

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: P1439839

Luminaire Tested: S123DR-S675D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439839
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-S675D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

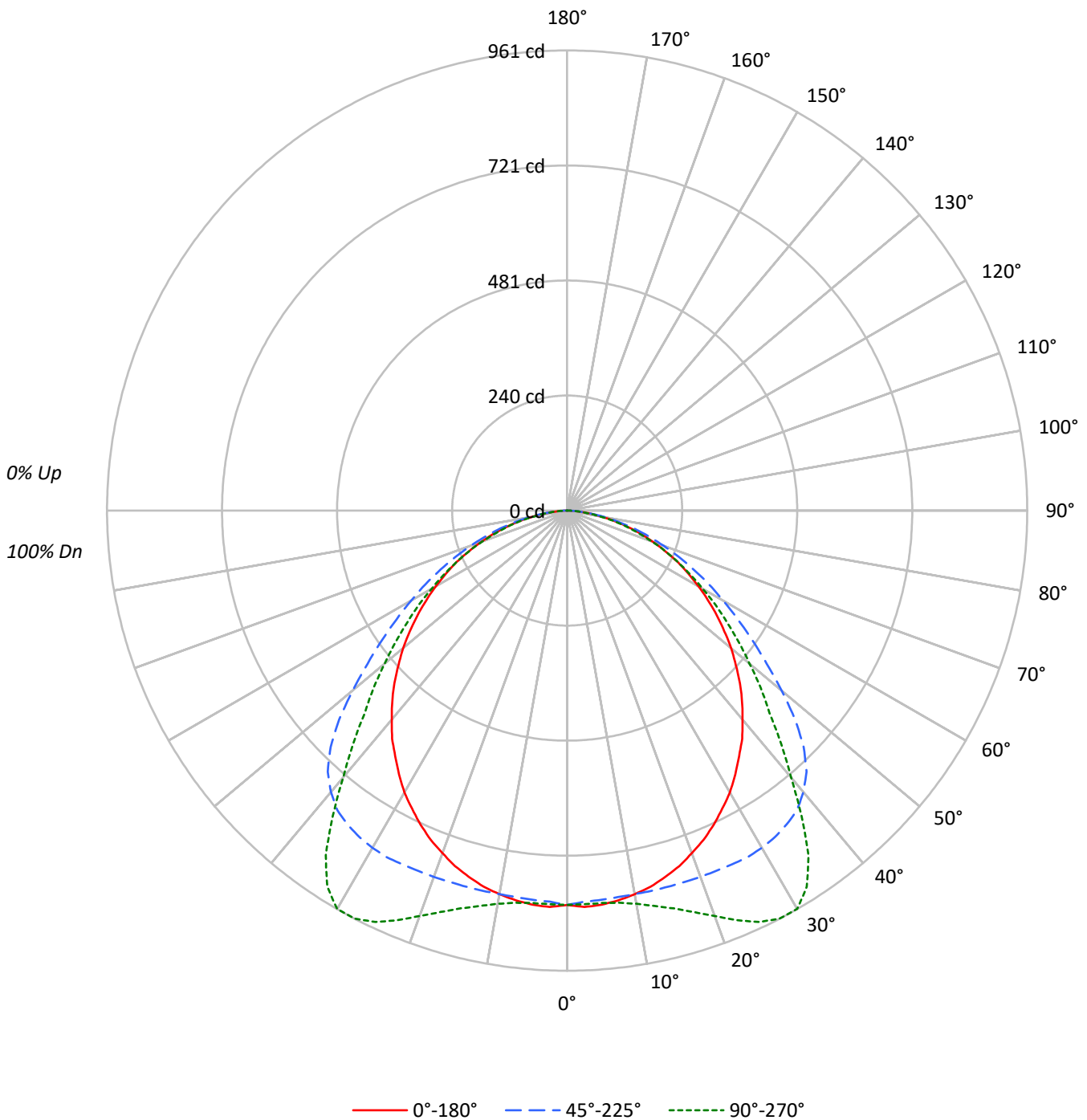
Lumens per Lamp: N/A
Luminaire Lumens: 2490.8 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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									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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85																												
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71																												
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60																												
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52																												
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																												
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9928	9928	9928
5°	9998	9874	9957
10°	9957	9957	10206
15°	9886	10151	10736
20°	9768	10445	11560
25°	9630	10842	12610
30°	9461	11322	13373
35°	9212	11770	12936
40°	8966	12076	11447
45°	8697	11906	10193
50°	8386	10958	9328
55°	8019	9917	8574
60°	7639	9076	7885
65°	7263	8310	7289
70°	6726	7537	6606
75°	6070	6703	5911
80°	5082	5617	4846
85°	3887	4122	3652

