

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: P931201

Luminaire Tested: DFN2DS-SQ4F0-140DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931201
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-SQ4F0-140DS930-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

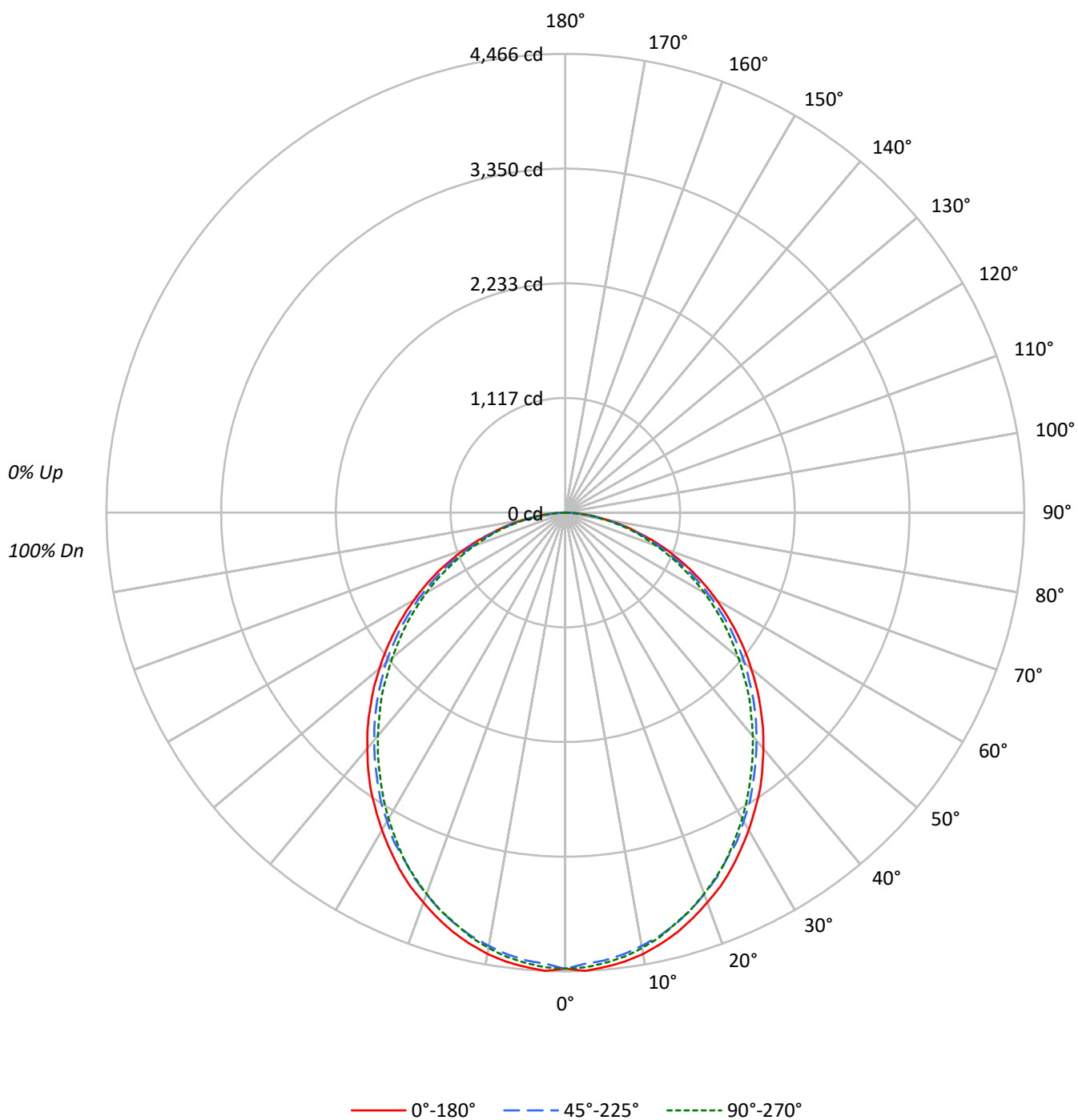
Lumens per Lamp: N/A
Luminaire Lumens: 11295.9 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 151.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3115	3115	3115
5°	3127	3082	3100
10°	3109	3051	3066
15°	3070	3011	3008
20°	3016	2952	2949
25°	2961	2879	2879
30°	2892	2812	2788
35°	2827	2732	2691
40°	2745	2651	2600
45°	2665	2571	2508
50°	2577	2488	2400
55°	2486	2392	2303
60°	2384	2277	2193
65°	2276	2162	2063
70°	2137	2023	1927
75°	1944	1863	1817
80°	1726	1673	1587
85°	1407	1342	1204

