

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: P1056173

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056173
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-H575D835-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

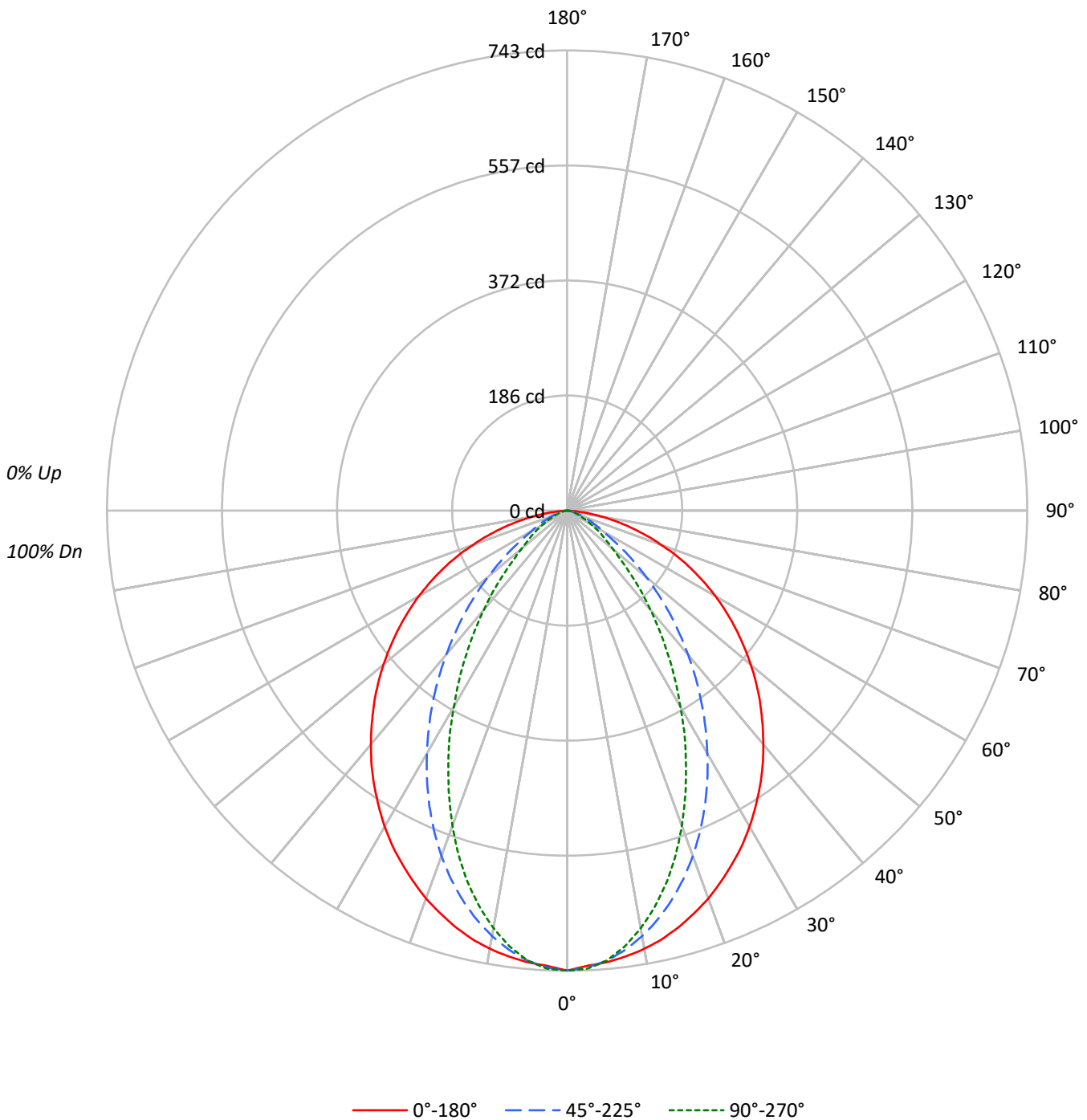
Lumens per Lamp: N/A
Luminaire Lumens: 1200.8 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	6566	6566	6566
5°	6498	6474	6474
10°	6450	6264	6145
15°	6373	5962	5683
20°	6272	5582	5094
25°	6145	5133	4425
30°	6014	4624	3727
35°	5859	4082	3067
40°	5690	3503	2418
45°	5515	2913	1807
50°	5326	2292	1322
55°	5116	1694	1056
60°	4891	1174	806
65°	4600	912	592
70°	4165	644	465
75°	3638	448	355
80°	2923	351	316
85°	1613	284	284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5515 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	5.7
10°-20°	184.0	15.3
20°-30°	245.5	20.4
30°-40°	247.2	20.6
40°-50°	202.7	16.9
50°-60°	138.5	11.5
60°-70°	77.4	6.4
70°-80°	30.7	2.6
80°-90°	5.8	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°	498.4	41.5
0°-40°	745.6	62.1
0°-60°	1086.8	90.5
0°-90°	1200.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1200.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	743	743	743	743	743	
5°	732	740	730	726	730	69
15°	696	689	651	628	621	196
25°	630	599	526	473	454	290
35°	543	485	378	306	284	339
45°	441	360	233	164	144	340
55°	332	233	110	73	68	297
65°	220	111	44	31	28	217
75°	106	29	13	11	10	114
85°	16	3	3	3	3	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	742.6	742.6	742.6	742.6	742.6
2.5°	735.7	744.7	738.5	739.2	740.5
5°	732.2	740.5	729.5	726.0	729.5
7.5°	726.0	732.2	715.7	708.7	710.1
10°	718.4	720.5	697.7	685.9	684.5
12.5°	708.7	706.0	676.2	659.0	654.8
15°	696.3	688.7	651.3	628.5	620.9
17.5°	681.8	668.6	623.7	594.0	582.9
20°	666.6	647.2	593.3	555.2	541.4
22.5°	648.6	624.4	560.8	514.4	498.5
25°	629.9	598.8	526.2	473.0	453.6
27.5°	610.6	572.5	490.2	430.8	411.4
30°	589.1	544.2	452.9	388.6	365.1
32.5°	566.3	515.1	415.6	347.1	325.0
