

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: P931595

Luminaire Tested: DFN2DS-TR4F0-120DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931595
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-TR4F0-120DS927-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

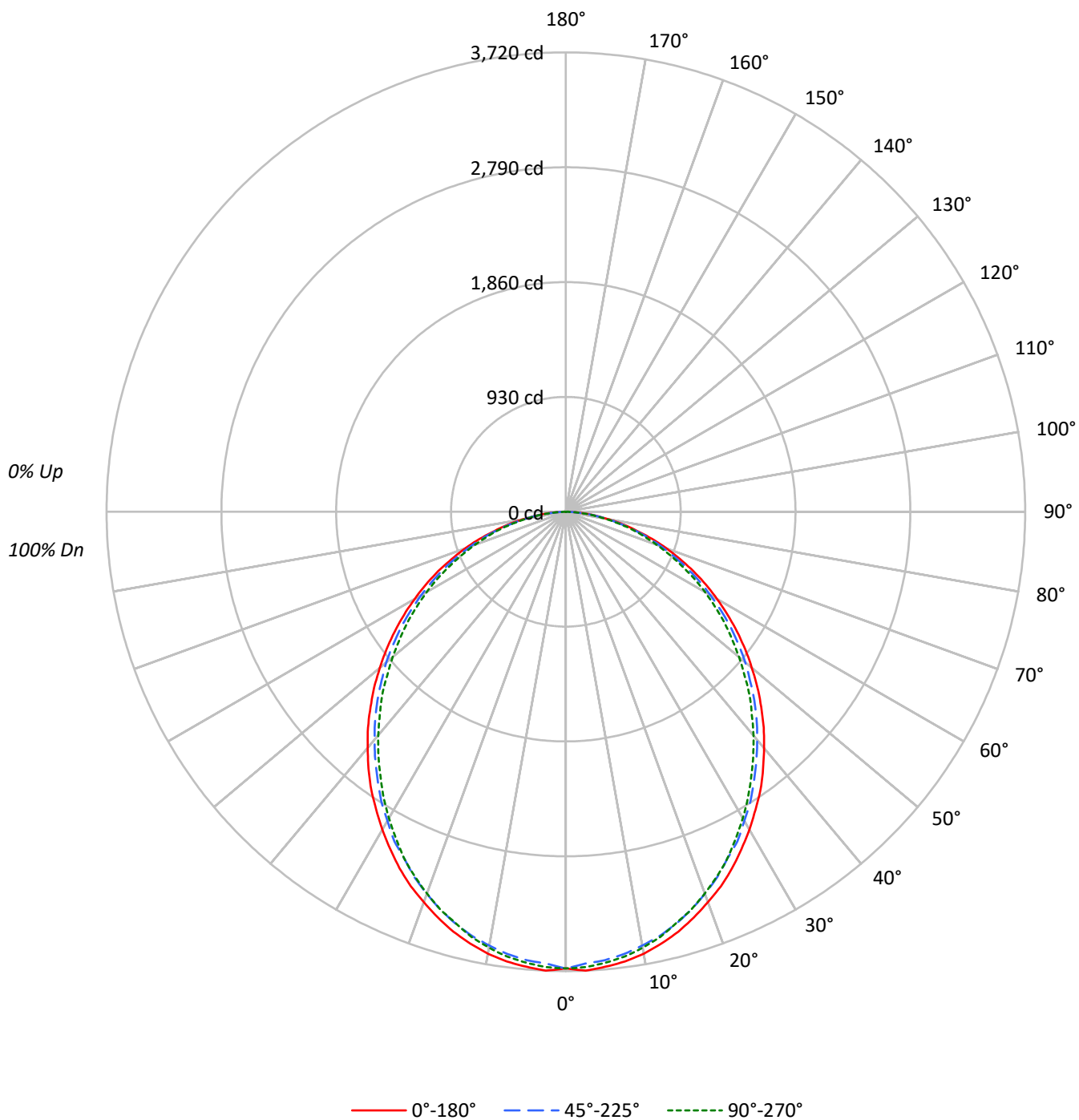
Lumens per Lamp: N/A
Luminaire Lumens: 9408.9 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 131.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9821
Total Harmonic Distortion (THDi): 0.08
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°	2938	2938	2938
5°	2949	2907	2924
10°	2932	2877	2892
15°	2895	2840	2837
20°	2844	2784	2781
25°	2793	2715	2715
30°	2727	2652	2629
35°	2666	2576	2538
40°	2589	2500	2452
45°	2513	2425	2365
50°	2430	2347	2263
55°	2345	2256	2172
60°	2248	2147	2068
65°	2146	2039	1945
70°	2015	1908	1818
75°	1833	1757	1714
80°	1628	1577	1496
85°	1327	1265	1135

