

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: P1055148

Luminaire Tested: S122R3DR-S1005D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055148
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-S1005D835-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

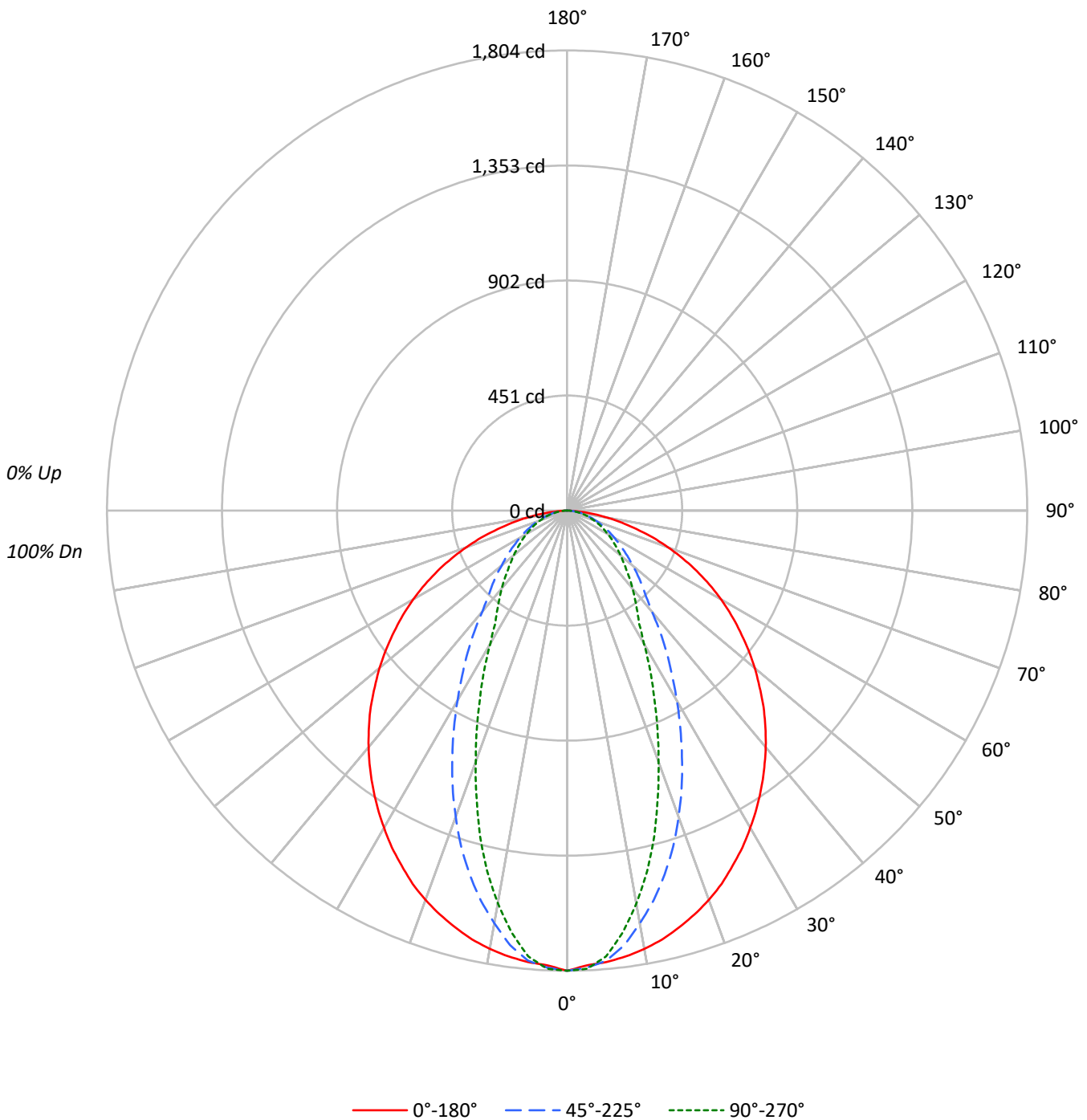
Lumens per Lamp: N/A
Luminaire Lumens: 2728.3 lumens
Efficiency: N/A
Efficacy: 65.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	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°	34175	34175	34175
5°	33788	33674	33358
10°	33569	31597	30088
15°	33189	28960	25883
20°	32749	25755	21134
25°	32095	22259	16868
30°	31411	18805	13165
35°	30696	15732	11058
40°	29951	12757	9848
45°	29175	11154	8810
50°	28316	9868	8047
55°	27350	8918	7472
60°	26403	8116	6972
65°	25149	7437	6559
70°	23310	6935	6182
75°	20643	6295	5849
80°	17610	5924	5433
85°	12130	5239	4913

