

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: P1055389

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055389
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
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-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

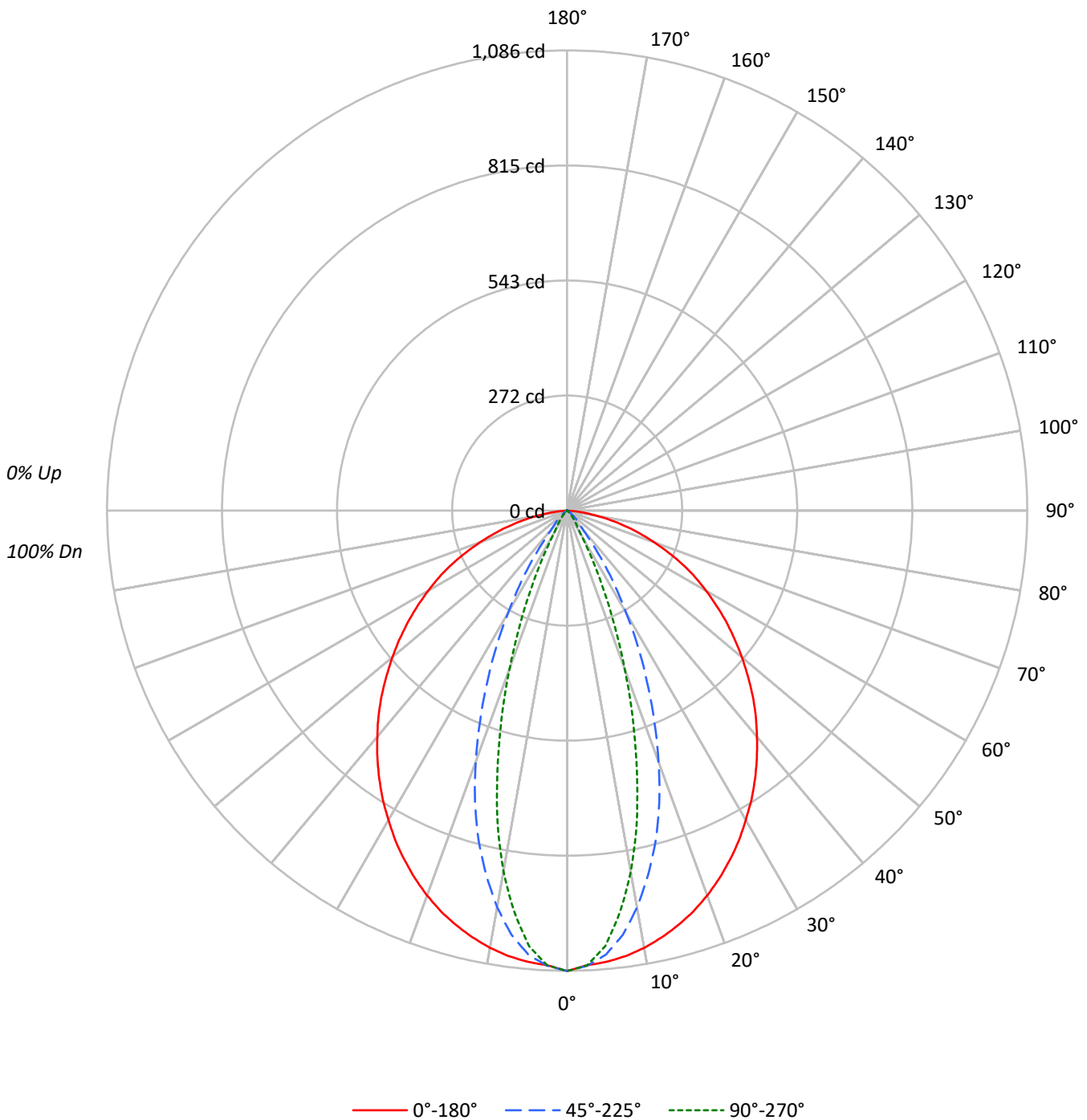
Lumens per Lamp: N/A
Luminaire Lumens: 988.4 lumens
Efficiency: N/A
Efficacy: 32.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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					100			
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20585	20585	20585
5°	20330	19998	19619
10°	20158	18284	16651
15°	19865	15825	12469
20°	19488	12716	7982
25°	19006	9319	4099
30°	18442	6093	1339
35°	17878	3379	779
40°	17236	1358	433
45°	16596	903	166
50°	15866	516	74
55°	15138	248	40
60°	14338	95	0
65°	13494	54	0
70°	12104	66	0
75°	10424	88	0
80°	7899	0	0
85°	3261	261	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16596 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	9.9
10°-20°	226.3	22.9
20°-30°	229.8	23.2
30°-40°	172.4	17.4
40°-50°	120.7	12.2
50°-60°	73.9	7.5
60°-70°	44.0	4.5
70°-80°	20.3	2.1
80°-90°	3.6	0.4
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°	553.5	56.0
0°-40°	725.9	73.4
0°-60°	920.5	93.1
0°-90°	988.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	988.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1069	1079	1052	1032	1032	101
15°	1013	958	807	683	636	285
25°	909	749	446	255	196	418
35°	773	503	146	44	34	483
45°	619	266	34	10	6	477
55°	458	81	8	2	1	410
65°	301	24	1	1	0	296
75°	142	2	1	1	0	151
85°	15	0	1	1	0	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.5	1086.5	1086.5	1086.5	1086.5
2.5°	1074.0	1090.2	1075.3	1072.8	1074.0
5°	1069.0	1079.0	1051.5	1031.6	1031.6
7.5°	1060.3	1060.3	1009.1	967.9	955.4
10°	1047.8	1034.1	950.4	884.2	865.5
12.5°	1031.6	999.1	881.7	788.0	758.1
15°	1012.8	957.9	806.8	683.1	635.7
17.5°	991.6	911.7	723.1	569.5	514.5
20°	966.6	861.7	630.7	453.3	395.9
