

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: P931600

Luminaire Tested: DFN2DS-TR4F0-120DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931600
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-120DS935-RLL
Description: 4 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

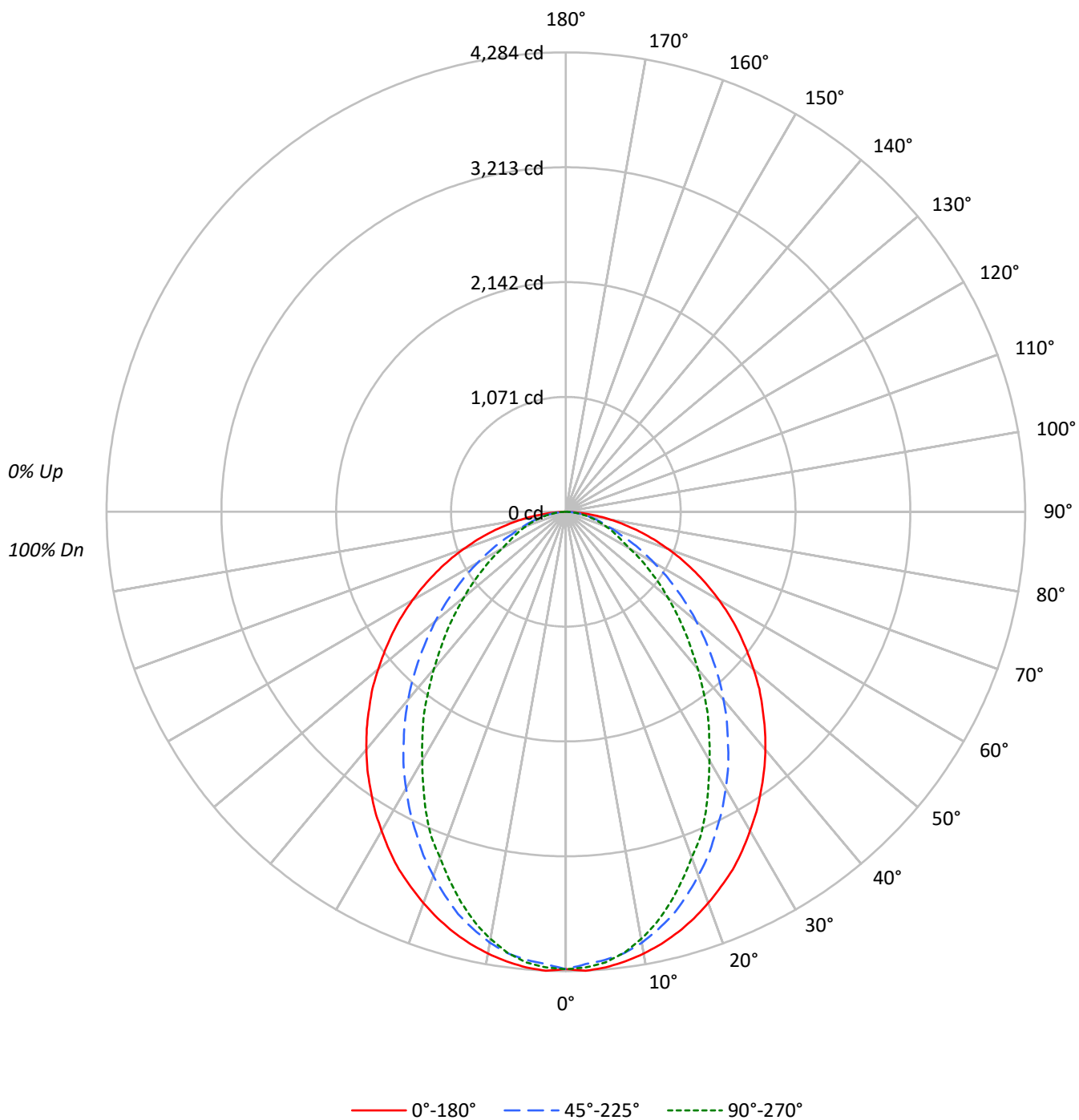
Lumens per Lamp: N/A
Luminaire Lumens: 8772.0 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3388	3388	3388
5°	3401	3346	3365
10°	3375	3291	3263
15°	3337	3194	3102
20°	3283	3054	2901
25°	3228	2896	2707
30°	3151	2733	2457
35°	3077	2557	2238
40°	3002	2374	1985
45°	2914	2168	1756
50°	2824	1961	1532
55°	2732	1737	1315
60°	2625	1502	1092
65°	2504	1263	994
70°	2358	1040	914
75°	2180	948	853
80°	1924	847	777
85°	1512	668	668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2914 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.7	4.6
10°-20°	1097.4	12.5
20°-30°	1540.7	17.6
30°-40°	1679.4	19.1
40°-50°	1543.6	17.6
50°-60°	1212.2	13.8
60°-70°	789.1	9.0
70°-80°	406.2	4.6
80°-90°	103.7	1.2
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°	3037.8	34.6
0°-40°	4717.2	53.8
0°-60°	7473.1	85.2
0°-90°	8772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8772.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4265	4265	4265	4265	4265	
5°	4265	4246	4196	4230	4219	404
15°	4057	4014	3883	3810	3771	1143
25°	3682	3559	3304	3146	3088	1694
35°	3173	2976	2636	2393	2308	1986
45°	2594	2335	1930	1656	1563	2003
55°	1972	1671	1254	1023	950	1762
65°	1332	1019	672	541	529	1320
75°	710	440	309	282	278	751
85°	166	85	73	73	73	199
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4265.3	4265.3	4265.3	4265.3	4265.3
2.5°	4284.5	4265.3	4222.7	4261.6	4253.7
5°	4265.3	4246.0	4195.6	4230.4	4219.0
7.5°	4230.4	4207.5	4153.5	4168.6	4149.3
10°	4184.2	4157.2	4080.1	4068.2	4045.4
12.5°	4126.4	4091.6	3987.1	3964.3	3921.7
15°	4056.8	4014.2	3883.2	3809.8	3771.4
17.5°	3975.7	3913.9	3751.7	3667.0	3605.1
20°	3883.2	3805.8	3612.9	3516.6	3431.4
22.5°	3782.8	3694.0	3469.9	3338.9	3281.2
25°	3682.5	3558.8	3304.0	3146.0	3087.8
27.5°	3562.9	3431.4	3149.7	2968.3	2879.4
30°	3435.5	3288.6	2979.7	2783.1	2678.7
