

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: P931185

Luminaire Tested: DFN2DS-SQ4F0-120DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931185
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-SQ4F0-120DS935-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

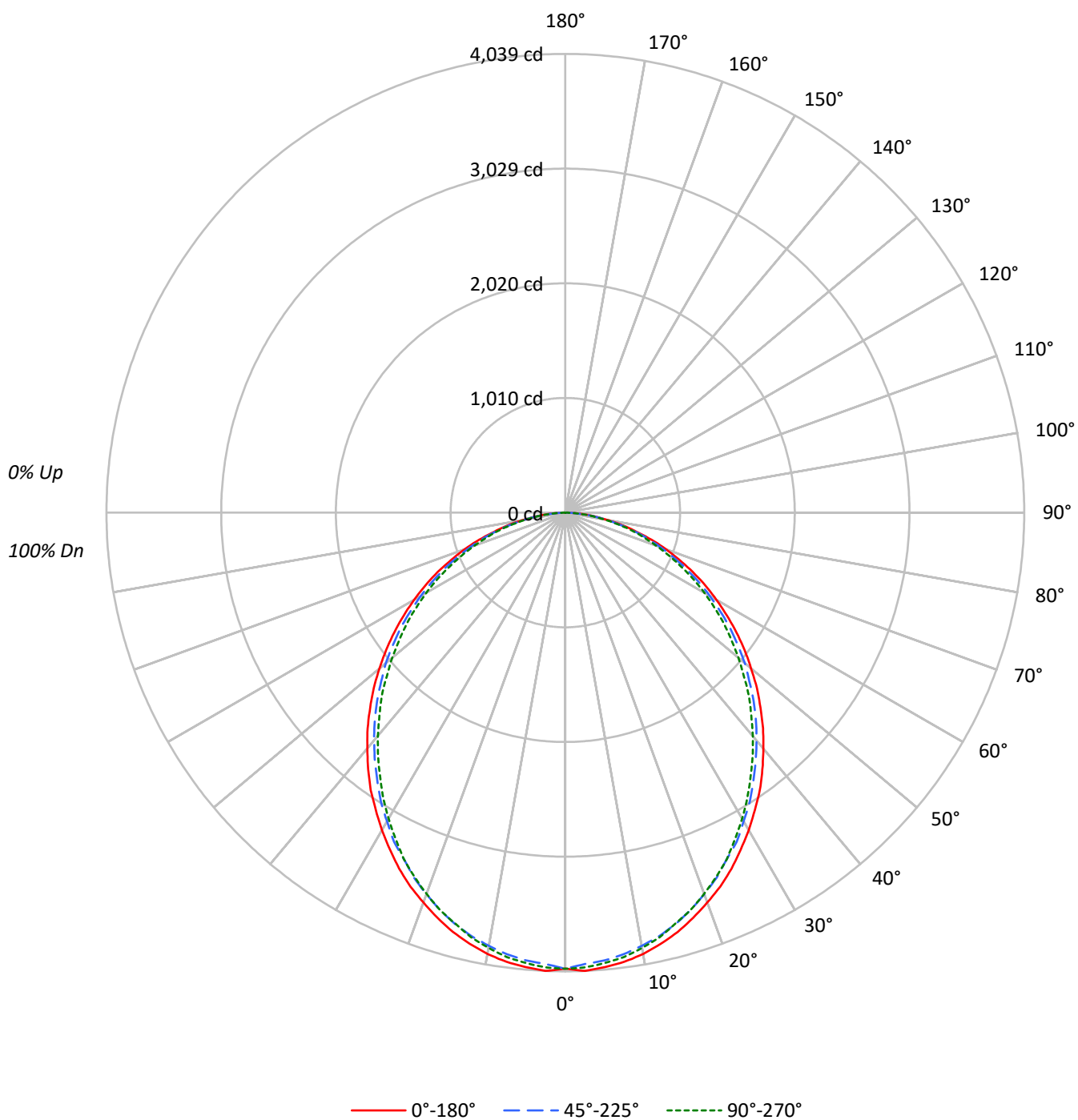
Lumens per Lamp: N/A
Luminaire Lumens: 10216.8 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 125.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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°	2818	2818	2818
5°	2828	2788	2804
10°	2812	2760	2773
15°	2777	2724	2721
20°	2727	2670	2667
25°	2678	2604	2604
30°	2616	2544	2522
35°	2557	2471	2434
40°	2483	2398	2352
45°	2410	2326	2268
50°	2331	2251	2171
55°	2249	2163	2083
60°	2156	2059	1983
65°	2058	1956	1866
70°	1933	1830	1743
75°	1758	1685	1644
80°	1561	1513	1435
85°	1274	1214	1088

