

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: P930995

Luminaire Tested: DFN2DS-SQ3F0-090DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930995
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-SQ3F0-090DS835-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

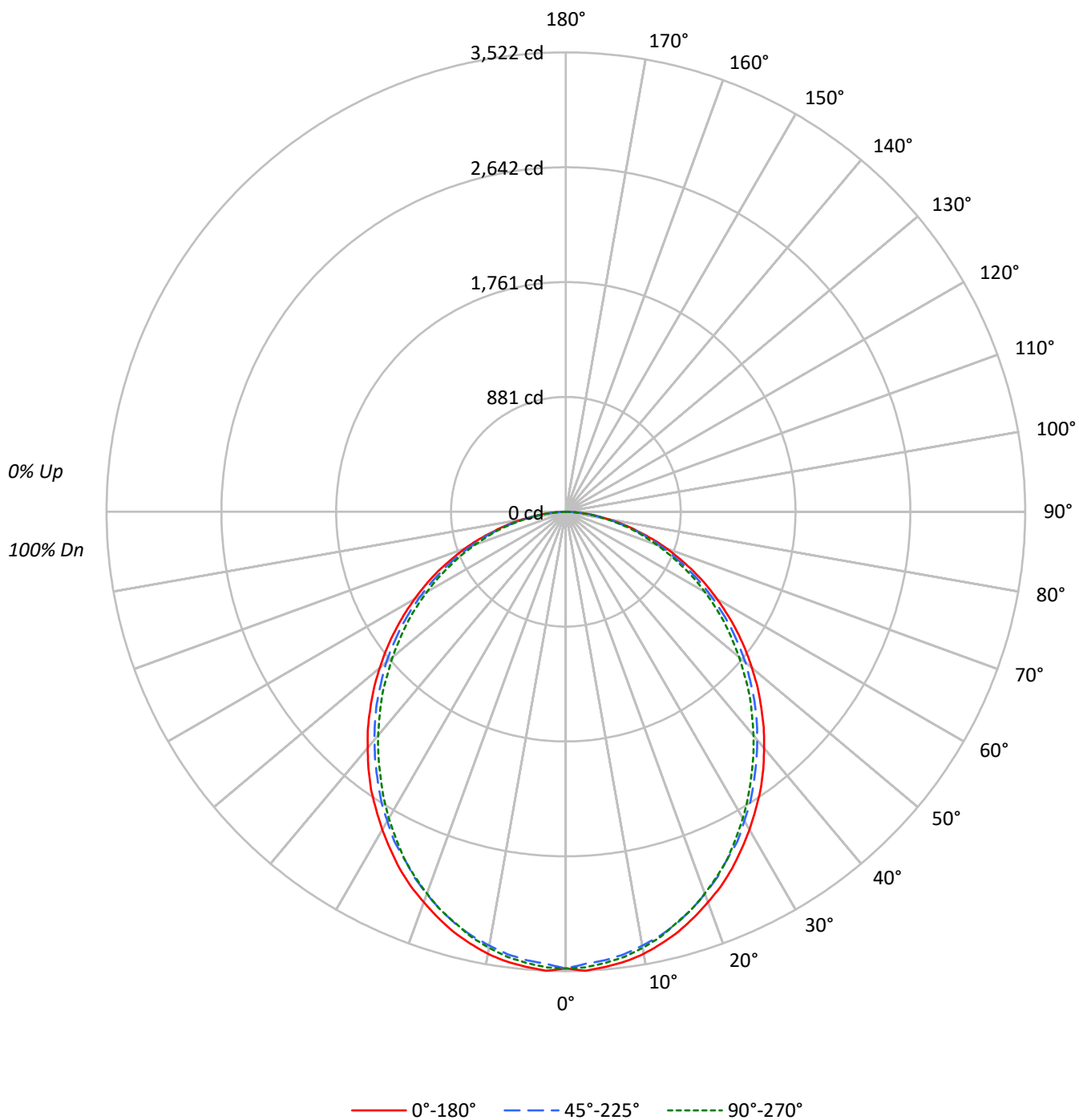
Lumens per Lamp: N/A
Luminaire Lumens: 8910.0 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
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°	4012	4012	4012
5°	4028	3970	3993
10°	4004	3930	3949
15°	3955	3879	3875
20°	3884	3802	3798
25°	3814	3708	3708
30°	3725	3622	3591
35°	3641	3519	3467
40°	3536	3415	3350
45°	3432	3312	3230
50°	3319	3205	3091
55°	3202	3081	2967
60°	3071	2933	2825
65°	2931	2785	2657
70°	2753	2606	2482
75°	2504	2399	2341
80°	2223	2154	2044
85°	1813	1729	1550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3432 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.6	3.7
10°-20°	927.4	10.4
20°-30°	1362.9	15.3
30°-40°	1582.9	17.8
40°-50°	1580.9	17.7
50°-60°	1378.5	15.5
60°-70°	1019.0	11.4
70°-80°	576.6	6.5
80°-90°	152.2	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°	2619.9	29.4
0°-40°	4202.8	47.2
0°-60°	7162.3	80.4
0°-90°	8910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8910.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3502	3502	3502	3502	3502	
5°	3502	3489	3452	3478	3472	332
15°	3334	3314	3270	3283	3266	939
25°	3017	2990	2933	2940	2933	1388
35°	2603	2570	2516	2495	2478	1626
45°	2118	2095	2044	2007	1994	1635
55°	1603	1583	1542	1502	1485	1433
65°	1081	1061	1027	997	980	1069
75°	566	559	542	522	529	604
85°	138	135	132	121	118	162
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3501.9	3501.9	3501.9	3501.9	3501.9
2.5°	3522.3	3505.5	3468.4	3501.9	3495.5
5°	3501.9	3488.7	3451.6	3478.4	3471.9
7.5°	3478.4	3458.4	3421.2	3448.4	3441.6
10°	3441.6	3418.0	3377.6	3404.4	3394.4
12.5°	3390.8	3370.8	3330.5	3347.2	3340.5
15°	3333.7	3313.7	3269.7	3283.3	3266.5
17.5°	3262.9	3242.9	3199.0	3215.8	3199.0
20°	3185.4	3165.4	3118.2	3128.2	3115.0
22.5°	3108.2	3077.9	3033.9	3033.9	3027.1
25°	3017.1	2990.3	2933.2	2939.6	2933.2
27.5°	2916.0	2892.4	2848.9	2838.9	2822.1
