

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: P1056011

Luminaire Tested: S124R3DR-S350D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056011
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-S350D835-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

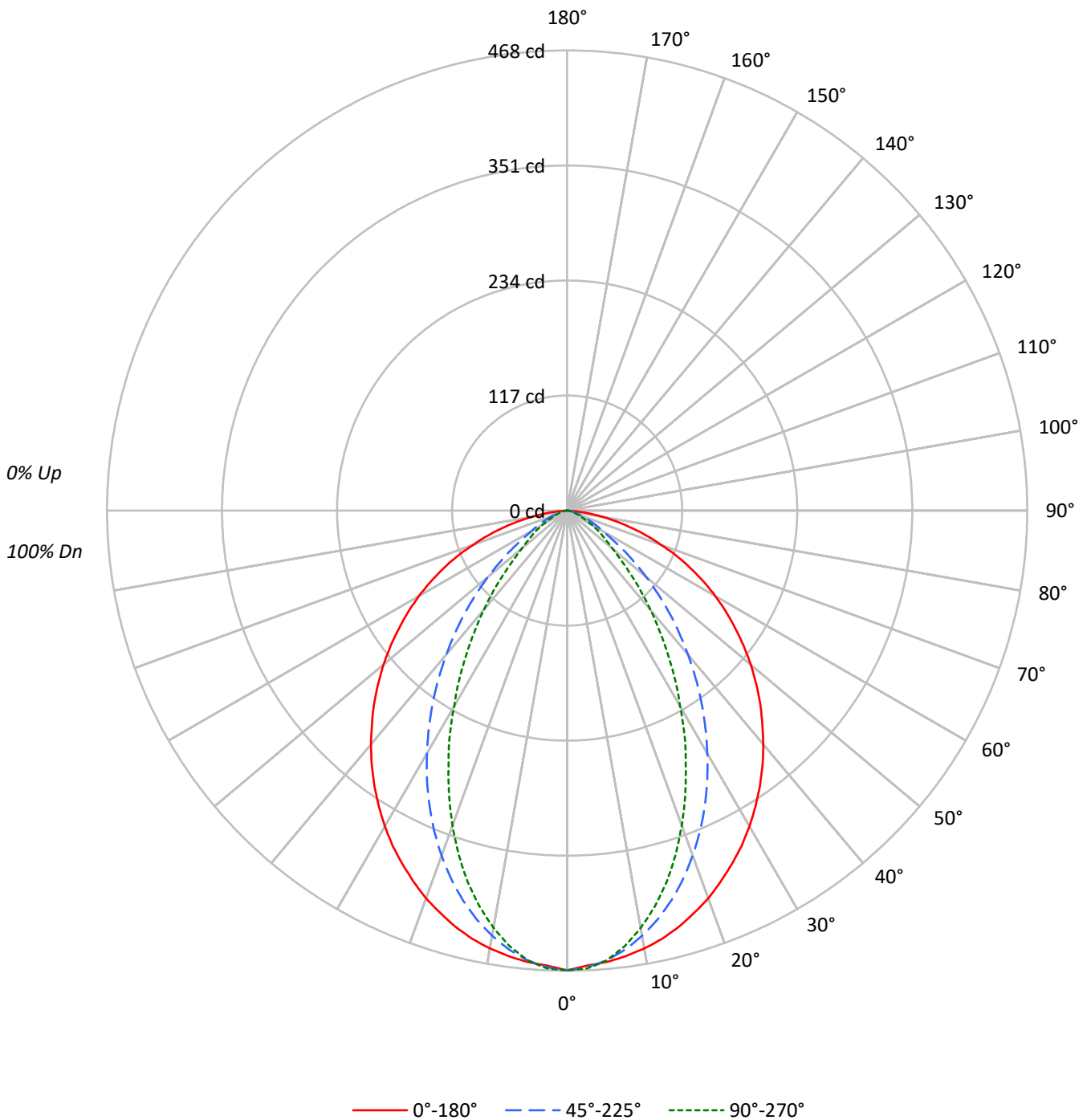
Lumens per Lamp: N/A
Luminaire Lumens: 755.9 lumens
Efficiency: N/A
Efficacy: 60.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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°	4133	4133	4133
5°	4091	4075	4075
10°	4060	3943	3869
15°	4012	3753	3578
20°	3948	3514	3207
25°	3868	3231	2785
30°	3786	2911	2346
35°	3688	2570	1931
40°	3581	2206	1522
45°	3472	1834	1138
50°	3352	1443	832
55°	3220	1067	664
60°	3079	739	507
65°	2895	573	372
70°	2621	406	292
75°	2289	284	222
80°	1838	224	199
85°	1014	172	172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3472 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.4	5.7
10°-20°	115.9	15.3
20°-30°	154.5	20.4
30°-40°	155.6	20.6
40°-50°	127.6	16.9
50°-60°	87.2	11.5
60°-70°	48.7	6.4
70°-80°	19.3	2.6
80°-90°	3.7	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°	313.7	41.5
0°-40°	469.3	62.1
0°-60°	684.2	90.5
0°-90°	755.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	755.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	461	466	459	457	459	44
15°	438	434	410	396	391	124
25°	396	377	331	298	286	183
35°	342	306	238	193	179	214
45°	278	227	147	103	91	214
55°	209	147	69	46	43	187
65°	138	70	27	20	18	137
75°	67	18	8	7	6	72
85°	10	2	2	2	2	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	467.5	467.5	467.5	467.5	467.5
2.5°	463.1	468.8	464.9	465.3	466.2
5°	460.9	466.2	459.2	457.0	459.2
7.5°	457.0	460.9	450.5	446.1	447.0
10°	452.2	453.5	439.2	431.8	430.9
12.5°	446.1	444.4	425.7	414.8	412.2
15°	438.3	433.5	410.0	395.7	390.9
17.5°	429.2	420.9	392.6	373.9	366.9
20°	419.6	407.4	373.5	349.5	340.8
22.5°	408.3	393.0	353.0	323.8	313.8
25°	396.5	376.9	331.2	297.7	285.5
