

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: P1055256

Luminaire Tested: S122R3DR-S865D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055256
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S865D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

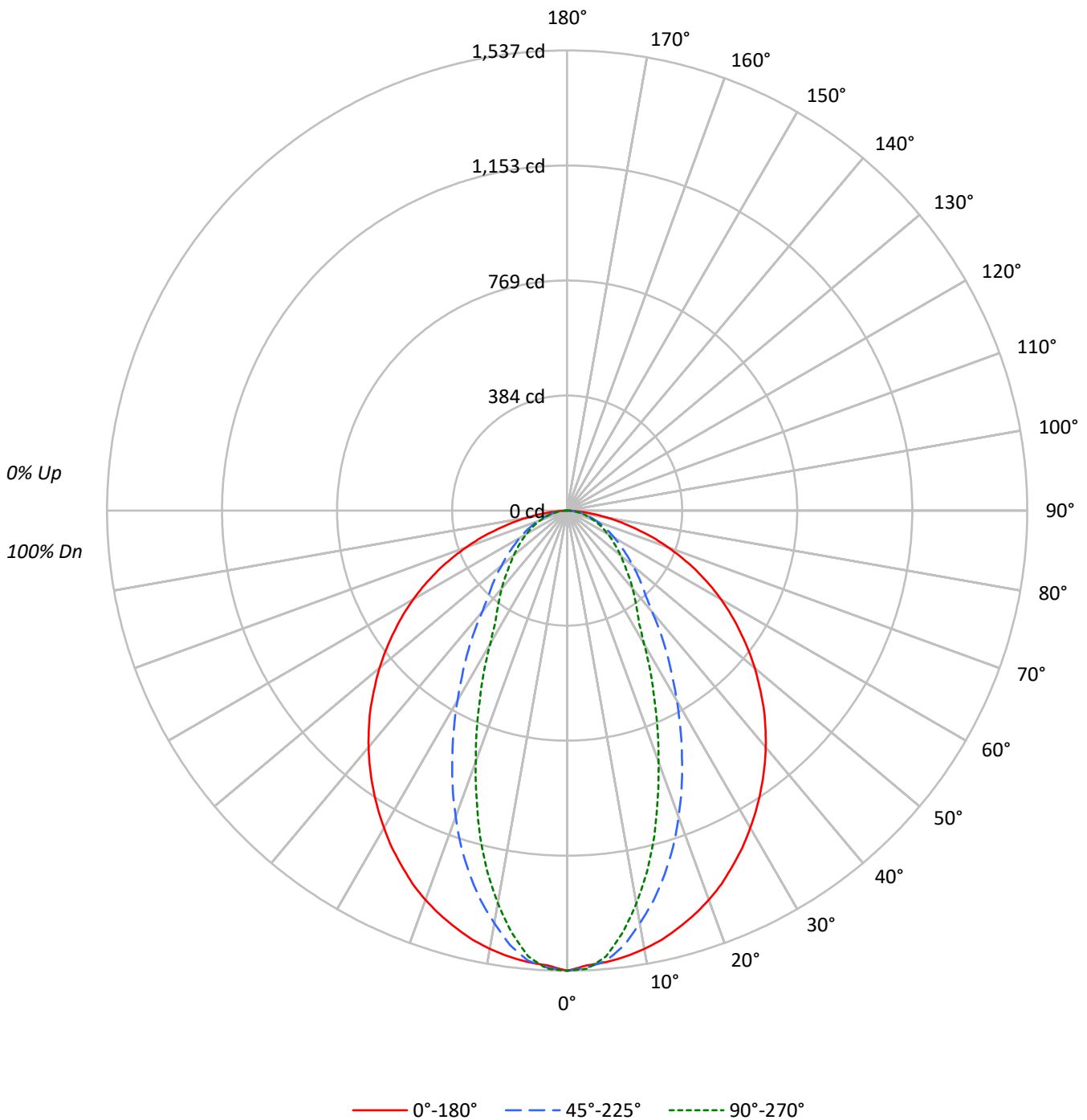
Lumens per Lamp: N/A
Luminaire Lumens: 2324.7 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	29118	29118	29118
5°	28790	28693	28423
10°	28603	26922	25637
15°	28280	24677	22054
20°	27904	21944	18006
25°	27347	18967	14372
30°	26764	16025	11216
35°	26156	13405	9423
40°	25521	10870	8392
45°	24859	9504	7505
50°	24128	8409	6856
55°	23303	7597	6368
60°	22496	6915	5941
65°	21429	6339	5590
70°	19859	5911	5268
75°	17590	5358	4985
80°	15002	5052	4626
85°	10326	4478	4195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24859 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	6.1
10°-20°	355.6	15.3
20°-30°	438.2	18.8
30°-40°	420.4	18.1
40°-50°	362.6	15.6
50°-60°	281.3	12.1
60°-70°	192.6	8.3
70°-80°	104.6	4.5
80°-90°	28.7	1.2
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°	934.6	40.2
0°-40°	1355.0	58.3
0°-60°	1998.9	86.0
0°-90°	2324.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2324.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1537	1537	1537	1537	1537	
5°	1514	1536	1509	1489	1494	144
15°	1442	1398	1258	1155	1124	407
25°	1308	1168	907	740	688	603
35°	1131	897	580	432	407	707
45°	928	624	355	293	280	715
55°	706	375	230	199	193	631
65°	478	204	141	128	125	472
75°	240	94	73	69	68	257
85°	48	23	21	21	19	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1536.9	1536.9	1536.9	1536.9	1536.9
2.5°	1520.2	1545.9	1527.9	1527.9	1531.8
5°	1513.8	1535.7	1508.7	1489.4	1494.5
7.5°	1502.2	1517.7	1463.7	1422.6	1421.3
10°	1486.8	1488.1	1399.4	1345.5	1332.6
12.5°	1467.5	1447.0	1333.9	1252.9	1233.7
15°	1441.8	1398.2	1258.1	1155.3	1124.4
17.5°	1414.9	1348.0	1177.1	1048.6	1006.2
20°	1384.0	1287.6	1088.4	942.0	893.1
22.5°	1349.3	1229.8	999.8	839.1	787.7
25°	1308.2	1168.1	907.3	740.2	687.5
27.5°	1268.4	1105.2	818.6	652.8	598.8
