

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: P931249

Luminaire Tested: DFN2DS-TR2F0-030DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931249
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-TR2F0-030DS840-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

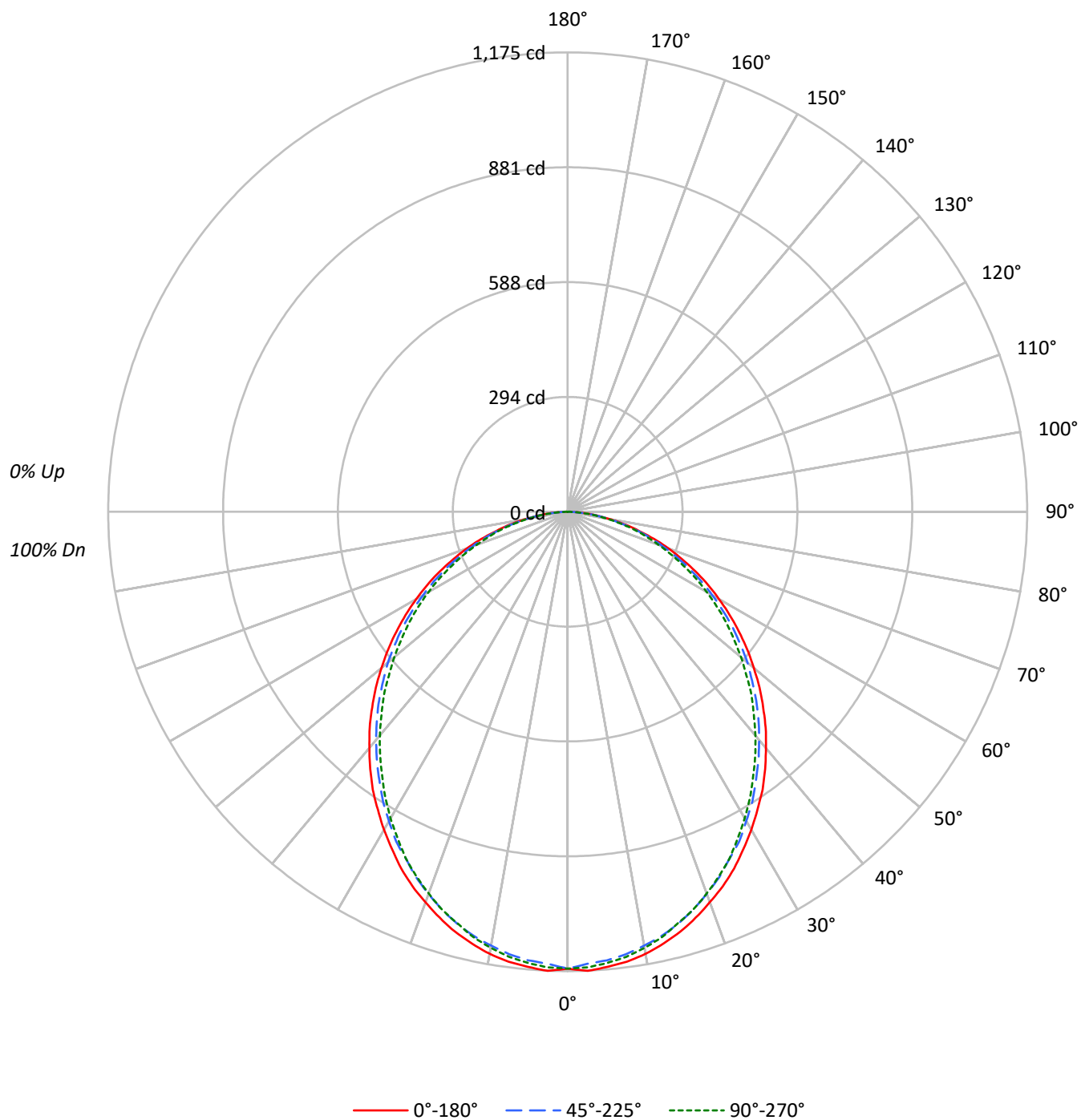
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931249

CATALOG NUMBER: DFN2DS-TR2F0-030DS840-FLL

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°	2606	2606	2606
5°	2616	2579	2594
10°	2601	2552	2565
15°	2568	2519	2517
20°	2523	2469	2467
25°	2477	2409	2409
30°	2419	2353	2332
35°	2365	2285	2252
40°	2297	2218	2176
45°	2229	2151	2098
50°	2156	2082	2008
55°	2080	2001	1927
60°	1994	1905	1835
65°	1904	1809	1726
70°	1788	1693	1612
75°	1626	1559	1521
80°	1444	1399	1328
85°	1177	1121	1006

