

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: P1055679

Luminaire Tested: S123R3DR-S775D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055679
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-S775D940-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

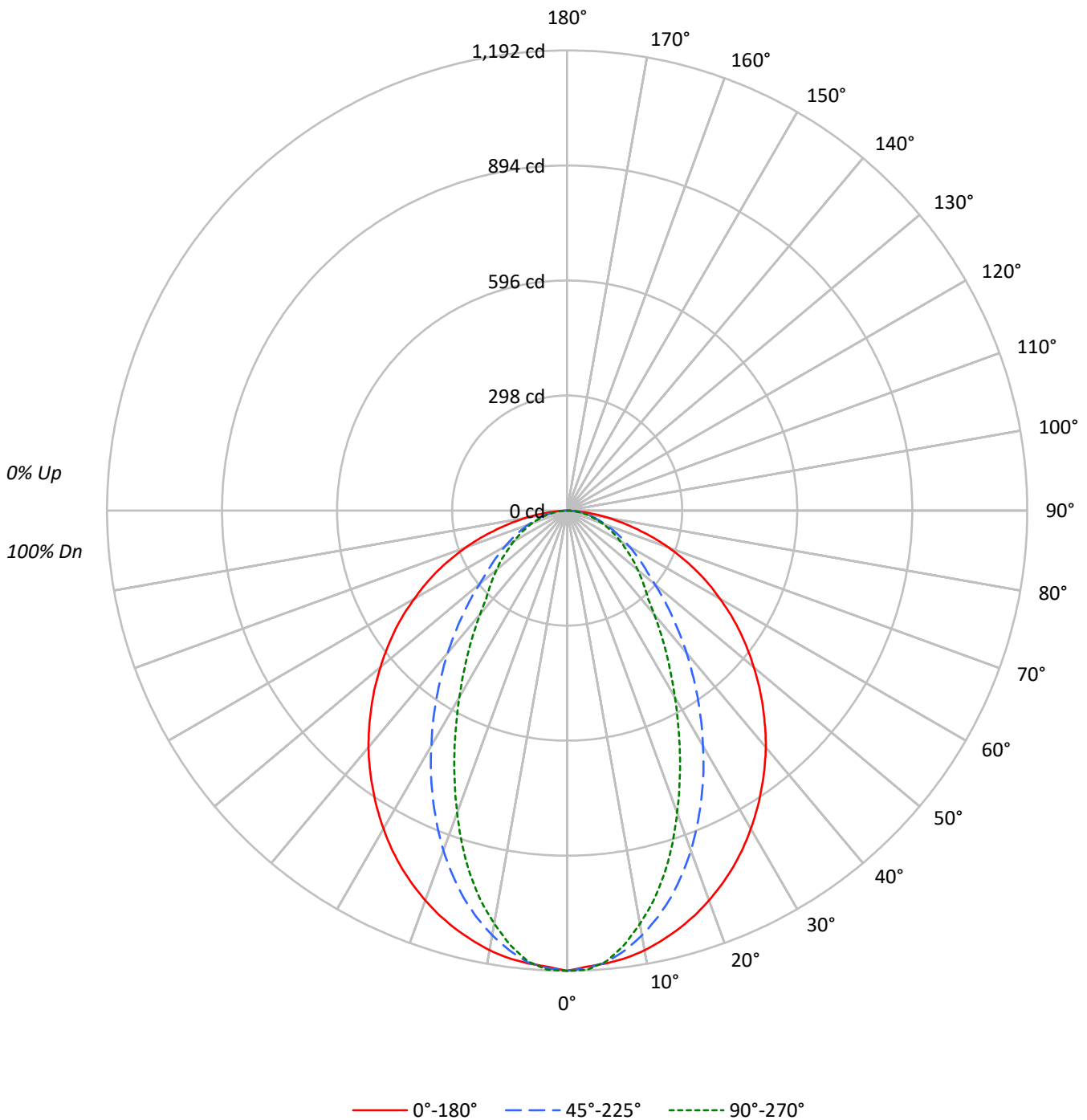
Lumens per Lamp: N/A
Luminaire Lumens: 2091.0 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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																		
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	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°	14374	14374	14374
5°	14246	14213	14180
10°	14158	13678	13307
15°	13991	12956	12153
20°	13786	12024	10686
25°	13546	10948	9194
30°	13246	9795	7771
35°	12927	8662	6563
40°	12603	7564	5515
45°	12223	6522	4864
50°	11841	5552	4466
55°	11489	4948	4124
60°	11010	4473	3848
65°	10558	4097	3612
70°	9838	3772	3395
75°	8804	3489	3200
80°	7554	3222	2972
85°	5298	2960	2836

