

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: P930423

Luminaire Tested: DFN2DS-PN2F0-020DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930423
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-PN2F0-020DS850-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

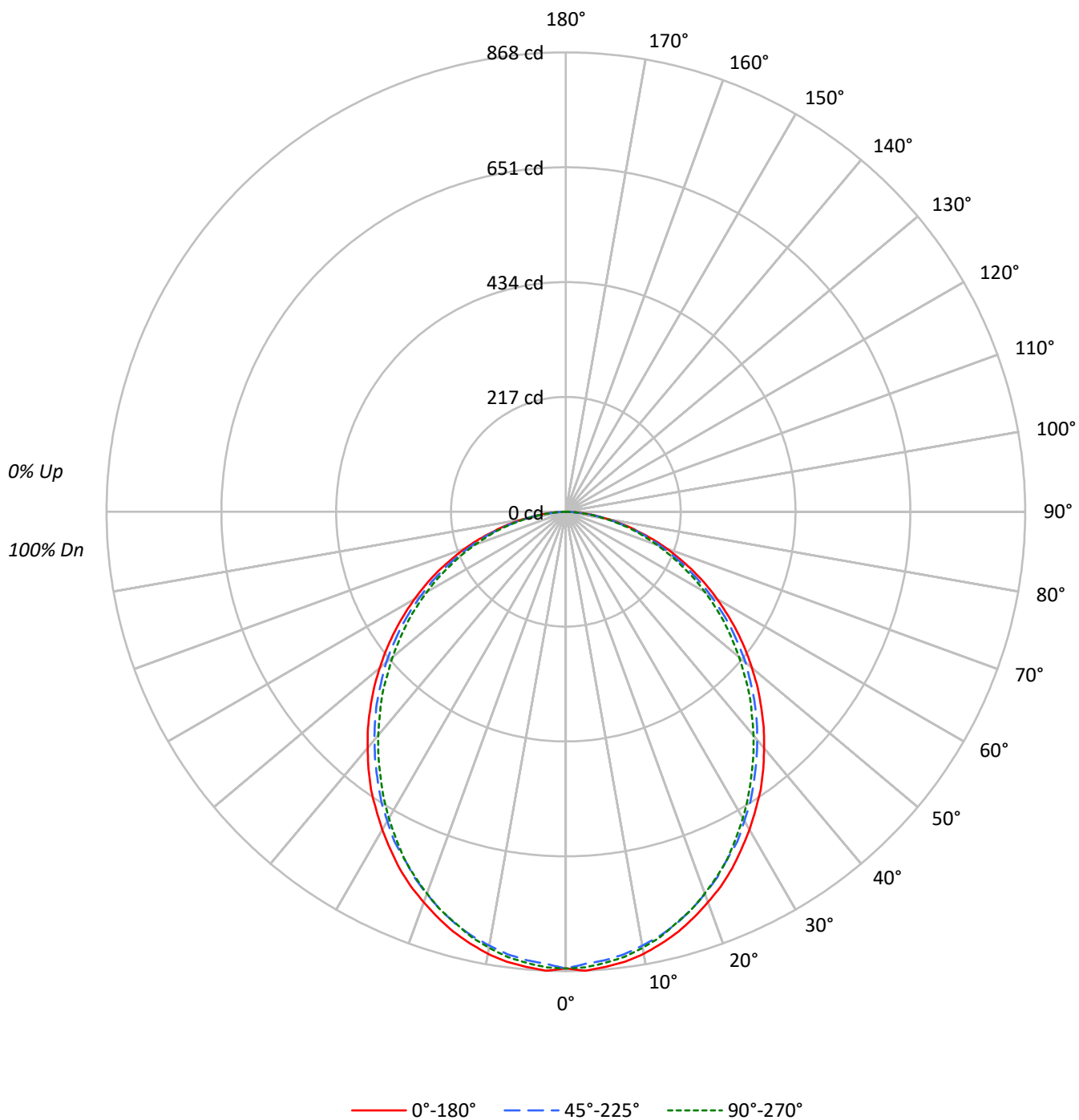
Lumens per Lamp: N/A
Luminaire Lumens: 2195.8 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

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°	1869	1869	1869
5°	1876	1849	1860
10°	1865	1831	1840
15°	1842	1807	1805
20°	1810	1771	1769
25°	1777	1727	1727
30°	1735	1687	1673
35°	1696	1639	1615
40°	1647	1591	1560
45°	1599	1543	1505
50°	1546	1493	1440
55°	1492	1435	1382
60°	1431	1366	1316
65°	1365	1298	1238
70°	1282	1213	1157
75°	1167	1117	1090
80°	1036	1004	952
85°	842	805	723

