

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: P1439834

Luminaire Tested: S123DR-S675D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439834
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-S675D840-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

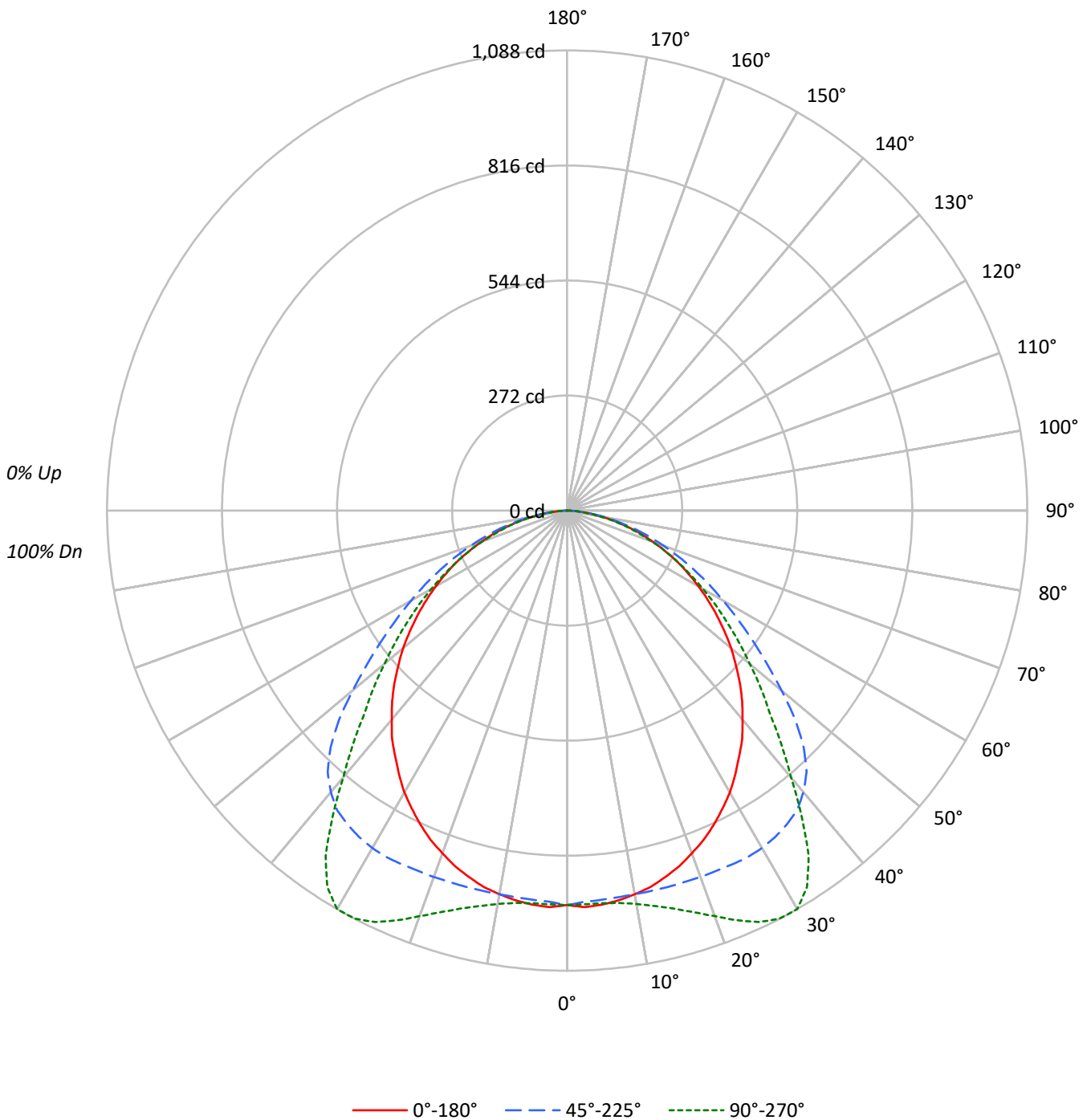
Lumens per Lamp: N/A
Luminaire Lumens: 2820.9 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85				85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71				71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60				60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52				52
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45				45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39				39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34				34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31				31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28				28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25				25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11244	11244	11244
5°	11322	11183	11276
10°	11276	11276	11559
15°	11195	11497	12158
20°	11062	11829	13092
25°	10906	12278	14279
30°	10714	12823	15145
35°	10434	13329	14649
40°	10154	13677	12962
45°	9850	13485	11545
50°	9496	12409	10564
55°	9083	11231	9711
60°	8652	10279	8931
65°	8227	9408	8253
70°	7614	8534	7480
75°	6876	7593	6694
80°	5756	6360	5492
85°	4399	4676	4136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13485 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	3.1
10°-20°	263.9	9.4
20°-30°	432.5	15.3
30°-40°	547.1	19.4
40°-50°	534.5	18.9
50°-60°	439.1	15.6
60°-70°	309.7	11.0
70°-80°	165.1	5.9
80°-90°	40.2	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°	785.2	27.8
0°-40°	1332.2	47.2
0°-60°	2305.8	81.7
0°-90°	2820.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2820.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	933	933	933	933	933	
5°	936	932	924	934	932	89
15°	897	902	921	962	974	253
25°	820	844	923	1035	1073	377
35°	709	758	906	1011	995	444
45°	578	643	791	714	677	445
55°	432	497	534	480	462	386
65°	288	330	330	301	289	285
75°	148	166	163	148	144	157
85°	32	35	34	31	30	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.6	932.6	932.6	932.6	932.6
2.5°	938.4	935.5	925.9	934.6	931.7
5°	935.5	931.7	924.0	933.6	931.7
7.5°	929.7	927.8	922.0	936.5	935.5
10°	921.1	920.1	921.1	942.3	944.2