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2410 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.9	3.7
10°-20°	1063.4	10.4
20°-30°	1562.8	15.3
30°-40°	1815.1	17.8
40°-50°	1812.8	17.7
50°-60°	1580.7	15.5
60°-70°	1168.5	11.4
70°-80°	661.1	6.5
80°-90°	174.5	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°	3004.1	29.4
0°-40°	4819.2	47.2
0°-60°	8212.7	80.4
0°-90°	10216.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10216.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4016	4016	4016	4016	4016	
5°	4016	4000	3958	3988	3981	381
15°	3823	3800	3749	3765	3746	1077
25°	3460	3429	3363	3371	3363	1592
35°	2985	2946	2884	2861	2842	1864
45°	2429	2402	2344	2302	2286	1875
55°	1838	1815	1768	1722	1703	1643
65°	1240	1216	1178	1143	1124	1226
75°	648	641	621	599	606	692
85°	158	154	151	139	135	186
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	4038.9	4019.6	3977.1	4015.6	4008.2
5°	4015.6	4000.4	3957.8	3988.5	3981.1
7.5°	3988.5	3965.5	3923.0	3954.1	3946.4
10°	3946.4	3919.3	3873.0	3903.7	3892.3
12.5°	3888.1	3865.2	3818.9	3838.2	3830.4
15°	3822.6	3799.7	3749.3	3764.8	3745.6
17.5°	3741.5	3718.6	3668.2	3687.4	3668.2
20°	3652.6	3629.6	3575.6	3587.1	3571.9
22.5°	3564.1	3529.3	3478.9	3478.9	3471.1
25°	3459.6	3428.9	3363.4	3370.8	3363.4
27.5°	3343.7	3316.7	3266.7	3255.2	3236.0
30°	3228.2	3197.0	3139.3	3127.8	3112.3
32.5°	3104.4	3081.6	3019.6	2996.3	2980.8
35°	2984.8	2946.4	2884.4	2861.1	2841.9
37.5°	2849.6	2814.9	2752.9	2725.9	2706.7
40°	2710.8	2679.7	2617.8	2583.4	2567.8
42.5°	2575.6	2544.5	2483.0	2444.1	2421.2
45°	2428.9	2401.9	2343.7	2301.5	2286.0
47.5°	2286.0	2258.9	2197.0	2154.5	2131.5
50°	2135.2	2115.9	2061.8	2007.8	1988.5
52.5°	1988.5	1961.5	1911.5	1868.9	1841.9
55°	1838.2	1814.9	1768.5	1722.2	1703.0
57.5°	1687.4	1668.1	1617.7	1571.5	1555.9
60°	1536.6	1521.5	1467.4	1424.8	1413.3
62.5°	1390.0	1362.9	1324.5	1286.0	1270.4
65°	1239.7	1216.3	1177.8	1142.9	1123.8
67.5°	1085.2	1065.5	1031.1	1004.1	988.6
70°	942.2	926.6	891.8	864.8	849.7
72.5°	795.6	780.0	760.8	733.8	722.2
75°	648.5	641.1	621.4	598.6	606.3
77.5°	517.4	501.8	494.1	482.5	471.1
80°	386.3	382.2	374.4	363.0	355.2
82.5°	262.6	262.6	258.9	243.4	243.4
85°	158.2	154.5	150.8	138.9	135.2
87.5°	69.7	61.8	54.1	42.6	38.5
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	14.88	16.49	15.25	16.81	17.12	14.44	16.05	14.80	16.36	16.68
	3H	16.63	18.09	17.01	18.41	18.77	16.14	17.60	16.52	17.92	18.28
	4H	17.28	18.65	17.68	18.99	19.37	16.78	18.15	17.18	18.50	18.88
	6H	17.75	19.02	18.16	19.38	19.77	17.25	18.51	17.66	18.88	19.27
	8H	17.89	19.10	18.31	19.49	19.89	17.39	18.60	17.81	18.99	19.39
	12H	17.98	19.14	18.41	19.52	19.95	17.47	18.63	17.90	19.01	19.44
4H	2H	15.44	16.81	15.84	17.16	17.53	15.09	16.46	15.49	16.81	17.18
	3H	17.42	18.56	17.83	18.96	19.36	17.01	18.16	17.42	18.55	18.95
	4H	18.19	19.23	18.62	19.64	20.08	17.77	18.81	18.20	19.22	19.66
	6H	18.79	19.69	19.24	20.14	20.59	18.36	19.26	18.81	19.70	20.16
	8H	18.98	19.83	19.44	20.27	20.73	18.54	19.39	19.00	19.83	20.30
	12H	19.11	19.87	19.59	20.35	20.82	18.66	19.42	19.14	19.90	20.36
8H	4H	18.47	19.31	18.93	19.76	20.22	18.09	18.94	18.55	19.38	19.85
	6H	19.18	19.88	19.67	20.37	20.85	18.80	19.50	19.29	19.99	20.47
	8H	19.44	20.07	19.95	20.58	21.06	19.05	19.68	19.56	20.19	20.67
	12H	19.64	20.20	20.15	20.69	21.25	19.23	19.79	19.73	20.28	20.84
12H	4H	18.49	19.25	18.97	19.73	20.20	18.13	18.89	18.61	19.36	19.83
	6H	19.23	19.86	19.74	20.37	20.85	18.86	19.49	19.37	20.00	20.48
	8H	19.54	20.10	20.05	20.59	21.15	19.16	19.72	19.67	20.21	20.77