

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: P1055259

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055259
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-S865D840-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

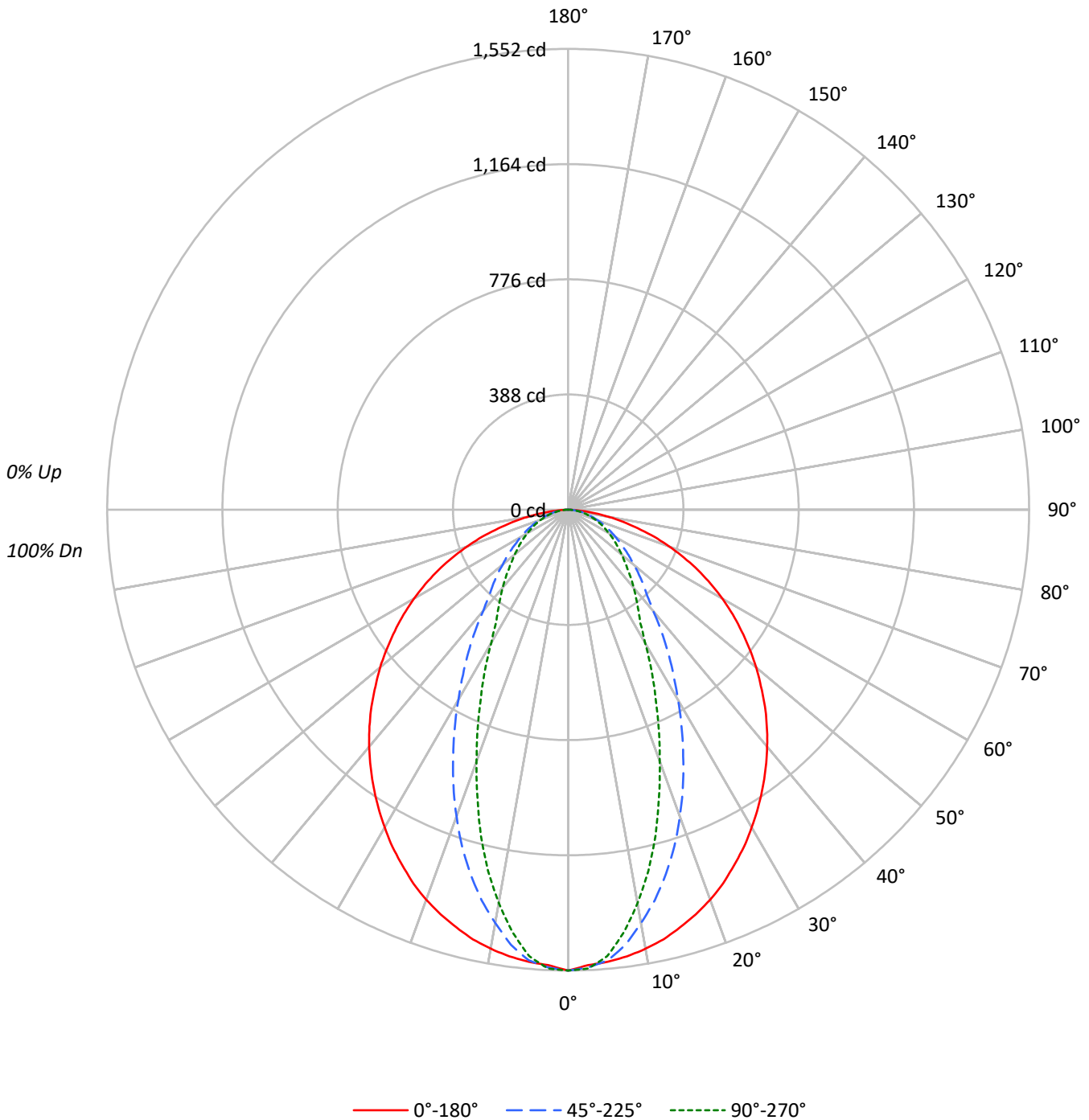
Lumens per Lamp: N/A
Luminaire Lumens: 2347.6 lumens
Efficiency: N/A
Efficacy: 67.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	29406	29406	29406
5°	29073	28974	28704
10°	28886	27187	25891
15°	28560	24920	22272
20°	28180	22162	18184
25°	27617	19153	14514
30°	27029	16182	11328
35°	26413	13537	9515
40°	25773	10976	8473
45°	25105	9597	7580
50°	24367	8492	6924
55°	23535	7673	6431
60°	22720	6983	5998
65°	21644	6402	5644
70°	20058	5966	5318
75°	17766	5417	5036
80°	15155	5095	4670
85°	10434	4521	4239

