

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: P1056070

Luminaire Tested: S124R3DR-S795D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056070
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S795D850-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

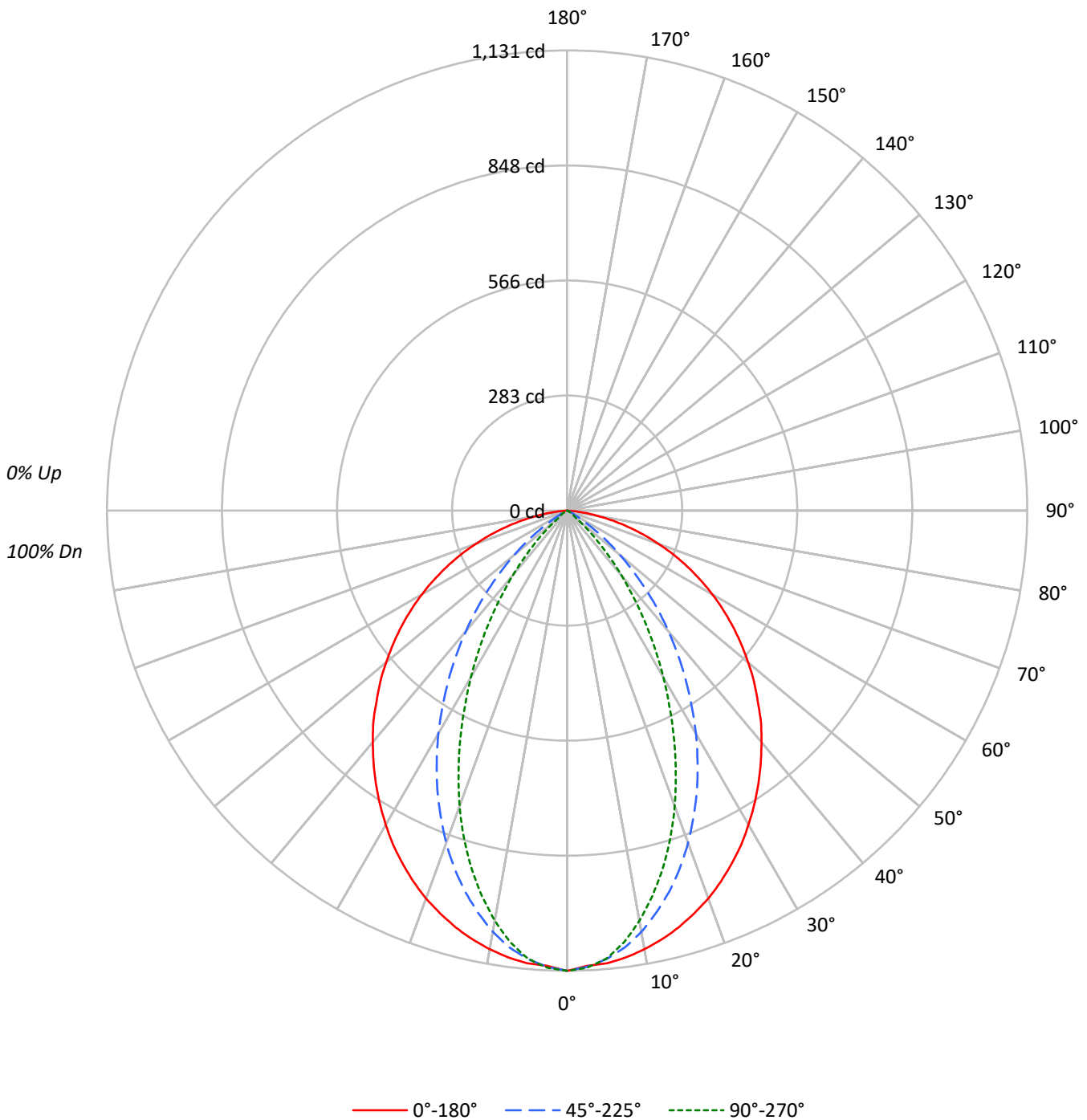
Lumens per Lamp: N/A
Luminaire Lumens: 1581.0 lumens
Efficiency: N/A
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10001	10001	10001
5°	9912	9823	9813
10°	9827	9438	9190
15°	9704	8872	8324
20°	9547	8181	7273
25°	9337	7367	6069
30°	9102	6464	4823
35°	8846	5482	3591
40°	8575	4467	2394
45°	8279	3411	1318
50°	7993	2334	366
55°	7675	1266	239
60°	7294	393	138
65°	6820	255	69
70°	6163	114	28
75°	5305	38	0
80°	4007	0	0
85°	1684	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8279 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	6.6
10°-20°	274.0	17.3
20°-30°	354.0	22.4
30°-40°	338.4	21.4
40°-50°	253.0	16.0
50°-60°	150.6	9.5
60°-70°	76.5	4.8
70°-80°	26.6	1.7
80°-90°	3.6	0.2
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°	732.3	46.3
0°-40°	1070.7	67.7
0°-60°	1474.3	93.3
0°-90°	1581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1117	1126	1107	1101	1106	106
15°	1060	1038	969	924	909	299
25°	957	890	755	655	622	441
35°	820	706	508	378	333	512
45°	662	508	273	145	105	512
55°	498	309	82	19	16	445
65°	326	125	12	4	3	322
75°	155	17	1	1	0	165
85°	17	0	0	0	0	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1131.2	1131.2	1131.2	1131.2	1131.2
2.5°	1120.1	1133.4	1122.3	1123.4	1124.5
5°	1116.8	1125.6	1106.8	1101.2	1105.7
7.5°	1107.9	1111.2	1083.5	1069.1	1070.2
10°	1094.6	1091.3	1051.3	1026.9	1023.6
12.5°	1079.1	1068.0	1012.5	977.0	969.3
15°	1060.2	1038.0	969.3	923.8	909.4
17.5°	1038.0	1005.9	921.6	861.7	843.9
20°	1014.7	970.4	869.5	795.2	773.0
22.5°	987.0	930.5	812.9	725.3	697.6
25°	957.1	890.5	755.2	655.4	622.1
27.5°	926.0	847.3	694.2	584.4	545.6
