

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: P930809

Luminaire Tested: DFN2DS-SQ2F0-030DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930809
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-SQ2F0-030DS940-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

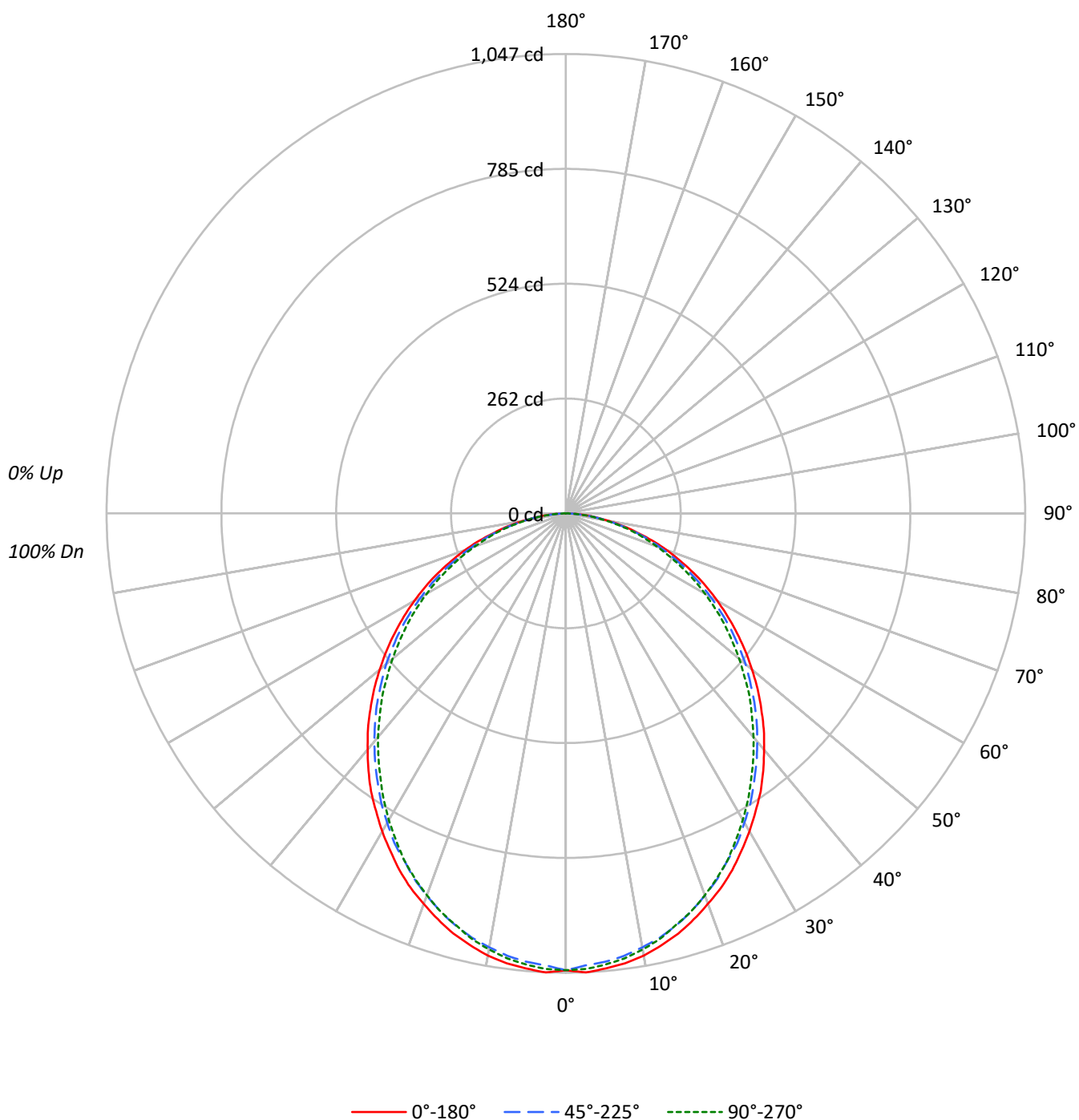
Lumens per Lamp: N/A
Luminaire Lumens: 2649.3 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 26.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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°	2289	2289	2289
5°	2298	2265	2279
10°	2285	2242	2254
15°	2256	2213	2211
20°	2216	2169	2167
25°	2177	2116	2116
30°	2125	2067	2049
35°	2078	2008	1978
40°	2018	1948	1911
45°	1958	1890	1843
50°	1894	1829	1764
55°	1828	1758	1693
60°	1753	1673	1612
65°	1673	1589	1516
70°	1571	1487	1416
75°	1428	1370	1336
80°	1269	1228	1166
85°	1034	986	886