22.5°	939.1	806.8	537.0	349.7	288.5
25°	909.2	749.3	445.8	254.8	196.1
27.5°	877.9	689.4	362.2	174.8	119.9
30°	843.0	626.9	278.5	103.7	61.2
32.5°	809.3	567.0	208.6	56.2	45.0
35°	773.0	503.3	146.1	43.7	33.7
37.5°	735.6	443.3	89.9	32.5	25.0
40°	696.9	382.1	54.9	23.7	17.5
42.5°	659.4	324.7	43.7	16.2	11.2
45°	619.4	266.0	33.7	10.0	6.2
47.5°	578.2	212.3	25.0	6.2	3.7
50°	538.3	164.8	17.5	3.7	2.5
52.5°	498.3	121.1	11.2	2.5	1.2
55°	458.3	81.2	7.5	2.5	1.2
57.5°	418.4	57.4	5.0	1.2	1.2
60°	378.4	45.0	2.5	1.2	0.0
62.5°	340.9	35.0	2.5	1.2	1.2
65°	301.0	23.7	1.2	1.2	0.0
67.5°	258.5	15.0	1.2	1.2	0.0
70°	218.5	8.7	1.2	1.2	0.0
72.5°	179.8	5.0	1.2	1.2	0.0
75°	142.4	2.5	1.2	1.2	0.0
77.5°	106.2	1.2	0.0	1.2	0.0
80°	72.4	0.0	0.0	1.2	0.0
82.5°	42.5	0.0	0.0	1.2	0.0
85°	15.0	0.0	1.2	1.2	0.0
87.5°	0.0	0.0	1.2	1.2	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	16.72	17.98	17.08	18.29	18.61	0.00	0.00	0.00	0.00	0.00
	3H	20.46	21.58	20.84	21.91	22.27	0.00	0.00	0.00	0.00	0.00
	4H	21.77	22.81	22.18	23.16	23.55	0.00	0.00	0.00	0.00	0.00
	6H	22.63	23.58	23.04	23.95	24.35	0.00	0.00	0.00	0.00	0.00
	8H	22.84	23.74	23.27	24.14	24.54	0.00	0.00	0.00	0.00	0.00
	12H	22.90	23.77	23.34	24.15	24.58	0.00	0.00	0.00	0.00	0.00
4H	2H	16.47	17.51	16.88	17.86	18.25	0.00	0.00	0.00	0.00	0.00
	3H	20.21	21.07	20.63	21.47	21.88	0.00	0.00	0.00	0.00	0.00
	4H	21.51	22.27	21.95	22.69	23.14	0.00	0.00	0.00	0.00	0.00
	6H	22.43	23.09	22.89	23.53	24.00	0.00	0.00	0.00	0.00	0.00
	8H	22.69	23.30	23.16	23.75	24.22	0.00	0.00	0.00	0.00	0.00
	12H	22.79	23.33	23.28	23.81	24.29	0.00	0.00	0.00	0.00	0.00
8H	4H	21.37	21.98	21.84	22.43	22.90	0.00	0.00	0.00	0.00	0.00
	6H	22.27	22.76	22.77	23.26	23.74	0.00	0.00	0.00	0.00	0.00
	8H	22.52	22.97	23.05	23.49	23.98	0.00	0.00	0.00	0.00	0.00
	12H	22.64	23.03	23.16	23.53	24.10	0.00	0.00	0.00	0.00	0.00
12H	4H	21.32	21.86	21.80	22.34	22.81	0.00	0.00	0.00	0.00	0.00
	6H	22.20	22.65	22.73	23.16	23.66	0.00	0.00	0.00	0.00	0.00
	8H	22.48	22.87	23.00	23.36	23.94	0.00	0.00	0.00	0.00	0.00