

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: P930433

Luminaire Tested: DFN2DS-PN2F0-020DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930433
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-PN2F0-020DS950-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

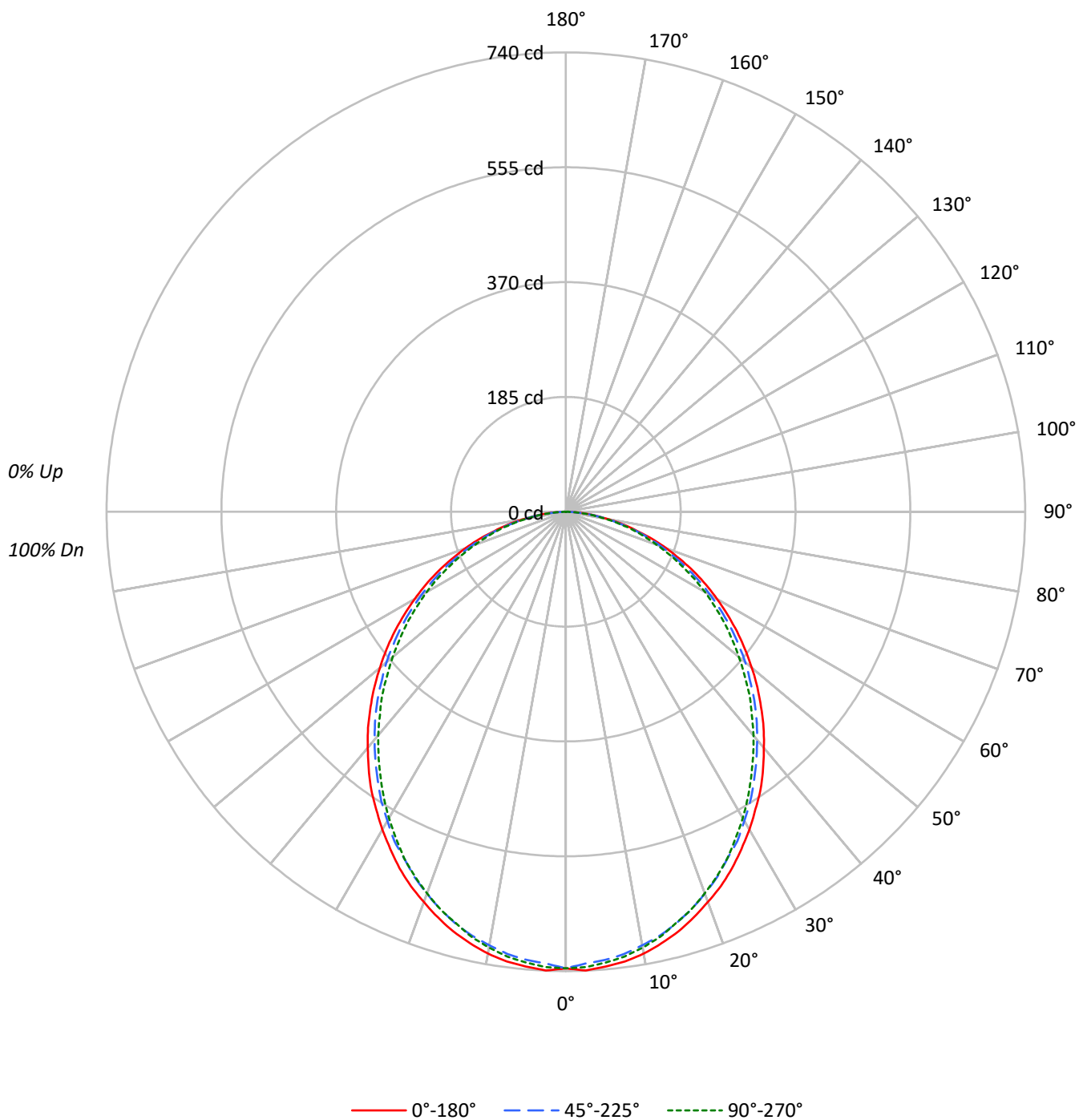
Lumens per Lamp: N/A
Luminaire Lumens: 1871.1 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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°	1593	1593	1593
5°	1599	1576	1585
10°	1589	1560	1568
15°	1570	1540	1538
20°	1542	1509	1508
25°	1514	1472	1472
30°	1479	1438	1425
35°	1445	1397	1376
40°	1403	1355	1329
45°	1362	1315	1282
50°	1317	1272	1227
55°	1271	1223	1177
60°	1219	1164	1121
65°	1163	1105	1055
70°	1093	1034	985
75°	994	952	929
80°	883	856	811
85°	718	686	616

