

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056068

Luminaire Tested: S124R3DR-S795D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056068
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-S795D840-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

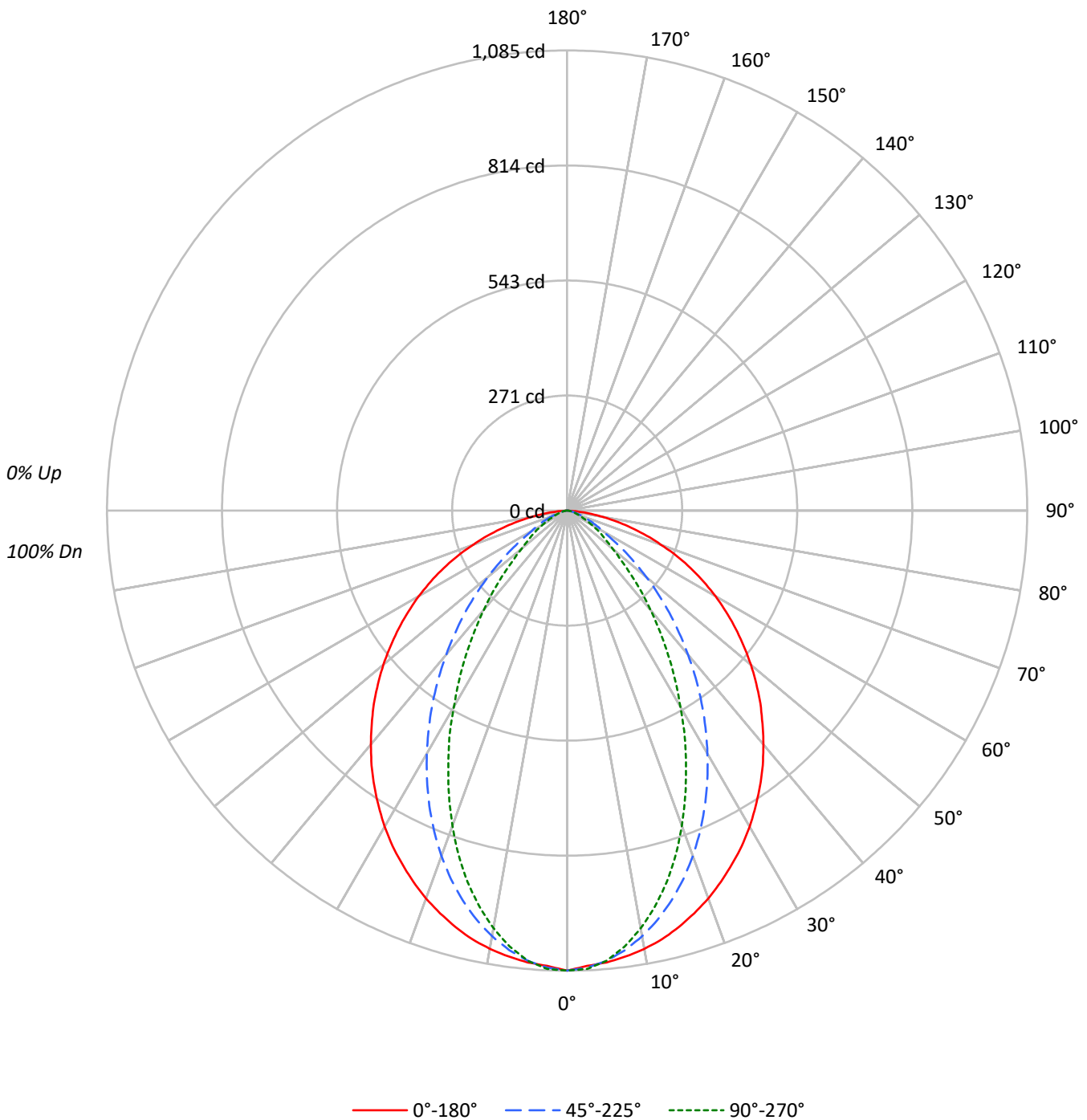
Lumens per Lamp: N/A
Luminaire Lumens: 1753.7 lumens
Efficiency: N/A
Efficacy: 66.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
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: 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°	9589	9589	9589
5°	9491	9456	9456
10°	9420	9148	8976
15°	9308	8708	8301
20°	9159	8153	7440
25°	8975	7497	6463
30°	8784	6753	5444
35°	8556	5962	4480
40°	8310	5116	3532
45°	8056	4255	2640
50°	7778	3348	1931
55°	7471	2476	1541
60°	7142	1713	1179
65°	6718	1331	866
70°	6083	941	680
75°	5312	656	516
80°	4267	514	463
85°	2353	406	406