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1958 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	3.7
10°-20°	275.7	10.4
20°-30°	405.2	15.3
30°-40°	470.6	17.8
40°-50°	470.1	17.7
50°-60°	409.9	15.5
60°-70°	303.0	11.4
70°-80°	171.4	6.5
80°-90°	45.3	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°	779.0	29.4
0°-40°	1249.6	47.2
0°-60°	2129.6	80.4
0°-90°	2649.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2649.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1041	1037	1026	1034	1032	99
15°	991	985	972	976	971	279
25°	897	889	872	874	872	413
35°	774	764	748	742	737	483
45°	630	623	608	597	593	486
55°	477	471	459	447	442	426
65°	322	315	305	296	291	318
75°	168	166	161	155	157	180
85°	41	40	39	36	35	48
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1041.2	1041.2	1041.2	1041.2	1041.2
2.5°	1047.3	1042.3	1031.2	1041.2	1039.4
5°	1041.2	1037.3	1026.2	1034.3	1032.3
7.5°	1034.3	1028.3	1017.2	1025.4	1023.3
10°	1023.3	1016.3	1004.3	1012.2	1009.3
12.5°	1008.2	1002.3	990.3	995.2	993.2
15°	991.2	985.3	972.2	976.2	971.2
17.5°	970.1	964.3	951.1	956.1	951.1
20°	947.1	941.1	927.1	930.1	926.2
22.5°	924.2	915.2	902.1	902.1	900.0
25°	897.1	889.1	872.1	874.1	872.1
27.5°	867.0	860.0	847.0	844.1	839.1
30°	837.1	829.0	814.0	811.0	807.0
32.5°	805.0	799.1	783.0	776.9	772.9
35°	774.0	764.0	747.9	741.9	736.9
37.5°	738.9	729.9	713.9	706.8	701.8
40°	702.9	694.9	678.8	669.9	665.9
42.5°	667.8	659.8	643.8	633.8	627.8
45°	629.8	622.8	607.7	596.7	592.7
47.5°	592.7	585.8	569.7	558.7	552.7
50°	553.7	548.7	534.7	520.7	515.7
52.5°	515.7	508.6	495.7	484.6	477.6
55°	476.7	470.6	458.6	446.6	441.6
57.5°	437.5	432.5	419.5	407.5	403.5
60°	398.5	394.5	380.5	369.5	366.5
62.5°	360.5	353.4	343.4	333.4	329.4
65°	321.5	315.4	305.4	296.4	291.4
67.5°	281.4	276.3	267.3	260.4	256.4
70°	244.3	240.3	231.3	224.2	220.3
72.5°	206.3	202.2	197.2	190.3	187.3
75°	168.1	166.3	161.2	155.2	157.3
77.5°	134.2	130.1	128.1	125.1	122.2
80°	100.2	99.1	97.0	94.1	92.1
82.5°	68.1	68.1	67.2	63.1	63.1
85°	41.0	40.1	39.1	36.0	35.1
87.5°	18.0	16.1	14.0	11.1	10.0
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	14.16	15.77	14.52	16.08	16.40	13.72	15.33	14.08	15.64	15.96
	3H	15.91	17.36	16.29	17.69	18.05	15.42	16.87	15.80	17.20	17.56
	4H	16.56	17.93	16.95	18.27	18.65	16.06	17.43	16.46	17.78	18.16
	6H	17.03	18.29	17.44	18.66	19.05	16.53	17.79	16.94	18.16	18.55
	8H	17.17	18.38	17.59	18.77	19.17	16.67	17.88	17.09	18.27	18.67
	12H	17.26	18.42	17.69	18.80	19.23	16.75	17.91	17.18	18.29	18.72
4H	2H	14.72	16.09	15.12	16.44	16.81	14.37	15.74	14.77	16.09	16.46
	3H	16.70	17.84	17.11	18.24	18.64	16.29	17.44	16.70	17.83	18.23
	4H	17.47	18.51	17.90	18.92	19.36	17.05	18.09	17.48	18.50	18.94
	6H	18.07	18.97	18.52	19.41	19.87	17.64	18.54	18.09	18.98	19.44
	8H	18.26	19.10	18.72	19.55	20.01	17.82	18.67	18.28	19.11	19.58
	12H	18.39	19.15	18.87	19.63	20.10	17.94	18.70	18.42	19.17	19.64
8H	4H	17.75	18.59	18.21	19.03	19.50	17.37	18.22	17.83	18.66	19.13
	6H	18.46	19.16	18.95	19.65	20.13	18.08	18.78	18.57	19.27	19.75
	8H	18.72	19.35	19.23	19.86	20.34	18.33	18.96	18.84	19.47	19.95
	12H	18.92	19.48	19.43	19.97	20.53	18.51	19.06	19.01	19.55	20.12
12H	4H	17.77	18.53	18.25	19.01	19.48	17.41	18.17	17.89	18.64	19.11
	6H	18.51	19.14	19.01	19.64	20.13	18.14	18.77	18.65	19.28	19.76
	8H	18.82	19.38	19.33	19.87	20.43	18.44	19.00	18.95	19.49	20.05