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2665 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.9	3.7
10°-20°	1175.7	10.4
20°-30°	1727.8	15.3
30°-40°	2006.8	17.8
40°-50°	2004.3	17.7
50°-60°	1747.7	15.5
60°-70°	1291.9	11.4
70°-80°	731.0	6.5
80°-90°	192.9	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°	3321.4	29.4
0°-40°	5328.2	47.2
0°-60°	9080.1	80.4
0°-90°	11295.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11295.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4440	4440	4440	4440	4440	
5°	4440	4423	4376	4410	4402	421
15°	4226	4201	4145	4162	4141	1190
25°	3825	3791	3719	3727	3719	1760
35°	3300	3258	3189	3163	3142	2061
45°	2685	2656	2591	2545	2527	2073
55°	2032	2006	1955	1904	1883	1817
65°	1371	1345	1302	1264	1242	1355
75°	717	709	687	662	670	765
85°	175	171	167	154	150	206
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4439.7	4439.7	4439.7	4439.7	4439.7
2.5°	4465.5	4444.2	4397.1	4439.7	4431.6
5°	4439.7	4422.9	4375.8	4409.8	4401.7
7.5°	4409.8	4384.5	4337.3	4371.7	4363.1
10°	4363.1	4333.3	4282.1	4316.1	4303.4
12.5°	4298.8	4273.5	4222.3	4243.5	4235.0
15°	4226.3	4201.0	4145.3	4162.5	4141.2
17.5°	4136.7	4111.3	4055.6	4076.9	4055.6
20°	4038.4	4013.1	3953.2	3966.0	3949.2
22.5°	3940.5	3902.1	3846.3	3846.3	3837.8
25°	3825.0	3791.1	3718.6	3726.8	3718.6
27.5°	3696.8	3667.0	3611.8	3599.0	3577.8
30°	3569.1	3534.7	3470.8	3458.2	3440.9
32.5°	3432.4	3407.0	3338.6	3312.8	3295.5
35°	3300.1	3257.6	3189.1	3163.3	3142.0
37.5°	3150.6	3112.2	3043.7	3013.9	2992.5
40°	2997.1	2962.7	2894.2	2856.2	2839.0
42.5°	2847.6	2813.2	2745.2	2702.2	2676.9
45°	2685.4	2655.6	2591.3	2544.6	2527.4
47.5°	2527.4	2497.5	2429.1	2382.0	2356.7
50°	2360.7	2339.5	2279.6	2219.8	2198.5
52.5°	2198.5	2168.6	2113.4	2066.3	2036.4
55°	2032.4	2006.5	1955.3	1904.2	1882.9
57.5°	1865.6	1844.3	1788.7	1737.5	1720.2
60°	1698.9	1682.2	1622.4	1575.3	1562.6
62.5°	1536.8	1506.9	1464.3	1421.8	1404.6
65°	1370.6	1344.8	1302.2	1263.7	1242.4
67.5°	1199.8	1178.1	1140.0	1110.1	1092.9
70°	1041.7	1024.5	986.1	956.2	939.4
72.5°	879.6	862.4	841.1	811.3	798.5
75°	717.0	708.9	687.1	661.8	670.3
77.5°	572.0	554.9	546.2	533.6	520.9
80°	427.1	422.6	414.0	401.3	392.7
82.5°	290.3	290.3	286.2	269.0	269.0
85°	174.8	170.7	166.7	153.5	149.5
87.5°	77.0	68.4	59.8	47.1	42.5
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	15.23	16.84	15.60	17.16	17.47	14.79	16.40	15.15	16.71	17.03
	3H	16.98	18.43	17.36	18.76	19.12	16.49	17.94	16.87	18.27	18.63
	4H	17.63	19.00	18.03	19.34	19.72	17.13	18.50	17.53	18.85	19.22
	6H	18.10	19.36	18.51	19.73	20.12	17.59	18.86	18.01	19.23	19.62
	8H	18.24	19.45	18.66	19.84	20.24	17.74	18.95	18.16	19.34	19.74
	12H	18.33	19.49	18.76	19.87	20.30	17.82	18.98	18.25	19.36	19.79
4H	2H	15.79	17.16	16.19	17.51	17.88	15.44	16.81	15.84	17.15	17.53
	3H	17.77	18.91	18.18	19.31	19.71	17.36	18.51	17.77	18.90	19.30
	4H	18.54	19.58	18.97	19.99	20.43	18.12	19.15	18.55	19.57	20.00
	6H	19.14	20.04	19.59	20.48	20.94	18.71	19.61	19.16	20.05	20.51
	8H	19.33	20.17	19.79	20.62	21.08	18.89	19.74	19.35	20.18	20.64
	12H	19.46	20.22	19.94	20.70	21.17	19.01	19.77	19.49	20.24	20.71
8H	4H	18.82	19.66	19.28	20.10	20.57	18.44	19.29	18.90	19.73	20.20
	6H	19.53	20.23	20.02	20.72	21.20	19.15	19.85	19.64	20.34	20.82
	8H	19.79	20.42	20.30	20.93	21.41	19.40	20.03	19.91	20.54	21.02
	12H	19.99	20.55	20.50	21.04	21.60	19.58	20.13	20.08	20.62	21.19
12H	4H	18.84	19.60	19.32	20.08	20.55	18.48	19.24	18.96	19.71	20.18
	6H	19.58	20.21	20.09	20.71	21.20	19.21	19.84	19.72	20.35	20.83
	8H	19.89	20.45	20.40	20.94	21.50	19.51	20.07	20.02	20.56	21.12

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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