

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: P930865

Luminaire Tested: DFN2DS-SQ2F0-060DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930865
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-SQ2F0-060DS950-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

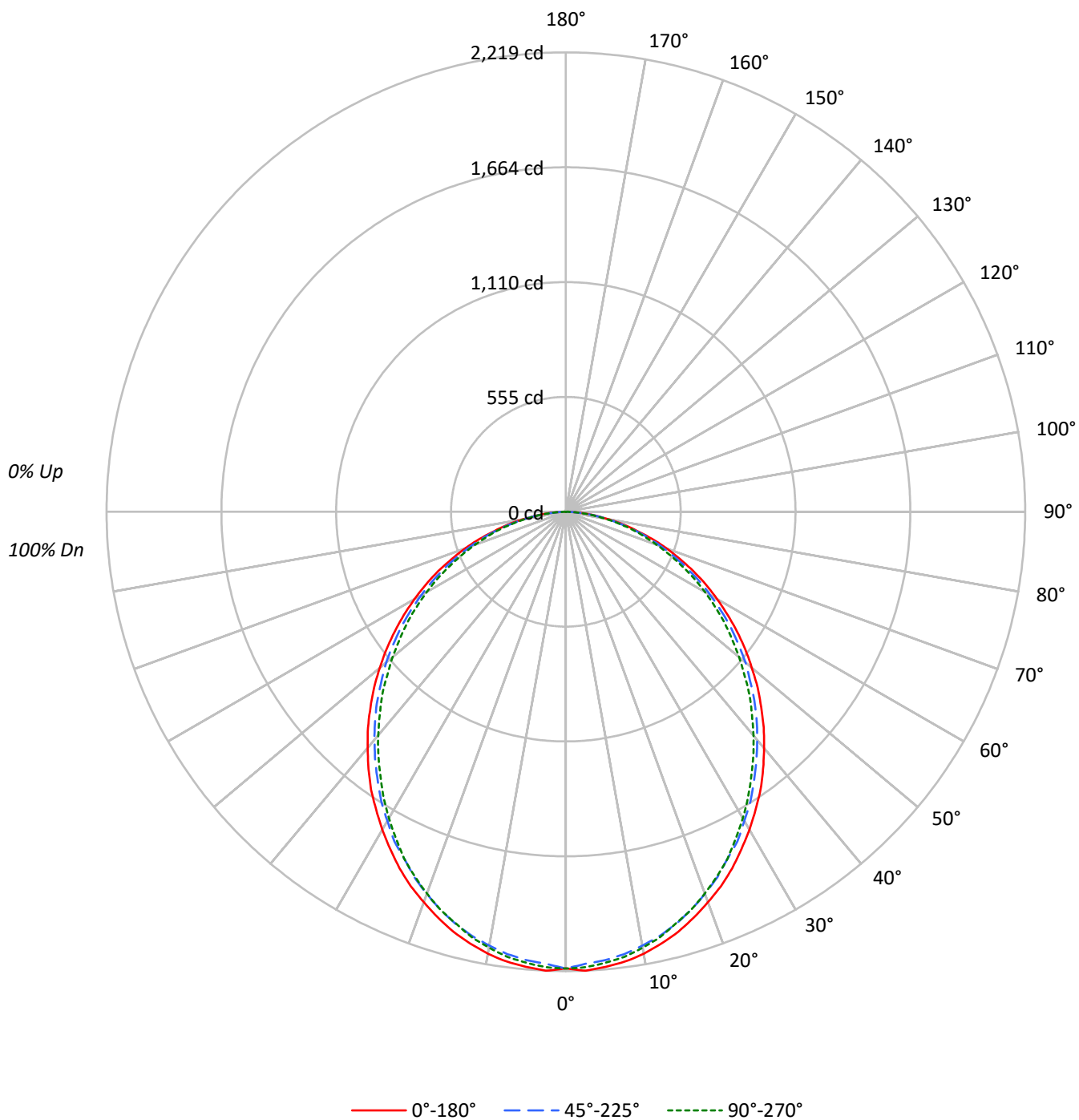
Lumens per Lamp: N/A
Luminaire Lumens: 5613.3 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 58.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
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°	4851	4851	4851
5°	4870	4800	4828
10°	4841	4751	4775
15°	4781	4689	4685
20°	4696	4597	4592
25°	4612	4483	4483
30°	4504	4379	4342
35°	4402	4254	4191
40°	4275	4129	4050
45°	4150	4004	3905
50°	4013	3876	3737
55°	3872	3725	3587
60°	3713	3546	3415
65°	3544	3367	3212
70°	3328	3150	3001
75°	3027	2900	2830
80°	2687	2605	2471
85°	2190	2089	1875