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2513 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.1	3.7
10°-20°	979.3	10.4
20°-30°	1439.2	15.3
30°-40°	1671.6	17.8
40°-50°	1669.5	17.7
50°-60°	1455.7	15.5
60°-70°	1076.1	11.4
70°-80°	608.8	6.5
80°-90°	160.7	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°	2766.6	29.4
0°-40°	4438.1	47.2
0°-60°	7563.3	80.4
0°-90°	9408.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9408.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3698	3698	3698	3698	3698	
5°	3698	3684	3645	3673	3666	351
15°	3520	3499	3453	3467	3449	991
25°	3186	3158	3097	3104	3097	1466
35°	2749	2713	2656	2635	2617	1717
45°	2237	2212	2158	2120	2105	1726
55°	1693	1671	1629	1586	1568	1513
65°	1142	1120	1085	1053	1035	1129
75°	597	590	572	551	558	638
85°	146	142	139	128	124	171
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3698.1	3698.1	3698.1	3698.1	3698.1
2.5°	3719.5	3701.8	3662.6	3698.1	3691.3
5°	3698.1	3684.1	3644.9	3673.1	3666.3
7.5°	3673.1	3652.0	3612.8	3641.5	3634.3
10°	3634.3	3609.4	3566.8	3595.0	3584.5
12.5°	3580.7	3559.6	3517.0	3534.7	3527.5
15°	3520.4	3499.2	3452.8	3467.1	3449.4
17.5°	3445.7	3424.5	3378.1	3395.9	3378.1
20°	3363.8	3342.6	3292.9	3303.4	3289.5
22.5°	3282.3	3250.2	3203.8	3203.8	3196.7
25°	3186.1	3157.8	3097.4	3104.2	3097.4
27.5°	3079.3	3054.4	3008.4	2997.8	2980.1
30°	2972.9	2944.3	2891.0	2880.5	2866.2
32.5°	2859.0	2837.9	2780.9	2759.4	2745.1
35°	2748.8	2713.4	2656.4	2634.9	2617.2
37.5°	2624.3	2592.3	2535.3	2510.4	2492.7
40°	2496.5	2467.8	2410.8	2379.1	2364.8
42.5°	2372.0	2343.3	2286.7	2250.9	2229.7
45°	2236.8	2212.0	2158.4	2119.6	2105.2
47.5°	2105.2	2080.3	2023.3	1984.1	1963.0
50°	1966.4	1948.6	1898.8	1849.0	1831.3
52.5°	1831.3	1806.4	1760.4	1721.1	1696.2
55°	1692.8	1671.4	1628.7	1586.1	1568.3
57.5°	1554.0	1536.2	1489.8	1447.2	1432.9
60°	1415.1	1401.2	1351.4	1312.2	1301.6
62.5°	1280.1	1255.2	1219.8	1184.3	1169.9
65°	1141.7	1120.1	1084.6	1052.6	1034.9
67.5°	999.4	981.3	949.6	924.7	910.4
70°	867.7	853.4	821.3	796.4	782.5
72.5°	732.7	718.3	700.6	675.7	665.1
75°	597.2	590.4	572.3	551.2	558.4
77.5°	476.5	462.1	455.0	444.4	433.9
80°	355.8	352.0	344.8	334.3	327.1
82.5°	241.8	241.8	238.5	224.1	224.1
85°	145.6	142.2	138.8	127.9	124.5
87.5°	64.2	56.9	49.8	39.2	35.5
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	15.03	16.64	15.39	16.95	17.27	14.58	16.19	14.95	16.51	16.82
	3H	16.78	18.23	17.15	18.56	18.92	16.29	17.74	16.66	18.07	18.43
	4H	17.42	18.79	17.82	19.14	19.52	16.93	18.30	17.33	18.65	19.02
	6H	17.89	19.16	18.30	19.53	19.92	17.39	18.66	17.80	19.02	19.42
	8H	18.04	19.25	18.46	19.64	20.03	17.53	18.74	17.96	19.13	19.53
	12H	18.13	19.29	18.55	19.67	20.10	17.61	18.77	18.04	19.16	19.58
4H	2H	15.59	16.96	15.99	17.30	17.68	15.23	16.60	15.63	16.95	17.33
	3H	17.56	18.71	17.97	19.11	19.51	17.16	18.30	17.57	18.70	19.10
	4H	18.34	19.37	18.77	19.79	20.22	17.91	18.95	18.35	19.36	19.80
	6H	18.94	19.84	19.39	20.28	20.74	18.50	19.41	18.96	19.85	20.30
	8H	19.12	19.97	19.59	20.41	20.88	18.69	19.53	19.15	19.98	20.44
	12H	19.26	20.02	19.74	20.49	20.96	18.80	19.56	19.28	20.04	20.51
8H	4H	18.61	19.46	19.07	19.90	20.37	18.24	19.08	18.70	19.53	19.99
	6H	19.33	20.03	19.82	20.52	20.99	18.94	19.65	19.44	20.14	20.61
	8H	19.59	20.22	20.10	20.72	21.21	19.19	19.82	19.70	20.33	20.82
	12H	19.79	20.34	20.29	20.83	21.39	19.37	19.93	19.88	20.42	20.98
12H	4H	18.64	19.40	19.12	19.87	20.34	18.27	19.03	18.75	19.51	19.98
	6H	19.37	20.00	19.88	20.51	21.00	19.00	19.64	19.51	20.14	20.63
	8H	19.69	20.24	20.19	20.73	21.30	19.31	19.87	19.81	20.36	20.92

END OF REPORT