

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: P931241

Luminaire Tested: DFN2DS-TR2F0-020DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931241
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-TR2F0-020DS940-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

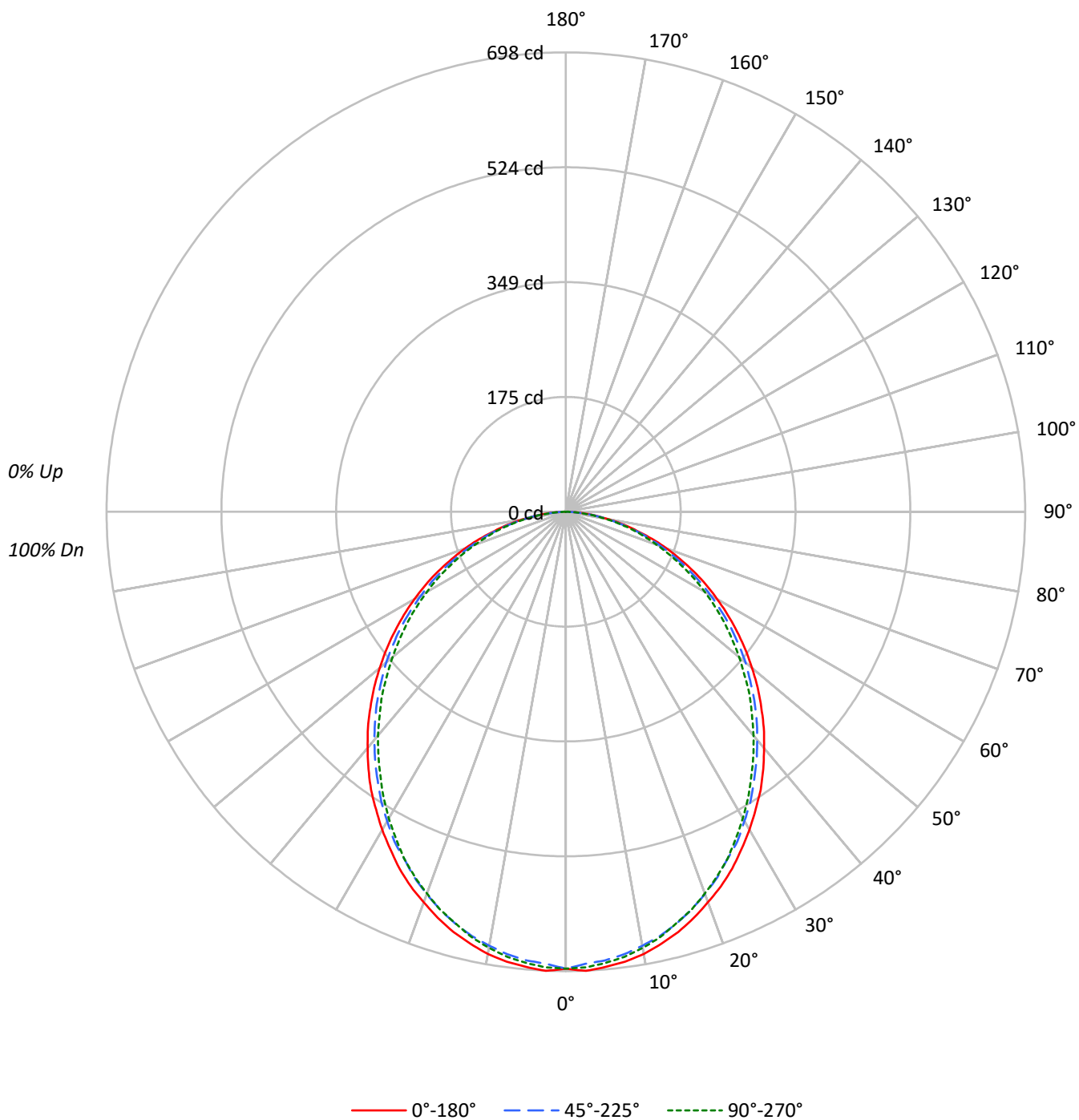
Lumens per Lamp: N/A
Luminaire Lumens: 1766.2 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
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°	1548	1548	1548
5°	1554	1532	1541
10°	1545	1516	1524
15°	1526	1497	1495
20°	1499	1467	1465
25°	1472	1431	1431
30°	1437	1398	1386
35°	1405	1358	1337
40°	1364	1318	1292
45°	1324	1278	1247
50°	1281	1237	1193
55°	1235	1189	1145
60°	1185	1132	1090
65°	1131	1075	1025
70°	1062	1005	958
75°	966	926	903
80°	858	832	789
85°	699	665	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1324 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	3.7
10°-20°	183.8	10.4
20°-30°	270.2	15.3
30°-40°	313.8	17.8
40°-50°	313.4	17.7
50°-60°	273.2	15.5
60°-70°	202.0	11.4
70°-80°	114.3	6.5
80°-90°	30.2	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°	519.3	29.4
0°-40°	833.1	47.2
0°-60°	1419.7	80.4
0°-90°	1766.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1766.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	694	692	684	690	688	66
15°	661	657	648	651	648	186
25°	598	593	581	583	581	275
35°	516	509	499	495	491	322
45°	420	415	405	398	395	324
55°	318	314	306	298	294	284
65°	214	210	204	198	194	212
75°	112	111	107	104	105	120
85°	27	27	26	24	23	32
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	694.2	694.2	694.2	694.2	694.2
2.5°	698.2	694.9	687.5	694.2	692.9
5°	694.2	691.6	684.2	689.5	688.2
7.5°	689.5	685.5	678.2	683.5	682.2
10°	682.2	677.6	669.5	674.8	672.8
12.5°	672.1	668.2	660.2	663.5	662.1
15°	660.8	656.9	648.1	650.8	647.5
17.5°	646.8	642.9	634.1	637.4	634.1
20°	631.4	627.4	618.1	620.1	617.4
22.5°	616.1	610.1	601.4	601.4	600.0
25°	598.1	592.7	581.4	582.7	581.4
27.5°	578.0	573.4	564.7	562.8	559.4
30°	558.0	552.7	542.7	540.7	538.0