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4150 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.7	3.7
10°-20°	584.3	10.4
20°-30°	858.6	15.3
30°-40°	997.2	17.8
40°-50°	996.0	17.7
50°-60°	868.5	15.5
60°-70°	642.0	11.4
70°-80°	363.2	6.5
80°-90°	95.9	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°	1650.5	29.4
0°-40°	2647.7	47.2
0°-60°	4512.2	80.4
0°-90°	5613.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5613.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2206	2198	2174	2191	2187	209
15°	2100	2088	2060	2068	2058	592
25°	1901	1884	1848	1852	1848	875
35°	1640	1619	1585	1572	1561	1024
45°	1334	1320	1288	1264	1256	1030
55°	1010	997	972	946	936	903
65°	681	668	647	628	617	673
75°	356	352	341	329	333	380
85°	87	85	83	76	74	102
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2206.2	2206.2	2206.2	2206.2	2206.2
2.5°	2219.0	2208.5	2185.0	2206.2	2202.1
5°	2206.2	2197.9	2174.4	2191.4	2187.3
7.5°	2191.4	2178.8	2155.4	2172.5	2168.2
10°	2168.2	2153.4	2127.9	2144.8	2138.4
12.5°	2136.3	2123.6	2098.2	2108.8	2104.5
15°	2100.2	2087.6	2059.9	2068.5	2057.9
17.5°	2055.7	2043.1	2015.4	2025.9	2015.4
20°	2006.8	1994.2	1964.5	1970.8	1962.5
22.5°	1958.2	1939.0	1911.4	1911.4	1907.1
25°	1900.8	1884.0	1847.9	1851.9	1847.9
27.5°	1837.1	1822.2	1794.7	1788.5	1777.9
30°	1773.7	1756.5	1724.8	1718.5	1709.9
32.5°	1705.6	1693.1	1659.0	1646.2	1637.7
35°	1640.0	1618.8	1584.8	1571.9	1561.3
37.5°	1565.7	1546.5	1512.6	1497.6	1487.1
40°	1489.3	1472.2	1438.3	1419.4	1410.8
42.5°	1415.0	1397.9	1364.2	1342.8	1330.2
45°	1334.5	1319.6	1287.7	1264.5	1255.9
47.5°	1255.9	1241.1	1207.1	1183.7	1171.0
50°	1173.1	1162.5	1132.9	1103.1	1092.5
52.5°	1092.5	1077.7	1050.2	1026.8	1012.0
55°	1009.9	997.1	971.6	946.2	935.6
57.5°	927.1	916.6	888.9	863.4	854.8
60°	844.3	835.9	806.3	782.8	776.5
62.5°	763.7	748.8	727.6	706.5	698.0
65°	681.1	668.3	647.1	628.0	617.4
67.5°	596.2	585.4	566.5	551.7	543.1
70°	517.7	509.2	490.0	475.1	466.8
72.5°	437.1	428.6	418.0	403.1	396.8
75°	356.3	352.3	341.4	328.9	333.1
77.5°	284.3	275.8	271.4	265.2	258.8
80°	212.2	210.0	205.7	199.4	195.1
82.5°	144.3	144.3	142.2	133.7	133.7
85°	86.8	84.9	82.8	76.3	74.3
87.5°	38.3	34.0	29.7	23.4	21.2
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	16.77	18.38	17.13	18.69	19.01	16.32	17.94	16.69	18.25	18.56
	3H	18.52	19.97	18.90	20.30	20.66	18.03	19.48	18.41	19.81	20.17
	4H	19.17	20.54	19.56	20.88	21.26	18.67	20.04	19.07	20.39	20.76
	6H	19.64	20.90	20.05	21.27	21.66	19.13	20.40	19.54	20.77	21.16
	8H	19.78	20.99	20.20	21.38	21.78	19.27	20.49	19.70	20.87	21.27
	12H	19.87	21.03	20.30	21.41	21.84	19.36	20.52	19.79	20.90	21.33
4H	2H	17.33	18.70	17.73	19.05	19.42	16.98	18.35	17.38	18.69	19.07
	3H	19.31	20.45	19.71	20.85	21.25	18.90	20.04	19.31	20.44	20.84
	4H	20.08	21.12	20.51	21.53	21.97	19.66	20.69	20.09	21.11	21.54
	6H	20.68	21.58	21.13	22.02	22.48	20.25	21.15	20.70	21.59	22.05
	8H	20.87	21.71	21.33	22.16	22.62	20.43	21.28	20.89	21.72	22.18
	12H	21.00	21.76	21.48	22.24	22.70	20.55	21.31	21.03	21.78	22.25
8H	4H	20.36	21.20	20.82	21.64	22.11	19.98	20.83	20.44	21.27	21.73
	6H	21.07	21.77	21.56	22.26	22.74	20.69	21.39	21.18	21.88	22.35
	8H	21.33	21.96	21.84	22.47	22.95	20.94	21.57	21.45	22.07	22.56
	12H	21.53	22.09	22.04	22.58	23.14	21.11	21.67	21.62	22.16	22.72
12H	4H	20.38	21.14	20.86	21.62	22.09	20.02	20.78	20.50	21.25	21.72
	6H	21.11	21.75	21.62	22.25	22.74	20.75	21.38	21.26	21.88	22.37
	8H	21.43	21.99	21.94	22.48	23.04	21.05	21.61	21.56	22.10	22.66