

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: P1055390

Luminaire Tested: S122R3DR-H865D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055390
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H865D835-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

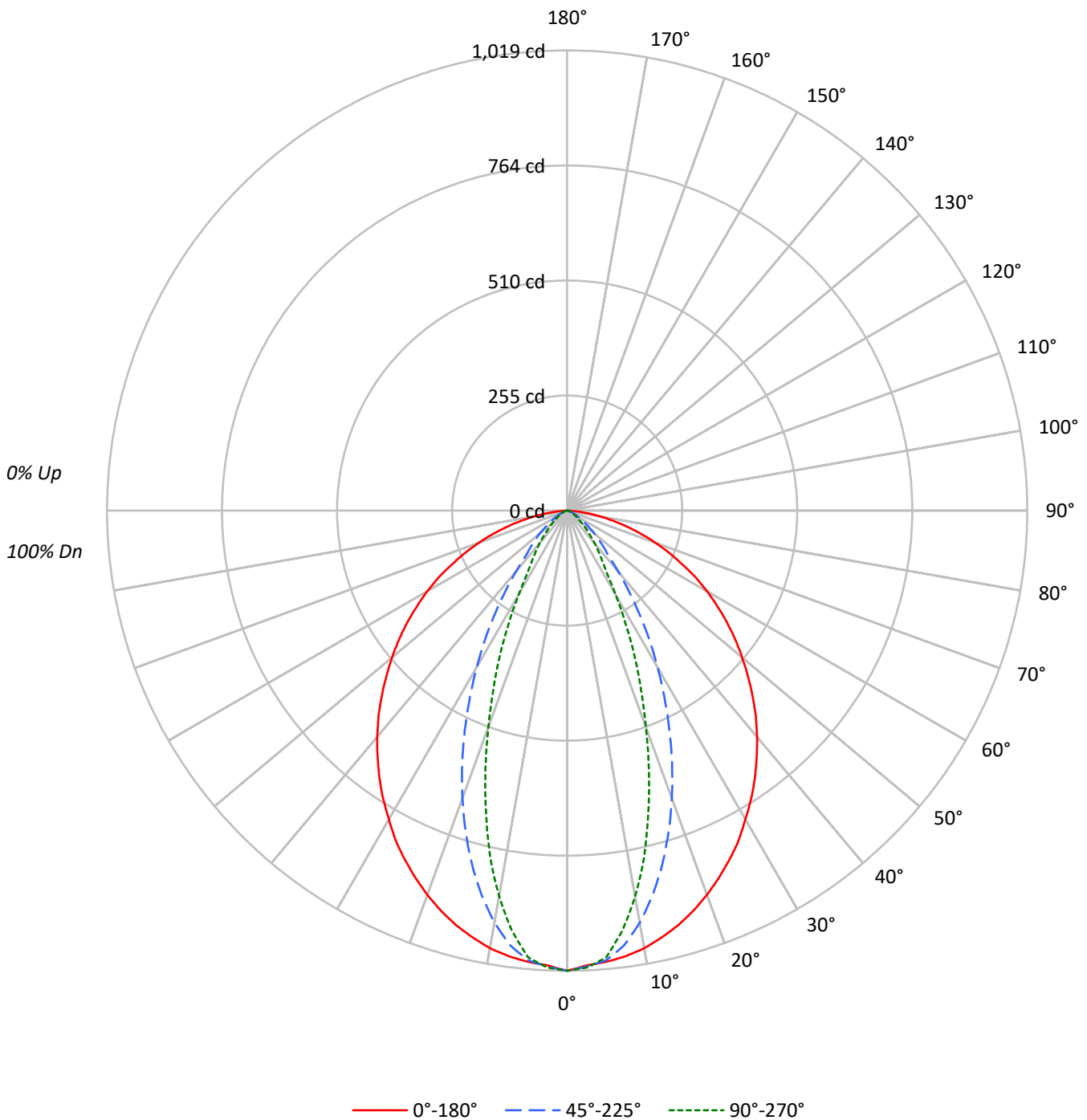
Lumens per Lamp: N/A
Luminaire Lumens: 1167.8 lumens
Efficiency: N/A
Efficacy: 37.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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	94	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	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19308	19308	19308
5°	19071	19001	18881
10°	18932	17826	16697
15°	18641	15946	13620
20°	18254	13672	10272
25°	17804	11201	7335
30°	17267	8742	4673
35°	16752	6411	3120
40°	16185	4323	2347
45°	15559	3044	1672
50°	14908	2320	1179
55°	14273	1609	865
60°	13580	1087	709
65°	12597	785	560
70°	11483	620	482
75°	9963	549	366
80°	7899	404	404
85°	4348	543	261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15559 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.2	8.0
10°-20°	228.7	19.6
20°-30°	261.2	22.4
30°-40°	221.5	19.0
40°-50°	165.3	14.2
50°-60°	106.8	9.1
60°-70°	59.5	5.1
70°-80°	26.1	2.2
80°-90°	5.4	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°	583.1	49.9
0°-40°	804.6	68.9
0°-60°	1076.7	92.2
0°-90°	1167.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1167.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1003	1015	999	989	993	95
15°	950	927	813	727	694	268
25°	852	752	536	392	351	392
35°	724	546	277	151	135	453
45°	581	345	114	74	62	448
55°	432	164	49	30	26	386
65°	281	60	18	14	12	279
75°	136	12	8	6	5	145
85°	20	1	2	1	1	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	1007.8	1022.8	1010.3	1010.3	1012.8
5°	1002.8	1015.3	999.1	989.1	992.8
7.5°	995.3	1004.1	970.4	940.4	937.9
10°	984.1	987.8	926.6	880.4	867.9
12.5°	967.9	959.1	872.9	808.0	786.8
15°	950.4	926.6	813.0	726.8	694.4
17.5°	929.1	886.7	746.8	641.9	601.9
20°	905.4	845.5	678.1	553.2	509.5