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8056 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.6	5.7
10°-20°	268.8	15.3
20°-30°	358.5	20.4
30°-40°	361.0	20.6
40°-50°	296.0	16.9
50°-60°	202.4	11.5
60°-70°	113.1	6.4
70°-80°	44.8	2.6
80°-90°	8.5	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°	727.9	41.5
0°-40°	1088.9	62.1
0°-60°	1587.3	90.5
0°-90°	1753.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1753.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1085	1085	1085	1085	1085	
5°	1069	1082	1065	1060	1065	101
15°	1017	1006	951	918	907	287
25°	920	874	768	691	662	424
35°	793	709	552	447	415	496
45°	644	526	340	239	211	497
55°	485	340	161	107	100	433
65°	321	162	64	45	41	317
75°	156	42	19	16	15	167
85°	23	4	4	4	4	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1084.6	1084.6	1084.6	1084.6	1084.6
2.5°	1074.5	1087.6	1078.5	1079.5	1081.6
5°	1069.4	1081.6	1065.4	1060.4	1065.4
7.5°	1060.4	1069.4	1045.2	1035.1	1037.1
10°	1049.3	1052.3	1019.0	1001.8	999.8
12.5°	1035.1	1031.1	987.6	962.4	956.3
15°	1016.9	1005.8	951.3	918.0	906.9
17.5°	995.7	976.5	910.9	867.5	851.3
20°	973.5	945.2	866.5	810.9	790.7
22.5°	947.3	911.9	819.0	751.3	728.1
25°	920.0	874.5	768.5	690.7	662.5
27.5°	891.7	836.2	716.0	629.1	600.9
30°	860.4	794.8	661.5	567.5	533.2
32.5°	827.1	752.3	606.9	507.0	474.6
35°	792.7	708.9	552.4	447.4	415.1
37.5°	757.4	664.5	497.9	390.8	358.5
40°	720.0	619.0	443.3	337.3	306.0
42.5°	681.7	572.6	390.8	286.8	257.5
45°	644.3	526.1	340.3	239.3	211.1
47.5°	604.9	479.7	290.8	194.9	170.7
50°	565.5	433.2	243.4	156.5	140.4
52.5°	525.1	386.8	200.0	128.3	117.1
55°	484.7	340.3	160.6	107.0	100.0
57.5°	444.3	293.9	124.2	90.9	82.8
60°	403.9	248.4	96.9	73.7	66.7
62.5°	362.5	203.0	79.8	58.6	52.5
65°	321.1	161.6	63.6	45.4	41.4
67.5°	279.7	123.2	48.5	35.3	32.3
70°	235.3	87.9	36.4	27.3	26.3
72.5°	196.9	59.6	26.3	21.2	20.2
75°	155.5	42.4	19.2	16.2	15.1
77.5°	120.2	27.3	14.1	13.1	12.1
80°	83.8	15.1	10.1	9.1	9.1
82.5°	51.5	8.1	7.1	6.1	6.1
85°	23.2	4.0	4.0	4.0	4.0
87.5°	4.0	2.0	2.0	2.0	2.0
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	18.58	19.99	18.94	20.30	20.61	9.67	11.08	10.03	11.39	11.70
	3H	20.16	21.42	20.54	21.75	22.11	10.26	11.51	10.64	11.84	12.20
	4H	20.76	21.93	21.16	22.28	22.66	10.42	11.59	10.82	11.94	12.32
	6H	21.19	22.27	21.60	22.64	23.03	10.52	11.60	10.94	11.97	12.36
	8H	21.30	22.32	21.73	22.71	23.12	10.55	11.57	10.97	11.96	12.36
	12H	21.35	22.32	21.78	22.70	23.13	10.55	11.53	10.98	11.91	12.34
4H	2H	18.43	19.60	18.83	19.95	20.33	10.25	11.42	10.65	11.77	12.15
	3H	20.08	21.04	20.49	21.44	21.84	10.96	11.92	11.38	12.33	12.73
	4H	20.69	21.54	21.12	21.96	22.40	11.17	12.03	11.60	12.44	12.89
	6H	21.18	21.92	21.64	22.36	22.83	11.34	12.08	11.80	12.52	12.99
	8H	21.32	22.01	21.79	22.46	22.93	11.37	12.06	11.84	12.51	12.98
	12H	21.39	22.01	21.88	22.49	22.96	11.39	12.01	11.88	12.49	12.96
8H	4H	20.58	21.27	21.05	21.72	22.19	11.44	12.13	11.91	12.58	13.05
	6H	21.06	21.63	21.56	22.12	22.60	11.64	12.21	12.14	12.70	13.18
	8H	21.20	21.71	21.72	22.23	22.72	11.70	12.21	12.22	12.72	13.21
	12H	21.30	21.74	21.81	22.24	22.81	11.76	12.21	12.27	12.70	13.27
12H	4H	20.54	21.15	21.02	21.63	22.11	11.47	12.08	11.95	12.56	13.03
	6H	21.01	21.51	21.52	22.03	22.52	11.67	12.18	12.19	12.69	13.19
	8H	21.17	21.62	21.68	22.11	22.68	11.77	12.21	12.28	12.71	13.28