

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: P1055571

Luminaire Tested: S123R3DR-S1000D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055571
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D940-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

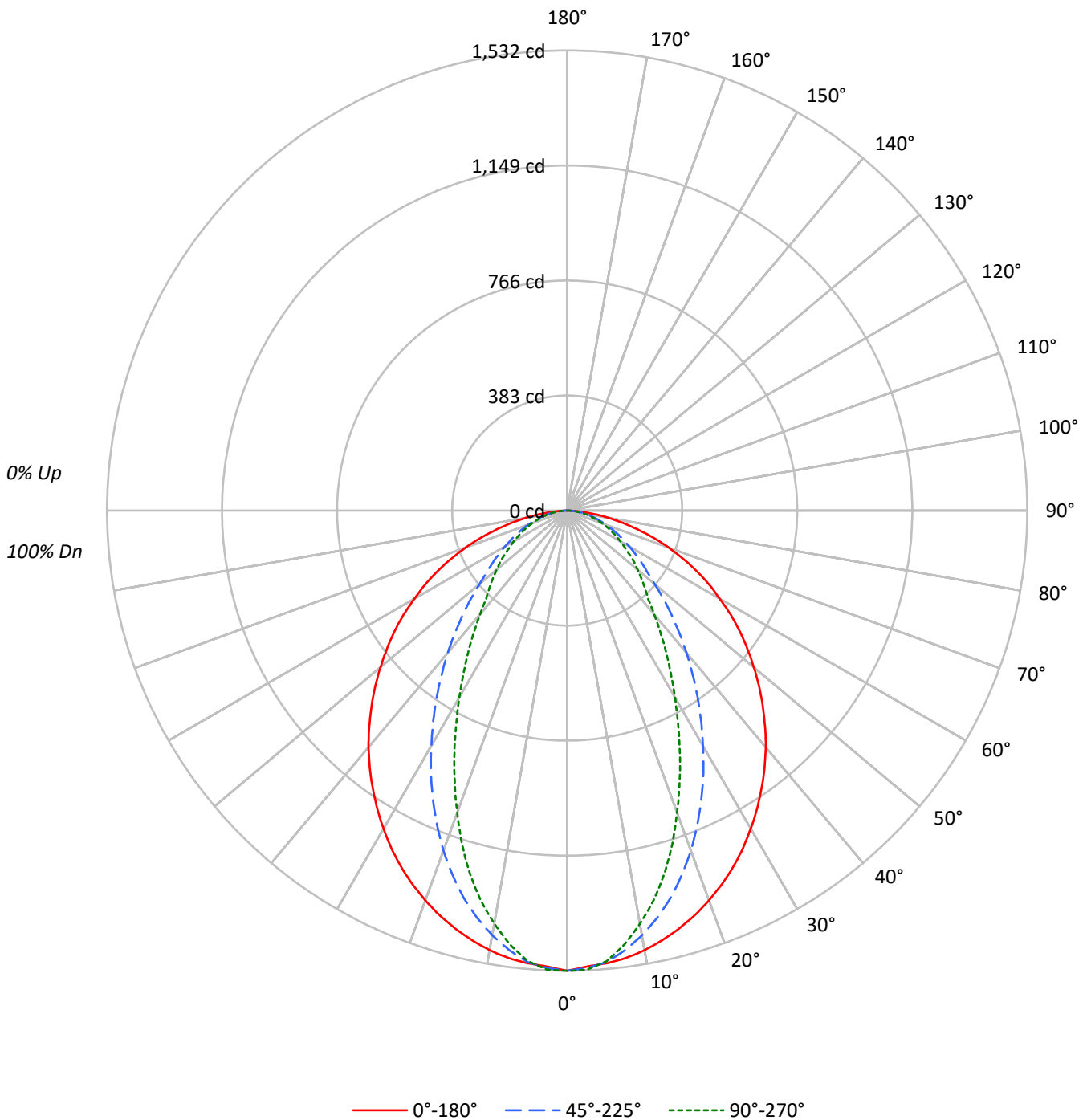
Lumens per Lamp: N/A
Luminaire Lumens: 2687.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (Ain): 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	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18472	18472	18472
5°	18306	18265	18223
10°	18195	17578	17101
15°	17979	16648	15618
20°	17716	15451	13732
25°	17408	14070	11814
30°	17022	12586	9986
35°	16612	11131	8434
40°	16195	9720	7087
45°	15708	8382	6252
50°	15217	7135	5739
55°	14764	6358	5299
60°	14147	5746	4946
65°	13568	5263	4641
70°	12644	4847	4364
75°	11315	4486	4109
80°	9706	4138	3819
85°	6820	3804	3652

