

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: P930449

Luminaire Tested: DFN2DS-PN2F0-030DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930449
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-PN2F0-030DS940-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

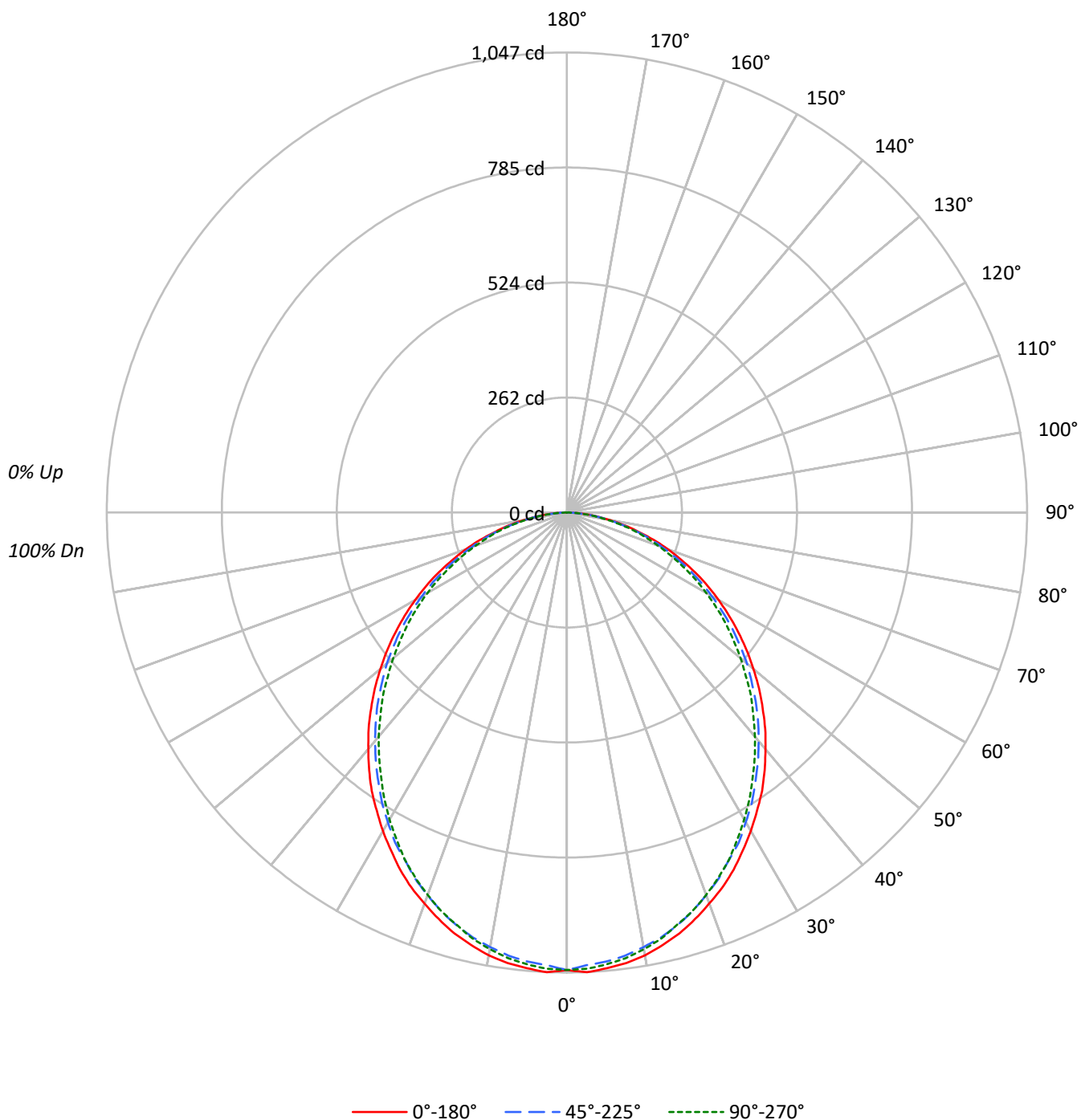
Lumens per Lamp: N/A
Luminaire Lumens: 2649.3 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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°	2255	2255	2255
5°	2264	2231	2244
10°	2251	2209	2220
15°	2223	2180	2178
20°	2183	2137	2135
25°	2144	2084	2084
30°	2094	2036	2018
35°	2046	1977	1948
40°	1987	1919	1883
45°	1929	1861	1815
50°	1866	1802	1738
55°	1800	1732	1668
60°	1726	1648	1588
65°	1648	1565	1493
70°	1547	1465	1395
75°	1407	1349	1316
80°	1250	1210	1149
85°	1019	972	872

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1929 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	14.11	15.72	14.47	16.03	16.35	13.66	15.27	14.03	15.59	15.90
	3H	15.86	17.31	16.23	17.64	18.00	15.37	16.82	15.74	17.15	17.51
	4H	16.50	17.87	16.90	18.22	18.60	16.01	17.38	16.41	17.73	18.10
	6H	16.97	18.24	17.38	18.61	19.00	16.47	17.74	16.88	18.11	18.50
	8H	17.12	18.33	17.54	18.72	19.12	16.61	17.83	17.04	18.21	18.61
	12H	17.21	18.37	17.64	18.75	19.18	16.70	17.86	17.12	18.24	18.67
4H	2H	14.67	16.04	15.07	16.38	16.76	14.32	15.68	14.71	16.03	16.41
	3H	16.64	17.79	17.05	18.19	18.59	16.24	17.38	16.65	17.78	18.18
	4H	17.42	18.46	17.85	18.87	19.31	17.00	18.03	17.43	18.45	18.88
	6H	18.02	18.92	18.47	19.36	19.82	17.58	18.49	18.04	18.93	19.39
	8H	18.21	19.05	18.67	19.49	19.96	17.77	18.61	18.23	19.06	19.52
	12H	18.34	19.10	18.82	19.57	20.04	17.89	18.65	18.37	19.12	19.59
8H	4H	17.69	18.54	18.15	18.98	19.45	17.32	18.17	17.78	18.61	19.07
	6H	18.41	19.11	18.90	19.60	20.07	18.03	18.73	18.52	19.22	19.69
	8H	18.67	19.30	19.18	19.80	20.29	18.28	18.91	18.79	19.41	19.90
	12H	18.87	19.42	19.37	19.92	20.48	18.45	19.01	18.96	19.50	20.06
12H	4H	17.72	18.48	18.20	18.95	19.42	17.36	18.11	17.84	18.59	19.06
	6H	18.45	19.08	18.96	19.59	20.08	18.08	18.72	18.59	19.22	19.71
	8H	18.77	19.32	19.27	19.82	20.38	18.39	18.95	18.90	19.44	20.00