12.5°	911.4	912.4	921.1	951.0	957.7
15°	896.9	901.8	921.1	962.5	974.1
17.5°	881.5	889.2	921.1	978.0	995.3
20°	862.2	875.7	922.0	994.4	1020.4
22.5°	842.9	859.3	922.0	1016.5	1048.4
25°	819.8	843.9	923.0	1034.9	1073.4
27.5°	794.7	823.6	924.0	1049.3	1087.9
30°	769.6	804.4	921.1	1055.1	1087.9
32.5°	739.7	782.2	915.3	1045.5	1055.1
35°	708.9	758.1	905.6	1010.8	995.3
37.5°	679.9	732.0	893.1	947.1	910.5
40°	645.2	704.1	869.0	866.1	823.6
42.5°	612.4	674.2	838.1	784.1	749.4
45°	577.7	643.3	790.9	713.7	677.1
47.5°	541.1	609.5	731.1	647.2	621.1
50°	506.3	574.8	661.6	586.4	563.2
52.5°	468.7	538.2	595.1	532.4	512.1
55°	432.1	496.7	534.3	480.3	462.0
57.5°	395.4	456.2	478.4	431.1	416.6
60°	358.8	413.8	426.3	385.8	370.4
62.5°	323.1	374.2	378.1	342.4	328.9
65°	288.4	329.8	329.8	300.9	289.3
67.5°	251.7	287.4	285.5	258.5	251.7
70°	216.0	245.9	242.1	219.9	212.2
72.5°	182.3	204.5	201.6	184.2	175.5
75°	147.6	165.9	163.0	147.6	143.7
77.5°	114.8	127.3	124.4	113.8	110.9
80°	82.9	92.6	91.6	83.9	79.1
82.5°	55.9	60.8	59.8	55.0	52.1
85°	31.8	34.7	33.8	30.9	29.9
87.5°	12.5	14.5	15.4	14.5	13.5
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	20.05	21.65	20.41	21.96	22.28	19.77	21.38	20.14	21.69	22.01
	3H	21.62	23.06	21.99	23.39	23.75	21.29	22.73	21.66	23.06	23.42
	4H	22.17	23.53	22.57	23.87	24.25	21.82	23.18	22.22	23.53	23.91
	6H	22.53	23.79	22.94	24.16	24.55	22.18	23.44	22.59	23.80	24.20
	8H	22.63	23.83	23.06	24.22	24.62	22.27	23.48	22.70	23.86	24.26
	12H	22.69	23.84	23.11	24.22	24.65	22.33	23.48	22.76	23.86	24.29
4H	2H	20.68	22.04	21.08	22.39	22.77	20.47	21.83	20.87	22.18	22.55
	3H	22.49	23.63	22.90	24.02	24.42	22.19	23.32	22.60	23.72	24.12
	4H	23.18	24.20	23.61	24.62	25.05	22.82	23.85	23.26	24.26	24.70
	6H	23.66	24.55	24.12	24.99	25.45	23.28	24.18	23.74	24.62	25.07
	8H	23.79	24.63	24.26	25.07	25.54	23.41	24.25	23.87	24.69	25.15
	12H	23.88	24.63	24.36	25.10	25.57	23.49	24.24	23.97	24.72	25.19
8H	4H	23.44	24.28	23.91	24.72	25.19	23.13	23.97	23.59	24.41	24.87
	6H	24.04	24.73	24.53	25.22	25.69	23.69	24.38	24.19	24.87	25.35
	8H	24.23	24.85	24.74	25.36	25.84	23.87	24.49	24.38	25.00	25.49
	12H	24.37	24.92	24.88	25.41	25.97	24.00	24.55	24.51	25.04	25.60
12H	4H	23.46	24.21	23.94	24.69	25.16	23.16	23.91	23.64	24.38	24.85
	6H	24.07	24.69	24.58	25.20	25.68	23.74	24.36	24.25	24.87	25.35
	8H	24.31	24.86	24.82	25.35	25.91	23.97	24.52	24.47	25.01	25.57