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12223 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.5	5.3
10°-20°	292.4	14.0
20°-30°	385.2	18.4
30°-40°	390.9	18.7
40°-50°	339.8	16.3
50°-60°	266.2	12.7
60°-70°	180.9	8.7
70°-80°	98.0	4.7
80°-90°	27.0	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°	788.1	37.7
0°-40°	1179.0	56.4
0°-60°	1785.1	85.4
0°-90°	2091.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2091.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1192	1192	1192	1192	1192	
5°	1177	1191	1174	1164	1172	112
15°	1121	1105	1038	987	974	316
25°	1018	957	823	720	691	469
35°	878	774	588	476	446	549
45°	717	575	382	295	285	553
55°	547	380	235	201	196	488
65°	370	205	144	128	127	365
75°	189	94	75	70	69	202
85°	38	23	21	20	20	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1192.2	1192.2	1192.2	1192.2	1192.2
2.5°	1182.4	1197.6	1186.0	1186.9	1190.4
5°	1177.1	1191.3	1174.4	1163.7	1171.7
7.5°	1169.0	1179.7	1148.5	1131.6	1134.3
10°	1156.5	1160.1	1117.3	1090.6	1087.0
12.5°	1139.6	1133.4	1079.9	1040.6	1034.4
15°	1120.9	1104.8	1038.0	987.1	973.7
17.5°	1099.5	1072.7	988.9	926.5	906.0
20°	1074.5	1037.1	937.2	857.8	832.9
22.5°	1047.8	999.6	881.0	787.4	761.5
25°	1018.3	956.8	823.0	720.5	691.1
27.5°	986.2	914.0	764.2	654.5	621.5
30°	951.5	869.4	703.6	590.3	558.2
32.5°	915.8	822.2	645.6	530.6	499.4
35°	878.3	774.0	588.5	476.2	445.9
37.5°	840.0	725.0	533.2	424.5	395.9
40°	800.8	675.0	480.6	376.3	350.4
42.5°	758.8	625.1	429.8	330.8	311.2
45°	716.9	575.2	382.5	295.2	285.3
47.5°	675.0	524.3	338.0	270.2	261.3
50°	631.3	475.3	296.0	247.0	238.1
52.5°	588.5	427.1	261.3	224.7	218.5
55°	546.6	379.9	235.4	200.6	196.2
57.5°	502.9	333.5	209.6	181.9	176.6
60°	456.6	288.9	185.5	162.3	159.6
62.5°	414.6	247.0	164.1	145.3	142.7
65°	370.1	205.1	143.6	128.4	126.6
67.5°	324.6	170.3	124.8	112.4	111.5
70°	279.1	143.6	107.0	97.2	96.3
72.5°	234.5	118.6	90.1	83.8	82.0
75°	189.0	94.5	74.9	69.6	68.7
77.5°	148.0	73.1	59.7	56.2	55.3
80°	108.8	54.4	46.4	43.7	42.8
82.5°	71.3	37.5	33.0	31.2	31.2
85°	38.3	23.2	21.4	19.6	20.5
87.5°	13.4	9.8	9.8	8.9	9.8
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	19.82	21.31	20.18	21.62	21.94	14.97	16.46	15.33	16.77	17.09
	3H	21.71	23.04	22.08	23.37	23.73	16.60	17.93	16.97	18.26	18.63
	4H	22.46	23.72	22.86	24.07	24.45	17.23	18.49	17.63	18.84	19.22
	6H	23.03	24.19	23.44	24.55	24.94	17.72	18.88	18.14	19.25	19.64
	8H	23.20	24.30	23.63	24.69	25.09	17.89	19.00	18.32	19.39	19.79
	12H	23.30	24.35	23.73	24.73	25.16	18.02	19.07	18.45	19.46	19.89
4H	2H	19.86	21.12	20.27	21.47	21.85	15.70	16.95	16.10	17.30	17.68
	3H	21.88	22.93	22.29	23.33	23.73	17.52	18.56	17.93	18.96	19.36
	4H	22.70	23.64	23.13	24.05	24.49	18.26	19.20	18.70	19.62	20.06
	6H	23.38	24.20	23.84	24.64	25.10	18.87	19.69	19.33	20.13	20.59
	8H	23.61	24.38	24.08	24.82	25.29	19.09	19.85	19.55	20.30	20.76
	12H	23.76	24.45	24.25	24.92	25.40	19.26	19.94	19.74	20.42	20.89
8H	4H	22.72	23.49	23.19	23.93	24.40	18.65	19.41	19.11	19.86	20.32
	6H	23.45	24.08	23.95	24.57	25.05	19.38	20.01	19.87	20.50	20.98
	8H	23.72	24.29	24.24	24.80	25.29	19.66	20.23	20.18	20.74	21.23
	12H	23.93	24.43	24.44	24.92	25.49	19.91	20.41	20.42	20.90	21.47
12H	4H	22.71	23.39	23.19	23.87	24.34	18.70	19.38	19.18	19.86	20.33
	6H	23.44	24.00	23.95	24.51	25.00	19.46	20.02	19.97	20.54	21.02
	8H	23.74	24.24	24.25	24.73	25.30	19.81	20.31	20.32	20.80	21.36