35°	542.8	485.4	378.2	306.3	284.2
37.5°	518.6	455.0	340.9	267.6	245.5
40°	493.0	423.9	303.5	230.9	209.5
42.5°	466.7	392.1	267.6	196.4	176.3
45°	441.1	360.2	233.0	163.9	144.5
47.5°	414.2	328.4	199.1	133.4	116.9
50°	387.2	296.6	166.6	107.2	96.1
52.5°	359.6	264.8	136.9	87.8	80.2
55°	331.9	233.0	109.9	73.3	68.5
57.5°	304.2	201.2	85.0	62.2	56.7
60°	276.6	170.1	66.4	50.5	45.6
62.5°	248.2	139.0	54.6	40.1	36.0
65°	219.9	110.6	43.6	31.1	28.3
67.5°	191.5	84.4	33.2	24.2	22.1
70°	161.1	60.2	24.9	18.7	18.0
72.5°	134.8	40.8	18.0	14.5	13.8
75°	106.5	29.0	13.1	11.1	10.4
77.5°	82.3	18.7	9.7	9.0	8.3
80°	57.4	10.4	6.9	6.2	6.2
82.5°	35.3	5.5	4.8	4.1	4.1
85°	15.9	2.8	2.8	2.8	2.8
87.5°	2.8	1.4	1.4	1.4	1.4
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	17.26	18.67	17.63	18.98	19.30	8.35	9.76	8.71	10.07	10.38
	3H	18.85	20.10	19.23	20.43	20.79	8.94	10.19	9.32	10.52	10.89
	4H	19.44	20.61	19.84	20.96	21.34	9.10	10.27	9.50	10.62	11.00
	6H	19.88	20.95	20.29	21.32	21.71	9.21	10.28	9.62	10.65	11.04
	8H	19.99	21.01	20.42	21.40	21.80	9.23	10.25	9.65	10.64	11.04
	12H	20.03	21.01	20.46	21.39	21.82	9.23	10.21	9.67	10.59	11.02
4H	2H	17.12	18.28	17.52	18.63	19.02	8.93	10.10	9.34	10.45	10.83
	3H	18.76	19.72	19.18	20.13	20.53	9.65	10.61	10.06	11.01	11.41
	4H	19.37	20.23	19.80	20.65	21.09	9.85	10.71	10.29	11.13	11.57
	6H	19.86	20.60	20.32	21.05	21.51	10.02	10.76	10.48	11.21	11.67
	8H	20.01	20.70	20.47	21.14	21.61	10.05	10.74	10.52	11.19	11.66
	12H	20.08	20.69	20.56	21.17	21.65	10.08	10.69	10.56	11.17	11.64
8H	4H	19.26	19.95	19.73	20.40	20.87	10.12	10.82	10.59	11.26	11.73
	6H	19.74	20.31	20.24	20.81	21.29	10.33	10.89	10.83	11.39	11.87
	8H	19.89	20.40	20.41	20.91	21.40	10.38	10.89	10.90	11.40	11.89
	12H	19.98	20.43	20.49	20.92	21.49	10.44	10.89	10.96	11.38	11.95
12H	4H	19.22	19.84	19.71	20.32	20.79	10.15	10.76	10.64	11.25	11.72
	6H	19.69	20.20	20.21	20.71	21.20	10.36	10.86	10.87	11.38	11.87
	8H	19.85	20.30	20.37	20.80	21.37	10.45	10.89	10.96	11.39	11.96