90°	1499.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1499.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	914	925	911	907	911	87
15°	870	860	813	785	775	245
25°	787	748	657	591	566	362
35°	678	606	472	382	355	424
45°	551	450	291	205	180	425
55°	414	291	137	92	86	371
65°	275	138	54	39	35	271
75°	133	36	16	14	13	142
85°	20	4	4	4	4	28
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	927.4	927.4	927.4	927.4	927.4
2.5°	918.8	930.0	922.2	923.1	924.8
5°	914.5	924.8	911.0	906.7	911.0
7.5°	906.7	914.5	893.7	885.1	886.8
10°	897.2	899.8	871.3	856.6	854.9
12.5°	885.1	881.6	844.5	822.9	817.7
15°	869.6	860.1	813.4	784.9	775.4
17.5°	851.4	835.0	778.9	741.8	727.9
20°	832.4	808.2	740.9	693.4	676.1
22.5°	810.0	779.7	700.3	642.4	622.6
25°	786.7	747.8	657.1	590.6	566.5
27.5°	762.5	715.0	612.2	538.0	513.8
30°	735.7	679.6	565.6	485.3	455.9
32.5°	707.2	643.3	519.0	433.5	405.8
35°	677.9	606.2	472.3	382.5	354.9
37.5°	647.6	568.2	425.7	334.2	306.5
40°	615.7	529.3	379.1	288.4	261.6
42.5°	582.9	489.6	334.2	245.2	220.2
45°	550.9	449.9	291.0	204.7	180.5
47.5°	517.2	410.2	248.7	166.7	145.9
50°	483.6	370.4	208.1	133.8	120.0
52.5°	449.0	330.7	171.0	109.7	100.2
55°	414.5	291.0	137.3	91.5	85.5
57.5°	379.9	251.3	106.2	77.7	70.8
60°	345.4	212.4	82.9	63.0	57.0
62.5°	310.0	173.6	68.2	50.1	44.9
65°	274.6	138.2	54.4	38.9	35.4
67.5°	239.2	105.3	41.4	30.2	27.6
70°	201.2	75.1	31.1	23.3	22.5
72.5°	168.4	50.9	22.5	18.1	17.3
75°	133.0	36.3	16.4	13.8	13.0
77.5°	102.8	23.3	12.1	11.2	10.4
80°	71.7	13.0	8.6	7.8	7.8
82.5°	44.0	6.9	6.0	5.2	5.2
85°	19.9	3.5	3.5	3.5	3.5
87.5°	3.5	1.7	1.7	1.7	1.7
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	18.03	19.44	18.40	19.75	20.07	9.12	10.53	9.49	10.84	11.16
	3H	19.62	20.87	20.00	21.20	21.56	9.71	10.97	10.09	11.30	11.66
	4H	20.22	21.38	20.62	21.73	22.12	9.87	11.04	10.27	11.39	11.77
	6H	20.65	21.72	21.06	22.09	22.48	9.98	11.06	10.39	11.42	11.82
	8H	20.76	21.78	21.19	22.17	22.57	10.00	11.02	10.43	11.41	11.82
	12H	20.80	21.78	21.23	22.16	22.59	10.01	10.99	10.44	11.37	11.80
4H	2H	17.89	19.06	18.29	19.41	19.79	9.71	10.87	10.11	11.22	11.61
	3H	19.54	20.49	19.95	20.90	21.30	10.42	11.38	10.83	11.78	12.18
	4H	20.14	21.00	20.58	21.42	21.86	10.62	11.48	11.06	11.90	12.34
	6H	20.63	21.38	21.10	21.82	22.29	10.79	11.53	11.25	11.98	12.44
	8H	20.78	21.47	21.24	21.91	22.38	10.82	11.52	11.29	11.96	12.43
	12H	20.85	21.46	21.34	21.95	22.42	10.85	11.46	11.33	11.94	12.42
8H	4H	20.03	20.73	20.50	21.17	21.64	10.89	11.59	11.36	12.03	12.50
	6H	20.52	21.08	21.02	21.58	22.06	11.10	11.67	11.60	12.16	12.64
	8H	20.66	21.17	21.18	21.68	22.17	11.16	11.67	11.68	12.18	12.67
	12H	20.75	21.20	21.26	21.69	22.26	11.22	11.67	11.73	12.16	12.73
12H	4H	20.00	20.61	20.48	21.09	21.56	10.92	11.54	11.41	12.02	12.49
	6H	20.46	20.97	20.98	21.48	21.97	11.13	11.64	11.65	12.15	12.64
	8H	20.63	21.07	21.14	21.57	22.14	11.22	11.67	11.73	12.16	12.73