

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: P1055257

Luminaire Tested: S122R3DR-S865D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055257
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-S865D840-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

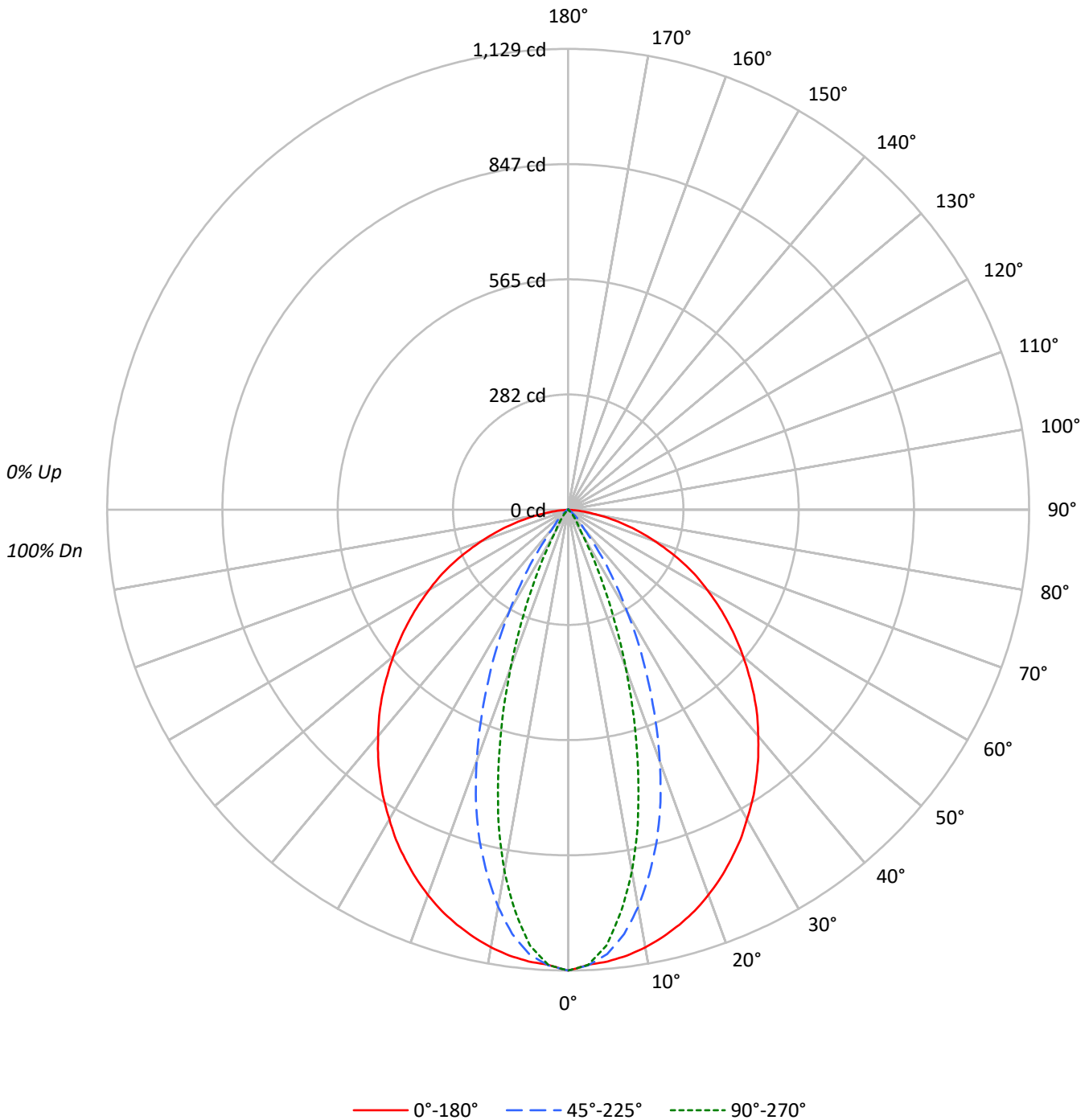
Lumens per Lamp: N/A
Luminaire Lumens: 1027.2 lumens
Efficiency: N/A
Efficacy: 29.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	62	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	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21390	21390	21390
5°	21127	20781	20386
10°	20946	19000	17301
15°	20644	16443	12957
20°	20252	13214	8295
25°	19751	9685	4258
30°	19164	6331	1391
35°	18579	3511	810
40°	17908	1412	450
45°	17247	938	174
50°	16485	536	77
55°	15733	258	43
60°	14899	99	0
65°	14023	58	0
70°	12580	72	0
75°	10826	95	0
80°	8216	0	0
85°	3391	283	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17247 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	9.9
10°-20°	235.2	22.9
20°-30°	238.8	23.2
30°-40°	179.2	17.4
40°-50°	125.5	12.2
50°-60°	76.8	7.5
60°-70°	45.7	4.5
70°-80°	21.1	2.1
80°-90°	3.8	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°	575.2	56.0
0°-40°	754.3	73.4
0°-60°	956.6	93.1
0°-90°	1027.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1027.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1129	1129	1129	1129	1129	
5°	1111	1121	1093	1072	1072	105
15°	1052	995	838	710	661	297
25°	945	779	463	265	204	435
35°	803	523	152	45	35	502
45°	644	276	35	10	6	496
55°	476	84	8	3	1	426
65°	313	25	1	1	0	308
75°	148	3	1	1	0	157
85°	16	0	1	1	0	26
90°	0	0	0	0	0	



