

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: P931243

Luminaire Tested: DFN2DS-TR2F0-020DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931243
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-TR2F0-020DS950-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

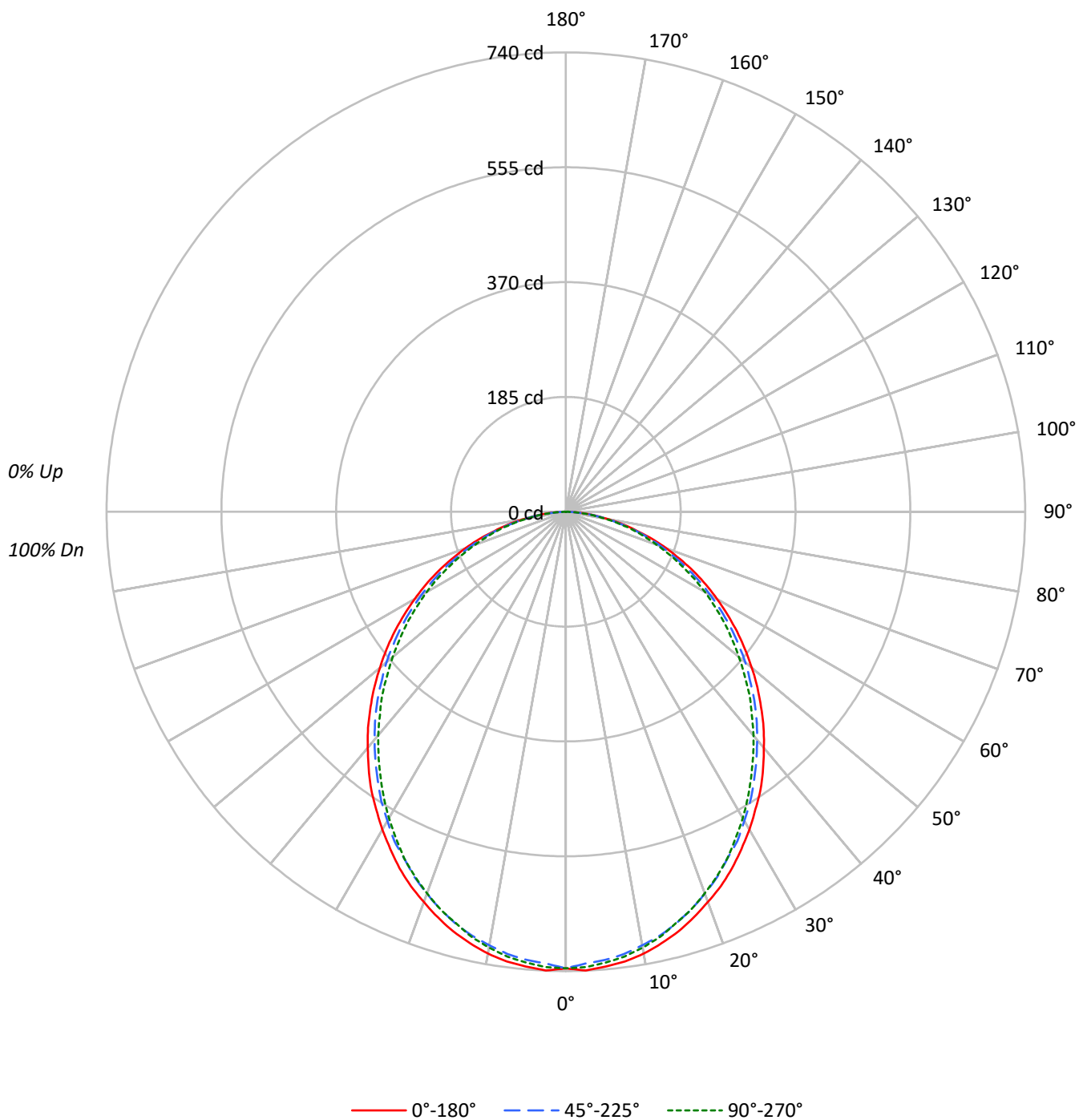
Lumens per Lamp: N/A
Luminaire Lumens: 1871.1 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

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°	1640	1640	1640
5°	1647	1623	1632
10°	1637	1606	1614
15°	1617	1585	1584
20°	1588	1554	1553
25°	1559	1516	1516
30°	1523	1481	1468
35°	1489	1438	1417
40°	1445	1396	1369
45°	1403	1354	1320
50°	1357	1310	1264
55°	1309	1260	1212
60°	1255	1199	1154
65°	1198	1138	1086
70°	1126	1065	1015
75°	1024	981	957
80°	909	881	835
85°	740	706	635

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1403 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	13.00	14.61	13.37	14.93	15.24	12.56	14.17	12.92	14.48	14.80
	3H	14.75	16.21	15.13	16.53	16.89	14.26	15.72	14.64	16.04	16.40
	4H	15.40	16.77	15.80	17.12	17.49	14.90	16.27	15.30	16.62	17.00
	6H	15.87	17.14	16.28	17.50	17.89	15.37	16.63	15.78	17.00	17.39
	8H	16.01	17.22	16.44	17.61	18.01	15.51	16.72	15.93	17.11	17.51
	12H	16.10	17.26	16.53	17.64	18.07	15.59	16.75	16.02	17.13	17.56
4H	2H	13.56	14.93	13.96	15.28	15.66	13.21	14.58	13.61	14.93	15.30
	3H	15.54	16.68	15.95	17.08	17.48	15.13	16.28	15.54	16.67	17.07
	4H	16.31	17.35	16.75	17.76	18.20	15.89	16.93	16.32	17.34	17.78
	6H	16.91	17.82	17.37	18.26	18.71	16.48	17.38	16.93	17.82	18.28
	8H	17.10	17.95	17.56	18.39	18.86	16.66	17.51	17.12	17.95	18.42
	12H	17.23	17.99	17.71	18.47	18.94	16.78	17.54	17.26	18.02	18.48
8H	4H	16.59	17.43	17.05	17.88	18.34	16.21	17.06	16.67	17.50	17.97
	6H	17.30	18.01	17.80	18.49	18.97	16.92	17.62	17.41	18.11	18.59
	8H	17.56	18.19	18.07	18.70	19.18	17.17	17.80	17.68	18.31	18.79
	12H	17.76	18.32	18.27	18.81	19.37	17.35	17.91	17.85	18.40	18.96
12H	4H	16.61	17.37	17.09	17.85	18.32	16.25	17.01	16.73	17.48	17.95
	6H	17.35	17.98	17.86	18.49	18.97	16.98	17.61	17.49	18.12	18.60
	8H	17.66	18.22	18.17	18.71	19.27	17.28	17.84	17.79	18.33	18.89