

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: P1056172

Luminaire Tested: S124R3DR-H575D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056172
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-H575D835-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

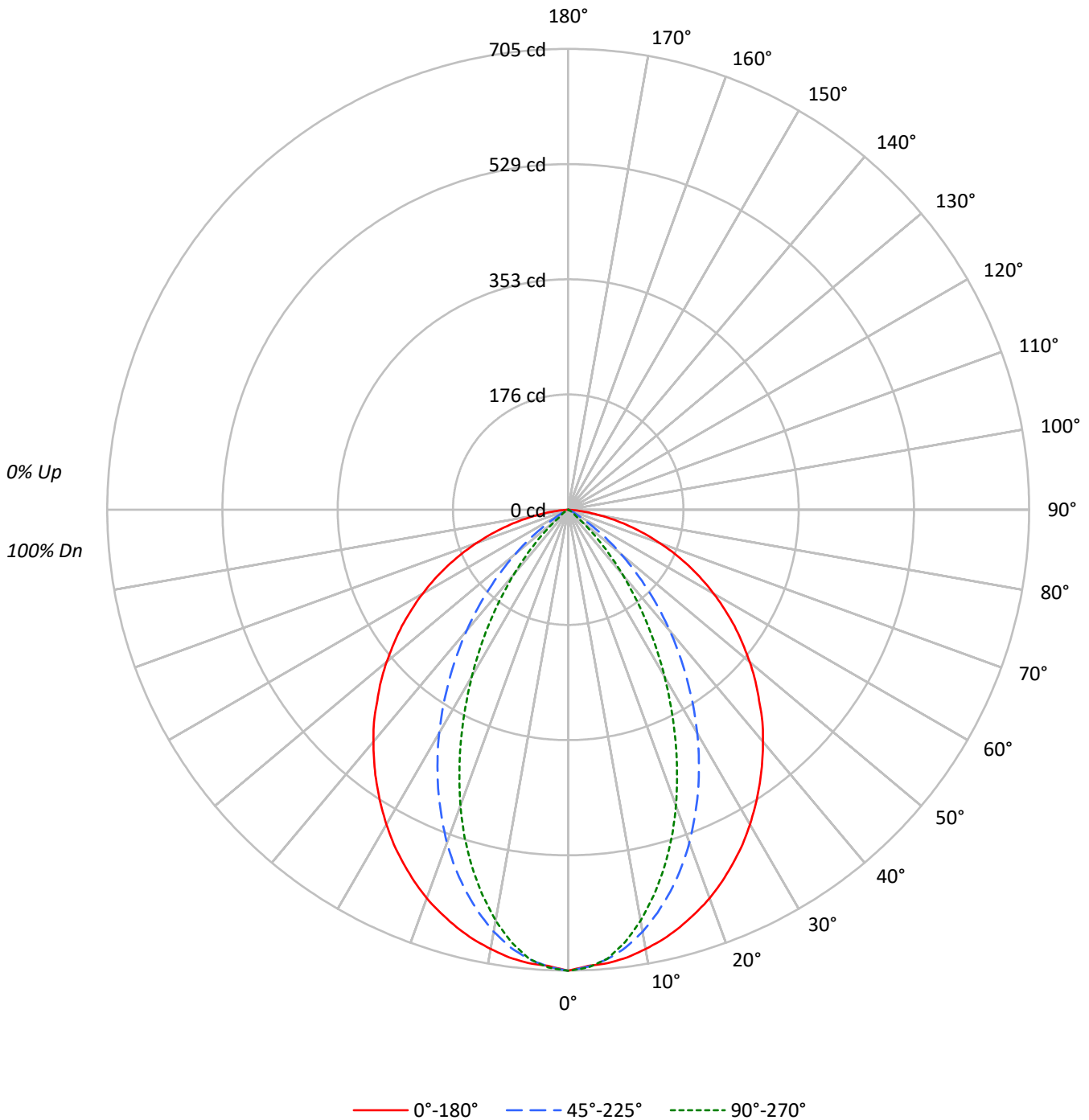
Lumens per Lamp: N/A
Luminaire Lumens: 985.8 lumens
Efficiency: N/A
Efficacy: 57.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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°	6236	6236	6236
5°	6180	6125	6119
10°	6127	5885	5730
15°	6050	5531	5190
20°	5953	5101	4534
25°	5821	4594	3784
30°	5675	4031	3008
35°	5515	3418	2239
40°	5347	2785	1492
45°	5161	2127	821
50°	4983	1455	228
55°	4786	789	150
60°	4548	244	85
65°	4253	159	44
70°	3844	72	18
75°	3307	24	0
80°	2500	0	0
85°	1055	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	6.6
10°-20°	170.8	17.3
20°-30°	220.7	22.4
30°-40°	211.0	21.4
40°-50°	157.8	16.0
50°-60°	93.9	9.5
60°-70°	47.7	4.8
70°-80°	16.6	1.7
80°-90°	2.3	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°	456.6	46.3
0°-40°	667.6	67.7
0°-60°	919.2	93.3
0°-90°	985.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	985.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	696	702	690	687	689	66
15°	661	647	604	576	567	186
25°	597	555	471	409	388	275
35°	511	440	317	236	207	320
45°	413	317	170	91	66	319
55°	310	193	51	12	10	277
65°	203	78	8	3	2	201
75°	97	10	1	1	0	103
85°	10	0	0	0	0	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	705.3	705.3	705.3	705.3	705.3
2.5°	698.4	706.7	699.7	700.4	701.1
5°	696.3	701.8	690.1	686.6	689.4
7.5°	690.8	692.8	675.5	666.6	667.2
10°	682.5	680.4	655.5	640.3	638.2
12.5°	672.8	665.9	631.3	609.2	604.3
15°	661.0	647.2	604.3	576.0	567.0
17.5°	647.2	627.1	574.6	537.3	526.2
20°	632.7	605.0	542.1	495.8	481.9
22.5°	615.4	580.1	506.8	452.2	434.9
25°	596.7	555.2	470.9	408.6	387.9
