

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: P1055667

Luminaire Tested: S123R3DR-S775D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055667
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-S775D850-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

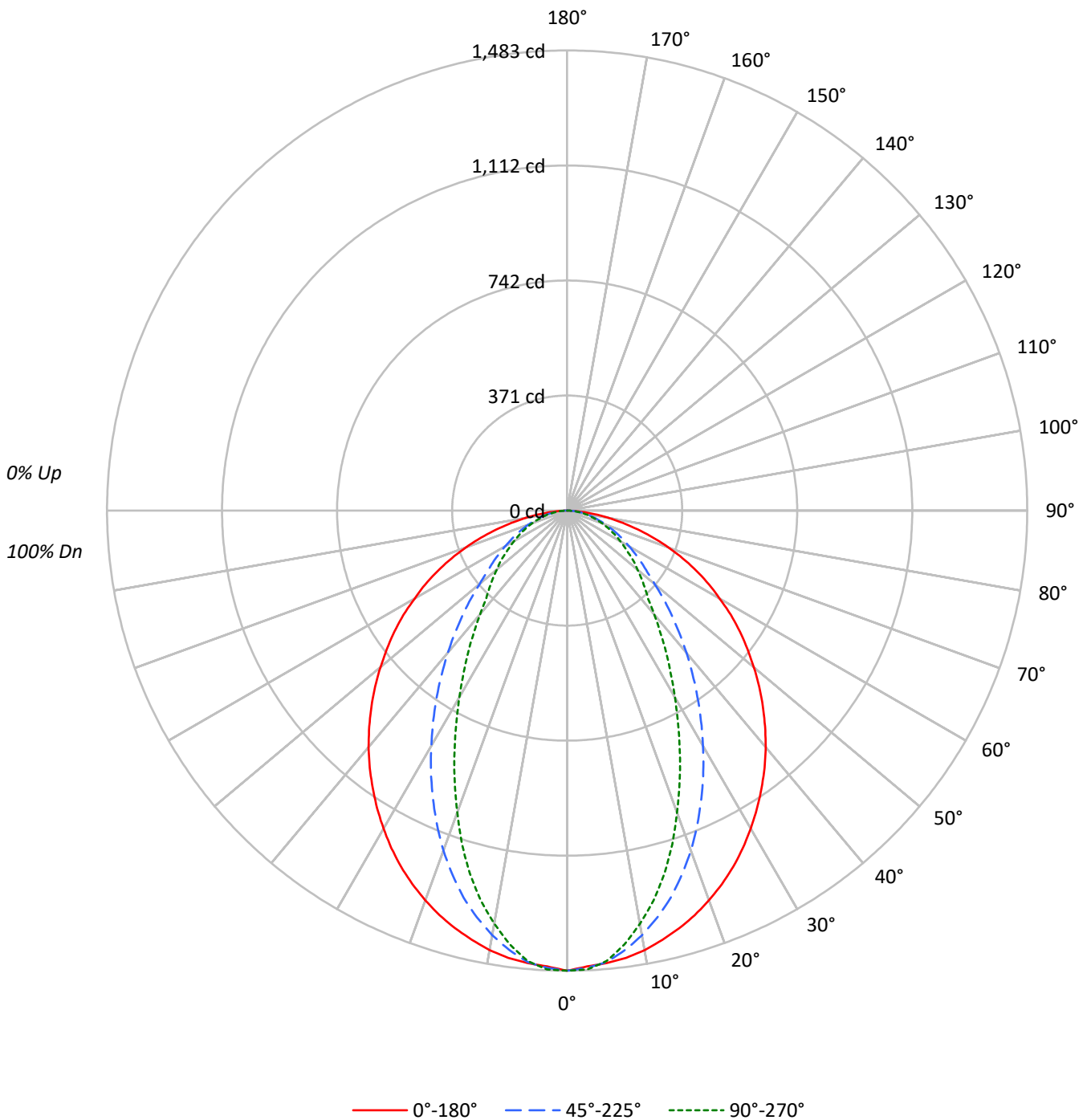
Lumens per Lamp: N/A
Luminaire Lumens: 2600.5 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17876	17876	17876
5°	17717	17677	17636
10°	17609	17012	16550
15°	17400	16113	15115
20°	17145	14955	13289
25°	16848	13617	11434
30°	16473	12181	9664
35°	16078	10772	8161
40°	15674	9408	6859
45°	15202	8113	6051
50°	14728	6906	5554
55°	14289	6155	5129
60°	13691	5563	4786
65°	13129	5092	4493
70°	12235	4692	4223
75°	10952	4341	3978
80°	9394	4006	3694
85°	6598	3680	3527