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 29175 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.3	6.1
10°-20°	417.3	15.3
20°-30°	514.2	18.8
30°-40°	493.4	18.1
40°-50°	425.6	15.6
50°-60°	330.1	12.1
60°-70°	226.0	8.3
70°-80°	122.7	4.5
80°-90°	33.6	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°	1096.8	40.2
0°-40°	1590.2	58.3
0°-60°	2345.9	86.0
0°-90°	2728.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2728.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1804	1804	1804	1804	1804	
5°	1777	1802	1771	1748	1754	169
15°	1692	1641	1476	1356	1320	477
25°	1535	1371	1065	869	807	708
35°	1327	1053	680	507	478	830
45°	1089	733	416	344	329	839
55°	828	440	270	234	226	741
65°	561	240	166	151	146	554
75°	282	110	86	81	80	302
85°	56	27	24	24	23	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1803.8	1803.8	1803.8	1803.8	1803.8
2.5°	1784.1	1814.3	1793.2	1793.2	1797.7
5°	1776.6	1802.2	1770.6	1747.9	1754.0
7.5°	1763.0	1781.1	1717.8	1669.5	1668.0
10°	1744.9	1746.4	1642.4	1579.0	1564.0
12.5°	1722.3	1698.2	1565.5	1470.4	1447.8
15°	1692.1	1640.9	1476.5	1355.8	1319.6
17.5°	1660.5	1582.1	1381.5	1230.7	1180.9
20°	1624.3	1511.2	1277.4	1105.5	1048.2
22.5°	1583.6	1443.3	1173.3	984.8	924.5
25°	1535.3	1370.9	1064.8	868.7	806.9
27.5°	1488.5	1297.0	960.7	766.1	702.8
30°	1435.8	1217.1	859.6	668.1	601.8
32.5°	1383.0	1135.6	766.1	574.6	524.8
35°	1327.2	1052.7	680.2	506.7	478.1
37.5°	1269.9	971.3	598.7	461.5	435.9
40°	1211.0	889.8	515.8	417.8	398.2
42.5°	1150.7	809.9	458.5	381.6	363.5
45°	1088.9	733.0	416.3	343.9	328.8
47.5°	1022.5	656.0	375.5	312.2	298.6
50°	960.7	582.1	334.8	283.5	273.0
52.5°	894.3	509.8	301.6	257.9	248.8
55°	828.0	440.4	270.0	233.8	226.2
57.5°	763.1	374.0	239.8	211.1	205.1
60°	696.8	321.2	214.2	190.0	184.0
62.5°	628.9	279.0	190.0	170.4	164.4
65°	561.0	239.8	165.9	150.8	146.3
67.5°	490.1	202.1	144.8	132.7	129.7
70°	420.8	168.9	125.2	114.6	111.6
72.5°	352.9	137.2	105.6	98.0	95.0
75°	282.0	110.1	86.0	81.4	79.9
77.5°	220.2	86.0	69.4	66.4	64.9
80°	161.4	63.3	54.3	51.3	49.8
82.5°	107.1	43.7	39.2	37.7	36.2
85°	55.8	27.1	24.1	24.1	22.6
87.5°	18.1	12.1	12.1	12.1	10.6
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	21.88	23.35	22.24	23.66	23.97	16.68	18.15	17.05	18.46	18.78
	3H	24.21	25.52	24.59	25.85	26.22	18.33	19.65	18.71	19.98	20.34
	4H	25.10	26.34	25.50	26.69	27.07	18.97	20.20	19.37	20.55	20.93
	6H	25.77	26.91	26.18	27.27	27.67	19.46	20.60	19.87	20.97	21.36
	8H	25.97	27.06	26.40	27.45	27.85	19.63	20.71	20.06	21.10	21.51
	12H	26.09	27.13	26.52	27.51	27.94	19.75	20.78	20.18	21.17	21.60
4H	2H	21.89	23.13	22.29	23.48	23.86	17.40	18.63	17.80	18.98	19.36
	3H	24.31	25.33	24.72	25.73	26.13	19.25	20.27	19.66	20.67	21.07
	4H	25.24	26.16	25.67	26.58	27.01	19.99	20.92	20.43	21.33	21.77
	6H	26.01	26.82	26.47	27.26	27.72	20.61	21.41	21.07	21.85	22.32
	8H	26.28	27.03	26.75	27.48	27.95	20.83	21.58	21.29	22.02	22.49
	12H	26.46	27.13	26.94	27.61	28.08	20.99	21.66	21.47	22.13	22.61
8H	4H	25.23	25.98	25.69	26.42	26.89	20.37	21.12	20.84	21.57	22.03
	6H	26.04	26.65	26.53	27.15	27.63	21.11	21.73	21.61	22.22	22.70
	8H	26.34	26.89	26.85	27.40	27.89	21.41	21.96	21.92	22.47	22.96
	12H	26.57	27.06	27.08	27.55	28.12	21.65	22.14	22.16	22.63	23.20
12H	4H	25.21	25.88	25.69	26.36	26.83	20.43	21.10	20.91	21.58	22.05
	6H	26.01	26.57	26.53	27.08	27.57	21.20	21.75	21.71	22.26	22.75
	8H	26.35	26.84	26.86	27.33	27.89	21.55	22.04	22.06	22.53	23.10