32.5°	3311.9	3134.1	2818.0	2586.2	2489.5
35°	3173.1	2976.0	2636.5	2393.3	2308.1
37.5°	3037.9	2825.4	2466.6	2200.0	2103.7
40°	2894.9	2663.6	2288.9	2014.9	1914.5
42.5°	2748.3	2501.4	2111.6	1825.7	1729.5
45°	2593.9	2335.2	1930.1	1655.8	1563.1
47.5°	2447.3	2173.4	1756.5	1482.1	1397.3
50°	2285.2	2011.2	1586.5	1319.9	1239.3
52.5°	2126.7	1837.1	1424.3	1169.6	1096.3
55°	1972.3	1671.3	1254.4	1023.0	949.7
57.5°	1814.2	1505.4	1104.1	887.9	826.0
60°	1652.1	1343.2	945.6	749.1	687.2
62.5°	1494.0	1185.2	810.5	625.4	594.6
65°	1331.8	1018.9	671.7	540.6	528.7
67.5°	1177.4	864.5	540.6	474.6	463.2
70°	1015.2	714.2	447.6	409.1	393.5
72.5°	860.9	575.0	374.3	343.6	335.8
75°	710.1	439.8	308.8	281.7	278.0
77.5°	559.9	312.4	243.3	227.7	219.9
80°	420.6	224.0	185.1	169.9	169.9
82.5°	293.3	150.7	127.4	119.5	119.5
85°	165.9	84.8	73.3	73.3	73.3
87.5°	61.8	30.7	30.7	27.0	27.0
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	15.47	17.00	15.84	17.31	17.62	11.44	12.96	11.80	13.27	13.59
	3H	17.24	18.61	17.62	18.93	19.29	12.70	14.07	13.08	14.39	14.76
	4H	17.91	19.19	18.31	19.54	19.91	13.20	14.48	13.60	14.83	15.21
	6H	18.40	19.58	18.81	19.94	20.34	13.58	14.77	13.99	15.13	15.52
	8H	18.56	19.69	18.99	20.08	20.48	13.71	14.83	14.13	15.22	15.62
	12H	18.66	19.74	19.09	20.12	20.55	13.79	14.87	14.22	15.25	15.68
4H	2H	15.58	16.86	15.98	17.21	17.59	12.13	13.41	12.53	13.76	14.14
	3H	17.51	18.57	17.92	18.97	19.38	13.57	14.64	13.98	15.04	15.44
	4H	18.26	19.22	18.69	19.63	20.07	14.17	15.13	14.61	15.55	15.98
	6H	18.85	19.69	19.31	20.13	20.59	14.66	15.49	15.12	15.94	16.40
	8H	19.07	19.85	19.53	20.29	20.76	14.82	15.60	15.29	16.04	16.51
	12H	19.22	19.92	19.70	20.39	20.87	14.94	15.63	15.42	16.11	16.58
8H	4H	18.29	19.06	18.75	19.51	19.97	14.53	15.30	14.99	15.75	16.22
	6H	18.92	19.57	19.42	20.06	20.53	15.11	15.76	15.61	16.25	16.72
	8H	19.17	19.75	19.69	20.26	20.75	15.33	15.91	15.85	16.42	16.91
	12H	19.38	19.89	19.89	20.38	20.94	15.51	16.02	16.02	16.52	17.08
12H	4H	18.27	18.96	18.75	19.44	19.91	14.57	15.26	15.05	15.74	16.21
	6H	18.90	19.48	19.42	19.99	20.48	15.18	15.75	15.69	16.26	16.75
	8H	19.19	19.70	19.70	20.19	20.75	15.45	15.96	15.96	16.45	17.02