27.5°	384.3	360.4	308.6	271.2	259.0
30°	370.8	342.5	285.1	244.6	229.8
32.5°	356.5	324.3	261.6	218.5	204.6
35°	341.7	305.6	238.1	192.8	178.9
37.5°	326.4	286.4	214.6	168.4	154.5
40°	310.3	266.8	191.1	145.4	131.9
42.5°	293.8	246.8	168.4	123.6	111.0
45°	277.7	226.8	146.7	103.2	91.0
47.5°	260.7	206.7	125.4	84.0	73.6
50°	243.7	186.7	104.9	67.5	60.5
52.5°	226.3	166.7	86.2	55.3	50.5
55°	208.9	146.7	69.2	46.1	43.1
57.5°	191.5	126.7	53.5	39.2	35.7
60°	174.1	107.1	41.8	31.8	28.7
62.5°	156.3	87.5	34.4	25.2	22.6
65°	138.4	69.6	27.4	19.6	17.8
67.5°	120.6	53.1	20.9	15.2	13.9
70°	101.4	37.9	15.7	11.8	11.3
72.5°	84.9	25.7	11.3	9.1	8.7
75°	67.0	18.3	8.3	7.0	6.5
77.5°	51.8	11.8	6.1	5.7	5.2
80°	36.1	6.5	4.4	3.9	3.9
82.5°	22.2	3.5	3.0	2.6	2.6
85°	10.0	1.7	1.7	1.7	1.7
87.5°	1.7	0.9	0.9	0.9	0.9
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	15.66	17.06	16.02	17.38	17.69	6.75	8.16	7.11	8.47	8.78
	3H	17.24	18.49	17.62	18.82	19.19	7.34	8.59	7.72	8.92	9.28
	4H	17.84	19.00	18.24	19.35	19.74	7.49	8.66	7.90	9.01	9.39
	6H	18.27	19.34	18.68	19.71	20.10	7.60	8.68	8.01	9.05	9.44
	8H	18.38	19.40	18.81	19.79	20.19	7.62	8.64	8.05	9.03	9.43
	12H	18.42	19.40	18.85	19.78	20.21	7.63	8.60	8.06	8.99	9.41
4H	2H	15.51	16.68	15.91	17.03	17.41	7.33	8.50	7.73	8.85	9.23
	3H	17.16	18.12	17.57	18.52	18.92	8.04	9.00	8.45	9.40	9.81
	4H	17.76	18.62	18.20	19.04	19.48	8.25	9.10	8.68	9.52	9.96
	6H	18.26	19.00	18.72	19.44	19.91	8.41	9.15	8.87	9.60	10.06
	8H	18.40	19.09	18.86	19.54	20.00	8.44	9.14	8.91	9.58	10.05
	12H	18.47	19.08	18.96	19.57	20.04	8.47	9.08	8.95	9.56	10.03
8H	4H	17.66	18.35	18.12	18.79	19.26	8.52	9.21	8.99	9.66	10.13
	6H	18.14	18.70	18.64	19.20	19.68	8.72	9.29	9.22	9.78	10.26
	8H	18.28	18.79	18.80	19.30	19.79	8.78	9.29	9.30	9.80	10.29
	12H	18.37	18.82	18.88	19.31	19.88	8.83	9.28	9.35	9.78	10.35
12H	4H	17.62	18.23	18.10	18.71	19.18	8.55	9.16	9.03	9.64	10.11
	6H	18.08	18.59	18.60	19.10	19.59	8.75	9.26	9.27	9.77	10.26
	8H	18.25	18.69	18.76	19.19	19.76	8.84	9.29	9.35	9.78	10.35