32.5°	536.6	532.7	522.0	518.0	515.3
35°	516.0	509.3	498.6	494.6	491.2
37.5°	492.7	486.6	475.9	471.2	467.9
40°	468.6	463.2	452.5	446.6	443.9
42.5°	445.2	439.8	429.2	422.5	418.5
45°	419.9	415.2	405.1	397.8	395.2
47.5°	395.2	390.5	379.8	372.4	368.5
50°	369.1	365.8	356.4	347.1	343.8
52.5°	343.8	339.0	330.4	323.1	318.4
55°	317.7	313.7	305.7	297.7	294.4
57.5°	291.7	288.4	279.6	271.7	268.9
60°	265.6	263.1	253.7	246.3	244.3
62.5°	240.3	235.6	229.0	222.3	219.6
65°	214.3	210.2	203.6	197.6	194.3
67.5°	187.6	184.2	178.2	173.6	170.9
70°	162.9	160.2	154.1	149.5	146.9
72.5°	137.5	134.9	131.5	126.8	124.9
75°	112.1	110.9	107.4	103.5	104.8
77.5°	89.5	86.8	85.4	83.4	81.4
80°	66.8	66.1	64.8	62.7	61.4
82.5°	45.4	45.4	44.8	42.1	42.1
85°	27.3	26.7	26.0	24.0	23.4
87.5°	12.0	10.7	9.4	7.4	6.7
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	12.80	14.41	13.17	14.73	15.04	12.36	13.97	12.72	14.28	14.60
	3H	14.55	16.01	14.93	16.33	16.69	14.06	15.52	14.44	15.84	16.20
	4H	15.20	16.57	15.60	16.92	17.29	14.70	16.07	15.10	16.42	16.80
	6H	15.67	16.94	16.08	17.30	17.69	15.17	16.43	15.58	16.80	17.19
	8H	15.81	17.02	16.24	17.41	17.81	15.31	16.52	15.73	16.91	17.31
	12H	15.90	17.06	16.33	17.44	17.87	15.39	16.55	15.82	16.93	17.36
4H	2H	13.36	14.73	13.76	15.08	15.46	13.01	14.38	13.41	14.73	15.10
	3H	15.34	16.48	15.75	16.88	17.28	14.93	16.08	15.34	16.47	16.87
	4H	16.11	17.15	16.55	17.56	18.00	15.69	16.73	16.12	17.14	17.58
	6H	16.71	17.62	17.17	18.06	18.51	16.28	17.18	16.73	17.62	18.08
	8H	16.90	17.75	17.36	18.19	18.65	16.46	17.31	16.92	17.75	18.22
	12H	17.03	17.79	17.51	18.27	18.74	16.58	17.34	17.06	17.82	18.28
8H	4H	16.39	17.23	16.85	17.68	18.14	16.01	16.86	16.47	17.30	17.77
	6H	17.10	17.81	17.60	18.29	18.77	16.72	17.42	17.21	17.91	18.39
	8H	17.36	17.99	17.87	18.50	18.99	16.97	17.60	17.48	18.11	18.59
	12H	17.56	18.12	18.07	18.61	19.17	17.15	17.71	17.65	18.20	18.76
12H	4H	16.41	17.17	16.89	17.65	18.12	16.05	16.81	16.53	17.28	17.75
	6H	17.15	17.78	17.66	18.29	18.77	16.78	17.41	17.29	17.92	18.40
	8H	17.46	18.02	17.97	18.51	19.07	17.08	17.64	17.59	18.13	18.69