22.5°	879.2	799.3	606.9	469.6	425.9
25°	851.7	751.8	535.8	392.1	350.9
27.5°	823.0	701.9	465.8	322.2	277.2
30°	789.3	650.6	399.6	254.8	213.6
32.5°	758.0	596.9	338.4	197.3	162.3
35°	724.3	545.7	277.2	151.1	134.9
37.5°	689.4	494.5	223.5	127.4	113.6
40°	654.4	443.3	174.8	107.4	94.9
42.5°	618.2	393.4	134.9	89.9	77.4
45°	580.7	344.7	113.6	73.7	62.4
47.5°	543.2	296.0	94.9	58.7	50.0
50°	505.8	249.8	78.7	46.2	40.0
52.5°	469.6	206.1	62.4	37.5	32.5
55°	432.1	163.6	48.7	30.0	26.2
57.5°	394.6	127.4	37.5	25.0	22.5
60°	358.4	96.2	28.7	20.0	18.7
62.5°	321.0	77.4	22.5	16.2	15.0
65°	281.0	59.9	17.5	13.7	12.5
67.5°	244.8	43.7	13.7	11.2	10.0
70°	207.3	30.0	11.2	10.0	8.7
72.5°	171.1	18.7	8.7	7.5	7.5
75°	136.1	12.5	7.5	6.2	5.0
77.5°	103.7	7.5	5.0	5.0	3.7
80°	72.4	5.0	3.7	3.7	3.7
82.5°	45.0	3.7	2.5	2.5	2.5
85°	20.0	1.2	2.5	1.2	1.2
87.5°	3.7	1.2	1.2	1.2	1.2
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	18.54	19.86	18.90	20.17	20.49	4.85	6.17	5.22	6.49	6.80
	3H	21.01	22.18	21.39	22.51	22.87	5.70	6.87	6.08	7.20	7.57
	4H	21.96	23.06	22.37	23.41	23.79	5.97	7.07	6.38	7.42	7.80
	6H	22.65	23.65	23.07	24.02	24.42	6.16	7.16	6.57	7.53	7.93
	8H	22.85	23.80	23.28	24.19	24.59	6.23	7.18	6.66	7.57	7.98
	12H	22.93	23.84	23.36	24.22	24.65	6.26	7.16	6.69	7.55	7.98
4H	2H	18.32	19.41	18.73	19.77	20.15	5.43	6.52	5.83	6.87	7.25
	3H	20.81	21.70	21.22	22.11	22.51	6.45	7.35	6.87	7.75	8.16
	4H	21.75	22.55	22.18	22.97	23.41	6.82	7.62	7.25	8.04	8.48
	6H	22.51	23.20	22.97	23.64	24.11	7.10	7.79	7.57	8.24	8.71
	8H	22.75	23.39	23.22	23.84	24.31	7.20	7.85	7.67	8.29	8.76
	12H	22.88	23.45	23.36	23.93	24.40	7.24	7.81	7.73	8.30	8.77
8H	4H	21.62	22.26	22.09	22.71	23.18	7.19	7.83	7.66	8.28	8.75
	6H	22.36	22.88	22.86	23.38	23.86	7.54	8.07	8.04	8.56	9.04
	8H	22.60	23.07	23.12	23.59	24.08	7.68	8.15	8.20	8.67	9.16
	12H	22.75	23.17	23.27	23.66	24.23	7.76	8.17	8.27	8.67	9.24
12H	4H	21.57	22.14	22.06	22.62	23.10	7.31	7.88	7.80	8.36	8.84
	6H	22.30	22.77	22.82	23.28	23.77	7.66	8.13	8.18	8.65	9.14
	8H	22.56	22.97	23.08	23.47	24.04	7.84	8.25	8.36	8.75	9.32