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1362 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	3.7
10°-20°	194.8	10.4
20°-30°	286.2	15.3
30°-40°	332.4	17.8
40°-50°	332.0	17.7
50°-60°	289.5	15.5
60°-70°	214.0	11.4
70°-80°	121.1	6.5
80°-90°	32.0	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°	550.2	29.4
0°-40°	882.6	47.2
0°-60°	1504.1	80.4
0°-90°	1871.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1871.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	735	733	725	730	729	70
15°	700	696	687	690	686	197
25°	634	628	616	617	616	292
35°	547	540	528	524	520	341
45°	445	440	429	422	419	343
55°	337	332	324	315	312	301
65°	227	223	216	209	206	224
75°	119	118	114	110	111	127
85°	29	28	28	25	25	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	735.4	735.4	735.4	735.4	735.4
2.5°	739.7	736.2	728.3	735.4	734.1
5°	735.4	732.7	724.8	730.5	729.1
7.5°	730.5	726.2	718.5	724.2	722.7
10°	722.7	717.8	709.3	714.9	712.8
12.5°	712.1	707.9	699.4	702.9	701.5
15°	700.1	695.9	686.6	689.5	686.0
17.5°	685.2	681.1	671.8	675.3	671.8
20°	669.0	664.7	654.8	657.0	654.1
22.5°	652.7	646.4	637.1	637.1	635.7
25°	633.6	628.0	616.0	617.3	616.0
27.5°	612.4	607.4	598.3	596.2	592.6
30°	591.2	585.5	574.9	572.9	569.9
32.5°	568.5	564.4	553.0	548.8	545.9
35°	546.7	539.6	528.3	524.0	520.4
37.5°	521.9	515.5	504.2	499.2	495.7
40°	496.4	490.7	479.4	473.2	470.2
42.5°	471.6	466.0	454.7	447.6	443.4
45°	444.8	439.9	429.2	421.5	418.6
47.5°	418.6	413.7	402.4	394.5	390.4
50°	391.0	387.5	377.6	367.7	364.2
52.5°	364.2	359.2	350.0	342.3	337.4
55°	336.6	332.4	323.9	315.4	311.8
57.5°	309.0	305.5	296.3	287.8	284.9
60°	281.4	278.7	268.8	260.9	258.8
62.5°	254.6	249.6	242.6	235.5	232.7
65°	227.0	222.7	215.7	209.3	205.8
67.5°	198.7	195.1	188.8	183.9	181.1
70°	172.6	169.7	163.3	158.4	155.6
72.5°	145.7	142.9	139.3	134.4	132.3
75°	118.8	117.5	113.8	109.6	111.0
77.5°	94.8	91.9	90.4	88.4	86.3
80°	70.8	70.0	68.6	66.4	65.0
82.5°	48.1	48.1	47.4	44.6	44.6
85°	28.9	28.3	27.6	25.4	24.8
87.5°	12.8	11.3	9.9	7.8	7.1
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	12.90	14.51	13.26	14.82	15.14	12.46	14.07	12.82	14.38	14.69
	3H	14.65	16.10	15.03	16.43	16.79	14.16	15.61	14.54	15.94	16.30
	4H	15.30	16.67	15.69	17.01	17.39	14.80	16.17	15.20	16.52	16.89
	6H	15.77	17.03	16.18	17.40	17.79	15.26	16.53	15.67	16.90	17.29
	8H	15.91	17.12	16.33	17.51	17.91	15.41	16.62	15.83	17.01	17.40
	12H	16.00	17.16	16.43	17.54	17.97	15.49	16.65	15.92	17.03	17.46
4H	2H	13.46	14.83	13.86	15.18	15.55	13.11	14.48	13.51	14.82	15.20
	3H	15.44	16.58	15.84	16.98	17.38	15.03	16.18	15.44	16.57	16.97
	4H	16.21	17.25	16.64	17.66	18.10	15.79	16.82	16.22	17.24	17.67
	6H	16.81	17.71	17.26	18.15	18.61	16.38	17.28	16.83	17.72	18.18
	8H	17.00	17.85	17.46	18.29	18.75	16.56	17.41	17.02	17.85	18.31
	12H	17.13	17.89	17.61	18.37	18.84	16.68	17.44	17.16	17.91	18.38
8H	4H	16.49	17.33	16.95	17.77	18.24	16.11	16.96	16.57	17.40	17.87
	6H	17.20	17.90	17.69	18.39	18.87	16.82	17.52	17.31	18.01	18.48
	8H	17.46	18.09	17.97	18.60	19.08	17.07	17.70	17.58	18.20	18.69
	12H	17.66	18.22	18.17	18.71	19.27	17.25	17.80	17.75	18.29	18.85
12H	4H	16.51	17.27	16.99	17.75	18.22	16.15	16.91	16.63	17.38	17.85
	6H	17.25	17.88	17.75	18.38	18.87	16.88	17.51	17.39	18.01	18.50
	8H	17.56	18.12	18.07	18.61	19.17	17.18	17.74	17.69	18.23	18.79

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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