27.5°	577.4	528.3	432.8	364.4	340.2
30°	555.9	499.9	394.8	319.5	294.6
32.5°	533.8	470.9	355.4	278.0	250.3
35°	511.0	440.5	316.7	235.8	207.4
37.5°	487.5	410.0	279.3	195.7	166.6
40°	463.3	378.9	241.3	157.7	129.3
42.5°	439.8	347.8	205.4	121.7	95.4
45°	412.8	316.7	170.1	90.6	65.7
47.5°	388.6	286.3	136.2	61.5	38.7
50°	362.3	253.8	105.8	36.0	16.6
52.5°	336.0	223.3	77.4	15.9	12.4
55°	310.5	192.9	51.2	11.8	9.7
57.5°	283.5	162.5	27.7	9.0	6.9
60°	257.2	132.8	13.8	6.9	4.8
62.5°	230.3	104.4	11.1	4.1	2.8
65°	203.3	78.1	7.6	2.8	2.1
67.5°	176.3	53.2	4.8	1.4	0.7
70°	148.7	32.5	2.8	0.7	0.7
72.5°	122.4	16.6	1.4	0.7	0.7
75°	96.8	10.4	0.7	0.7	0.0
77.5°	71.9	5.5	0.7	0.7	0.0
80°	49.1	2.1	0.0	0.0	0.0
82.5°	28.3	0.7	0.0	0.0	0.0
85°	10.4	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	16.81	18.14	17.18	18.46	18.77	0.00	0.00	0.00	0.00	0.00
	3H	18.36	19.53	18.74	19.86	20.23	0.00	0.00	0.00	0.00	0.00
	4H	18.95	20.05	19.35	20.40	20.78	0.00	0.00	0.00	0.00	0.00
	6H	19.37	20.37	19.78	20.74	21.14	0.00	0.00	0.00	0.00	0.00
	8H	19.47	20.42	19.90	20.81	21.21	0.00	0.00	0.00	0.00	0.00
	12H	19.49	20.40	19.92	20.78	21.21	0.00	0.00	0.00	0.00	0.00
4H	2H	16.59	17.69	16.99	18.04	18.42	0.00	0.00	0.00	0.00	0.00
	3H	18.16	19.05	18.57	19.45	19.86	0.00	0.00	0.00	0.00	0.00
	4H	18.74	19.54	19.17	19.96	20.40	0.00	0.00	0.00	0.00	0.00
	6H	19.20	19.89	19.66	20.33	20.80	0.00	0.00	0.00	0.00	0.00
	8H	19.32	19.96	19.79	20.41	20.88	0.00	0.00	0.00	0.00	0.00
	12H	19.36	19.92	19.84	20.41	20.88	0.00	0.00	0.00	0.00	0.00
8H	4H	18.60	19.24	19.07	19.69	20.16	0.00	0.00	0.00	0.00	0.00
	6H	19.04	19.57	19.55	20.06	20.54	0.00	0.00	0.00	0.00	0.00
	8H	19.16	19.63	19.68	20.14	20.64	0.00	0.00	0.00	0.00	0.00
	12H	19.21	19.62	19.72	20.12	20.69	0.00	0.00	0.00	0.00	0.00
12H	4H	18.56	19.12	19.04	19.61	20.08	0.00	0.00	0.00	0.00	0.05
	6H	18.98	19.45	19.50	19.97	20.46	0.00	0.00	0.00	0.00	0.00
	8H	19.12	19.53	19.63	20.02	20.60	0.00	0.00	0.00	0.00	0.00