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2229 cd/sqm

TEST NUMBER: P931249

CATALOG NUMBER: DFN2DS-TR2F0-030DS840-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.7
10°-20°	309.4	10.4
20°-30°	454.7	15.3
30°-40°	528.2	17.8
40°-50°	527.5	17.7
50°-60°	460.0	15.5
60°-70°	340.0	11.4
70°-80°	192.4	6.5
80°-90°	50.8	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°	874.2	29.4
0°-40°	1402.3	47.2
0°-60°	2389.8	80.4
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1164	1152	1161	1158	111
15°	1112	1106	1091	1096	1090	313
25°	1007	998	979	981	979	463
35°	869	857	839	832	827	542
45°	707	699	682	670	665	545
55°	535	528	515	501	496	478
65°	361	354	343	333	327	357
75°	189	187	181	174	176	201
85°	46	45	44	40	39	54
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-TR2F0-030DS840-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.5	1168.5	1168.5	1168.5	1168.5
2.5°	1175.3	1169.7	1157.3	1168.5	1166.4
5°	1168.5	1164.1	1151.7	1160.7	1158.5
7.5°	1160.7	1154.0	1141.5	1150.6	1148.3
10°	1148.3	1140.4	1127.0	1135.9	1132.6
12.5°	1131.4	1124.7	1111.3	1116.8	1114.6
15°	1112.3	1105.7	1091.0	1095.5	1089.9
17.5°	1088.7	1082.1	1067.4	1073.0	1067.4
20°	1062.9	1056.2	1040.4	1043.7	1039.3
22.5°	1037.1	1027.0	1012.3	1012.3	1010.0
25°	1006.7	997.8	978.7	980.9	978.7
27.5°	973.0	965.1	950.5	947.2	941.6
30°	939.3	930.3	913.5	910.1	905.6
32.5°	903.4	896.7	878.7	871.9	867.4
35°	868.6	857.4	839.3	832.5	826.9
37.5°	829.2	819.1	801.1	793.2	787.6
40°	788.8	779.8	761.8	751.8	747.2
42.5°	749.4	740.4	722.5	711.2	704.5
45°	706.8	698.9	682.0	669.7	665.2
47.5°	665.2	657.4	639.3	626.9	620.2
50°	621.3	615.7	600.0	584.3	578.7
52.5°	578.7	570.8	556.3	543.8	535.9
55°	534.9	528.1	514.6	501.2	495.6
57.5°	491.0	485.4	470.8	457.3	452.8
60°	447.1	442.7	427.0	414.6	411.3
62.5°	404.5	396.6	385.4	374.2	369.7
65°	360.8	354.0	342.7	332.6	327.0
67.5°	315.8	310.1	300.0	292.2	287.7
70°	274.2	269.7	259.6	251.7	247.2
72.5°	231.5	226.9	221.3	213.5	210.2
75°	188.7	186.6	180.9	174.2	176.5
77.5°	150.6	146.0	143.7	140.4	137.1
80°	112.4	111.2	108.9	105.6	103.4
82.5°	76.4	76.4	75.4	70.8	70.8
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931249

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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	14.61	16.22	14.98	16.54	16.85	14.17	15.78	14.53	16.09	16.41
	3H	16.36	17.82	16.74	18.14	18.50	15.87	17.32	16.25	17.65	18.01
	4H	17.01	18.38	17.41	18.72	19.10	16.51	17.88	16.91	18.23	18.61
	6H	17.48	18.74	17.89	19.11	19.50	16.98	18.24	17.39	18.61	19.00
	8H	17.62	18.83	18.04	19.22	19.62	17.12	18.33	17.54	18.72	19.12
	12H	17.71	18.87	18.14	19.25	19.68	17.20	18.36	17.63	18.74	19.17
4H	2H	15.17	16.54	15.57	16.89	17.26	14.82	16.19	15.22	16.54	16.91
	3H	17.15	18.29	17.56	18.69	19.09	16.74	17.89	17.15	18.28	18.68
	4H	17.92	18.96	18.35	19.37	19.81	17.50	18.54	17.93	18.95	19.39
	6H	18.52	19.42	18.97	19.86	20.32	18.09	18.99	18.54	19.43	19.89
	8H	18.71	19.56	19.17	20.00	20.46	18.27	19.12	18.73	19.56	20.03
	12H	18.84	19.60	19.32	20.08	20.55	18.39	19.15	18.87	19.62	20.09
8H	4H	18.20	19.04	18.66	19.49	19.95	17.82	18.67	18.28	19.11	19.58
	6H	18.91	19.61	19.40	20.10	20.58	18.53	19.23	19.02	19.72	20.20
	8H	19.17	19.80	19.68	20.31	20.79	18.78	19.41	19.29	19.92	20.40
	12H	19.37	19.93	19.88	20.42	20.98	18.96	19.51	19.46	20.00	20.57
12H	4H	18.22	18.98	18.70	19.46	19.93	17.86	18.62	18.34	19.09	19.56
	6H	18.96	19.59	19.47	20.09	20.58	18.59	19.22	19.10	19.73	20.21
	8H	19.27	19.83	19.78	20.32	20.88	18.89	19.45	19.40	19.94	20.50