30°	1223.4	1037.0	732.5	569.3	512.7
32.5°	1178.4	967.7	652.8	489.6	447.2
35°	1130.9	897.0	579.6	431.8	407.4
37.5°	1082.0	827.6	510.2	393.2	371.4
40°	1031.9	758.2	439.5	356.0	339.3
42.5°	980.5	690.1	390.7	325.1	309.7
45°	927.8	624.5	354.7	293.0	280.1
47.5°	871.3	559.0	320.0	266.0	254.4
50°	818.6	496.0	285.3	241.6	232.6
52.5°	762.0	434.4	257.0	219.7	212.0
55°	705.5	375.2	230.0	199.2	192.8
57.5°	650.2	318.7	204.3	179.9	174.8
60°	593.7	273.7	182.5	161.9	156.8
62.5°	535.9	237.7	161.9	145.2	140.1
65°	478.0	204.3	141.4	128.5	124.7
67.5°	417.6	172.2	123.4	113.1	110.5
70°	358.5	143.9	106.7	97.7	95.1
72.5°	300.7	116.9	90.0	83.5	81.0
75°	240.3	93.8	73.2	69.4	68.1
77.5°	187.6	73.2	59.1	56.5	55.3
80°	137.5	54.0	46.3	43.7	42.4
82.5°	91.2	37.3	33.4	32.1	30.8
85°	47.5	23.1	20.6	20.6	19.3
87.5°	15.4	10.3	10.3	10.3	9.0
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	21.32	22.79	21.69	23.10	23.42	16.13	17.60	16.49	17.91	18.22
	3H	23.65	24.97	24.03	25.30	25.66	17.78	19.09	18.15	19.42	19.78
	4H	24.55	25.78	24.95	26.13	26.51	18.41	19.65	18.81	19.99	20.37
	6H	25.21	26.35	25.62	26.72	27.11	18.90	20.04	19.32	20.41	20.80
	8H	25.42	26.50	25.84	26.89	27.29	19.07	20.16	19.50	20.55	20.95
	12H	25.53	26.57	25.96	26.95	27.38	19.19	20.23	19.62	20.61	21.04
4H	2H	21.34	22.57	21.74	22.92	23.30	16.84	18.08	17.24	18.43	18.81
	3H	23.75	24.78	24.16	25.18	25.58	18.69	19.72	19.10	20.12	20.52
	4H	24.68	25.60	25.11	26.02	26.46	19.44	20.36	19.87	20.78	21.22
	6H	25.46	26.26	25.92	26.70	27.16	20.05	20.86	20.51	21.30	21.76
	8H	25.73	26.48	26.19	26.92	27.39	20.27	21.02	20.73	21.46	21.93
	12H	25.90	26.57	26.39	27.05	27.52	20.43	21.10	20.91	21.58	22.05
8H	4H	24.67	25.42	25.14	25.87	26.34	19.82	20.57	20.28	21.01	21.48
	6H	25.48	26.10	25.98	26.59	27.07	20.56	21.17	21.05	21.67	22.14
	8H	25.78	26.34	26.30	26.85	27.34	20.85	21.40	21.37	21.91	22.40
	12H	26.01	26.50	26.52	26.99	27.56	21.09	21.58	21.61	22.08	22.64
12H	4H	24.65	25.32	25.14	25.80	26.27	19.87	20.54	20.36	21.02	21.49
	6H	25.46	26.01	25.97	26.52	27.01	20.64	21.20	21.16	21.71	22.20
	8H	25.79	26.28	26.30	26.77	27.34	21.00	21.49	21.51	21.98	22.54