

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931017

Luminaire Tested: DFN2DS-SQ3F0-100DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931017
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-100DS850-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

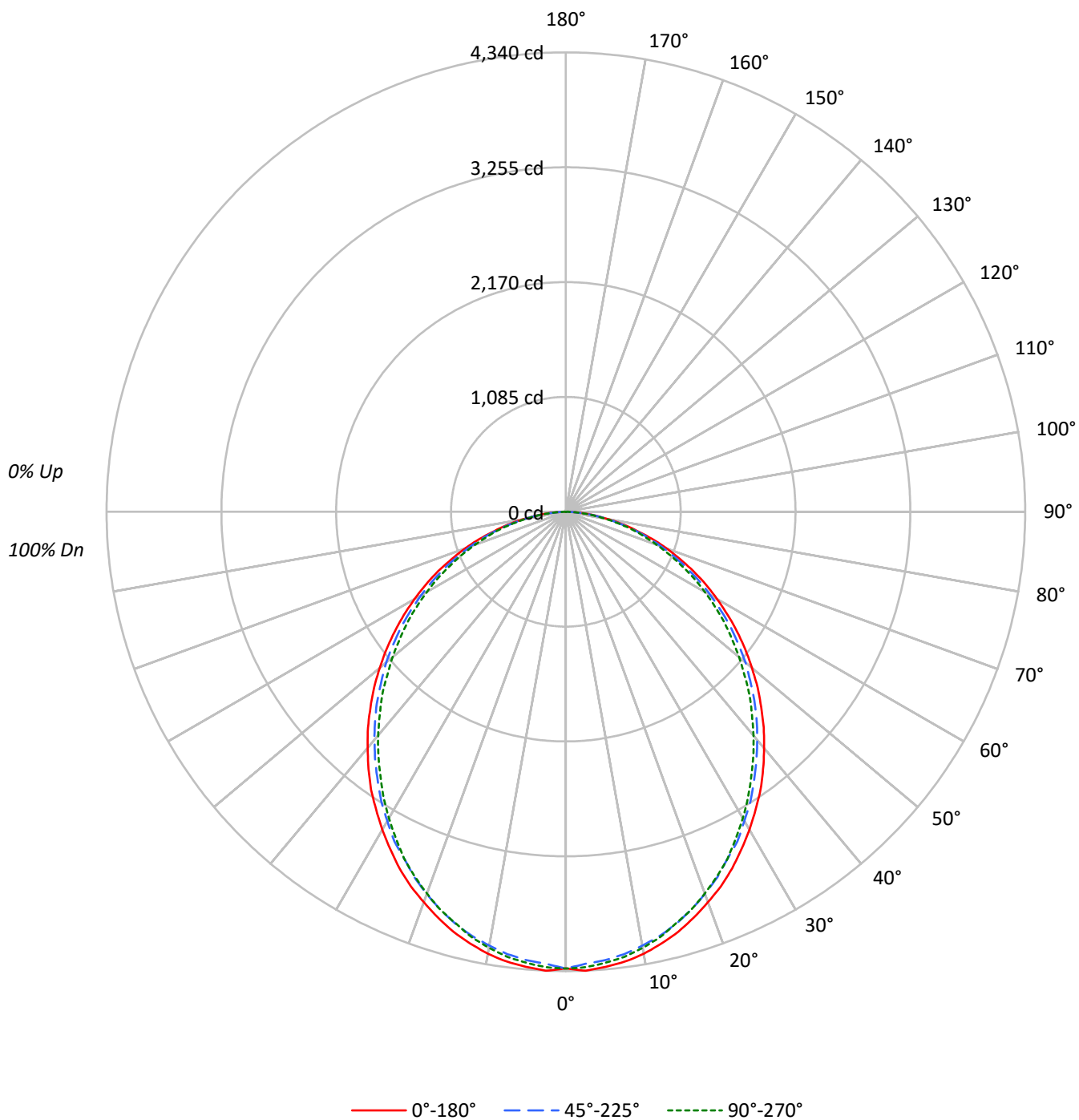
Lumens per Lamp: N/A
Luminaire Lumens: 10979.1 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 104.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
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	0		
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84		
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71		
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60		
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51		
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45		
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39		
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35		
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31		
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28		
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4944	4944	4944
5°	4963	4892	4921
10°	4934	4842	4866
15°	4873	4779	4775
20°	4786	4685	4680
25°	4700	4569	4569
30°	4590	4463	4425
35°	4487	4336	4272
40°	4357	4208	4127
45°	4229	4081	3981
50°	4090	3950	3809
55°	3946	3797	3656
60°	3784	3614	3480
65°	3612	3432	3274
70°	3392	3211	3059
75°	3085	2956	2884
80°	2739	2655	2519
85°	2234	2130	1910