30°	2815.3	2788.1	2737.7	2727.7	2714.2
32.5°	2707.4	2687.4	2633.4	2613.1	2599.5
35°	2603.1	2569.5	2515.5	2495.2	2478.4
37.5°	2485.2	2454.8	2400.8	2377.3	2360.5
40°	2364.0	2336.9	2282.9	2252.9	2239.4
42.5°	2246.1	2219.0	2165.4	2131.5	2111.5
45°	2118.2	2094.7	2043.9	2007.1	1993.6
47.5°	1993.6	1970.0	1916.0	1878.9	1858.9
50°	1862.1	1845.3	1798.1	1751.0	1734.2
52.5°	1734.2	1710.6	1667.0	1629.9	1606.3
55°	1603.1	1582.7	1542.3	1502.0	1485.2
57.5°	1471.6	1454.8	1410.9	1370.5	1356.9
60°	1340.1	1326.9	1279.7	1242.6	1232.6
62.5°	1212.2	1188.6	1155.0	1121.5	1107.9
65°	1081.1	1060.7	1027.1	996.8	980.0
67.5°	946.4	929.3	899.2	875.7	862.1
70°	821.7	808.1	777.8	754.2	741.0
72.5°	693.8	680.2	663.4	639.9	629.9
75°	565.6	559.1	542.0	522.0	528.8
77.5°	451.2	437.7	430.9	420.9	410.9
80°	336.9	333.3	326.5	316.5	309.8
82.5°	229.0	229.0	225.8	212.2	212.2
85°	137.9	134.7	131.5	121.1	117.9
87.5°	60.7	53.9	47.2	37.2	33.6
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	16.11	17.72	16.47	18.03	18.35	15.67	17.28	16.03	17.59	17.90
	3H	17.86	19.31	18.24	19.64	20.00	17.37	18.82	17.75	19.15	19.51
	4H	18.51	19.88	18.90	20.22	20.60	18.01	19.38	18.41	19.73	20.10
	6H	18.98	20.24	19.39	20.61	21.00	18.47	19.74	18.89	20.11	20.50
	8H	19.12	20.33	19.54	20.72	21.12	18.62	19.83	19.04	20.22	20.61
	12H	19.21	20.37	19.64	20.75	21.18	18.70	19.86	19.13	20.24	20.67
4H	2H	16.67	18.04	17.07	18.39	18.76	16.32	17.69	16.72	18.03	18.41
	3H	18.65	19.79	19.06	20.19	20.59	18.24	19.38	18.65	19.78	20.18
	4H	19.42	20.46	19.85	20.87	21.31	19.00	20.03	19.43	20.45	20.88
	6H	20.02	20.92	20.47	21.36	21.82	19.59	20.49	20.04	20.93	21.39
	8H	20.21	21.05	20.67	21.50	21.96	19.77	20.62	20.23	21.06	21.52
	12H	20.34	21.10	20.82	21.58	22.04	19.89	20.65	20.37	21.12	21.59
8H	4H	19.70	20.54	20.16	20.98	21.45	19.32	20.17	19.78	20.61	21.08
	6H	20.41	21.11	20.90	21.60	22.08	20.03	20.73	20.52	21.22	21.69
	8H	20.67	21.30	21.18	21.81	22.29	20.28	20.91	20.79	21.41	21.90
	12H	20.87	21.43	21.38	21.92	22.48	20.46	21.01	20.96	21.50	22.07
12H	4H	19.72	20.48	20.20	20.96	21.43	19.36	20.12	19.84	20.59	21.06
	6H	20.45	21.09	20.96	21.59	22.08	20.09	20.72	20.60	21.23	21.71
	8H	20.77	21.33	21.28	21.82	22.38	20.39	20.95	20.90	21.44	22.00