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15708 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.0	5.3
10°-20°	375.7	14.0
20°-30°	495.0	18.4
30°-40°	502.4	18.7
40°-50°	436.7	16.3
50°-60°	342.1	12.7
60°-70°	232.4	8.7
70°-80°	126.0	4.7
80°-90°	34.7	1.3
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°	1012.7	37.7
0°-40°	1515.1	56.4
0°-60°	2293.9	85.4
0°-90°	2687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2687.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1532	1532	1532	1532	1532	
5°	1513	1531	1509	1495	1506	144
15°	1440	1420	1334	1268	1251	406
25°	1309	1230	1058	926	888	602
35°	1129	995	756	612	573	706
45°	921	739	492	379	367	711
55°	702	488	302	258	252	627
65°	476	264	184	165	163	470
75°	243	122	96	89	88	259
85°	49	30	28	25	26	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1532.1	1532.1	1532.1	1532.1	1532.1
2.5°	1519.5	1539.0	1524.1	1525.2	1529.8
5°	1512.6	1530.9	1509.2	1495.4	1505.7
7.5°	1502.3	1516.0	1475.9	1454.2	1457.6
10°	1486.2	1490.8	1435.8	1401.4	1396.9
12.5°	1464.5	1456.4	1387.7	1337.3	1329.2
15°	1440.4	1419.8	1333.8	1268.5	1251.3
17.5°	1412.9	1378.5	1270.8	1190.6	1164.2
20°	1380.8	1332.7	1204.3	1102.4	1070.3
22.5°	1346.4	1284.6	1132.2	1011.8	978.6
25°	1308.6	1229.6	1057.7	925.9	888.1
27.5°	1267.4	1174.6	982.0	841.1	798.7
30°	1222.7	1117.3	904.1	758.6	717.3
32.5°	1176.8	1056.5	829.6	681.8	641.7
35°	1128.7	994.6	756.3	611.9	573.0
37.5°	1079.4	931.6	685.3	545.5	508.8
40°	1029.0	867.4	617.6	483.6	450.3
42.5°	975.2	803.3	552.3	425.1	399.9
45°	921.3	739.1	491.6	379.3	366.7
47.5°	867.4	673.8	434.3	347.2	335.8
50°	811.3	610.8	380.4	317.4	306.0
52.5°	756.3	548.9	335.8	288.8	280.7
55°	702.4	488.2	302.5	257.8	252.1
57.5°	646.3	428.6	269.3	233.8	226.9
60°	586.7	371.3	238.3	208.6	205.1
62.5°	532.8	317.4	210.8	186.8	183.3
65°	475.6	263.6	184.5	165.0	162.7
67.5°	417.1	218.9	160.4	144.4	143.2
70°	358.7	184.5	137.5	124.9	123.8
72.5°	301.4	152.4	115.7	107.7	105.4
75°	242.9	121.5	96.3	89.4	88.2
77.5°	190.2	94.0	76.8	72.2	71.0
80°	139.8	69.9	59.6	56.1	55.0
82.5°	91.7	48.1	42.4	40.1	40.1
85°	49.3	29.8	27.5	25.2	26.4
87.5°	17.2	12.6	12.6	11.5	12.6
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	20.69	22.18	21.06	22.50	22.81	15.84	17.33	16.21	17.65	17.96
	3H	22.58	23.92	22.96	24.24	24.61	17.47	18.81	17.85	19.13	19.50
	4H	23.33	24.59	23.73	24.94	25.32	18.10	19.36	18.50	19.71	20.09
	6H	23.90	25.06	24.31	25.42	25.82	18.59	19.75	19.01	20.12	20.51
	8H	24.07	25.17	24.50	25.56	25.97	18.76	19.87	19.19	20.26	20.66
	12H	24.17	25.22	24.60	25.61	26.04	18.89	19.94	19.32	20.33	20.76
4H	2H	20.74	21.99	21.14	22.34	22.72	16.57	17.82	16.97	18.17	18.55
	3H	22.75	23.80	23.16	24.20	24.60	18.39	19.43	18.80	19.83	20.23
	4H	23.57	24.51	24.00	24.93	25.37	19.13	20.07	19.57	20.49	20.93
	6H	24.25	25.07	24.71	25.51	25.97	19.74	20.56	20.20	21.00	21.46
	8H	24.48	25.25	24.95	25.69	26.16	19.96	20.72	20.42	21.17	21.63
	12H	24.64	25.32	25.12	25.80	26.27	20.13	20.81	20.61	21.29	21.76
8H	4H	23.60	24.36	24.06	24.80	25.27	19.52	20.28	19.98	20.73	21.19
	6H	24.32	24.96	24.82	25.45	25.92	20.25	20.88	20.74	21.37	21.85
	8H	24.59	25.16	25.11	25.67	26.16	20.53	21.10	21.05	21.61	22.10
	12H	24.80	25.30	25.31	25.79	26.36	20.78	21.28	21.29	21.77	22.34
12H	4H	23.58	24.26	24.06	24.74	25.21	19.57	20.25	20.06	20.73	21.20
	6H	24.31	24.87	24.82	25.39	25.87	20.33	20.90	20.84	21.41	21.89
	8H	24.61	25.11	25.12	25.61	26.17	20.68	21.18	21.19	21.67	22.23