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25105 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	6.1
10°-20°	359.1	15.3
20°-30°	442.5	18.8
30°-40°	424.5	18.1
40°-50°	366.2	15.6
50°-60°	284.1	12.1
60°-70°	194.5	8.3
70°-80°	105.6	4.5
80°-90°	28.9	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°	943.8	40.2
0°-40°	1368.3	58.3
0°-60°	2018.6	86.0
0°-90°	2347.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2347.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1552	1552	1552	1552	1552	
5°	1529	1551	1524	1504	1509	145
15°	1456	1412	1270	1167	1136	411
25°	1321	1180	916	748	694	609
35°	1142	906	585	436	411	714
45°	937	631	358	296	283	722
55°	712	379	232	201	195	638
65°	483	206	143	130	126	477
75°	243	95	74	70	69	260
85°	48	23	21	21	20	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1552.1	1552.1	1552.1	1552.1	1552.1
2.5°	1535.2	1561.2	1543.0	1543.0	1546.9
5°	1528.7	1550.8	1523.5	1504.1	1509.3
7.5°	1517.1	1532.6	1478.1	1436.6	1435.3
10°	1501.5	1502.8	1413.2	1358.7	1345.8
12.5°	1482.0	1461.3	1347.1	1265.3	1245.8
15°	1456.1	1411.9	1270.5	1166.7	1135.5
17.5°	1428.8	1361.3	1188.7	1059.0	1016.1
20°	1397.7	1300.3	1099.2	951.2	901.9
22.5°	1362.6	1241.9	1009.6	847.4	795.5
25°	1321.1	1179.6	916.2	747.5	694.3
27.5°	1280.9	1116.1	826.7	659.3	604.7
30°	1235.5	1047.3	739.7	574.9	517.8
32.5°	1190.0	977.2	659.3	494.4	451.6
35°	1142.0	905.8	585.3	436.0	411.4
37.5°	1092.7	835.7	515.2	397.1	375.0
40°	1042.1	765.7	443.8	359.5	342.6
42.5°	990.2	696.9	394.5	328.3	312.8
45°	937.0	630.7	358.2	295.9	282.9
47.5°	879.9	564.5	323.1	268.6	257.0
50°	826.7	500.9	288.1	244.0	234.9
52.5°	769.6	438.6	259.5	221.9	214.1
55°	712.5	378.9	232.3	201.2	194.7
57.5°	656.7	321.8	206.3	181.7	176.5
60°	599.6	276.4	184.3	163.5	158.3
62.5°	541.2	240.1	163.5	146.6	141.5
65°	482.8	206.3	142.8	129.8	125.9
67.5°	421.8	173.9	124.6	114.2	111.6
70°	362.1	145.3	107.7	98.6	96.0
72.5°	303.7	118.1	90.8	84.4	81.8
75°	242.7	94.7	74.0	70.1	68.8
77.5°	189.5	74.0	59.7	57.1	55.8
80°	138.9	54.5	46.7	44.1	42.8
82.5°	92.1	37.6	33.7	32.4	31.1
85°	48.0	23.4	20.8	20.8	19.5
87.5°	15.6	10.4	10.4	10.4	9.1
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	21.36	22.82	21.72	23.14	23.45	16.16	17.63	16.53	17.94	18.26
	3H	23.69	25.00	24.06	25.33	25.69	17.81	19.13	18.19	19.45	19.82
	4H	24.58	25.82	24.98	26.17	26.54	18.44	19.68	18.85	20.03	20.41
	6H	25.24	26.38	25.66	26.75	27.14	18.94	20.08	19.35	20.45	20.84
	8H	25.45	26.54	25.88	26.93	27.33	19.11	20.19	19.54	20.58	20.98
	12H	25.57	26.61	26.00	26.99	27.42	19.22	20.26	19.66	20.64	21.07
4H	2H	21.37	22.61	21.77	22.96	23.34	16.88	18.11	17.28	18.46	18.84
	3H	23.78	24.81	24.20	25.21	25.61	18.73	19.75	19.14	20.15	20.55
	4H	24.71	25.64	25.15	26.05	26.49	19.47	20.40	19.91	20.81	21.25
	6H	25.49	26.29	25.95	26.74	27.20	20.09	20.89	20.55	21.33	21.79
	8H	25.76	26.51	26.23	26.96	27.42	20.30	21.05	20.77	21.50	21.97
	12H	25.94	26.61	26.42	27.09	27.56	20.46	21.13	20.95	21.61	22.08
8H	4H	24.71	25.46	25.17	25.90	26.37	19.85	20.60	20.32	21.05	21.51
	6H	25.52	26.13	26.01	26.63	27.10	20.59	21.21	21.09	21.70	22.18
	8H	25.82	26.37	26.33	26.88	27.37	20.88	21.44	21.40	21.95	22.44
	12H	26.05	26.54	26.56	27.03	27.59	21.13	21.62	21.64	22.11	22.68
12H	4H	24.69	25.36	25.17	25.84	26.31	19.91	20.58	20.39	21.06	21.53
	6H	25.49	26.05	26.01	26.56	27.05	20.67	21.23	21.19	21.74	22.23
	8H	25.82	26.31	26.34	26.81	27.37	21.03	21.52	21.54	22.01	22.58