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15202 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.4	5.3
10°-20°	363.6	14.0
20°-30°	479.0	18.4
30°-40°	486.2	18.7
40°-50°	422.6	16.3
50°-60°	331.1	12.7
60°-70°	225.0	8.7
70°-80°	121.9	4.7
80°-90°	33.6	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°	980.1	37.7
0°-40°	1466.3	56.4
0°-60°	2220.0	85.4
0°-90°	2600.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2600.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1483	1483	1483	1483	1483	
5°	1464	1482	1461	1447	1457	139
15°	1394	1374	1291	1228	1211	393
25°	1266	1190	1024	896	860	583
35°	1092	963	732	592	554	683
45°	892	715	476	367	355	688
55°	680	472	293	250	244	607
65°	460	255	178	160	158	454
75°	235	118	93	86	85	251
85°	48	29	27	24	26	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1482.7	1482.7	1482.7	1482.7	1482.7
2.5°	1470.5	1489.4	1475.0	1476.1	1480.5
5°	1463.9	1481.6	1460.6	1447.2	1457.2
7.5°	1453.9	1467.2	1428.4	1407.3	1410.6
10°	1438.4	1442.8	1389.6	1356.3	1351.9
12.5°	1417.3	1409.5	1343.0	1294.2	1286.4
15°	1394.0	1374.1	1290.9	1227.7	1211.0
17.5°	1367.4	1334.1	1229.9	1152.3	1126.7
20°	1336.3	1289.8	1165.6	1066.9	1035.8
22.5°	1303.1	1243.2	1095.7	979.2	947.1
25°	1266.5	1190.0	1023.6	896.1	859.5
27.5°	1226.6	1136.7	950.4	814.0	773.0
30°	1183.3	1081.3	875.0	734.2	694.2
32.5°	1138.9	1022.5	802.9	659.9	621.0
35°	1092.4	962.6	731.9	592.2	554.5
37.5°	1044.7	901.6	663.2	527.9	492.4
40°	995.9	839.5	597.8	468.0	435.8
42.5°	943.8	777.4	534.5	411.4	387.0
45°	891.6	715.3	475.8	367.1	354.9
47.5°	839.5	652.1	420.3	336.0	324.9
50°	785.2	591.1	368.2	307.2	296.1
52.5°	731.9	531.2	324.9	279.5	271.7
55°	679.8	472.4	292.8	249.5	244.0
57.5°	625.5	414.8	260.6	226.2	219.6
60°	567.8	359.3	230.7	201.8	198.5
62.5°	515.7	307.2	204.1	180.8	177.4
65°	460.2	255.1	178.5	159.7	157.5
67.5°	403.7	211.8	155.3	139.7	138.6
70°	347.1	178.5	133.1	120.9	119.8
72.5°	291.7	147.5	112.0	104.2	102.0
75°	235.1	117.6	93.2	86.5	85.4
77.5°	184.1	90.9	74.3	69.9	68.8
80°	135.3	67.6	57.7	54.3	53.2
82.5°	88.7	46.6	41.0	38.8	38.8
85°	47.7	28.8	26.6	24.4	25.5
87.5°	16.6	12.2	12.2	11.1	12.2
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	20.58	22.07	20.94	22.38	22.70	15.72	17.22	16.09	17.53	17.84
	3H	22.46	23.80	22.84	24.13	24.49	17.35	18.69	17.73	19.02	19.38
	4H	23.22	24.48	23.62	24.82	25.20	17.99	19.24	18.39	19.59	19.97
	6H	23.78	24.94	24.20	25.31	25.70	18.48	19.64	18.89	20.01	20.40
	8H	23.96	25.06	24.38	25.45	25.85	18.65	19.75	19.08	20.14	20.54
	12H	24.05	25.11	24.48	25.49	25.92	18.77	19.83	19.20	20.21	20.64
4H	2H	20.62	21.88	21.02	22.23	22.61	16.45	17.71	16.85	18.06	18.44
	3H	22.64	23.68	23.05	24.08	24.48	18.27	19.32	18.68	19.72	20.12
	4H	23.46	24.40	23.89	24.81	25.25	19.02	19.96	19.45	20.38	20.82
	6H	24.14	24.96	24.60	25.40	25.86	19.63	20.45	20.09	20.89	21.35
	8H	24.37	25.13	24.83	25.58	26.05	19.84	20.61	20.31	21.05	21.52
	12H	24.52	25.20	25.00	25.68	26.15	20.01	20.69	20.49	21.17	21.64
8H	4H	23.48	24.25	23.95	24.69	25.16	19.40	20.17	19.87	20.61	21.08
	6H	24.21	24.84	24.71	25.33	25.81	20.13	20.76	20.63	21.25	21.73
	8H	24.48	25.05	24.99	25.56	26.04	20.42	20.99	20.93	21.50	21.98
	12H	24.69	25.19	25.20	25.68	26.25	20.66	21.16	21.17	21.66	22.22
12H	4H	23.47	24.15	23.95	24.63	25.10	19.46	20.14	19.94	20.62	21.09
	6H	24.19	24.76	24.71	25.27	25.76	20.21	20.78	20.73	21.29	21.78
	8H	24.50	25.00	25.01	25.49	26.06	20.56	21.06	21.07	21.55	22.12