30°	891.6	801.8	633.2	512.4	472.4
32.5°	856.1	755.2	570.0	445.8	401.5
35°	819.6	706.4	507.9	378.2	332.7
37.5°	781.8	657.6	448.0	313.8	267.3
40°	743.0	607.7	387.0	252.9	207.4
42.5°	705.3	557.8	329.4	195.2	153.0
45°	662.1	507.9	272.8	145.3	105.4
47.5°	623.3	459.1	218.5	98.7	62.1
50°	581.1	407.0	169.7	57.7	26.6
52.5°	539.0	358.2	124.2	25.5	20.0
55°	497.9	309.4	82.1	18.9	15.5
57.5°	454.7	260.6	44.4	14.4	11.1
60°	412.5	212.9	22.2	11.1	7.8
62.5°	369.3	167.5	17.7	6.7	4.4
65°	326.0	125.3	12.2	4.4	3.3
67.5°	282.8	85.4	7.8	2.2	1.1
70°	238.4	52.1	4.4	1.1	1.1
72.5°	196.3	26.6	2.2	1.1	1.1
75°	155.3	16.6	1.1	1.1	0.0
77.5°	115.3	8.9	1.1	1.1	0.0
80°	78.7	3.3	0.0	0.0	0.0
82.5°	45.5	1.1	0.0	0.0	0.0
85°	16.6	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	18.46	19.78	18.82	20.10	20.41	0.00	0.00	0.00	0.00	0.00
	3H	20.00	21.17	20.38	21.50	21.87	0.00	0.00	0.00	0.00	0.00
	4H	20.59	21.69	20.99	22.04	22.42	0.00	0.00	0.00	0.00	0.00
	6H	21.01	22.01	21.42	22.38	22.78	0.00	0.00	0.00	0.00	0.00
	8H	21.11	22.06	21.54	22.45	22.86	0.00	0.00	0.00	0.00	0.00
	12H	21.13	22.04	21.56	22.42	22.85	0.00	0.00	0.00	0.00	0.00
4H	2H	18.23	19.33	18.64	19.68	20.06	0.00	0.00	0.00	0.00	0.00
	3H	19.80	20.69	20.21	21.09	21.50	0.00	0.00	0.00	0.00	0.00
	4H	20.38	21.18	20.81	21.60	22.04	0.00	0.00	0.00	0.00	0.00
	6H	20.84	21.53	21.30	21.97	22.44	0.00	0.00	0.00	0.00	0.00
	8H	20.96	21.60	21.43	22.05	22.52	0.00	0.00	0.00	0.00	0.00
	12H	21.00	21.57	21.49	22.05	22.52	0.00	0.00	0.00	0.00	0.00
8H	4H	20.24	20.88	20.71	21.33	21.80	0.00	0.39	0.21	0.83	1.30
	6H	20.68	21.21	21.19	21.70	22.18	0.00	0.18	0.16	0.67	1.15
	8H	20.80	21.27	21.32	21.78	22.28	0.00	0.06	0.11	0.58	1.07
	12H	20.85	21.26	21.37	21.76	22.33	0.00	0.00	0.06	0.46	1.03
12H	4H	20.20	20.76	20.68	21.25	21.72	0.16	0.72	0.64	1.21	1.68
	6H	20.62	21.09	21.14	21.61	22.10	0.05	0.52	0.57	1.03	1.53
	8H	20.76	21.17	21.27	21.66	22.24	0.01	0.42	0.52	0.91	1.49