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1599 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.7
10°-20°	228.6	10.4
20°-30°	335.9	15.3
30°-40°	390.1	17.8
40°-50°	389.6	17.7
50°-60°	339.7	15.5
60°-70°	251.1	11.4
70°-80°	142.1	6.5
80°-90°	37.5	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°	645.7	29.4
0°-40°	1035.8	47.2
0°-60°	1765.1	80.4
0°-90°	2195.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2195.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	863	860	851	857	856	82
15°	822	817	806	809	805	231
25°	744	737	723	724	723	342
35°	642	633	620	615	611	401
45°	522	516	504	495	491	403
55°	395	390	380	370	366	353
65°	266	261	253	246	242	263
75°	139	138	134	129	130	149
85°	34	33	32	30	29	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	863.9	854.7	863.0	861.5
5°	863.0	859.8	850.6	857.3	855.6
7.5°	857.3	852.3	843.2	849.8	848.2
10°	848.2	842.4	832.4	839.0	836.5
12.5°	835.6	830.8	820.8	824.9	823.2
15°	821.5	816.7	805.8	809.1	805.0
17.5°	804.1	799.3	788.4	792.5	788.4
20°	785.1	780.1	768.4	771.0	767.6
22.5°	766.0	758.6	747.7	747.7	746.0
25°	743.6	736.9	722.8	724.4	722.8
27.5°	718.6	712.9	702.1	699.7	695.5
30°	693.8	687.1	674.7	672.3	668.8
32.5°	667.2	662.3	649.0	644.0	640.7
35°	641.6	633.2	619.9	614.9	610.7
37.5°	612.5	605.0	591.7	585.9	581.7
40°	582.6	575.9	562.6	555.3	551.8
42.5°	553.5	546.8	533.7	525.3	520.3
45°	522.0	516.2	503.7	494.6	491.3
47.5°	491.3	485.5	472.2	463.0	458.1
50°	458.9	454.8	443.2	431.5	427.4
52.5°	427.4	421.5	410.8	401.7	395.9
55°	395.0	390.0	380.1	370.2	366.0
57.5°	362.6	358.5	347.7	337.8	334.4
60°	330.3	327.0	315.4	306.2	303.8
62.5°	298.8	292.9	284.7	276.4	273.0
65°	266.4	261.4	253.2	245.6	241.5
67.5°	233.2	229.0	221.6	215.8	212.5
70°	202.5	199.2	191.6	185.9	182.7
72.5°	171.0	167.7	163.5	157.7	155.3
75°	139.4	137.8	133.5	128.6	130.3
77.5°	111.2	107.9	106.1	103.7	101.3
80°	83.1	82.2	80.5	78.0	76.3
82.5°	56.4	56.4	55.7	52.3	52.3
85°	33.9	33.2	32.4	29.8	29.1
87.5°	15.0	13.3	11.6	9.2	8.3
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	13.46	15.07	13.82	15.38	15.69	13.01	14.62	13.38	14.94	15.25
	3H	15.21	16.66	15.58	16.99	17.35	14.72	16.17	15.09	16.50	16.86
	4H	15.85	17.22	16.25	17.57	17.95	15.36	16.73	15.76	17.08	17.45
	6H	16.32	17.59	16.73	17.95	18.35	15.82	17.09	16.23	17.45	17.84
	8H	16.46	17.68	16.89	18.06	18.46	15.96	17.17	16.39	17.56	17.96
	12H	16.55	17.71	16.98	18.10	18.52	16.04	17.20	16.47	17.59	18.01
4H	2H	14.02	15.39	14.41	15.73	16.11	13.66	15.03	14.06	15.38	15.76
	3H	15.99	17.14	16.40	17.54	17.94	15.59	16.73	16.00	17.13	17.53
	4H	16.77	17.80	17.20	18.22	18.65	16.34	17.38	16.78	17.79	18.23
	6H	17.37	18.27	17.82	18.71	19.17	16.93	17.84	17.39	18.28	18.73
	8H	17.55	18.40	18.01	18.84	19.31	17.12	17.96	17.58	18.41	18.87
	12H	17.69	18.45	18.17	18.92	19.39	17.23	17.99	17.71	18.47	18.94
8H	4H	17.04	17.89	17.50	18.33	18.80	16.67	17.51	17.13	17.96	18.42
	6H	17.76	18.46	18.25	18.95	19.42	17.37	18.08	17.87	18.57	19.04
	8H	18.02	18.65	18.52	19.15	19.64	17.62	18.25	18.13	18.76	19.25
	12H	18.21	18.77	18.72	19.26	19.82	17.80	18.36	18.31	18.85	19.41
12H	4H	17.07	17.83	17.55	18.30	18.77	16.70	17.46	17.18	17.94	18.41
	6H	17.80	18.43	18.31	18.94	19.43	17.43	18.06	17.94	18.57	19.06
	8H	18.12	18.67	18.62	19.16	19.72	17.74	18.29	18.24	18.79	19.35