TEST NUMBER: P105257

CATALOG NUMBER: S122R3DR-S865D840-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1129.0	1129.0	1129.0	1129.0	1129.0
2.5°	1116.1	1132.9	1117.4	1114.8	1116.1
5°	1110.9	1121.3	1092.7	1071.9	1071.9
7.5°	1101.8	1101.8	1048.6	1005.8	992.8
10°	1088.8	1074.5	987.6	918.8	899.3
12.5°	1071.9	1038.2	916.2	818.9	787.7
15°	1052.5	995.4	838.3	709.9	660.6
17.5°	1030.4	947.4	751.4	591.8	534.7
20°	1004.5	895.4	655.4	471.1	411.4
22.5°	975.9	838.3	558.0	363.4	299.8
25°	944.8	778.7	463.3	264.7	203.7
27.5°	912.3	716.4	376.3	181.7	124.6
30°	876.0	651.5	289.4	107.7	63.6
32.5°	840.9	589.2	216.7	58.4	46.7
35°	803.3	523.0	151.8	45.4	35.0
37.5°	764.4	460.7	93.4	33.7	26.0
40°	724.1	397.1	57.1	24.7	18.2
42.5°	685.2	337.4	45.4	16.9	11.7
45°	643.7	276.4	35.0	10.4	6.5
47.5°	600.9	220.6	26.0	6.5	3.9
50°	559.3	171.3	18.2	3.9	2.6
52.5°	517.8	125.9	11.7	2.6	1.3
55°	476.3	84.4	7.8	2.6	1.3
57.5°	434.7	59.7	5.2	1.3	1.3
60°	393.2	46.7	2.6	1.3	0.0
62.5°	354.3	36.3	2.6	1.3	1.3
65°	312.8	24.7	1.3	1.3	0.0
67.5°	268.6	15.6	1.3	1.3	0.0
70°	227.1	9.1	1.3	1.3	0.0
72.5°	186.9	5.2	1.3	1.3	0.0
75°	147.9	2.6	1.3	1.3	0.0
77.5°	110.3	1.3	0.0	1.3	0.0
80°	75.3	0.0	0.0	1.3	0.0
82.5°	44.1	0.0	0.0	1.3	0.0
85°	15.6	0.0	1.3	1.3	0.0
87.5°	0.0	0.0	1.3	1.3	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	16.85	18.11	17.22	18.42	18.74	0.00	0.00	0.00	0.00	0.00
	3H	20.59	21.71	20.97	22.04	22.41	0.00	0.00	0.00	0.00	0.00
	4H	21.91	22.95	22.31	23.30	23.68	0.00	0.00	0.00	0.00	0.00
	6H	22.76	23.72	23.18	24.09	24.48	0.00	0.00	0.00	0.00	0.00
	8H	22.97	23.88	23.40	24.27	24.67	0.00	0.00	0.00	0.00	0.00
	12H	23.04	23.90	23.47	24.28	24.71	0.00	0.00	0.00	0.00	0.00
4H	2H	16.61	17.65	17.01	18.00	18.38	0.00	0.00	0.00	0.00	0.00
	3H	20.35	21.20	20.76	21.61	22.01	0.00	0.00	0.00	0.00	0.00
	4H	21.64	22.41	22.08	22.83	23.27	0.00	0.00	0.00	0.00	0.00
	6H	22.56	23.22	23.03	23.67	24.13	0.00	0.00	0.00	0.00	0.00
	8H	22.82	23.43	23.29	23.88	24.35	0.00	0.00	0.00	0.00	0.00
	12H	22.92	23.46	23.41	23.95	24.42	0.00	0.00	0.00	0.00	0.00
8H	4H	21.50	22.11	21.97	22.56	23.03	0.00	0.00	0.00	0.00	0.00
	6H	22.40	22.90	22.90	23.39	23.88	0.00	0.00	0.00	0.00	0.00
	8H	22.66	23.10	23.18	23.62	24.11	0.00	0.00	0.00	0.00	0.00
	12H	22.78	23.16	23.29	23.66	24.23	0.00	0.00	0.00	0.00	0.00
12H	4H	21.45	21.99	21.94	22.47	22.95	0.00	0.00	0.00	0.00	0.00
	6H	22.34	22.78	22.86	23.30	23.79	0.00	0.00	0.00	0.00	0.00
	8H	22.61	23.00	23.13	23.50	24.07	0.00	0.00	0.00	0.00	0.00