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4229 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.1	3.7
10°-20°	1142.7	10.4
20°-30°	1679.4	15.3
30°-40°	1950.5	17.8
40°-50°	1948.1	17.7
50°-60°	1698.7	15.5
60°-70°	1255.7	11.4
70°-80°	710.4	6.5
80°-90°	187.5	1.7
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°	3228.3	29.4
0°-40°	5178.7	47.2
0°-60°	8825.5	80.4
0°-90°	10979.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10979.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4315	4315	4315	4315	4315	
5°	4315	4299	4253	4286	4278	410
15°	4108	4083	4029	4046	4025	1157
25°	3718	3685	3614	3622	3614	1711
35°	3208	3166	3100	3075	3054	2003
45°	2610	2581	2518	2473	2456	2014
55°	1975	1950	1900	1851	1830	1766
65°	1332	1307	1266	1228	1208	1317
75°	697	689	668	643	652	744
85°	170	166	162	149	145	200
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4315.2	4315.2	4315.2	4315.2	4315.2
2.5°	4340.3	4319.6	4273.8	4315.2	4307.2
5°	4315.2	4298.9	4253.1	4286.2	4278.2
7.5°	4286.2	4261.4	4215.6	4249.1	4240.8
10°	4240.8	4211.8	4162.0	4195.0	4182.7
12.5°	4178.3	4153.6	4103.9	4124.6	4116.2
15°	4107.8	4083.2	4029.0	4045.7	4025.1
17.5°	4020.7	3996.1	3941.8	3962.6	3941.8
20°	3925.1	3900.5	3842.4	3854.7	3838.4
22.5°	3830.0	3792.7	3738.4	3738.4	3730.1
25°	3717.8	3684.8	3614.3	3622.2	3614.3
27.5°	3593.2	3564.1	3510.4	3498.1	3477.4
30°	3469.1	3435.6	3373.5	3361.2	3344.4
32.5°	3336.1	3311.5	3244.9	3219.9	3203.1
35°	3207.6	3166.2	3099.7	3074.6	3053.9
37.5°	3062.3	3024.8	2958.4	2929.3	2908.6
40°	2913.0	2879.5	2813.1	2776.2	2759.4
42.5°	2767.7	2734.2	2668.3	2626.4	2601.8
45°	2610.1	2581.1	2518.5	2473.2	2456.5
47.5°	2456.5	2427.5	2361.0	2315.1	2290.5
50°	2294.5	2273.8	2215.7	2157.6	2136.9
52.5°	2136.9	2107.9	2054.1	2008.4	1979.3
55°	1975.4	1950.3	1900.5	1850.7	1830.1
57.5°	1813.3	1792.6	1738.5	1688.8	1672.0
60°	1651.3	1635.0	1576.9	1531.1	1518.8
62.5°	1493.7	1464.7	1423.3	1381.9	1365.2
65°	1332.1	1307.1	1265.7	1228.2	1207.6
67.5°	1166.2	1145.0	1108.1	1079.1	1062.3
70°	1012.5	995.8	958.4	929.3	913.0
72.5°	854.9	838.2	817.6	788.5	776.1
75°	696.9	689.0	667.8	643.2	651.5
77.5°	556.1	539.3	530.9	518.6	506.3
80°	415.1	410.8	402.3	390.0	381.7
82.5°	282.2	282.2	278.2	261.5	261.5
85°	169.9	166.0	162.0	149.3	145.3
87.5°	74.9	66.4	58.1	45.8	41.4
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	16.84	18.45	17.20	18.76	19.07	16.39	18.00	16.76	18.32	18.63
	3H	18.59	20.04	18.96	20.37	20.73	18.09	19.55	18.47	19.88	20.24
	4H	19.23	20.60	19.63	20.95	21.32	18.74	20.11	19.14	20.45	20.83
	6H	19.70	20.97	20.11	21.33	21.73	19.20	20.47	19.61	20.83	21.22
	8H	19.84	21.05	20.27	21.44	21.84	19.34	20.55	19.77	20.94	21.34
	12H	19.93	21.09	20.36	21.48	21.90	19.42	20.58	19.85	20.96	21.39
4H	2H	17.40	18.76	17.79	19.11	19.49	17.04	18.41	17.44	18.76	19.14
	3H	19.37	20.52	19.78	20.91	21.31	18.96	20.11	19.37	20.51	20.91
	4H	20.15	21.18	20.58	21.60	22.03	19.72	20.76	20.16	21.17	21.61
	6H	20.74	21.65	21.20	22.09	22.55	20.31	21.22	20.77	21.66	22.11
	8H	20.93	21.78	21.39	22.22	22.69	20.50	21.34	20.96	21.78	22.25
	12H	21.07	21.83	21.55	22.30	22.77	20.61	21.37	21.09	21.85	22.32
8H	4H	20.42	21.27	20.88	21.71	22.18	20.05	20.89	20.51	21.34	21.80
	6H	21.14	21.84	21.63	22.33	22.80	20.75	21.46	21.25	21.94	22.42
	8H	21.39	22.03	21.90	22.53	23.02	21.00	21.63	21.51	22.14	22.63
	12H	21.59	22.15	22.10	22.64	23.20	21.18	21.74	21.69	22.23	22.79
12H	4H	20.45	21.21	20.93	21.68	22.15	20.08	20.84	20.56	21.32	21.79
	6H	21.18	21.81	21.69	22.32	22.81	20.81	21.44	21.32	21.95	22.44
	8H	21.49	22.05	22.00	22.54	23.10	21.12	21.67	21.62	22.16	22.73