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11906 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.4	3.1
10°-20°	233.0	9.4
20°-30°	381.9	15.3
30°-40°	483.1	19.4
40°-50°	471.9	18.9
50°-60°	387.7	15.6
60°-70°	273.5	11.0
70°-80°	145.8	5.9
80°-90°	35.5	1.4
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°	693.3	27.8
0°-40°	1176.4	47.2
0°-60°	2036.0	81.7
0°-90°	2490.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2490.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	826	823	816	824	823	78
15°	792	796	813	850	860	223
25°	724	745	815	914	948	333
35°	626	669	800	892	879	392
45°	510	568	698	630	598	393
55°	382	439	472	424	408	341
65°	255	291	291	266	256	251
75°	130	146	144	130	127	138
85°	28	31	30	27	26	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	823.5	823.5	823.5	823.5	823.5
2.5°	828.6	826.1	817.6	825.2	822.7
5°	826.1	822.7	815.9	824.4	822.7
7.5°	821.0	819.3	814.1	826.9	826.1
10°	813.3	812.4	813.3	832.0	833.7
12.5°	804.8	805.6	813.3	839.7	845.7
15°	792.0	796.3	813.3	849.9	860.1
17.5°	778.4	785.2	813.3	863.5	878.9
20°	761.3	773.3	814.1	878.0	901.0
22.5°	744.3	758.8	814.1	897.6	925.7
25°	723.9	745.2	815.0	913.8	947.9
27.5°	701.7	727.3	815.9	926.6	960.6
30°	679.6	710.2	813.3	931.7	960.6
32.5°	653.2	690.7	808.2	923.2	931.7
35°	625.9	669.4	799.7	892.5	878.9
37.5°	600.4	646.4	788.6	836.3	803.9
40°	569.7	621.7	767.3	764.8	727.3
42.5°	540.8	595.3	740.1	692.4	661.7
45°	510.1	568.0	698.3	630.2	597.8
47.5°	477.8	538.2	645.5	571.4	548.4
50°	447.1	507.6	584.2	517.8	497.3
52.5°	413.9	475.2	525.4	470.1	452.2
55°	381.5	438.6	471.8	424.1	407.9
57.5°	349.2	402.8	422.4	380.7	367.9
60°	316.8	365.3	376.4	340.6	327.0
62.5°	285.3	330.4	333.8	302.3	290.4
65°	254.6	291.3	291.3	265.7	255.5
67.5°	222.3	253.8	252.1	228.2	222.3
70°	190.8	217.2	213.8	194.2	187.4
72.5°	161.0	180.5	178.0	162.7	155.0
75°	130.3	146.5	143.9	130.3	126.9
77.5°	101.3	112.4	109.9	100.5	97.9
80°	73.2	81.8	80.9	74.1	69.8
82.5°	49.4	53.7	52.8	48.5	46.0
85°	28.1	30.7	29.8	27.3	26.4
87.5°	11.1	12.8	13.6	12.8	11.9
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	19.61	21.22	19.98	21.53	21.85	19.34	20.95	19.71	21.26	21.57
	3H	21.18	22.63	21.56	22.96	23.32	20.86	22.30	21.23	22.63	22.99
	4H	21.73	23.09	22.13	23.44	23.82	21.39	22.75	21.79	23.10	23.48
	6H	22.10	23.36	22.51	23.72	24.11	21.75	23.01	22.16	23.37	23.76
	8H	22.20	23.40	22.62	23.79	24.19	21.84	23.04	22.27	23.43	23.83
	12H	22.25	23.40	22.68	23.79	24.21	21.89	23.04	22.32	23.43	23.86
4H	2H	20.25	21.61	20.65	21.96	22.34	20.04	21.40	20.44	21.75	22.12
	3H	22.06	23.19	22.47	23.59	23.99	21.76	22.89	22.16	23.29	23.69
	4H	22.75	23.77	23.18	24.19	24.62	22.39	23.42	22.82	23.83	24.27
	6H	23.23	24.12	23.68	24.56	25.02	22.85	23.74	23.31	24.19	24.64
	8H	23.36	24.20	23.82	24.64	25.11	22.98	23.81	23.44	24.26	24.72
	12H	23.45	24.20	23.93	24.67	25.14	23.06	23.81	23.54	24.28	24.75
8H	4H	23.01	23.85	23.47	24.29	24.76	22.70	23.53	23.16	23.98	24.44
	6H	23.60	24.30	24.10	24.78	25.26	23.26	23.95	23.75	24.44	24.92
	8H	23.80	24.42	24.31	24.93	25.41	23.44	24.06	23.95	24.57	25.05
	12H	23.94	24.49	24.45	24.98	25.54	23.57	24.12	24.08	24.61	25.17
12H	4H	23.03	23.78	23.51	24.25	24.72	22.73	23.48	23.21	23.95	24.42
	6H	23.64	24.26	24.15	24.77	25.25	23.30	23.93	23.81	24.43	24.92
	8H	23.88	24.43	24.39	24.92	25.48	23.53	24.08	24.04	24.57	25.14